



ROBOTICS

Technical reference manual

Event logs for RobotWare 7



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Technical reference manual

Event logs for RobotWare 7

RobotWare 7.16

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Overview of this manual

About this manual

This manual contains the event logs extracted from RobotWare 7, for the OmniCore robot controller.

Usage

This manual should be used as a reference when troubleshooting to read event log messages when the controller is not available.



Tip

The instructions for troubleshooting the robot is described in the respective product manual.

Who should read this manual?

This manual is intended for the following personnel:

- Machine and robot operators qualified to perform very basic troubleshooting and reporting to service personnel.
- Programmers qualified to write and change RAPID programs.
- Specialized troubleshooting personnel, usually very experienced service personnel, qualified for methodically isolating, analyzing and correcting malfunctions within the robot system.

Prerequisites

The reader should:

- Have extensive experience in troubleshooting industrial electro-mechanical machinery.
- Have in depth knowledge of the robot system function.
- Be familiar with the actual robot installation at hand, its surrounding equipment and peripherals.

References

Reference:	Document ID
<i>Safety manual for robot - Manipulator and IRC5 or OmniCore controller</i>	3HAC031045-001
<i>Product manual - OmniCore C30</i>	3HAC060860-001
<i>Product manual - OmniCore C90XT</i>	3HAC073706-001
<i>Product manual - OmniCore E10</i>	3HAC079399-001
<i>Operating manual - OmniCore</i>	3HAC065036-001
<i>Operating manual - RobotStudio</i>	3HAC032104-001
<i>Technical reference manual - System parameters</i>	3HAC065041-001
Product manual for the manipulator	

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Revisions

Revision	Description
A	Released with RobotWare 7.0.
B	Released with updated event logs for RobotWare 7.0.1.
C	Released with updated event logs for RobotWare 7.0.2.
D	Released with updated event logs for RobotWare 7.1.
E	Released with updated event logs for RobotWare 7.2.
F	Released with updated event logs for RobotWare 7.4.
G	Released with updated event logs for RobotWare 7.5.
H	Released with updated event logs for RobotWare 7.6.
J	Released with updated event logs for RobotWare 7.7.
K	Released with updated event logs for RobotWare 7.8.
L	Released with updated event logs for RobotWare 7.10.
M	Released with updated event logs for RobotWare 7.12.
N	Released with updated event logs for RobotWare 7.13.
P	Released with updated event logs for RobotWare 7.14.
Q	Released with updated event logs for RobotWare 7.15.
R	Released with updated event logs for RobotWare 7.16.
S	Released with updated event logs for RobotWare 7.17.

1 Event log messages

Type of event log messages

There are three types of event log messages.

Type	Description
Information	These messages are used to log information into the event log, but that do not require specific actions on the part of the user. Informational messages do not take focus on a display device for the controller.
Warning	These messages are used to remind the user that something is not necessarily correct in the system but that operation continues. These messages are placed into the event log but do not take focus on a display device.
Error	These messages indicate something is seriously wrong with the system and that operation has stopped. They are used when an immediate action should be taken by the user.



Note

The message type is not contained in the actual message text, but in the code itself when the message is generated. Messages can only appear as one type and the message should be written to provide information about its type.



Note

The version of the translated event logs as shown in the translated manuals may differ slightly to the English version due to late corrections.

Event number series

The event messages are divided into the following groups depending on which part of the robot system it refers to.



Note

Not all event log messages are translated to all languages. However, the English version of the manual contains all event log messages that are included in the related RobotWare release.

Number series	Type of event
1 xxxx	Operational events; events dealing with handling of the system.
2 xxxx	System events; events dealing with system functions, system states, and so on.
3 xxxx	Hardware events; events dealing with system hardware, manipulators as well as controller hardware.
4 xxxx	Program events; events dealing with RAPID instructions, data, and so on.
5 xxxx	Motion events; events dealing with the control of the manipulator movements and positioning.

Continues on next page

1 Event log messages

Continued

Number series	Type of event
7 xxxx	I/O events; events dealing with inputs and outputs, data buses, and so on.
8 xxxx	User events; events defined by the user.
9 xxxx	Functional safety events; events related to functional safety.
11 xxxx ⁱ	Process events; application specific events, arc welding, spot welding, and so on. 0001 - 0199 Continuous Application Platform 0200 - 0399 Discrete Application Platform 0400 - 0599 Arc 0600 - 0699 Spot 0700 - 0799 Bosch 0800 - 0899 Dispense 1000 - 1200 Pick and Place 1400 - 1499 Production manager 1500 - 1549 BullsEye 1550 - 1599 SmartTac 1600 - 1699 Production Monitor 1700 - 1749 TorchClean 1750 - 1799 Navigator 1800 - 1849 Arcitec 1850 - 1899 MigRob 1900 - 2399 PickMaster RC 2400 - 2449 AristoMig 2500 - 2599 Weld Data Monitor 2600 - 2649 GSI 2700 - 2702 Integrated Vision 4800 - 4814 Miscellaneous Process
12 xxxx	Configuration events; events dealing with the configuration of the system.
15 xxxx	RAPID
17 xxxx	Connected Service Embedded event logs which are generated during starting, registering, unregistering, losing connectivity, and so on.

ⁱ Only applications currently available in RobotWare 7 are included in this manual.

2 Number series: 1 xxxx

10002, Program pointer has been reset or removed

Description

The program pointer of task *arg* has been reset or removed.

Consequences

If the program pointer has been reset, then the program execution will start on the first instruction of the task's entry routine. If the program pointer has been removed, then the program pointer must be set to be able to start execute the program. NOTE that the manipulator may move to unexpected position when restarted!

Probable causes

The operator has probably requested this action manually by setting the program pointer, editing the program or updating positions. Loading a new program or the Exit-instruction will also reset/remove the program pointer.

Consequences

No operation will be possible until after closing the Motors On circuit. The manipulator's axes are meanwhile held in position by mechanical holding brakes.

Probable causes

Any safety device connected to the system's stop inputs have been opened. These are shown in the Circuit Diagram.

Recommended actions

- 1 Check which safety device caused the stop.
- 2 Close the circuit.
- 3 To resume operation, switch the system back to state Motors On.

10010, Motors Off state

Description

The system is in the Motors Off state. It enters this state either after switching from Manual mode to Automatic, or after the Motors On circuit has been opened during program execution.

Consequences

No operation will be possible until after closing the Motors On circuit. The manipulator's axes are meanwhile held in position by mechanical holding brakes.

10013, Emergency stop state

Description

The system is in the Emergency stop state, since the Motors On circuit has been opened by an Emergency Stop device.

Consequences

All program execution and thus robot actions are immediately halted. The robot axes are meanwhile held in position by mechanical holding brakes.

Probable causes

Any emergency stop device connected to the emergency stop input have been opened. These may be internal (on the controller or on the FlexPendant) or external (devices connected by the system builder). The internal devices are shown in the Circuit Diagram.

Recommended actions

- 1 Check which emergency stop device caused the stop.
- 2 Close/reset the device.

10011, Motors On state

Description

The system is in the Motors On state.

Consequences

The Motors On circuit has been closed, enabling power supply to the manipulator's motors. Normal operation may be resumed.

10014, System failure state

Description

Execution of all NORMAL tasks has been stopped due to malfunction.

Consequences

No start of program execution or manual manipulator jogging will be possible until after the system has been restarted.

Probable causes

A large number of malfunctions may cause this condition. Please use the FlexPendant or RobotStudio to check other event log messages for events occurring at this time!

10012, Safety guard stop state

Description

The system is in the Guard stop state. It enters this state either after switching from Automatic- to Manual mode, or after the Motors On circuit has been opened by an Emergency Stop or Automatic Stop, or in Manual mode if Enabling device was released.

Continues on next page

Recommended actions

- 1 Determine what caused the stop by studying the event log.
- 2 Remedy the fault.
- 3 Restart the system as detailed in the Operating manual for the controller.

10015, Manual mode selected

Description

The system is in the Manual mode.

Consequences

Programmed operation is possible, but only with a max. speed of 250 mm/s. The manipulator may also be jogged manually after pressing the enabling device on the FlexPendant.

10016, Automatic mode requested

Description

The system has been ordered to go to the Automatic mode.

Consequences

The system will go to the Automatic mode after confirmed from FlexPendant.

10017, Automatic mode confirmed

Description

The system is in the Automatic mode.

Consequences

The enabling device is disconnected. The robot can move without human intervention.

10018, Manual mode full speed requested

Description

The system has been ordered to go to the Manual mode where the speed can be increased to programmed speed.

Consequences

The system will go to the Manual mode full speed.

10019, Manual mode full speed confirmed

Description

The system is in the Manual mode and the speed can be increased to programmed speed.

Consequences

Programmed operation is possible while pressing the hold-to-run button on the FlexPendant. The manipulator may also be jogged manually after pressing the enabling device on the FlexPendant.

Continues on next page

10020, Execution error state

Description

The program execution in task *arg* has been stopped due to a spontaneous error.

Consequences

No program execution will be possible until the error has been removed.

Probable causes

A large number of malfunctions may cause this condition. Please use the FlexPendant or RobotStudio to check other event log messages for events occurring at this time!

Recommended actions

- 1 Determine what caused the stop by studying the event log.
- 2 Remedy the fault.
- 3 If necessary, move Program Pointer to main before pressing start button.

10021, Execution error reset

Description

The program execution in task *arg* has left a spontaneous error state.

10024, Collision triggered

Description

Some mechanical part of the manipulator has collided with a piece of fixed equipment in the cell.

Consequences

Manipulator movement is interrupted and program execution is stopped.

10025, Collision confirmed

Description

The collision detection has been confirmed.

Recommended actions

10026, Collision retraction

Description

The manipulator has attempted to back away from the obstacle, into which it collided, and succeeded.

Consequences

The system is ready to go back to normal operation.

10027, Collision retraction fail**Description**

The manipulator has attempted to back away from the obstacle, into which it collided, and failed.

Consequences

The system is NOT ready to go back to normal operation.

Probable causes

This may be caused by the robot being stuck to the object into which it collided.

Recommended actions

- 1 Go to Manual Mode.
- 2 Manually run the robot away from the object.
- 3 Resume operation by restarting the program.

10030, All axes commutated**Description**

After checking, the system has found all manipulator axes to be commutated.

Consequences

Normal operation is possible.

10031, All axes calibrated**Description**

After checking, the system has found all manipulator axes to be calibrated.

Consequences

Normal operation is possible.

10032, All revolution counters updated**Description**

After checking, the system has found all revolution counters for all manipulator axes to be updated.

Consequences

Normal operation is possible.

10033, All axes synchronized**Description**

After checking, the system has found all manipulator axes to be synchronized.

Consequences

Normal operation is possible.

10034, Axis not commutated**Description**

After checking, the system has found that one or more manipulator axes are not commutated.

Consequences

To enable operation, all manipulator axes must be commutated.

Probable causes

The manipulator drive motor and related units may have been altered, e.g. after replacing a faulty unit.

Recommended actions

Commute the manipulator axes as detailed in the manipulator Product Manual.

10035, Axis not calibrated**Description**

After checking, the system has found that one or more manipulator axes are not calibrated.

Consequences

To enable operation, all manipulator axes must be calibrated.

Probable causes

The manipulator drive motor and related units may have been altered, e.g. after replacing a faulty unit.

Recommended actions

Calibrate the manipulator axes as detailed in the manipulator Product Manual.

10036, Revolution counter not updated**Description**

After checking, the system has found that the revolution counters of one or more manipulator axes are not updated.

Consequences

To enable operation, the revolution counters of all manipulator axes must be updated.

Probable causes

The manipulator drive motor and related units may have been altered, e.g. after replacing a faulty unit.

Recommended actions

Update the revolution counters of all manipulator axes as detailed in the manipulator Product Manual.

Continues on next page

10037, Axis not synchronized

Description

After checking, the system has found that one or more manipulator axes are not synchronized.

Consequences

To enable operation, all manipulator axes must be synchronized.

Probable causes

The manipulator drive motor and related units may have been altered, e.g. after replacing a faulty unit.

Recommended actions

Synchronize the manipulator axes as detailed in the manipulator Product Manual.

10038, Robot memory is OK

Description

During startup, the system has found that all data in the robot memory is OK.

Consequences

Operation is possible.

10039, Robot memory is not OK

Description

During startup, the system has found that data in the robot memory is not OK.

Consequences

The robot cannot be used in Automatic mode until this has been resolved. Manually jogging of the robot is possible.

Probable causes

This may be due to replacement of Serial measurement board, controller or both.

Recommended actions

- 1 Update the robot memory as detailed in Operating manual for the controller.

10040, Program loaded

Description

A program or program module has been loaded into task *arg* by *arg*. After loading, *arg* bytes memory remain. The size of the loaded program is *arg* bytes.

10041, Program deleted

Description

A program or program module was deleted from task *arg* by *arg*.

Consequences

If the deleted program contained the task entry routine, the program will no longer be executable.

Probable causes

The program may have been removed manually.

Recommended actions

- 1 Define an entry routine in one of the task's remaining programs, or:
- 2 Load a program containing an entry routine.

10042, Axis synchronized

Description

A fine calibration or update of revolution counter(s) was made.

10044, Program Pointer updated

Description

The task *arg* could have changed the Program Pointer position.

Recommended actions

10045, System restarted

Description

System was restarted.

Recommended actions

10046, System reset

Description

Loading the original system installation settings.

Recommended actions

10048, Background task did stop

Description

The task *arg* has stopped.

Recommended actions

10051, Event routine error**Description**

The task *arg* could not start the specified system event routine *arg*. The routine is either unknown to the system or the program is unlinkable.

Recommended actions

- 1 Insert the routine in a system module or:
- 2 Correct the program or:
- 3 Make sure that someone else does not have mastership over motion.

10052, Regain start**Description**

A regain movement has started.

Recommended actions

10053, Regain ready**Description**

The regain movement is ready.

Recommended actions

10056, System shutdown initiated**Description**

System shutdown is now initiated and steps are taken to stop activities and store the current state for the next startup.

Recommended actions

10057, The controller name has been changed**Description**

The controller name has been changed to:
arg

10061, A position has been modified**Description**

A position in module *arg* in task *arg* has been modified or tuned on line *arg*, to position: *arg*, by *arg*.

10062, A module has been edited.**Description**

Module *arg* in task *arg* has been edited between lines: *arg*, *arg* by *arg*.

10063, Module has been edited**Description**

Module *arg* in task *arg* has been edited by *arg*.

10064, A module has been erased.**Description**

Module *arg* in task *arg* has been erased by *arg*.

10066, Not possible to load system module**Description**

System module *arg* in task *arg* cannot be loaded since the file is not found.

10067, Program Pointer Reset**Description**

Unable to reset the program pointer for task *arg*.

Consequences

The program will not start.

Probable causes

- No program is loaded.
- The main routine is missing.
- There are errors in the program.

Recommended actions

- 1 Load program if no program is loaded.
- 2 Check that the program has a main routine. If there is no main routine, add one.
- 3 Check for errors in the program and correct them.
- 4 See previous error messages in the Event log.

10068, Start Program**Description**

Unable to start program for task *arg*.

Consequences

The program will not execute.

10069, A named position has been modified**Description**

The named position *arg* in module *arg*, task *arg*, on line: *arg* has been modified or tuned by *arg*.

Continues on next page

10074, NFS server up

Description

The control system communicates correctly with the NFS server *arg*.

10075, NFS server down

Description

The control system is not able to communicate correctly with the NFS server *arg*.

Consequences

If the server *arg* is defined as TRUSTED, robot program execution will be stopped. If the server is defined as NON-TRUSTED, execution will proceed. These definitions are specified in the Application manual - Controller software.

Probable causes

If this message is displayed at first start-up, the server configuration may be incorrect. If displayed during operation, the previously working communication has been lost due to a broken connection. Also see the I/O event log!

Recommended actions

- 1 Check the NFS server configuration.
- 2 Check all communication hardware, cables and such.
- 3 Check NFS client configuration on the controller.

10076, FTP server up

Description

The control system communicates correctly with the FTP server *arg*.

10077, FTP server down

Description

The robot controller is not able to communicate correctly with the FTP server *arg*.

Consequences

If the device *arg* is defined as TRUSTED, robot program execution will be stopped. If the device is defined as NON-TRUSTED, execution will proceed. These definitions are specified in the Application manual - Controller software.

Probable causes

If this message is displayed at first start-up, the server configuration may be incorrect. If displayed during operation, the previously working communication has been disconnected. Also see the IO Communication event log.

Recommended actions

- 1 Check the FTP server configuration.
- 2 Check all communication hardware.
- 3 Check the FTP client configuration on the controller.

10078, A module has been edited

Description

Module *arg* in task *arg* has been edited before line: *arg* by *arg*.

10079, A module has been edited

Description

Module *arg* in task *arg* has been edited after line: *arg* by *arg*.

10082, RAPID Task supervision

Description

Task *arg* is not running. The system will be set in SysFail state. It's now impossible to change to motors on *arg*.

Recommended actions

See previous messages for the cause. Restart the system to reset the error state.

10083, RAPID Task supervision

Description

Task *arg* is not running. The system will be set in motors off state. *arg*

Recommended actions

See previous messages for the cause.

10084, RAPID Task supervision

Description

Task *arg* is not running. All NORMAL tasks will also be stopped.

Recommended actions

See previous messages for the cause.

10090, Reset RAPID done

Description

Reset RAPID is done.

Consequences

After restart the system's state will be resumed except for manually loaded programs and modules. Static and semistatic tasks are restarted from the beginning, not from the state they had when the system was stopped.

Continues on next page

Modules will be installed and loaded in accordance with the set configuration. System parameters will not be affected.

Probable causes

- 1 Reset RAPID was ordered by the user.
- 2 The system forced Reset RAPID due to inconsistent data, malfunction or unrecoverable task state.

10091, Restart not possible

Description

A restart after collision detection is not possible before acknowledge the error dialogue.

Recommended actions

10092, (Re)start not possible

Description

(Re)start is not possible due to lost contact with IO module *arg* configured with trustlevel.

Recommended actions

10095, At least one task is unchecked in the task selection panel

Description

One or more of the NORMAL tasks are unchecked in the task selection panel when performing a (re)start.

Recommended actions

10096, *arg* not active!

Description

The workobject *arg* contains a coordinated mechanical unit which is not activated.

Recommended actions

Activate the mechanical unit and perform the operation again.

10097, Restart not possible

Description

The task *arg* is set in blocked state and the program is for that reason not possible to restart from the current program position.

Recommended actions

The Program Pointer must be moved before restart.

10098, Restart not possible

Description

The task *arg* has been in system failure state and the program is for that reason not possible to restart from the current program position.

Recommended actions

The Program Pointer must be moved before restart.

10099, Program start rejected

Description

The system has performed a Category-1 stop, and the program may not be restarted.

Consequences

The system goes to the Motors Off state and cannot be started.

Probable causes

The Category-1 stop may be caused by opening the safety circuit.

Recommended actions

- 1 Check the safety circuits for an open switch.
- 2 Go to Motors On and restart the program.

10100, SFTP server up

Description

The control system communicates correctly with the SFTP server *arg*.

10101, SFTP server down

Description

The control system is not able to communicate correctly with the SFTP server *arg*.

Consequences

If the server *arg* is defined as TRUSTED, robot program execution will be stopped. If the server is defined as NON-TRUSTED, execution will proceed. These definitions are specified in the Application manual - Controller software.

Probable causes

If this message is displayed at first start-up, the server configuration may be incorrect. If displayed during operation, the previously working communication has been lost due to a broken connection. Also see the I/O event log!

Recommended actions

- 1 Check the SFTP server configuration.
- 2 Check all communication hardware, cables and such.

Continues on next page

Continued

3 Check the SFTP client configuration on the controller.

10106, Time for service

Description

It's time for service for robot *arg* because it is *arg* days since the last service.

Recommended actions

10107, Close to service

Description

It remains *arg* days for robot *arg* until it's time for service.

Recommended actions

10108, Time for service

Description

It's time for service for robot *arg* cause it's *arg* hours of production since last service.

Recommended actions

10109, Close to service

Description

It remains *arg* hours of production for robot *arg* to next service.

Recommended actions

10110, Gearbox needs service

Description

The gearbox at *arg* of robot *arg* needs service.

Recommended actions

10111, Gearbox reached service interval

Description

The gearbox at *arg* of robot *arg* has reached *arg* of its service interval.

Recommended actions

10112, SIS calendar notification

Description

The system date and time has changed.
This could cause problems with the SIS calendar notification.

Recommended actions

The SIS parameters Calendar Limit and Calendar Warning might need to be changed

Continues on next page

10115, A backup is made of the robot memory

Description

Data is moved from robot memory to backup of robot memory by *arg*.

Recommended actions

10116, Robot memory is restored from the backup

Description

Data is moved from backup of robot memory to robot memory by *arg*.

Recommended actions

10117, The robot memory is cleared

Description

Data in robot memory is cleared by *arg*.

Recommended actions

10118, The backup of the robot memory is cleared

Description

Data in the backup of robot memory is cleared by *arg*.

Recommended actions

10120, Program stopped

Description

The task *arg* has stopped. The reason is that an external or internal stop after current instruction has occurred.

Recommended actions

10121, Program stopped

Description

The task *arg* has stopped. The reason is that the task has reached an exit instruction.

Recommended actions

10122, Program stopped

Description

The task *arg* has stopped. The reason is that the task is ready.

Recommended actions

10123, Program stopped**Description**

The task *arg* has stopped. The reason is that the task is ready with this step.

Recommended actions**10124, Program stopped****Description**

The task *arg* has stopped. The reason is that the task has reached a break instruction.

Recommended actions**10125, Program stopped****Description**

The task *arg* has stopped. The reason is that an external or internal stop has occurred.

Recommended actions**10126, Program stopped****Description**

The task *arg* has stopped. The reason is that an error has occurred.

Recommended actions**10127, Backward execution not possible****Description**

The task *arg* has stopped. The reason is that it is not possible to execute backward past beginning of instruction list.

Recommended actions**10128, Backward execution not possible****Description**

The task *arg* has stopped. The reason is that it is not possible to execute backward past the instruction.

Recommended actions**10129, Program stopped****Description**

The task *arg* has stopped. The reason is that the event routine for RESET or POWER_ON is ready.

Recommended actions**10130, Program stopped****Description**

The task *arg* has stopped. The reason is that the task is ready with this move step.

Recommended actions**10131, Program stopped****Description**

The task *arg* has stopped. The reason is that the routine called from system IO interrupt or a service routine is ready.

Recommended actions**10132, Program stopped****Description**

The task *arg* has stopped. The reason could not be determined.

Recommended actions**10133, Program stopped****Description**

The task *arg* has stopped. The reason is that the task is ready with the execution of the UNDO handlers.

10134, POWER_ON event routine stopped**Description**

The system was stopped while execution a POWER_ON event routine.

Consequences

WARNING: Moving program pointer will leave the system in an undefined state because many applications rely on the POWER_ON routine completion.

Probable causes

POWER_ON event routines can be stopped for many reasons. You may need to look for other event log messages but the normal ones are:

- 1 Stop button
- 2 Rapid Stop instruction
- 3 Execution error

10135, Program stopped**Description**

The task *arg* has stopped. The reason is that a stop after current cycle has occurred.

Recommended actions

Continues on next page

Continued

10136, Program stopped

Description

The task *arg* has stopped. The reason is that the task has reached a stop instruction.

Recommended actions

10137, Program stopped

Description

The task *arg* has stopped. The reason is that the task has reached a stop\AllMoveTask instruction.

Recommended actions

10138, Program stopped

Description

The task *arg* has stopped. The reason is that an stop from system input has occurred.

Recommended actions

10139, Execution is stopped

Description

The edit mastership supervision time-out occurred.

Consequences

The execution is stopped as a safety measure.

Probable causes

When executing RAPID and holding edit mastership a periodic watchdog command must be sent.

Recommended actions

Proposed alternatives:

- If not using RobotControlMate, change configuration parameter 'Controller/OperatorSafety/Heartbeat' to False and restart system.
- If using RobotControlMate, restart the RAPID execution.

10140, Speed adjusted

Description

The speed has been adjusted to *arg*% by *arg*.

10141, Program pointer moved to cursor

Description

The program pointer of task *arg* in module *arg* has been moved to position *arg* by *arg*.

10142, Call routine

Description

The program pointer in task *arg* has been moved to routine *arg* by *arg*.

10143, Cancel call routine

Description

The execution of the called routine has been canceled in task *arg* by *arg*.

10144, Simulate of Wait instruction

Description

A wait instruction (WaitTime, WaitUntil, WaitDO, etc.) has been simulated in task *arg* by *arg*.

Recommended actions

10145, Task selection panel is set

Description

Task *arg* has been added in Task Selection Panel by *arg*.

Recommended actions

10146, Task selection panel is cleared

Description

Task *arg* has been removed in Task Selection Panel by *arg*.

Recommended actions

10147, Setting of variable

Description

Variable *arg* has changed value from *arg* to *arg* by *arg*.

Recommended actions

10148, Setting of IO

Description

IO signal *arg* has changed value from *arg* to *arg* by *arg*.

Recommended actions

10149, Program Pointer moved to routine

Description

The program pointer in task *arg* has been moved to routine *arg* by *arg*.

Recommended actions

Continues on next page

10150, Program started**Description**

Execution of task *arg* has been started from the first instruction of the task's entry routine. The originator could not be determined.

Recommended actions

10151, Program started**Description**

Execution of task *arg* has been started from the first instruction of the task's entry routine. The originator is an external client.

Recommended actions

10152, Program started**Description**

Execution of task *arg* has been started from the first instruction of the task's entry routine. The start order was initiated by an action causing the UNDO handler to execute.

10153, Run mode is changed**Description**

Run mode has been changed to single cycle by *arg*.

10154, Run mode is changed**Description**

Run mode has been changed to continuous mode by *arg*.

10155, Program restarted**Description**

Execution of task *arg* has been restarted from where it was previously stopped. The originator could not be determined.

Recommended actions

10156, Program restarted**Description**

Execution of task *arg* has been restarted from where it was previously stopped. The originator is an external client.

Recommended actions

10157, Program restarted**Description**

Execution of task *arg* has been restarted from where it was previously stopped. The restart order was initiated by an action causing the UNDO handler to execute.

10158, Program started**Description**

Stepwise forward execution of task *arg* has been started.

10159, Program started**Description**

Stepwise backward execution of task *arg* has been started.

10160, Pulsing of IO**Description**

IO signal *arg* has been pulsed by *arg*.

Recommended actions

10161, Setting of analog IO value**Description**

IO signal *arg* has changed value from *arg* to *arg* by *arg*.

Recommended actions

10170, Background task *arg***Description**

refuse to start. Task is empty.

Recommended actions

10171, Background task *arg***Description**

refuse to start. Wrong state.

Recommended actions

10172, Background task *arg***Description**

Refuse to start. Can't set PP to the main routine.

Probable causes

The module that contains the main routine was not loaded since the module file is missing in the target directory.

Continues on next page

Continued

The module that contains the main routine was not loaded since the configuration file has no entry for automatic loading of the module.

The main entry routine is missing.

The main entry is corrupted.

Recommended actions

Load the module manually or perform a system reset after the cause of the problem is removed.

10173, Background task *arg*

Description

refuse to start. Can't set the execution mode.

Recommended actions

10174, Background task *arg*

Description

refuse to start. The start order failed.

Recommended actions

10175, Background task *arg*

Description

refuse to start due to a syntax error.

Recommended actions

10176, Background task *arg*

Description

refuse to start. Can't load module.

Probable causes

The module file is missing in the target directory.

Recommended actions

- 1 Copy the module file to the target directory.
- 2 Reset the system.

10177, Task refuses to start

Description

Task *arg*:

There is not sufficient program memory or the program memory is fragmented. Modules could be missing or data may not have been installed.

Recommended actions

- 1 Unload/reload modules and restart the system.
- 2 Split large data structures.
- 3 Do Reset RAPID.

Continues on next page

10185, Task could not be prepared for start

Description

Task *arg*:

There is not sufficient program memory or the program memory is fragmented. Modules could be missing or data may not have been installed.

Recommended actions

- 1 Unload/reload modules and restart the system.
- 2 Split large data structures.
- 3 Do Reset RAPID.

10190, Protected area not done

Description

A power fail did occur in the middle of a protected area for the task *arg*. The system is trying to selfheal.

Recommended actions

10191, Protected area not done

Description

A power fail did occur in the middle of a protected area for the task *arg*. A pending error is removed from the queue.

Recommended actions

10192, Protected area not done

Description

A power fail did occur in the middle of a protected area for the task *arg*. A pending exit is removed from the queue.

Recommended actions

10193, Protected area not done

Description

A power fail did occur in the middle of a protected area for the task *arg*. This may result in an extra program cycle.

Recommended actions

10194, Protected area not done

Description

A power fail did occur in the middle of a protected area for the task *arg*. The task will be restarted from the main routine.

Recommended actions

10195, Protected area not done**Description**

A power fail did occur in the middle of a protected area for the task *arg*. All tasks are reset and all user programs are lost.

Recommended actions

Try to save the user program and restart the system.

10196, Protected area not done**Description**

A power fail did occur in the middle of a protected area for the task *arg*.

Recommended actions

10200, Event logs are cleared**Description**

All event logs has been cleared by user: *arg*.

Recommended actions

10201, Event logs for one domain is cleared**Description**

Domain *arg* has been cleared by user: *arg*.

Recommended actions

10202, Date and/or time is changed**Description**

Date and/or time is changed to *arg* by *arg*.

Recommended actions

10205, Configuration parameter changed**Description**

A configuration parameter has been changed in domain: *arg* by *arg*.

Recommended actions

10206, Configuration file has been loaded**Description**

A configuration file *arg* has been loaded by *arg*.

Recommended actions

10210, Execution cancelled**Description**

The restart will clear the execution in task *arg* of a POWER ON system event routine.

Recommended actions

10211, Execution cancelled**Description**

The restart will clear the execution in task *arg* of a STOP system event routine.

Recommended actions

10212, Execution cancelled**Description**

The restart will clear the execution in task *arg* of an EMERGENCY STOP system event routine.

Recommended actions

10213, Execution cancelled**Description**

The restart will clear the execution in task *arg* of a START system event routine.

Recommended actions

10214, Execution cancelled**Description**

The restart will clear the execution in task *arg* of a RESTART system event routine.

Recommended actions

10215, Execution cancelled**Description**

The restart will clear the execution in task *arg* of a RESET system event routine.

Recommended actions

10217, Execution cancelled**Description**

The restart will clear the execution in task *arg* of a USER routine.

Recommended actions

Continues on next page

Continued

10218, Execution cancelled

Description

The restart will clear the execution in task *arg*.

Recommended actions

10219, Execution cancelled

Description

The restart will clear the execution in task *arg* of a STEP system event routine.

Recommended actions

10230, Backup step ready

Description

The backup step Prepare is ready.

Recommended actions

10231, Backup step ready

Description

The backup step Configuration is ready.

Recommended actions

10232, Backup step ready

Description

The backup of Task is ready.

Recommended actions

10233, Backup step ready

Description

The backup of Controller Settings is ready.

Recommended actions

10234, Backup step ready

Description

The backup of User Authorization System is ready.

Recommended actions

10250, Restore step ready

Description

The restore step Prepare is ready.

Recommended actions

10251, Restore step ready

Description

The restore step Configuration is ready.

Recommended actions

10252, Restore step ready

Description

The restore of Task is ready.

Recommended actions

10253, Restore step ready

Description

The restore of User Task is ready.

Recommended actions

10254, Restore step ready

Description

The restore of Controller Settings is ready.

Recommended actions

10255, Restore step ready

Description

The restore of Safety Settings is ready.

Recommended actions

10256, Restore step ready

Description

The restore of User Authorization System is ready.

Recommended actions

10260, System diagnostics info generated

Description

System diagnostics information was successfully generated to file *arg*

10261, System diagnostics info unavailable

Description

User requested to save diagnostics system information to file *arg*. System was unable to fulfill this request.

Continues on next page

Consequences

Diagnostics system information is normally used when reporting a problem with the system to ABB support.

Probable causes

The system is in such state that it is not possible to generate the requested information.

Please check that the device has enough space left.

Recommended actions

If you are experiencing a problem with the system contact ABB support.

10262, System log has been created**Description**

A system log has been created.

A System Diagnostics has to be created using FlexPendant or RobotStudio.

Probable causes

The system log was triggered by the error event: *arg*

Recommended actions

Create a System Diagnostics and attach it to your error report if reported to ABB support.

10270, Cyclic Brake Check Done**Description**

The Cyclic Brake Check has been done for all brakes supervised by Safety Controllers.

10271, Cyclic Brake Check Started**Description**

The Cyclic Brake Check has been started.

10272, Brake Check Done**Description**

The Brake Check has been done for all brakes.

10273, Brake Check Started**Description**

The Brake Check has been started.

10280, The coordinate system has been changed to World frame**Description**

The coordinate system has been changed to World frame in mechanical unit *arg* by *arg*.

10281, The coordinate system has been changed to Base frame**Description**

The coordinate system has been changed to Base frame in mechanical unit *arg* by *arg*.

10282, The coordinate system has been changed to Tool frame**Description**

The coordinate system has been changed to Tool frame in mechanical unit *arg* by *arg*.

10283, The coordinate system has been changed to Object frame**Description**

The coordinate system has been changed to Object frame in mechanical unit *arg* by *arg*.

10284, Non motion execution mode is set**Description**

The non motion execution mode has been set by *arg*.

Consequences

The mechanical unit will not move when executing.

10285, Non motion execution mode has been reset**Description**

The non motion execution mode has been reset by *arg*.

Consequences

The mechanical unit will move while executing.

10286, Payload has been changed**Description**

The payload has been changed to *arg* in task *arg* by *arg*.

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Continued

10287, Total load has been changed

Description

The total load has been changed to *arg* in task *arg* by *arg*.

10288, The Work Object has been changed

Description

The Work object has been changed to *arg* in task *arg* by *arg*.

10289, The tool has been changed

Description

The tool has been changed to *arg* in task *arg* by *arg*.

10290, The robot has been calibrated

Description

The mechanical unit *arg*, axis *arg* has been calibrated by *arg*.

10291, Goto position

Description

The functionality Goto position has been used by *arg*.

10292, Revolution Counter updated

Description

The revolution counter for robot *arg*, axis *arg* has been updated by *arg*.

10293, Path Supervision is set to On

Description

The Path supervision for task *arg* is set to On by user: *arg*.

10294, Path Supervision is set to Off

Description

The Path supervision for task *arg* is set to Off by user: *arg*.

10295, The Sensitivity for Path Supervision is updated

Description

The Sensitivity for task *arg* for Path Supervision is set to *arg*% by user: *arg*.

10296, Jog Supervision is set to On

Description

The Jog supervision for task *arg* is set to On by user: *arg*.

10297, Jog Supervision is set to Off

Description

The Jog supervision for task *arg* is set to Off by user: *arg*.

10298, The Sensitivity for Jog Supervision is updated

Description

The Sensitivity for task *arg* for Jog Supervision is set to *arg*% by user: *arg*.

10300, A Reset RAPID is ordered

Description

Reset RAPID has been ordered from the system.

Recommended actions

10304, An update has been ordered

Description

An update of program configuration is done.

Recommended actions

10350, Update of task failed

Description

The system could not update task *arg* to the new configuration.

Recommended actions

10351, A task is removed

Description

The task *arg* was removed because of configuration changes.

Recommended actions

10352, A task is added

Description

The task *arg* was installed because of configuration changes.

Recommended actions

10353, A task is reinstalled

Description

The task *arg* was reinstalled because of configuration changes.

Recommended actions

Continues on next page

10354, Restore aborted due to lost system data.**Description**

The system is using a backup of the system data, since the system data was not properly saved at last shutdown. Due to this, a previously ordered Restore from directory *arg* was attempted again, but was aborted.

Consequences

No RAPID programs or modules will be loaded.

Probable causes

The system data was not properly saved at last shutdown.

Recommended actions

After recovering from the system data loss by a (B)ackup-Restart or system re-installation, please verify that the backup directory *arg* is OK, and perform the Restore again.

10355, Restore error**Description**

Error during the restore of Task. Trying to load to unknown task, *arg*.

Consequences

Loading has been aborted for *arg*.

Probable causes

The current system doesn't have the same options as the one used to create the backup.

10356, Restore warning**Description**

The module *arg* is automatic loaded from old module format (.mod). If the module is updated after installation there is no possibility to restore the changes because format of module files is changed to .modx format.

Consequences

Changes in module *arg* may be lost.

Probable causes

The current system only fully support automatic loaded modules of type modx (UTF8).

10400, User *arg* logged on**Description**

User *arg* logged on using *arg*.

10401, User *arg* logged off**Description**

User *arg* using *arg* logged off.

10420, New unsafe robot path**Description**

The robot path has been cleared after a target has been modified in task *arg*. The robot will for that reason move towards the position pointed out by the move instruction at the program pointer. Move instructions between the modified target and the program pointer will be skipped.

Consequences

The programmed speed is used for this movement. The new untested path may contain obstacles that might cause a collision.

Recommended actions

Check your program pointer and move it if necessary. Reduce the speed.

10421, Planned path not aborted**Description**

A target that may be part of the planned robot path has been modified. The new target position will be used the next time the instruction with the target is executed.

Consequences

The current planned path is using the old target position.

Recommended actions

If the current planned path is unsafe, move the program pointer to abort it.

10451, Update of RobotWare system failed**Description**

It was not possible to apply update of the current RobotWare system using Update package with ID: *arg*.

Consequences

The system remains unchanged.

Recommended actions

Create a System Diagnostics and attach it to your error report if reported to ABB support.

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10452, Update of RobotWare system done

Description

Update of the RobotWare system has been successful.

Consequences

The RobotWare system has been updated.

10455, Update of RobotWare system error

Description

Update of the current RobotWare system did not complete properly.

Consequences

The current RobotWare system may be in an undefined state and it may need to be repaired.

Recommended actions

- 1 Manually check if all products in the current system have expected versions and then load a valid backup if desired.
- 2 Restore system to the previous state using a snapshot.
- 3 Perform a complete reinstallation of the RobotWare system using RobotWare Installation Utilities.

10457, Event routines are deferred

Description

The *arg* event routine *arg* in task *arg* could not start. Executions of event routines are deferred until next start order for this task.

Recommended actions

Check earlier events in the event log for the reason why this task could not start.

10458, System state could not be restored after RobotWare system update

Description

Under normal circumstances, previous system state is automatically reloaded after the system has been updated. Loading the state has in this case failed and the system has therefore been reset and started with an empty configuration.

Consequences

All user programs and system parameters prior to the system update must be manually reloaded.

Probable causes

In some scenarios, such as removing or adding certain optional features or major upgrades of installed software products versions, the previous system state may be incompatible with the newly reconfigured system. An event log file has been saved

in the home directory and may help to identify the incompatible configuration that is causing the problem.

Recommended actions

Proposed alternatives:

- Continue using the updated system and reimplement your programs and configuration, e.g. by selectively reloading contents of a previous valid backup.
- Use a snapshot to restore a previous valid system state.
- Perform a complete reinstallation of the RobotWare system using RobotWare Installation Utilities and then reload a valid backup.

10459, System restored from a snapshot

Description

System state has been restored from a snapshot.

Consequences

System state has been reverted to a previous point in time. This includes installed software products, system internal state, user and AddIns data.

Recommended actions

Before starting a robot program, make sure that robot position is ok.

10460, System state could not be restored after RobotWare system recovery

Description

Under normal circumstances, the attached backup is reloaded during system recovery. Loading the state has in this case failed and the system has therefore been reset and started with an empty configuration.

Consequences

All user programs and system parameters from the backup must be manually reloaded.

Probable causes

- The attached backup is invalid, e.g. missing some files.
- The attached backup and the configured system may be incompatible.

Recommended actions

Proposed alternatives:

- Continue using the system and re-implement your programs and configuration, e.g. by selectively reloading contents of a previous valid backup.

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10461, System recovery done**Description**

A system recovery package has been successfully installed on the current controller.

Consequences

The system is ready.

Recommended actions

Before starting a robot program, make sure that robot position is ok.

Probable causes

The path might be too long.

You may not have write access to the backup drive.

The drive might be full.

If it is a network drive, you might have lost connection.

Recommended actions

- 1 Verify that the backup drive isn't write protected
- 2 If it is a network drive, verify that controller hasn't lost contact

11020, Backup error**Description**

An error occurred while preparing to create a backup.

Unknown error.

Consequences

The backup request is aborted.

No backup was created.

Recommended actions

arg

Description

An error occurred while preparing to create a backup.

Error while creating the backinfo.txt file.

Consequences

The backup request is aborted.

No backup was created.

Probable causes

You may not have write access to the backup drive.

The drive might be full.

If it is a network drive, you might have lost connection.

Recommended actions

- 1 Verify that the backup drive isn't write protected
- 2 If it is a network drive, verify that controller hasn't lost contact

11024, Backup error**Description**

An error occurred while preparing to create a backup.

A directory/file couldn't be created.

Consequences

The backup request is aborted.

No backup was created.

Probable causes

You may not have write access to the backup drive.

The drive might be full.

If it is a network drive, you might have lost connection.

Recommended actions

- 1 Verify that the backup drive isn't write protected
- 2 If it is a network drive, verify that controller hasn't lost contact

11029, Backup error**Description**

An error occurred while preparing to create a backup.

The given backup path is too long.

Consequences

The backup request is aborted.

No backup was created.

Probable causes

The given backup path has exceeded the maximum allowed *arg* characters.

Recommended actions

Use a shorter path to create the backup.

11025, Backup error**Description**

An error occurred while preparing to create a backup.

The backup directory couldn't be created.

Consequences

The backup request is aborted.

No backup was created.

11031, Backup error**Description**

An error occurred while preparing to create a backup.

Error while searching for a file/entry.

Consequences

The backup request is aborted.

No backup was created.

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Continued

Probable causes

The current user does not have permission to write in requested directory.

Recommended actions

Choose another backup directory than *arg*, or log in as a different user.

11036, Backup error

Description

An error occurred while preparing to create a backup.
Write error.

Consequences

The backup request is aborted.
No backup was created.

Probable causes

You may not have write access to the backup drive.
The drive might be full.
If it is a network drive, you might have lost connection.
Do not create a backup inside the HOME directory.

Recommended actions

arg

11037, Backup error

Description

An error occurred while preparing to create a backup.
At least one modules name is too long.

Consequences

The backup request is aborted.
No backup was created.

Recommended actions

arg

11039, Backup error

Description

An error occurred while preparing to create a backup.
The drive is full.

Consequences

The backup request is aborted.
No backup was created.

Recommended actions

arg

11041, Backup error

Description

An error occurred while preparing to create a backup.
Error while verifying the system.
system.xml isn't installed in the system

Consequences

The backup request is aborted.
No backup was created.

Probable causes

system.xml isn't installed in the system

Recommended actions

Reset the system.

11042, Backup error

Description

An error occurred while preparing to create a backup.
Error while verifying the system.
system.xml isn't present in the SYSTEM directory.

Consequences

The backup request is aborted.
No backup was created.

Probable causes

system.xml isn't present in the SYSTEM directory.

Recommended actions

Reset the system.

11044, Backup error

Description

Error while verifying the backup path.

Consequences

The backup request is aborted.
No backup was created.

Probable causes

The backup path contains an invalid character.

Recommended actions

Verify the backup path.

11045, Backup error

Description

Error while creating the backup directory due to missing access rights.

Consequences

The backup request is aborted.

Continues on next page

No backup was created.

Probable causes

Missing access rights in the given backup path.

Recommended actions

Verify the access rights.

11120, Backup error

Description

Error during the backup step Configuration.

Unknown error.

Consequences

The backup request is aborted.

No backup was created.

11127, Backup error

Description

Error during the backup step Configuration.

Error while reading configuration parameters.

Consequences

The backup request is aborted.

No backup was created.

11128, Backup error

Description

Error during the backup step Configuration.

Error writing configuration parameters.

Consequences

The backup request is aborted.

No backup was created.

Probable causes

- 1 The destination is write protected.
- 2 The controller has lost contact with a mounted device (e.g. NFS, FTP, USB).

Recommended actions

- 1 Verify that the destination isn't write protected.
- 2 Verify that controller hasn't lost contact with a mounted device.

11129, Backup error

Description

Error during the backup step Configuration.

The given backup path is too long.

Consequences

The backup request is aborted.

No backup was created.

Probable causes

The given backup path has exceeded the maximum allowed *arg* characters.

Recommended actions

Use a shorter path to where to create the backup.

11130, Backup error

Description

Error during the backup step Configuration.

No more objects.

Consequences

The backup request is aborted.

No backup was created.

11136, Backup error

Description

Error during the backup step Configuration.

Write error.

Consequences

The backup request is aborted.

No backup was created.

Probable causes

- 1 The destination is write protected.
- 2 The controller has lost contact with a mounted device (e.g. NFS, FTP, USB).

Recommended actions

- 1 Verify that the destination isn't write protected.
- 2 Verify that controller hasn't lost contact with a mounted device.

11220, Backup error

Description

Error during the backup of Task.

Unknown error.

Consequences

The backup request is aborted.

No backup was created.

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11221, Backup error

Description

Error during the backup of Task.

Error with file path: *arg*

Consequences

The backup request is aborted.

No backup was created.

11222, Backup error

Description

Error during the backup of Task.

The backup already contains directories that are to be created.

Consequences

The backup request is aborted.

No backup was created.

11223, Backup error

Description

Error during the backup of Task.

The directory lacks at least one necessary item.

Consequences

The backup request is aborted.

No backup was created.

11224, Backup error

Description

Error during the backup of Task.

The directory does not exist.

Consequences

The backup request is aborted.

No backup was created.

11225, Backup error

Description

Error during the backup of Task.

Directory cannot be created.

Consequences

The backup request is aborted.

No backup was created.

Probable causes

- 1 The destination is write protected.
- 2 The controller has lost contact with a mounted device (e.g. NFS, FTP, USB).

Recommended actions

- 1 Verify that the destination isn't write protected.
- 2 Verify that controller hasn't lost contact with a mounted device.

11226, Backup error

Description

Error during the backup of Task.

Error while writing the backup.

Consequences

The backup request is aborted.

No backup was created.

Probable causes

- 1 The destination is write protected.
- 2 The controller has lost contact with a mounted device (e.g. NFS, FTP, USB).

Recommended actions

- 1 Verify that the destination isn't write protected.
- 2 Verify that controller hasn't lost contact with a mounted device.

11229, Backup error

Description

Error during the backup step Prepare.

The given backup path is too long.

Consequences

The backup request is aborted.

No backup was created.

Probable causes

The given backup path has exceeded the maximum allowed *arg* characters.

Recommended actions

Use a shorter path to create the backup.

11230, Backup error

Description

Error during the backup of Task.

No more objects.

Consequences

The backup request is aborted.

No backup was created.

Continues on next page

11231, Backup error**Description**

Error during the backup of Task.
The directory lacks at least one necessary item.

Consequences

The backup request is aborted.
No backup was created.

11236, Backup error**Description**

Error during the backup of Task.
Write error.

Consequences

The backup request is aborted.
No backup was created.

Recommended actions

Check: No space left on device. Corrupt device.

11237, Backup error**Description**

Error during the backup of Task.
At least one modname is too long.

Consequences

The backup request is aborted.
No backup was created.

11238, Backup error**Description**

Error during the backup of Task.
Low on program memory.

Consequences

The backup request is aborted.
No backup was created.

Probable causes

The backprocess needs program memory to store persistent variables.

Recommended actions

- 1 Stop the program before taking the backup.
- 2 Reduce the number of persistent variables in program.
- 3 Reduce the rapid program.

11261, Backup removed**Description**

Error while creating a backup at path: *arg*

Consequences

The backup request is aborted.
No backup was created.

Probable causes

- 1 Available disk space on the controller may be insufficient to perform the requested action.
- 2 Check for other error messages regarding backup.

11262, Backup error**Description**

Error during the backup of Controller Settings.

Consequences

The backup request is aborted.
No backup was created.

Probable causes

Check for other error messages regarding backup.

11263, Backup operation failed**Description**

The user *arg* does not have the required UAS grant UAS_BACKUP for the requested backup operation.

Consequences

The backup operation was not performed.

Probable causes

The user does not have the required UAS grant, is not logged on or has an invalid user id.

Recommended actions

- Log in as another user that has the required UAS grant, or add the grant to the existing user.
- If shown after a System Diagnostics file generation, please let a user with required UAS grant take a backup, without modifying RAPID/CFG, and include with System Diagnostics.

11264, Backup error**Description**

Error during the backup of User Authorization System.

Consequences

The backup request is aborted.
No backup was created.

Continues on next page

Continued

Probable causes

Check for other error messages regarding backup.

12020, Restore error

Description

Error during the restore step Prepare.
Unknown error.

Recommended actions

arg.

12023, Restore error

Description

Error during the restore step Prepare.
The directory lacks at least one necessary item.

Recommended actions

arg.

12024, Restore error

Description

Error during the restore step Prepare.
The directory does not exist.

Recommended actions

arg.

12029, Restore error

Description

Error during the restore step Prepare.
The path is too long.

Probable causes

The maximum allowed *arg* characters has been exceeded.

Recommended actions

Make sure no files with deep structures or long names have been added to the backup used to restore from.

12030, Restore error

Description

Error during the restore step Prepare.
No more objects.

Recommended actions

arg.

12031, Restore error

Description

Error during the restore step Prepare.
The directory lacks at least one necessary item.

Recommended actions

arg.

12032, Restore error

Description

Error during the restore step Prepare.
The system version doesn't match the backup.

Recommended actions

arg.

12033, Restore error

Description

Error during the restore step Prepare.
Error restoring configuration parameters.

Recommended actions

arg.

12035, Restore error

Description

Error during the restore step Prepare.
Mismatch between current system and the backup.

Recommended actions

arg.

12036, Restore error

Description

Error during the restore step Prepare.
Write error.

Recommended actions

arg.

12120, Restore error

Description

Error during the restore step Configuration.

12123, Restore error

Description

Error during the restore step Configuration.
The directory lacks at least one necessary item.

Continues on next page

12129, Restore error**Description**

Error during the restore step Prepare.
The path is too long.

Probable causes

The maximum allowed *arg* characters has been exceeded.

Recommended actions

Make sure no files with deep structures or long names have been added to the backup used to restore from.

12130, Restore error**Description**

Error during the restore step Configuration.
No more objects.

12131, Restore error**Description**

Error during the restore step Configuration.
The directory lacks at least one necessary item.

12134, Restore error**Description**

Error during the restore step Configuration.
Error restoring configuration parameters.

12136, Restore error**Description**

Error during the restore step Configuration.
Write error.

Probable causes

There might be some files located in the target HOME directory that are in use. The restore operation cannot overwrite the file(s). Another cause could be that there are entries in the backup that contains unsupported characters.

Recommended actions

- 1 Check if there are any open files, and if so, close them.
- 2 Verify that no file or directory in the backup has a name containing not supported characters.

12220, Restore error**Description**

Error during the restore of Task.
Unknown error.

12230, Restore error**Description**

Error during the restore of Task.
No more objects

12231, Restore error**Description**

Error during the restore of Task.
The directory lacks at least one necessary item.

12236, Restore error**Description**

Error during the restore of Task.
Write error.

12320, Restore error**Description**

Error during the restore of User Task.
Unknown error.

12323, Restore error**Description**

Error during the restore of User Task.
The directory lacks at least one necessary item.

12338, Restore error**Description**

Error during the restore of User Task.
Unknown task.

12341, Restore error**Description**

Error during the restore of Controller Settings.

12342, Restore error**Description**

Error during the restore of Safety Settings.

12343, Restore error**Description**

Error during the restore of User Authorization System.

Continues on next page

Continued

12344, Restore operation failed

Description

The user *arg* does not have the required UAS grant UAS_UAS_ADMINISTRATION for restoring User Authorization System.

Consequences

The restore operation was not performed.

Probable causes

The user does not have the required UAS grant, is not logged on or has an invalid user id.

Recommended actions

- 1 Log in as another user that has the required UAS grant.
- 2 Add the grant to the existing user.
- 3 Do not include User Authorization System when restoring the backup.

12345, Restore operation failed

Description

Restoring of User Authorization System is not possible on a Virtual Controller.

Consequences

The restore operation was not performed.

Recommended actions

Do not include User Authorization System when restoring the backup.

12346, Restore operation information

Description

The file *arg* in backup is modified.

12347, Restore operation information

Description

The file *arg* is added to backup.

12348, Restore operation information

Description

The file *arg* is removed from backup.

12350, Backup pending

Description

A backup will not be completed until the system input signal Disable Backup is set and reset.

12351, Backup pending

Description

The system input signal Disable Backup is set. A backup will not be completed until the system input signal Disable Backup is reset.

12510, Network subnet mask illegal

Description

The subnet mask *arg* for network interface *arg* is illegal.

Consequences

The network interface will not be configured, and may not be used.

Probable causes

The network subnet mask may be mistyped.

Recommended actions

- 1 Make sure the network subnet mask is correct.

12511, Network interface IP address illegal

Description

The network IP address *arg* for interface *arg* is illegal/missing.

Consequences

The interface will not be configured, and may not be used.

Probable causes

The network IP address may be mistyped or it already exists on the network.

Recommended actions

- 1 Make sure the interface IP address is correct and not a duplicate.

12512, Network gateway IP address illegal

Description

The gateway IP address *arg* is illegal/missing or the destination IP address *arg* is illegal.

Consequences

The network will not be reached, and may not be used.

Probable causes

The gateway IP and/or destination IP addresses may be mistyped.

Recommended actions

- 1 Make sure the gateway IP and destination IP addresses are correct.

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12513, No parameters from the DHCP server**Description**

The network interface *arg* has not received any parameters from the DHCP server.

Consequences

The interface will not be configured, and may not be used.

Probable causes

The LAN connection is not working -The DHCP server is not activated.

Recommended actions

- 1 Make sure the LAN cable is working and correctly connected.
- 2 Make sure the DHCP server is activated.
- 3 Set the LAN IP address manually.

12514, Network interface initialization error**Description**

The network interface *arg* could not be initialized.

Consequences

The interface will not be configured, and may not be used.

Probable causes

The network parameters may be wrong.

- Although unlikely, the hardware may be faulty, requiring replacement.

Recommended actions

- 1 Make sure the network parameters for the interface at hand are correct.
- 2 Isolate the cause, by replacing the suspected hardware.

12515, Network interface IP addresses overlap**Description**

The network IP address for '*arg*' is overlapping with IP address for '*arg*'.

Consequences

The interface will not be configured, and may not be used.

Probable causes

The network IP address and subnet mask overlaps with other IP address and subnet mask.

Recommended actions

- 1 Make sure the interface IP address and subnet mask are correct.

12516, Port forwarding configuration failed**Description**

Attempt to setup forwarding to IP address '*arg*' and port '*arg*' did not succeed.

Consequences

The port forwarding is not active.

Probable causes

The configuration is invalid or it has been rejected by the controller for security reasons.

Recommended actions

- 1 Make sure that the listening interface has an IP address configured.
- 2 Try another listening port, in case it is in conflict with another service on the controller.
- 3 Check for other log messages.

12521, Network service disabled**Description**

The network service *arg* is disabled on the *arg* network of the controller.

Consequences

Communication ports cannot be opened for the network service.

Recommended actions

Enable the network service *arg* on the *arg* network in the Firewall Manager configuration.

12610, Available RAM memory low**Description**

The available amount of RAM memory is low. Total RAM memory size: *arg* bytes. Free: *arg* bytes.

Consequences

The system may run out of memory.

Recommended actions

It is recommended to restart the system.

12611, Available RAM memory very low**Description**

The available amount of RAM memory is very low. Total RAM memory size: *arg* bytes. Free: *arg* bytes.

Consequences

The system may run out of memory. Memory allocation for non-production critical functionality will be rejected.

Continues on next page

Continued

Recommended actions

It is highly recommended to restart the system.

12612, Available RAM memory too low

Description

The available amount of RAM memory is too low. Total RAM memory size: *arg* bytes. Free: *arg* bytes.

Consequences

The system will enter System Failure State.

Recommended actions

Please restart the system.

12620, Mass storage predictive failure

Description

The mass storage device has issued a predictive failure alert.

Consequences

The mass storage device can fail and data will be lost.

Recommended actions

- 1 Back up data.
- 2 Replace the unit.

12700, Missing time zone information

Description

No time zone information has been specified.

Recommended actions

Please use the FlexPendant or RobotStudio to set the time zone for your location.

12705, OPC UA Server up and running

Description

OPC UA Server up and running on *arg* on Endpoint url.

12706, WAN IP Address

Description

Controller WAN IP Address is *arg*.

Recommended actions

Please update server application Instance certificate accordingly.

12707, Backup error

Description

An error occurred while preparing to create a backup.
A directory/file couldn't be created.

Consequences

The backup request is aborted.
No backup was created.

Probable causes

The name of a file or directory in the controller may contain non-valid characters.
The drive might be full.
If it is a network drive, you might have lost connection.

Recommended actions

- 1 Verify that no file or directory has a name containing unsupported characters.
- 2 Verify that the backup drive isn't write protected.
- 3 If it is a network drive, verify that controller hasn't lost contact.

12800, Enter sleep mode

Description

Controller is entering sleep mode.

Recommended actions

The controller is set to sleep mode. It will wake up upon receiving a Wake-on-Lan packet or a power cycle.

12801, Sleep mode not supported

Description

Controller cannot enter sleep mode.

Recommended actions

The controller hardware does not support Wake-on-Lan.

3 Number series: 2 xxxx

20012, System failure state active

Description

Fatal non-recoverable system error. Controller restart is required.

Recommended actions

Turn the mains switch off and on again if the soft restart command is ignored or not possible to reach.

Consequences

All data must be OK before automatic operation is possible. Manually jogging of the robot is possible.

Probable causes

There are differences between the data in the robot and the backup of robot memory. This may be due to replacement of serial measurement board, controller or both, or manually cleared robot memory.

Recommended actions

- 1 Update the robot memory as detailed in the operating manual for the controller.

20030, Axis not commutated

Description

One or several internal drive unit axes are not commutated.

Recommended actions

20051, Not allowed command

Description

The command is only allowed when the client is in control of the resource (program/motion).

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Check if the client is in control, by checking "Write Access" in RobotStudio.
- 2 Check if the client who ought to be in control really is.

20031, Axis not calibrated.

Description

One or several absolute/relative measurement axes are not calibrated.

Recommended actions

Check what axis that are not calibrated and calibrate them.

20032, Rev. counter not updated

Description

Revolution counter is not updated. One or several absolute measurement axes are not synchronized.

Recommended actions

Move the axes to the sync position and update the revolution counters.

20054, Not allowed command

Description

The command is NOT allowed when the program is executing.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Make sure the program is not executing.

20033, Axis not synchronized.

Description

One or several relative measurement axes are not synchronized.

Recommended actions

Order Motors On and synchronize all mechanical units in the list.

20059, Not allowed command

Description

The command is not allowed when the file containing system persistent data is invalid (the system has been started using last good auto saved system data).

Consequences

The system remains in the same status, and the requested action will not be performed.

20034, Robot memory is not OK

Description

This action or state is not allowed since data in the robot memory is not OK.

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Continued

Recommended actions

- 1 Revert to last auto saved system data (restart mode "Revert to last auto saved").
- 2 Reset the system (restart mode "Reset system").
- 3 Reinstall the system.

20060, Not allowed command

Description

The command is not allowed in Auto mode.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Make sure the system is NOT in Auto Mode.

20061, Not allowed command

Description

The command is not allowed when changing to Auto mode.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Make sure the system is NOT changing to Auto Mode.

20062, Not allowed command

Description

The command is not allowed in Manual mode.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Make sure the system is NOT in Manual Mode.

20063, Not allowed command

Description

The command is not allowed in Manual full speed mode.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Make sure the system is NOT in Manual full speed Mode.

20064, Not allowed command

Description

The command is not allowed when changing to Manual full speed mode.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Make sure the system is NOT changing to Manual full speed Mode.

20066, Not allowed command

Description

The system input action *arg* is not allowed in Manual full speed mode.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Make sure the system is NOT in Manual full speed Mode.

20067, Not allowed command

Description

The system input action *arg* is not allowed when changing to Manual full speed mode.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Make sure the system is NOT changing to Manual full speed Mode.

20068, Not allowed command

Description

The command is not allowed in current energy state.

Consequences

The system remains in the same status, and the requested action will not be performed.

Probable causes

The system is in an energy saving state.

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20069, Not allowed command**Description**

The command is not allowed when the robot is manually jogged.

Consequences

The system remains in the same status, and the requested action will not be performed.

Probable causes

The system is manually jogged.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Investigate by whom and why the action was requested, and, if required, correct the reason.

20070, Not allowed command**Description**

The command is not allowed in Motors On state.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Make sure the system is in Motors Off state.

20074, Not allowed command**Description**

The command is not allowed in Guard Stop state.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Make sure the system is NOT in Guard Stop state.

20071, Not allowed command**Description**

The command is not allowed while changing to Motors On state.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Investigate by whom and why the action was requested, and, if required, correct the reason.

20075, Not allowed command**Description**

The command is not allowed in Emergency Stop state.

Consequences

Emergency stop reset is required.

Recommended actions

- 1 Make sure the system is NOT in Emergency Stop state.

20072, Not allowed command**Description**

The command is not allowed in Motors Off state.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Make sure the system is in Motors On state.

20076, Not allowed command**Description**

The command is not allowed in system failure state.

Consequences

A non-recoverable system error has occurred, and a controller restart is required.

Recommended actions

- 1 Make sure the system is NOT in Emergency Stop state.
- 2 Perform a restart as detailed in the operating manual for the controller.
- 3 If restarting is not possible, switch the main power OFF and then back ON.

20073, Not allowed command**Description**

The command is not allowed while changing to Motors Off state.

20080, Not allowed command**Description**

The command is not allowed when axis has not been commutated.

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Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Commutate the axis as detailed in the Additional Axes Manual.
- 2 Investigate by whom and why the action was requested, and, if required, correct the reason.

20081, Not allowed command

Description

The command is not allowed when axis is not calibrated.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Calibrate the axis as detailed in the Calibration Pendulum Instruction or the Instructions for Level-meter calibration, depending on which equipment to be used.

20082, Not allowed command

Description

The command is not allowed when axis revolution counter is not updated.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Update the revolution counter as detailed in the operating manual for the controller.

20083, Not allowed command

Description

The command is not allowed when axis is not synchronized.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

- 1 Synchronize the axis as detailed in the Calibration Pendulum Instruction or the Instructions for Level-meter calibration, depending on which equipment to be used.

20084, Not allowed command

Description

This command is not allowed since data in the robot memory is not OK.

Consequences

All data must be OK before automatic operation is possible. Manually jogging the robot is possible.

Recommended actions

- 1 Update the robot memory as detailed in the operating manual for the controller.

20088, Automatic Mode Rejected

Description

The speed could not be set to 100% when automatic mode was requested.

Consequences

The system cannot enter automatic mode.

Probable causes

The speed could not be set to 100%.

Recommended actions

- 1 Switch back to manual mode.
- 2 a) Set the speed in the QuickSet menu.b) or set System Parameter Controller/Auto Condition Reset/AllDebugSettings/Reset to No if the system should be in debug mode when switching to auto.
- 3 Switch back to automatic mode and confirm.

20089, Automatic Mode Rejected

Description

The call chain was altered to begin at a routine other than main and could not be reset to main when automatic mode was requested.

Consequences

The system cannot enter automatic mode.

Probable causes

Program pointer could not be set to Main.

Recommended actions

- 1 Switch back to manual mode.
- 2 a) Move PP to main.b) or if the program always shall start at the new routine, change System Parameter "Main entry" (Domain Controller, Type Task) to the new routine name.c) or set System Parameter Controller/Auto Condition Reset/AllDebugSettings/Reset to No if the system should be in debug mode when switching to auto.

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3 Switch back to automatic mode and confirm.

20092, Not allowed command

Description

Not allowed in state System IO Start Blocked.

Recommended actions

20093, Automatic Mode Rejected

Description

One or more of the NORMAL tasks were disabled and could not be enabled when automatic mode was requested.

Consequences

The system cannot enter automatic mode.

Probable causes

It is not possible to reset Task Selection Panel in synchronized block.

Recommended actions

- 1 Switch back to manual mode.
- 2 a) Set PP to main.b) or step out of synchronized block.c) or set System Parameter Controller/Auto Condition Reset/AllDebugSettings/Reset to No if the system should be in debug mode when switching to auto.
- 3 Switch back to automatic mode and confirm.

20094, Load name could not be found

Description

Load name *arg* could not be found.

Consequences

It is not possible to jog without a correct defined load.

Probable causes

The module with the load definition is probably deleted.

Recommended actions

Load module with load definition. Choose other load.

20095, Tool name could not be found

Description

Tool name *arg* could not be found.

Consequences

It is not possible to jog without a correct defined tool.

Probable causes

The module with the tool definition is probably deleted.

Recommended actions

Load module with tool definition. Choose other tool.

20096, WorkObject name could not be found

Description

WorkObject name *arg* could not be found.

Consequences

It is not possible to jog without a correct defined workobject.

Probable causes

The module with the workobject definition is probably deleted.

Recommended actions

Load module with workobject definition. Choose other workobject.

20103, Controller busy updating Task Selection Panel.

Description

The Task Selection Panel is having an update. It is not possible to do the requested command.

Recommended actions

Perform the command again or restart the controller and perform the command again.

20104, The system path is too long.

Description

The system path is too long. It is not possible for the system to act in a safe way.

Consequences

The system will enter system failure state.

Recommended actions

Move the system to a location with a shorter file path.

20105, Backup already in progress

Description

A backup is already in progress.

Consequences

The command "Backup" from System Input Signal will be rejected.

Recommended actions

Use System Output Signal "Backup in progress" to control if a backup can be started.

20106, Backup path

Description

There are errors in the backup path or the backup name in the configuration for the System Input Backup. The directory for

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the backup cannot be created. Backup path: *arg*. Backup name: *arg*.

Consequences

The command "Backup" from System Input Signal will be rejected.

Probable causes

The path to the backup may not be correct.

Recommended actions

Verify that configured path and name for the System Input Backup are correct.

20126, Load data has changed

Description

The active load *arg* was removed and replaced with *arg*. The load data was located in task: *arg* connected to mechanical unit *arg*.

Consequences

The load definition for jogging may not be correct.

Probable causes

The load data was removed. The module containing the original tool definition may have been deleted.

Recommended actions

If you require the old definition, locate the program or module of the original load data and load it.

20127, Tool data has changed

Description

The active tool *arg* was removed and replaced with *arg*. The tool data was located in task: *arg* connected to mechanical unit *arg*.

Consequences

The tool definition for jogging may not be correct.

Probable causes

The tool data was removed. The module containing the original tool definition may have been deleted.

Recommended actions

If you require the old definition, locate the program or module of the original tool data and load it.

20128, Work object data has changed

Description

The active work object *arg* was removed and replaced with *arg*. The work object data was located in task: *arg* connected to mechanical unit *arg*.

Consequences

The work object definition for jogging may not be correct.

Probable causes

The work object data was removed. The module containing the original tool definition may have been deleted.

Recommended actions

If you require the old definition, locate the program or module of the original work object data and load it.

20131, Automatic Mode Rejected

Description

One or more logical I/O signals were blocked and could not be unblocked when automatic mode was requested.

Consequences

The system cannot enter automatic mode.

Probable causes

Some blocked I/O signal could not be unblocked.

Recommended actions

- 1 Switch back to manual mode.
- 2 a) Check Event Log for errors related to I/O, b) or set System Parameter Controller/Auto Condition Reset/AllDebugSettings/Reset to No if the system should be in debug mode when switching to auto.
- 3 Switch back to automatic mode and confirm.

20132, Blocked I/O signals

Description

One or more logical I/O signals were blocked during startup in automatic mode.

Consequences

Blocked signals will be unblocked.

Probable causes

System was switched to automatic mode during a controller restart.

System parameter AllDebugSettings is set to Yes.

Recommended actions

None, system has automatically reset debug settings. To keep debug settings in auto:

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- 1 Switch back to manual mode.
- 2 Set system parameter Controller/Auto Condition Reset/AllDebugSettings/Reset to NO.
- 3 Switch back to automatic mode and confirm.
- 4 For more info, see the Technical Reference Manual - System Parameters.

20133, Debug Settings in Auto

Description

One or more logical I/O signals were blocked during startup in automatic mode.

Consequences

Blocked I/O signals will stay blocked. System will not be in full production mode in auto.

Recommended actions

For full production mode:

- 1 Switch back to manual mode.
- 2 Set system parameter Controller/Auto Condition Reset/AllDebugSettings/Reset to YES.
- 3 Switch back to automatic mode and confirm.
- 4 For more info, see the Technical Reference Manual - System Parameters.

20134, Call Chain

Description

The call chain has been altered to begin at a routine other than main.

Consequences

Program pointer will be reset to main routine.

Probable causes

System was switched to automatic mode during controller restart. System parameter AllDebugSettings is set to Yes.

Recommended actions

For debug mode in auto:

- 1 Switch back to manual mode.
- 2 Set system parameter AllDebugSetting, reset to NO.
- 3 Switch back to automatic mode and confirm.
- 4 For more info, see the Technical Reference Manual - System Parameters.

20135, Debug Settings in Auto

Description

The call chain has been altered to begin at a routine other than main.

Consequences

Program pointer will not be set to main. System will not be in full production mode in auto.

Recommended actions

For full production mode:

- 1 Switch back to manual mode.
- 2 Set system parameter Controller/Auto Condition Reset/AllDebugSettings/Reset to YES.
- 3 Switch back to automatic mode and confirm.
- 4 For more info, see the Technical Reference Manual - System Parameters.

20136, Reduced Speed

Description

The system was running at reduced speed during startup in automatic mode.

Consequences

Speed will be set to 100%.

Probable causes

System was switched to automatic mode during controller restart.

Recommended actions

None, system has automatically reset debug settings.

To keep debug settings in auto:

- 1 Switch back to manual mode.
- 2 Set system parameter Controller/Auto Condition Reset/AllDebugSettings/Reset to NO.
- 3 Switch back to automatic mode and confirm.
- 4 For more info, see the Technical Reference Manual - System Parameters.

20137, Debug Settings in Auto

Description

The system was running at reduced speed during startup in automatic mode.

Consequences

Speed will stay unchanged. System will not be in full production mode in auto.

Recommended actions

For full production mode:

- 1 Switch back to manual mode.
- 2 Set system parameter Controller/Auto Condition Reset/AllDebugSettings/Reset to YES.
- 3 Switch back to automatic mode and confirm.

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- 4 For more info, see the Technical Reference Manual - System Parameters.

20138, Disabled Tasks

Description

One or more of the NORMAL tasks were disabled during the startup when in automatic mode.

Consequences

All disabled normal tasks will be enabled.

Probable causes

System was switched to automatic mode during controller restart. System parameter AllDebugSettings is set to Yes.

Recommended actions

None, system has automatically reset debug settings. To keep debug settings in auto:

- 1 Switch back to manual mode.
- 2 Set system parameter Controller/Auto Condition Reset/AllDebugSettings/Reset to NO.
- 3 Switch back to automatic mode and confirm.
- 4 For more info, see the Technical Reference Manual - System Parameters.

20139, Debug Settings in Auto

Description

One or more of the NORMAL tasks were disabled during startup in automatic mode.

Consequences

Disabled tasks will stay disabled. System will not be in full production mode in auto.

Recommended actions

For full production mode:

- 1 Switch back to manual mode.
- 2 Set system parameter Controller/Auto Condition Reset/AllDebugSettings/Reset to YES.
- 3 Switch back to automatic mode and confirm.
- 4 For more info, see the Technical Reference Manual - System Parameters.

20140, Motors On rejected

Description

Motors On, via System IO, was rejected.

Recommended actions

20141, Motors Off rejected

Description

Motors Off, via System IO, was rejected.

Recommended actions

20142, Start rejected

Description

Start/restart of program, via System IO, was rejected.

Consequences

Program will not be possible to start.

Probable causes

- The reason could be that the robot is outside of regain distance.
- The program was executing.
- An ongoing Backup operation.

Recommended actions

- Jog robot into regain zone or move the program pointer.
- Stop program before activating System Input Start.

20143, Start at main rejected

Description

Start of program at main, via System IO, was rejected.

Consequences

Program will not be possible to start.

Probable causes

- The program was executing.
- An ongoing Backup operation.

Recommended actions

Stop program before activating System Input Start at Main.

20144, Stop rejected

Description

Stop of program, via System IO, was rejected.

Recommended actions

20145, Stop cycle rejected

Description

Stop of program after cycle, via System IO, was rejected.

Recommended actions

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20146, Manual interrupt rejected**Description**

Manual interrupt of program, via System IO, was rejected.

Consequences

The manual interrupt will not be executed.

Probable causes

- The program was executing.
- An ongoing Backup operation.

Recommended actions

Stop program before activating System Input Interrupt.

20147, Load and start rejected**Description**

Load and start of program, via System IO, was rejected.

Consequences

Program will not be possible to start.

Probable causes

- The arguments for the System Input Load and Start are wrong: .
- The module was loaded, but the system failed to set the program pointer.
- The program was executing.
- An ongoing Backup operation.

Recommended actions

Check the following:

- Correct arguments for System Input Load and Start.
- Defined and correct name of the program file to be loaded (including mass memory unit).
- Defined and correct name of the task that the program should be loaded in.
- Program stopped before activating System Input Load and Start.

20149, Error reset rejected**Description**

Program execution error reset, via System IO, was rejected.

Recommended actions

20150, Load failure**Description**

Load of program, via System IO, failed.

Consequences

Program will not be possible to start.

Probable causes

- The arguments for the System Input Load are wrong: .
- The module was loaded, but the system failed to set the program pointer.
- The program was executing.
- An ongoing Backup operation.

Recommended actions

Check the following:

- Correct arguments for System Input Load.
- Defined and correct name of the program file to be loaded (including mass memory unit).
- Defined and correct name of the task that the program should be loaded in.
- Program stopped before activating System Input Load.

20153, Motors On and Start rejected**Description**

Motors On and Start/Restart of program, via System IO, was rejected.

Consequences

Program will not be possible to start.

Probable causes

- The reason could be that the robot is outside of regain distance.
- The program was executing.
- An ongoing Backup operation.

Recommended actions

- Jog robot into regain zone or move the program pointer.
- Stop program before activating System Input Motors On and Start.

20154, Stop instruction rejected**Description**

Stop of program after instruction, via System IO, was rejected.

Recommended actions

20156, Undefined Argument**Description**

Interrupt routine name for System IO Manual Interrupt is not defined.

Recommended actions

Configure the interrupt routine name.

Continues on next page

20157, Undefined Argument

Description

Program name for System IO LoadStart is not defined.

Recommended actions

Configure the program name.

20158, No System Input signal

Description

A System Input has been configured to an I/O-signal that does not exist. System Input: *arg*. Signal Name: *arg*.

Consequences

The system goes to system failure state.

Recommended actions

Add signal *arg* to *eio.cfg* or remove System Input *arg* from *eio.cfg*. For every System Input a signal must be configured.

20159, No System Output signal

Description

A System Output has been configured to an I/O-signal that does not exist. System Output: *arg*. Signal Name: *arg*.

Consequences

The system goes to system failure state.

Recommended actions

Add signal *arg* to *eio.cfg* or remove System Output *arg* from *eio.cfg*. For every System Output a signal must be configured.

20161, Path not found

Description

The system module *arg* in task *arg* has a corresponding specification in the configuration for "Task modules" that point out a non-existing file path.

Recommended actions

View "Task modules" in the "System Parameter" menu and change the path in the item for this system module.

20162, Write error

Description

A write error occur when the system try to save the system module *arg* at *arg* in task *arg*. Or the file system was full.

Recommended actions

View "Task modules" in the "System Parameter" menu and change the path in the item for this system module.

Continues on next page

20164, Reconfig failed

Description

There are still some unsaved system modules.

Recommended actions

Read error descriptions in earlier messages. Try another system start.

20165, Program Pointer lost.

Description

Restart is no longer possible from current position.

Recommended actions

The program has to be started from the beginning.

20166, Refuse to save module

Description

The module *arg* is older than the source at *arg* in task *arg*.

Recommended actions

20167, Unsaved module

Description

The module *arg* is changed but not saved in task *arg*.

Recommended actions

20170, The system was stopped

Description

An error was detected, which stopped the system.

Consequences

The system goes to status SYS STOP and the robot is stopped along the path.

Probable causes

A number of errors may cause this status transition.

Recommended actions

- 1 Check other event messages occurring at the same time to determine the actual cause.
- 2 Fix the cause of the fault.

20171, The system was halted

Description

An error was detected, which halted the system.

Consequences

The system goes to status SYS HALT, the program and robot motion is stopped and the motors are switched OFF.

Probable causes

A number of errors may cause this status transition.

Recommended actions

- 1 Check other event messages occurring at the same time to determine the actual cause.
- 2 Fix the cause of the fault.
- 3 Restart the program.

20172, The system has failed**Description**

An error was detected, which caused the system to fail.

Consequences

The system goes to system failure state. The program and robot motion is stopped and the motors are switched OFF.

Probable causes

A number of errors may cause this status transition.

Recommended actions

- 1 Check other event messages occurring at the same time to determine the actual cause.
- 2 Fix the cause of the fault.
- 3 Perform a controller restart as detailed in the operating manual for the controller.

20176, Analog System Output Outside Limits**Description**

The value *arg* for the System Output *arg*, signal *arg*, is outside its limits (logical min: *arg* m/s, logical max: *arg* m/s).

Consequences

The new value is not set; the previous value of the analogue signal is preserved.

Probable causes

The logical upper and/or lower limit for the signal may be defined wrongly.

Recommended actions

Adjust the values of the logical upper and/or lower limit for the signal and restart the controller.

20178, Wrong task name configured**Description**

Wrong task name *arg* configured for System Input *arg*.

Consequences

The digital input signal will not be connected to the specified event.

Recommended actions

Change the configuration and restart the controller.

20181, System Reset rejected.**Description**

System Reset via System IO not allowed.

Recommended actions**20182, The System Input Signal QuickStop is rejected****Description**

QStop of program, via System IO, was rejected.

Recommended actions**20184, Incorrect argument for System Inputs****Description**

An undefined Start Mode has been declared for System IO.

Recommended actions**20188, System data is not valid****Description**

The contents of the file, containing system persistent state is invalid. Internal error code: *arg*. The system has been started using last good auto-recovery state saved earlier at *arg*.

Consequences

Any changes made in the system configuration or RAPID programs since *arg* are lost.

Probable causes

The backup energy bank may have been drained at the time of the shutdown or software problem during shutdown.

Recommended actions

- Check other event messages to help determine the actual cause.
- If acceptable, acknowledge the auto-recovered system data.
- Reset the system and load user backup.
- Reinstall the system and load user backup.
- Report the problem to ABB support and attach system diagnostics data.

20189, Robot data not valid**Description**

Could not load robot data from file.

The file exists but the content is not valid. Internal code: *arg*.

Continues on next page

Continued

Recommended actions

Check other logged messages for needed actions. Report the problem to ABB support.

20193, Robot data update warning

Description

Axis sync values and service information data (SIS) was restored from auto-recovery backup.

The robot data was not saved during system shutdown.

Recommended actions

Check other event log messages that may indicate software problems.

The backup battery may be drained. Check the hardware log.

20194, Auto-recovery backup could not be created

Description

The system state was restored successfully on startup but a auto-recovery backup of the current system state could not be created.

Recommended actions

Report this problem to ABB support.

20195, System state from last shutdown is lost

Description

Internal system file containing system persistent state was not found. Under normal circumstances, the system state is automatically stored to controller persistent memory during shutdown or restart. The system has been started using auto-recovery system data saved earlier at *arg*.

Consequences

Any changes made in system configuration or RAPID programs since *arg* are lost and will have to be re-implemented.

Probable causes

The backup energy bank may have been drained at the time of the shutdown. The internal storage disk may be full. Software problem during shutdown.

Recommended actions

- Check other event messages to help determine the actual cause.
- If acceptable, acknowledge the auto-recovered system data.
- Reset the system and load user backup.
- Reinstall the system and load user backup.
- Report the problem to ABB support and attach system diagnostics data.

Continues on next page

20196, Module saved

Description

During reconfiguration of the system a changed and not saved module was found.

The module was saved to *arg*.

Recommended actions

20271, Text files are no longer supported.

Description

The file *arg* is of old text format that is no longer supported./>

Recommended actions

Convert the file to XML-format.

20280, Symbol conflict

Description

The signal *arg* defined in the IO configuration conflict with another program symbol with the same name.

Due on that fact the signal will not be mapped to a program variable.

Recommended actions

Rename the signal in the IO configuration.

20282, Resource and index exist

Description

Resource *arg*.

Index *arg*.

Recommended actions

20283, Text database is full.

Description

Resource *arg*.

Index *arg*.

Recommended actions

20284, Wrong Signal Type For System Input

Description

The System Input *arg* is configured with an I/O-signal of wrong type.

The I/O-signal *arg* is of type *arg* and this System Input requires an I/O-signal of type *arg*.

Recommended actions

Change the configuration for the specified System Input.

20285, Wrong Signal Type For System Output**Description**

The System Output *arg* is configured with an I/O-signal of wrong type.

The I/O-signal *arg* is of type *arg* and this System Output requires an I/O-signal of type *arg*.

Recommended actions

Change the configuration for the specified System Output.

20286, Not Unique I/O-Signal For System Output**Description**

Each System Output must have a unique I/O-signal configured. It is not possible to configure same I/O-signal to several System Outputs.

System Output: *arg*.

Signal Name: *arg*.

Recommended actions**20287, Not Unique I/O-signal For System Input****Description**

Each System Input must have a unique I/O-signal configured. It is not possible to configure same I/O-signal to several System Inputs.

System Input: *arg*.

Signal Name: *arg*.

20288, Unknown System Output Type**Description**

The configured System Output type is unknown by the system. Unknown System Output: *arg*.

Recommended actions

Verify that the System Output name is correctly spelled.

20289, Unknown System Input Type**Description**

The configured System Input type is unknown by the system. Unknown System Input: *arg*.

Recommended actions

Verify that the System Input name is correctly spelled.

20290, Unknown Mechanical Unit Name For System Output**Description**

A System Output is configured with a mechanical unit name which is unknown by the system.

System Output: *arg*.

Mechanical unit name: *arg*.

Recommended actions

The specified mechanical unit must be configured in order to be used by System Outputs.

Verify that the mechanical unit name is correctly spelled.

20291, Unknown System Input Restriction Type**Description**

The configured System Input Restriction Type is unknown by the system.

Unknown System Input Restriction: *arg*.

Recommended actions

Verify that the System Input Restriction name is correctly spelled.

20292, Unknown System Input Restriction**Description**

The configured System Input Restriction is unknown by the system.

System Input Restriction Type: *arg*.

Unknown System Input Restriction: *arg*.

Recommended actions

Verify that the System Input Restriction name is correctly spelled.

20293, The Requested Action is Restricted**Description**

The requested *arg* is restricted by the system input *arg* set by I/O signal *arg*.

Consequences

The action called for will not take place.

Probable causes

System input *arg* may be set by external equipment, such as PLCs, etc. for a number of reasons.

Recommended actions

- 1 Investigate why the system input was set, and, if required, correct the reason.

Continues on next page

Continued

20294, Action *arg* cannot be fulfilled.

Description

The requested action cannot be fulfilled since the IO unit is not responding.

Consequences

It is not possible to decide if there are any restrictions set to the action.

Probable causes

The requested action will not be fulfilled until the I/O unit is enabled again.

Recommended actions

Never disable a unit with System Inputs/Outputs.

20295, Signal cannot be used as System Output.

Description

The System Output *arg* is configured with an I/O-signal with wrong category. The I/O-signal *arg* belongs to category Safety and cannot be used as System Output.

Recommended actions

Choose another signal or set to another category.

20296, Wrong task name configured

Description

Wrong task name *arg* configured for System Output *arg*.

Consequences

The digital output signal will not be connected to the specified event.

Recommended actions

Change the configuration and restart the controller.

20297, System Output Communication Failure

Description

Unable to set the value of the I/O signal *arg* connected to the System Output *arg*.

Consequences

The system goes to status SYS HALT.

Probable causes

- The connection to the I/O unit may have been lost.

20299, Several I/O-signals Configured For System Input

Description

System Input Verify Local Presence.

Continues on next page

It is not possible to configure several I/O-signals to this system input.

Signal Name: *arg* rejected.

20300, Restricted System Input

Description

The configured System Input: *arg* is restricted by an option.

Recommended actions

Remove the System Input and restart or install correct option.

20301, Restricted System Output

Description

The configured System Output: *arg* is restricted by an option.

Recommended actions

Remove the System Output and restart or install correct option.

20321, Not-a-Number

Description

Not-a-Number was found in task *arg*.

A symbol of type '*arg*' was found holding an undefined number.

Consequences

The undefined number was replaced with '*arg*'.

20322, Positive infinity

Description

Positive infinity was found in task *arg*.

A symbol of type '*arg*' was found holding positive infinity.

Consequences

The positive infinity was replaced with '*arg*'.

20323, Negative infinity

Description

Negative infinity was found in task *arg*.

A symbol of type '*arg*' was found holding negative infinity.

Consequences

The negative infinity was replaced with '*arg*'.

20324, Incorrect argument for System IO Signal

Description

arg set to signal *arg* has an incorrect argument.

Consequences

It will not be possible to use *arg*.

Probable causes

The configuration has probably been edited outside a proper configuration editor.

Recommended actions

The system IO signal must be reconfigured, preferably with the configuration editor on RobotStudio or on FlexPendant.

20326, Incorrect argument for System IO Signal**Description**

arg set to signal *arg* has an incorrect argument. The delay must not be a negative value.

Consequences

It will not be possible to use *arg*.

Recommended actions

The system IO signal must be reconfigured.

20327, System Signal already installed**Description**

arg will not be loaded from the I/O configuration file. It has already been installed from the Controller configuration file.

Recommended actions

Verify the configuration for the system signal to see if all data is correct.

20350, Not a valid task name**Description**

The task name *arg* cannot be used as a name of a task. It is either already used as an installed symbol, a reserved word in the system or too long (max. 16 characters).

Consequences

The task will not be installed in the system.

Recommended actions

Change the configuration of the task name and restart the controller.

20351, Max number of tasks exceeded**Description**

The maximum number of tasks, *arg*, of the configuration type *arg* is exceeded.

Consequences

All configured tasks will not be installed.

Recommended actions

Change the configuration and restart the controller.

20352, Not a valid Motion Planner name**Description**

The Motion Planner name for Mechanical Unit Group *arg* in *arg* is not correct.

The reason can be one of the following:

- 1 Empty name.
- 2 Not present in the Motion configuration.
- 3 Already in use by another Mechanical Unit Group.

Consequences

The system will not be able to use.

Recommended actions

Change the configuration and restart the controller.

20353, Mechanical unit not found**Description**

The mechanical unit *arg* in *arg* cannot be found in the list of configured mechanical units.

Consequences

It is not possible to execute any RAPID instructions that use the configured mechanical units.

Probable causes

The unit is probably not present in the Motion configuration.

Recommended actions

Change the configuration and restart the controller.

20354, The argument is undefined**Description**

The configured argument *arg* for task *arg* is not a valid type.

Consequences

The behavior of the task will be undefined.

Recommended actions

Change the configuration and restart the controller.

20355, Mechanical Unit Group name not correct**Description**

The configured name of *arg* in task *arg* is not correct.

The reason could be:

- 1 The argument is not used in the configuration.
- 2 The configured name is not a member of the Mechanical Unit Group.
- 3 The configured name is already used by another task.

Continues on next page

Continued

Consequences

The task will not be installed or it will not be possible to execute RAPID motion instructions.

Recommended actions

Change the configuration and restart the controller.

20356, Maximum number of Motion tasks exceeded

Description

Only *arg* tasks are allowed to control mechanical units i.e. execute RAPID move instructions.

Recommended actions

Change the configuration and restart the controller.

20357, No configured Motion task

Description

No task is configured to control mechanical units i.e. execute RAPID move instructions.

Consequences

It is not possible to execute any RAPID move instructions.

Recommended actions

Reinstall the system and be sure to include a robot.

20358, No members of *arg* configured

Description

The configuration type is required in a multi robot system.

Consequences

It is not possible to execute any RAPID move instructions.

Recommended actions

Change the configuration and restart the controller.

20359, Cfg type *arg* is configured

Description

The type was found but not expected in a system with current options.

Recommended actions

Check if the right configuration file is loaded or remove all instances of the type.

Restart the controller.

20360, Unknown event in cfg type *arg*

Description

The event *arg* is not a system event.

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Recommended actions

Change the configuration and restart the controller.

20361, Only shared modules in the shared task

Description

The module *arg* is not configured shared and cannot be loaded into the shared task.

Recommended actions

Change the configuration and restart the controller.

20362, Not defined task name

Description

The task *arg* in cfg type *arg* is not configured in the system.

Recommended actions

Change the configuration and restart the controller.

20363, Module not a system module

Description

The module *arg* loaded from the file *arg* is not a system module.

Recommended actions

Change the file suffix or add a module attribute to the module.
Load the module again or restart the controller.

20364, Max number of Mechanical Unit Groups exceeded

Description

The maximum number of Mechanical Unit Groups, *arg*, of the configuration type *arg* is exceeded.

Consequences

Exceeded instances are ignored.

Recommended actions

Change the configuration and restart the controller.

20365, Update of configuration is done

Description

All tasks are reset to its main routine due to configuration changes.

Recommended actions

20366, Type error in task configuration**Description**

The task *arg* is configured with wrong type. Task configured to control mechanical units i.e. execute RAPID move instructions must be of type *arg*.

Consequences

The task will not be installed.

Recommended actions

Change the configuration and restart the controller.

20367, No configured mechanical units**Description**

The instance *arg* of configuration type *arg* has no mechanical unit argument.

Consequences

It will not be possible to perform any actions against the motion system, i.e. execute RAPID move instructions.

Recommended actions

Change the configuration and restart the controller.

20368, Not connected Mechanical Unit Group**Description**

There is no Motion task connected with the Mechanical Unit Group *arg*.

Consequences

It will not be possible to use the mechanical units that belong to this group.

Probable causes

The cause of this error can be a missing RAPID task instance in the Controller domain of the configuration or a task that has not been configured as a Motion task.

Recommended actions

- 1 Add a Motion task instance that is connected to the Mechanical Unit Group.
- 2 Change an existing non Motion task to a Motion task.
- 3 Remove the Mechanical Unit Group.
- 4 Check for misspelled names.

20370, Failed to read configuration data for regain distance**Description**

The system failed to read the configuration data for the type *<arg>*. The regain distance is the limit when the system will warn before a start with regain movement.

Consequences

Default value for the regain distance will be used.

Probable causes

- The sys.cfg file loaded into the system does not contain any regain distance information.
- No sys.cfg file has been loaded due to file errors.

Recommended actions

- 1 Load a new sys.cfg file and restart the controller.

20371, A default Mechanical Unit Group is used**Description**

The configuration of task *arg* has no connection to *arg*. The attribute *arg* is required in a MultiMove system and is missing.

Consequences

The task performs no movement by the mechanical unit, but can read motion data. The RAPID functions may fail, if they read motion data and is connected to the wrong mechanical unit. The Mechanical Unit Group in *arg* has been connected to the task.

Probable causes

- The attribute was not specified when the configuration was created.
- The configuration file could have been created in a non-multi move system.

Recommended actions

- 1 Make sure the correct Mechanical Unit Group is connected to the task.

20372, Failed to read configuration data.**Description**

The system failed to read the configuration data for the type *<arg>*.

Consequences

Hotedit or modpos will not be possible.

Probable causes

- The sys.cfg file loaded into the system does not contain hotedit and modpos information.
- No sys.cfg file has been loaded due to file errors.

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Recommended actions

Load a new sys.cfg file and restart the controller.

20373, Missing task name

Description

No task is given for module *arg* in cfg type *arg*.

Recommended actions

Change the configuration and restart the controller.

20380, No Motion Planner connected to mechanical unit

Description

The mechanical unit *arg* has no Motion Planner connected.

Consequences

It is not possible to use this mechanical unit in any operations such as calibration or activation.

Probable causes

The cause of this error is probably an error in the configuration.

Recommended actions

Check the Motion and/or Controller configuration.

20381, Error when recreating path after power fail

Description

The path wasn't successfully recreated.

Consequences

The Program Pointer must be moved before restarting the program. It's recommended to move the robot to a safe position though the robot might not follow the original path when restarted.

Probable causes

A number of errors may cause this. Faults causing the system to go to system failure state will generally also cause path recreate after power failure to fail.

Recommended actions

- 1 Check other event messages occurring at the same time to determine the actual cause.
- 2 Fix the cause of the fault.
- 3 Move the robot to a safe position before restarting. The robot may not follow the original path.

20390, Start rejected

Description

Start/restart of program, via System IO, was rejected.

The reason is that write access is held by *arg* using *arg*.

Recommended actions

20391, Start at main rejected

Description

Start of program at main, via System IO, was rejected.

The reason is that write access is held by *arg* using *arg*.

Recommended actions

20392, Manual interrupt rejected

Description

Manual interrupt of program, via System IO, was rejected.

The reason is that write access is held by *arg* using *arg*.

Recommended actions

20393, Load and start rejected

Description

Load and start of program, via System IO, was rejected.

The reason is that write access is held by *arg* using *arg*.

Recommended actions

20394, Motors On and Start rejected.

Description

Motors On and Start/restart of program, via System IO, was rejected.

The reason is that write access is held by *arg* using *arg*.

Recommended actions

20395, Load rejected

Description

Load of program via System IO, was rejected.

The reason is that write access is held by *arg* using *arg*.

20396, Manual interrupt rejected

Description

Manual interrupt of program, via System IO, was rejected in task *arg*.

Manual interrupt is not allowed during synchronized movement.

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20397, Manual interrupt rejected**Description**

Manual interrupt of program, via System IO, was rejected in task *arg*.

The interrupt is connected to *arg*, which is not a valid RAPID procedure.

Consequences

arg will not be executed.

Probable causes

- 1 does not exist.
- 2 is not a procedure (PROC) that takes zero (0) parameters.

Recommended actions

Make sure that *arg* is an existing procedure (PROC) that takes zero (0) parameters.

- 1 Switch back to auto mode.
- 2 Set system parameter Controller/Auto Condition Reset/AllDebugSettings/Reset to NO.
- 3 Switch back to automatic mode and confirm.
- 4 For more info, see the Technical Reference Manual - System Parameters.

20400, Debug Settings In Auto**Description**

A static/semi-static task (alias background task) has been stopped.

Consequences

The static/semi-static task will not be started.
System will not be in full production mode in auto.

Recommended actions

For full production mode:

- 1 Switch back to manual mode.
- 2 Set system parameter Controller/Auto Condition Reset/AllDebugSettings/Reset to Yes.
- 3 Switch back to automatic mode and confirm.
- 4 For more info, see the Technical Reference Manual - System Parameters.

20398, Automatic Mode Rejected**Description**

A stopped static/semi-static task (alias background task) could not be started when automatic mode was requested.

Consequences

The system cannot enter automatic mode.

Probable causes

A stopped static/semi-static task could not be started.

Recommended actions

- 1 Switch back to manual mode.
- 2 Make sure that all static/semi-static tasks has a program/module containing the configured production entry.
- 3 Make sure that no static/semi-static task has any syntax errors.
- 4 Switch back to automatic mode and confirm.

20401, Too many CFG instances**Description**

There are too many instances *arg* of type *arg* in topic *arg*.

Consequences

The wrong instance may be used and cause unexpected behavior.

Probable causes

There are multiple instances of *arg* of type *arg* in topic *arg*.

Recommended actions

Remove all instances but one.

20399, Static/Semi-static task started**Description**

At least one static/semi-static task (alias background task) was not executing after startup in automatic mode.

Consequences

Execution was started in at least one static/semi-static task.

Probable causes

System was switched to automatic mode during a controller restart.

Recommended actions

None, system has automatically reset debug settings. To keep debug settings in auto:

20402, Automatic Mode Rejected**Description**

An active RAPID Spy session could not be deactivated when automatic mode was requested.

Consequences

The system cannot enter automatic mode.

Probable causes

RAPID Spy could not be deactivated.

Recommended actions

- 1 Switch back to manual mode.

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- 2 Use an external client, e.g. RobotStudio, to deactivate RAPID Spy.
- 3 Switch back to automatic mode and confirm.

20403, RAPID Spy deactivated

Description

RAPID Spy was deactivated after startup in automatic mode.

Consequences

RAPID Spy was deactivated.

Probable causes

System was switched to automatic mode during controller restart.

Recommended actions

None, system has automatically reset debug settings. To keep debug settings in auto:

- 1 Switch back to manual mode.
- 2 Set system parameter Controller / Auto Condition Reset / AllDebugSettings / Reset to NO.
- 3 Switch back to automatic mode and confirm.
- 4 For more info, see the Technical Reference Manual - System Parameters.

20404, Debug Settings In Auto

Description

RAPID Spy is active.

Consequences

RAPID Spy will not be deactivated.

System will not be in full production mode in auto.

Recommended actions

For full production mode:

- 1 Switch back to manual mode.
- 2 Set system parameter Controller / Auto Condition Reset / AllDebugSettings / Reset to Yes.
- 3 Switch back to automatic mode and confirm.
- 4 For more info, see the Technical Reference Manual - System Parameters.

20408, PP to Main rejected

Description

Setting PP to Main, via System IO, was rejected.

The reason is that write access is held by *arg* using *arg*.

20409, PP to Main rejected

Description

Setting PP to Main, via System IO, was rejected.

Consequences

PP wasn't set to Main.

Probable causes

The reason could be that the program was executing or that no program is loaded containing the Main procedure.

Recommended actions

Make sure the program execution is stopped and that a program containing the Main procedure is loaded.

20410, Energy Saving has been reset

Description

Energy Saving has been reset. Before being reset, the system was in Energy Saving Mode: *arg*.

Consequences

The system is no longer in any Energy Saving mode.

Probable causes

The system has been restarted, intentional or caused by a power fail.

20411, Energy saving activated

Description

The robot system has entered an energy saving state.

Consequences

The robot system will not be able to perform any normal tasks.

20412, Energy saving deactivated

Description

The robot system has resumed from an energy saving state.

Consequences

The robot system will now be able to perform any normal tasks.

20413, Motors On failed

Description

Motors On failed when the controller was resuming from an energy saving state.

Consequences

The system will resume from energy saving state, but remain in Motors Off/Guard Stop.

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Probable causes

The controller:

- is no longer in Auto mode,
- is in system failure state,
- is in emergency stop state.

20414, Program start failed**Description**

Start of program execution failed when the controller was resuming from an energy saving state.

Consequences

The system will resume from energy saving state, but remain in stopped state.

Probable causes

The controller:

- is no longer in Auto mode,
- is in system failure state,
- is in emergency stop state.

20415, Motors On/Program Start failed**Description**

Motors On and/or Start of program execution failed when the controller was resuming from an energy saving state.

Consequences

The system will resume from energy saving state, but remain in Motors Off.

Probable causes

The system is in Emergency Stop state.

Recommended actions

Make sure the emergency stop button has been released and that the emergency stop has been reset (pressing Motors On button or using System Input action 'Reset Emergency Stop').

20416, Energy saving blocked**Description**

The robot system has been blocked from entering an energy saving state.

Consequences

The robot system will not be able to enter an energy saving state until being unblocked.

Probable causes

- System Input Action 'EnableEnergySaving' is not set.
- Not in operator Mode Auto.
- Sysenergy option is not present (PROFInergy).

20417, Energy saving unblocked**Description**

The robot system has left blocked state.

Consequences

The robot system will now be able to enter an energy saving state.

20418, Energy saving already active**Description**

The robot system has already entered energy saving state. There is no support for switching between energy saving modes. To enter a different energy saving mode, the robot system must first be resumed.

Consequences

The robot system will remain in the previously entered saving mode.

Probable causes

The robot system has already entered energy saving state.

Recommended actions

To enter a different energy saving mode, the robot system must first be resumed.

20425, Write Access rejected**Description**

Requesting Write Access, via System IO, was rejected.

Consequences

Write Access was not granted.

Probable causes

The reason could be that another client already holds write access or that the system isn't in Auto mode.

Recommended actions

Make sure that no other client, e.g. RobotStudio, holds write access and that the system is in Auto mode.

20426, Write Access rejected**Description**

Requesting Write Access, via System IO, was rejected. The reason is that write access is held by *arg* using *arg*.

20440, Failed to initialize FW upgrade framework**Description**

The firmware upgrade framework for hardware boards could not be initialized.

Continues on next page

Continued

Consequences

No firmware upgrade of hardware boards will be performed.

Probable causes

An invalid xml file in the controller installation:*arg*.

Recommended actions

For developers:

- Correct the file. Use the *hw_compatibility.xsd* schema to verify.

For other users:

- Reinstall the system.

20441, Failed to initialize firmware patch

Description

Failed to initialize the firmware patch handling for hardware boards.

Consequences

No firmware patches for hardware boards will be applied.

Probable causes

The firmware patch file was invalid:*arg*.

Recommended actions

Correct the patch file. Use the schema *hw_compatibility.xsd* to verify.

20443, Multiple firmware upgrade restarts

Description

A new restart to firmware upgrade mode was ordered after two consecutive upgrade restarts.

Consequences

No further restart to firmware upgrade mode was performed.

Probable causes

Firmware upgrade of a hardware board has most likely failed. The board's firmware or hardware may be corrupt.

Recommended actions

Check the event log for previous error messages.

20573, Controller ID is Missing

Description

Controller ID is the controller's unique identity. It is by default equal to the serial number of the controller's cabinet. The software configuration of the controller is missing this identity information.

Probable causes

This may happen if the storage media of the controller has been replaced or reformatted.

Recommended actions

Read the serial number of the controller from the controller cabinet to find out what the controller ID should be. Use RobotStudio tools to set this value for the controller.

20578, ABB internal licenses are used

Description

Licenses for ABB internal use are installed on this controller.

Consequences

Using these licenses outside of ABB is a violation of license agreement.

Recommended actions

If this is a production system, please contact ABB to obtain valid customer licenses.

20600, Unofficial RobotWare release

Description

The current RobotWare is not an officially supported release. Unofficial RobotWare releases may only be used for time-limited test and validation purposes.

Consequences

ABB will not provide long-term support on unofficial releases.

Recommended actions

If this is a production system, install an official RobotWare release as soon as possible.

20602, Unofficial RobotWare image

Description

The current RobotWare main computer image is not the original, and is hence not officially supported.

Consequences

ABB will not provide long-term support on unofficial RobotWare releases.

Probable causes

The officially released main computer image has been replaced, e.g., for the purpose of collecting diagnostic data for a specific problem.

Recommended actions

If this is a production system, install an official RobotWare release as soon as possible.

Continues on next page

20610, Motor phase short circuit**Description**

The drive unit for joint *arg* has reported short circuit. The joint is connected to drive module *arg* with unit position *arg* and node *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state with zero torque.

Probable causes

- 1 Short circuit in cables or connectors between the phases or to ground.
- 2 Short circuit in motor between the phases or to ground.

Recommended actions

- 1 Check/replace cables and connectors.
- 2 Check/replace motor.

20620, The system has entered an internal test mode**Description**

A feature to perform ABB Robotics internal tests has been enabled in *arg*.

Consequences

The system may not behave as expected.

Recommended actions

Restart the controller when the test has been performed. If this was an unexpected message, please contact your contact your local ABB representative for assistance.

20630, Camera job missing Output to Rapid**Description**

The camera *arg* has a job loaded that is not created with the "Use Output to Rapid" functionality. The "Use Output to Rapid" functionality will be disabled until the next state change from program mode to run mode.

Consequences

All functionality that requires the use of output to Rapid, e.g. CamGetResult, is turned off. CamGetParameter is not affected and will still work.

Probable causes

- The "Use Output to Rapid" configuration parameter is set to Yes, but was supposed to be set to No.
- The job loaded into the camera is not correct or is not compatible with this version of RobotWare.

Recommended actions

- Set the camera in program mode. Load a valid job into the camera or use Robot Studio to create one.
- In RobotStudio in the "Vision"-tab, select "Output to RAPID" to convert parameters to RAPID variables and save the job.
- Set the "Use Output to Rapid" configuration parameter to No, if that functionality is not intended to be used.

20633, Integrated Vision not installed**Description**

The option Integrated Vision is not installed on this system.

Consequences

No communication with the camera is possible.

Probable causes

The Integrated Vision functionality have been used or configured without the Integrated Vision option installed.

Recommended actions

- 1 If the Integrated Vision option is needed: configure a new system with this option, and install the system.
- 2 If the Integrated Vision option is not needed: remove the use of Integrated Vision functionality, i.e. RAPID or configuration data.

20634, No result for current camera job**Description**

The robot controller did not receive any result for camera *arg*.

Consequences

The robot controller will not recognize any positional data in the image.

Probable causes

No part tools have been defined for the current job loaded in camera *arg*.

Recommended actions

Use RobotStudio to add a Part Location Tool or a Part Inspection Tool to the job. Follow the instruction in the RobotStudio context menu and save the job.

20635, Too many cameras connected**Description**

Number of cameras connected to the robot controller is *arg*. Max number of cameras for a robot controller is *arg*.

Consequences

The robot controller will not communicate with all the cameras.

Continues on next page

Continued

Probable causes

Maximum number of cameras for a robot controller have been exceeded.

Recommended actions

Reduce the number of cameras connected to the robot controller.

20636, Duplicated camera name

Description

The camera configuration is invalid. The camera name *arg* have been used for more than one camera.

Consequences

The robot controller will not communicate with cameras with the same name.

Probable causes

Two or more cameras with the same name have been configured.

Recommended actions

Rename the cameras so that they have unique names and restart the controller.

20637, Camera permission denied

Description

Permission denied to login to the camera with ip address *arg* using username *arg*.

Consequences

The robot controller cannot login to the camera.

Probable causes

Username and/or password is not correct.

Recommended actions

From RobotStudio Integrated Vision Add-In use "Set Controller User" to select camera login credentials to be used by the controller.

20638, Option missing

Description

You are trying to use functionality that require the RobotWare Option *arg*.

Recommended actions

Check the options of your system.
Correct your system options and reset the system.

20639, Camera connection up

Description

The robot controller communicates correctly with the camera *arg* with IP address *arg*.

20640, Camera connection down

Description

The connection to camera *arg* with IP address *arg* has been lost.

Consequences

The robot controller cannot access the camera.

Recommended actions

Check cabling and camera settings.

20641, New camera detected

Description

A new camera with mac address *arg* has been detected.

20642, DryRun configuration error

Description

Error while reading the DryRun configuration file *arg*.

Consequences

The DryRun configuration failed. All signals might not have been added to the Dryrun configuration.

Probable causes

The file does not follow the recommended XML format.

Recommended actions

Review the DryRun configuration file *arg* and make sure it is correct. See the recommended XML format in the user documentation.

20643, DryRun configuration error

Description

Error while reading the DryRun configuration file *arg*.

Consequences

The DryRun configuration failed. The signal *arg* was not added to the DryRun configuration.

Probable causes

- 1 The file does not follow the recommended XML format.
- 2 The signal is missing in the I/O configuration.

Continues on next page

Recommended actions

Review the DryRun configuration file *arg* and make sure that the entry for signal *arg* is correct. See the recommended XML format in user documentation.

20644, DryRun configuration error**Description**

Error while reading the DryRun configuration file *arg*.

Consequences

The DryRun configuration failed. The signal *arg* was not added to the DryRun configuration.

Probable causes

The maximum number of allowed configured signals in DryRun has been exceeded. No more than *arg* signals can be configured for DryRun.

Recommended actions

Reduce the number of signals in the DryRun configuration.

20645, DryRun configuration error**Description**

Unexpected error during the DryRun configuration.

Consequences

All signals might not have been added to the DryRun configuration.

Recommended actions

Review all DryRun configuration files and make sure that they are correct. See the recommended XML format in user documentation.

20646, DryRun aborted**Description**

DryRun was aborted by a Stop.

Consequences

Dryrun was aborted and no signal values have been updated.

Recommended actions

DryRun will be executed in fully at next program start.

20647, DryRun aborted**Description**

DryRun was aborted by a Power Fail.

Consequences

All signal values might not have been updated as planned and PP might be in wrong place.

Recommended actions

Move PP to Main to restart the production cycle and refresh all signal values.

20648, DryRun aborted**Description**

DryRun was aborted by an execution error.

Consequences

Dryrun was aborted and no signal values have been updated.

Recommended actions

Solve the error and try to start again.

20649, DryRun configuration error**Description**

Error while configuring DryRun, a signal named *arg* already exists.

Consequences

The DryRun configuration failed. The original configuration of signal *arg* was kept in the DryRun configuration.

Probable causes

The signal *arg* is duplicated in the DryRun configuration.

Recommended actions

Review all DryRun configuration files and make sure that signal *arg* is only present once.

20650, DryRun aborted**Description**

DryRun was aborted when program execution reached end of main without reaching position where program pointer was placed when DryRun started.

Consequences

All signal values might not have been updated as planned and PP might be in wrong place.

Probable causes

The program pointer's original position could not be reached while restarting execution in DryRun mode from the beginning of the routine.

Recommended actions

Move PP to Main to restart the production cycle and refresh all signal values.

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20651, Image request timed out

Description

An image request for camera *arg* has timed out.

Consequences

- If the camera is still processing the image then new commands towards the camera may not respond and also timeout.
- If/when the current processing image completes it will insert the results into the database.

Probable causes

- The timeout set in configuration for the maximum time for image requests may be set too low.
- The camera may be in an error state.
- The communication with the camera is down.

Recommended actions

- If the image processing time is larger than the maximum time set in configuration for image requests, then adjust the configuration.
- Start and try again.
- If the problem remain, restart the camera.

20652, Camera job is not valid

Description

The job loaded into the camera *arg* is not correct or is not compatible with this version of RobotWare.

Consequences

The camera will reset to program mode.

Probable causes

- The job loaded into the camera is not correct or is not compatible with this version of RobotWare.
- The "Use Output to Rapid" configuration parameter is set to Yes, but was supposed to be set to No.

Recommended actions

- If the usage of output to Rapid functionality, e.g. CamGetResult, is not intended to be used, then set the "Use Output to Rapid" configuration to No.
- If the "Use of Output to Rapid" functionality is needed then a correct job has to be loaded into the camera.
- Make sure that the fields in the "Output to Rapid" tab is saved before loading the job.

20653, DryRun rejected

Description

DryRun was rejected due to unfinished movement.

Continues on next page

Consequences

Start will be rejected until unfinished movement has been cleared.

Probable causes

DryRun execution cannot handle unfinished movement.

Recommended actions

Abort unfinished movement:

- Set PP to Cursor, i.e. to the position where PP currently is.
- Set PP to Main.

20655, No job is loaded in the camera

Description

There is no job loaded in the camera *arg* or the active job in the camera has not been saved.

Consequences

If there is no job loaded in the camera, the robot controller will not recognize any positional data in the image.

Recommended actions

- If no job exists on the camera, use RobotStudio to create a job and add a Part Location Tool or a Part Inspection Tool to the job. Follow the instruction in the RobotStudio context menu and save the job.
- If an active job exists on the camera, save the job.

20656, Camera refresh started

Description

An update of camera information has been ordered by an external client.

Consequences

If a camera is busy doing any time consuming operation such as loading a job or processing an image, the camera refresh service for that specific camera will be postponed until the ongoing operation is finished.

20657, Camera IP address changed

Description

The IP address of camera *arg* with MAC address *arg* has changed.

Old IP address *arg*.

New IP address *arg*.

Consequences

For the controller to connect to a configured camera that has a new IP address, it is necessary to warmstart the controller.

Recommended actions

If a configured camera has changed IP address, warmstart the controller.

20658, Camera updated**Description**

The camera *arg* with IP address *arg* and MAC address *arg* has been updated.

20659, Camera instruction**Description**

The camera *arg* is of type *arg*. The instruction *arg* is not available on a camera *arg*.

20660, Debug service not using default values**Description**

The debug service is not using default values and the system is considered to be in debug mode.

Consequences

The changed debug service settings may slightly affect system performance.

Recommended actions

To switch back to default debug service setting, please set the configuration parameter in domain *arg*, type *arg*, instance *arg* and attribute *arg* to false.

This can be done by creating a cfg file with the following data and then load it.

```
DBG:CFG_1.0:7:0::
```

```
DBG_SERVICE_default:
```

```
-name "IsDefaultValueUsed" -isDefaultValuesUsed 1
```

20661, Debug service using default values**Description**

The debug service is now using default values and the system is no longer in debug mode.

20665, Error during automatic calibration**Description**

Error locating the hall sensor.

Unable to move off the sensor for joint *arg*.

20666, Error during automatic calibration**Description**

Error locating the hall sensor.

Unable to find the hall sensor for joint *arg*.

Consequences

The calibration for joint *arg* failed, and will be uncalibrated.

Recommended actions

Move the joint closer the synchronization markers and retry.

20667, System state is lost**Description**

The file containing system persistent data cannot be found and auto-recovery backup of the previous last-good system state is not available. In normal circumstances system state is automatically stored to persistent memory during shutdown and an auto-recovery copy of previous last-good state is preserved.

Consequences

System configuration and RAPID programs are lost and will have to be re-implemented or reloaded from a user stored backup.

Probable causes

Internal system error or insufficient space on the internal system storage.

Recommended actions

- Reset the system and load a backup that you have previously stored on the controller or on external storage media.
- Reinstall the RobotWare System and load a backup.
- Report the problem to ABB support and attach system diagnostics data.

20668, Uas grant removed**Description**

In the User Authorization System, the role *arg* has a grant specified that no longer exist.

Consequences

Users with the role specified may not have access to the same functionality as before.

Recommended actions

Review what grants that the role need to have and update accordingly.

20669, The camera user is missing sufficient permission**Description**

The camera user account *arg* is missing sufficient permission to communicate with camera, ip address *arg*. For the controller

Continues on next page

Continued

to be able to communicate to the camera, the user account on the camera requires access: Protected or Full.

Consequences

The controller will not be able to connect to the camera.

Recommended actions

Review the access settings for the user account on the camera or select an account that have access rights: Protected or Full.

20670, Obsolete compression format

Description

The identified compression format is no longer in use.

Consequences

The compressed file will not be decompressed.

Probable causes

Outdated RobotStudio.

Recommended actions

Update RobotStudio.

20671, Restricted command

Description

The script file *arg* contains the restricted command *arg* that is not allowed in untrusted scripts.

Consequences

This restricted command will be executed on a virtual controller but not on a real robot controller.

Probable causes

Use of a restricted command in an untrusted script file.

Recommended actions

Modify your script to use a replacement command before using it on a real controller.

See Application manual RobotWare Add-Ins for more help if needed.

20672, Restricted command

Description

This script file *arg* contains the restricted command *arg* that is not allowed in untrusted scripts.

Consequences

The restricted command is not executed.

Probable causes

Use of a restricted command in an untrusted script file.

Recommended actions

Modify your script to use a replacement command.

See Application manual RobotWare Add-Ins for more help if needed.

20673, No brake release function available

Description

The system has started with no available emergency brake release function.

Consequences

In an emergency, the robot can not be moved without drive power.

Probable causes

The FlexPendant App is not updated to latest version.

Recommended actions

Update the FlexPendant App.

20674, Invalid subnet mask

Description

The subnet mask *arg* defined in the *vc_network_definition.xml* is invalid or missing. The subnet mask has to be added in the dotted decimal notation, in the element SubnetMask. The file *vc_network_definition.xml* is located in the HOME/IV folder of the virtual controller.

Consequences

The virtual controller will not be able to connect to a camera

Recommended actions

Add a valid subnet mask and restart the virtual controller.

20675, Invalid IP address

Description

The IP address *arg* defined in the *vc_network_definition.xml* is invalid or missing. The IP address has to be added in the dotted decimal notation. The file *vc_network_definition.xml* is located in the HOME/IV folder of the virtual controller.

Consequences

The virtual controller will not be able to connect to a camera

Recommended actions

Add a valid IP address and restart the virtual controller.

4 Number series: 3 xxxx

31810, DeviceNet master/slave board is missing

Description

The DeviceNet master/slave board does not work.

Consequences

No communication on the DeviceNet network is possible.

Probable causes

The DeviceNet master/slave board is either malfunctioning or missing.

Recommended actions

- 1 Make sure a DeviceNet master/slave board is installed.
- 2 Replace the board if faulty.

31910, PROFIBUS master board is missing

Description

The PROFIBUS master board does not work.

Consequences

No communication on the Profibus is possible.

Probable causes

The PROFIBUS master board is either malfunctioning or missing.

Recommended actions

- 1 Make sure a PROFIBUS master board is installed.
- 2 Replace the board if faulty.

31911, Profibus board update error

Description

The RobotWare software was not able to download new driver software to the PROFIBUS master board. The *arg* channel (ch *arg*) of the Profibus board could not be programmed. Internal error code:*arg*.

Consequences

No communication on the Profibus is possible.

Probable causes

The RobotWare software may be corrupt or the board hardware may be malfunctioning.

Recommended actions

- 1 Restart the controller to reattempt downloading the software.
- 2 Reinstall the present system files.
- 3 Create and run a new system to download the driver software.
- 4 Replace the board if faulty.

31912, PROFIBUS master board failure

Description

The PROFIBUS master board did not start up correctly.

Consequences

No communication on the Profibus is possible.

Probable causes

The PROFIBUS master board hardware may be malfunctioning.

Recommended actions

- 1 Restart the controller.
- 2 Replace the PROFIBUS master board if faulty.

31913, PROFIBUS master board internal error

Description

The PROFIBUS master board reported internal error *arg*.

Consequences

No communication on the PROFIBUS network is possible.

Probable causes

The PROFIBUS master board hardware may be malfunctioning.

Recommended actions

- 1 Restart the controller.
- 2 Replace the PROFIBUS master board if faulty.

31914, PROFIBUS network startup error

Description

PROFIBUS network startup error *arg*. Check cabling, terminators and modules then restart.

Recommended actions

31915, PROFIBUS network error

Description

PROFIBUS master network error.

Internal error

Error code *arg*.

Consequences

Certain expected associated errors may be delayed.

Probable causes

Faulty PROFIBUS cabling, terminators and/or module(s).

Duplicated PROFIBUS addresses.

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Recommended actions

Check cabling, terminators and modules.

31916, PROFIBUS network OK

Description

PROFIBUS regained contact on the master network.

Recommended actions

31917, PROFIBUS master board exception

Description

A fatal error has occurred on the PROFIBUS master board. *arg* channel in task *arg*. Parameters *arg*.

Consequences

No communication on the Profibus is possible.

Probable causes

The PROFIBUS master board hardware may be malfunctioning.

Recommended actions

- 1 Restart the controller.
- 2 Replace the PROFIBUS master board if faulty.

32119, RTC is missing or not working properly

Description

The Real Time Clock is missing or not working properly.

Consequences

Robot controller would have a wrong time base.

Probable causes

No RTC battery, or the battery power is low.

Recommended actions

- 1 Replace the RTC battery on control board.
- 2 Replace the control board if faulty.

32540, Drive unit firmware re-flash started

Description

In drive module *arg*, a required upgrade of the firmware in the drive unit at unit position *arg* has started. The old firmware revision *arg* is replaced with revision *arg*.

Recommended actions

Wait for the firmware upgrade process to complete. Do not turn off system power!

32541, Drive unit firmware re-flash complete

Description

In drive module *arg*, the upgrade of the firmware in the drive unit with unit position *arg* is completed. New revision is *arg*.

32542, Drive unit hardware not supported

Description

In drive module *arg*, the system cannot use the drive unit with hardware identity *arg* because the hardware revision *arg* is not supported.

Consequences

The system is unable to use the drive unit. The system goes to system failure state.

Probable causes

The RobotWare version is too old to support the drive unit.

Recommended actions

- 1 Upgrade the system to a RobotWare version supporting the drive unit revision.
- 2 Replace the drive unit to one with compatible revision.

32543, Drive unit firmware re-flash failed

Description

In drive module *arg*, the upgrade of the firmware in the drive unit at unit position *arg* failed.

Consequences

The required upgrade of the drive unit firmware is not performed.

Recommended actions

- 1 Check other hardware event log messages for detailed explanation of the error condition.
- 2 Try again by restart the controller using the main power switch.

32544, Drive unit firmware file not found

Description

The file *arg*, required to upgrade a drive unit's firmware, is not found.

Consequences

The required upgrade of the drive unit firmware is not performed.

Probable causes

The RobotWare installation does not contain the firmware file.

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Recommended actions

Reinstall the system.

32545, Drive unit firmware file type error**Description**

The file *arg*, required to upgrade a drive unit's firmware, is of wrong type.

Consequences

The required upgrade of the drive unit firmware is not performed.

Probable causes

The RobotWare installation is faulty.

Recommended actions

Reinstall the system.

32546, Drive unit firmware file error**Description**

The file *arg*, required to upgrade a drive unit's firmware, is not usable because it failed the integrity check.

Consequences

The required upgrade of the drive unit firmware is not performed.

Probable causes

The RobotWare installation is faulty.

Recommended actions

Reinstall the system.

32550, Firmware re-flash started**Description**

A required update of the *arg* firmware has started. File used: *[arg]*.

Recommended actions

Wait for the re-flash to complete.

32551, Firmware re-flash completed**Description**

The update of *arg* firmware has completed successfully.

32552, Firmware re-flash failed**Description**

The update of *arg* firmware failed.

Internal error code:*arg*.

Recommended actions

- 1 Check other error messages for detailed explanation.
- 2 Restart the controller.
- 3 Reinstall the system.
- 4 Replace the .

32553, Firmware file is corrupt**Description**

The firmware file *[arg]* is corrupt. Internal error code:*arg*.

Recommended actions

Reinstall the system.

32554, Firmware file not found**Description**

The firmware file *[arg]* is not found.

Recommended actions

Reinstall the system.

32560, Axis computer firmware re-flash started**Description**

In drive module *arg*, a required upgrade of the firmware in the axis computer *arg* with hardware identity *arg* has started. The old firmware revision *arg* is replaced with revision *arg*.

Recommended actions

Wait for the firmware upgrade process to complete. Do not turn off system power!

32561, Axis computer firmware re-flash complete**Description**

In drive module *arg*, the upgrade of the firmware in the axis computer *arg* with hardware identity *arg* is completed. New revision is *arg*.

32562, Axis computer communication error**Description**

The system failed to communicate with the axis computer in drive module *arg* when trying to read firmware information.

Consequences

The system is unable to determine if an upgrade is required of the firmware in the affected drive module. The system goes to system failure state.

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Probable causes

This may be due to a cable break, bad connector or high levels of interference in the cable between the main computer and the axis computer.

Recommended actions

- 1 Make sure the cable between the main computer and the axis computer is not damaged and that both connectors are correctly connected.
- 2 Make sure no extreme levels of electromagnetic interference are emitted close to the robot cabling.

32563, Axis computer hardware not supported

Description

In drive module *arg*, the system cannot use the axis computer with hardware identity *arg* because the hardware revision *arg* is not supported.

Consequences

The system is unable to use the axis computer. The system goes to system failure state.

Probable causes

The RobotWare version is too old to support the axis computer unit.

Recommended actions

- 1 Replace the axis computer to one with compatible revision.
- 2 Upgrade the system to a RobotWare version supporting the axis computer revision.

32564, Axis computer firmware re-flash failed

Description

In drive module *arg*, the upgrade of the firmware in the axis computer *arg* with hardware identity *arg* failed.

Consequences

The required upgrade of the axis computer firmware is not performed.

Recommended actions

- 1 Check other hardware event log messages for detailed explanation of the error condition.
- 2 Retry again by restarting the controller using the main power switch.

32565, Axis computer firmware file not found

Description

The file *arg*, required to upgrade an axis computer's firmware, is not found.

Consequences

The required upgrade of the axis computer firmware is not performed.

Probable causes

The RobotWare installation does not contain the firmware file.

Recommended actions

Reinstall the system.

32567, Axis computer firmware file type error

Description

The file *arg*, required to upgrade an axis computer firmware, is of wrong type.

Consequences

The required upgrade of the axis computer's firmware is not performed.

Probable causes

The firmware file is corrupt.

Recommended actions

Reinstall the system.

32568, Axis computer firmware file error

Description

The file *arg*, required to upgrade an axis computer's firmware, is not usable because it failed the integrity check.

Consequences

The required upgrade of the axis computer firmware is not performed.

Probable causes

The firmware file is corrupt.

Recommended actions

Reinstall the system.

32569, Corrupt axis computer hardware

Description

In drive module *arg*, the axis computer flash memory has a corrupt content.

Recommended actions

- 1 Retry again by restarting the controller using the main power switch.
- 2 If the problem remains then replace the axis computer.

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32570, Firmware re-flash started**Description**

A required update of the *arg* firmware has started. Replacing old firmware version: [arg].

Recommended actions

Wait for the re-flash to complete.

32571, Firmware re-flash completed**Description**

The update of *arg* firmware has completed successfully. New version: [arg]. Internal code:[arg].

32572, Firmware re-flash failed**Description**

The upgrade of *arg* firmware failed.
Current version:arg. Internal error code:arg.

Recommended actions

- 1 Check other hardware eventlog messages for detailed explanation of the error condition.
- 2 Reinstall the system.

32573, Unable to download firmware file**Description**

The firmware file *arg* is not found. Internal error code:arg.

Recommended actions

Reinstall the system.

32574, Corrupt axis computer hardware**Description**

The *arg* flash memory has a corrupt content. Internal error code:arg.

Recommended actions

- 1 Check other hardware event log messages for detailed explanation of the error condition.
- 2 Restart the controller.
- 3 If failure occurs again, replace the axis computer.

32575, Found no axis computer board**Description**

System failed to detect any connected axis computer.

Recommended actions

- 1 Check system for axis computer board.

- 2 Check Ethernet cables between the main computer and the axis computer.
- 3 Restart the controller.

32576, Axis firmware: No communication**Description**

The system failed to communicate with axis board *arg* when trying to check the firmware version.

Consequences

The system is unable to check and if necessary upgrade the firmware in the affected axis computer.

Recommended actions

- 1 Check system for axis computer board.
- 2 Check Ethernet cables between the main computer and the axis computer.
- 3 Restart the controller.

32577, Axis computer hardware data error**Description**

In drive module *arg*, the axis computer has corrupt information stored on the unit.

Consequences

The system goes to system failure state.

Probable causes

The integrity check of the axis computer information stored on the unit has failed.

Recommended actions

- 1 Retry again by restarting the controller using the main power switch.
- 2 Replace the faulty axis computer.

33503, Revolution counter update failure**Description**

Update of the revolution counter for joint *arg* failed.

Consequences

Joint not synchronized.

Probable causes

- 1 Joint missing or not active.
- 2 Measurement system error.

Recommended actions

- 1 Check if joint active.
- 2 Check configuration files.
- 3 Check measurement system.

Continues on next page

33601, Anybus module is missing

Description

The Anybus module is missing.

Consequences

No communication with the Anybus module is possible.

Probable causes

The Anybus module is either malfunctioning or missing.

Recommended actions

- 1 Make sure a Anybus module is installed.
- 2 Replace the module if faulty.

34101, Drive system not supported

Description

The configured drive system in drive module *arg* is not of type Drive System '09.

Consequences

The system goes to system failure state.

Probable causes

- 1 Wrong drive module key used, i.e., the configuration does not match hardware.
- 2 Wrong hardware used in the system.

Recommended actions

- 1 Reinstall the system with a drive module key that matches the hardware.
- 2 Replace the drive module with one that supports Drive System '09.

34102, Missing rectifier unit

Description

For joint *arg*, the system cannot find the configured rectifier unit. The joint is configured for controller cabinet *arg*, in the drive unit at unit position *arg*.

Consequences

The system goes to system failure state.

Probable causes

A joint is configured but a rectifier unit is not found.

Recommended actions

- 1 Verify that the controller cabinet contains the rectifier unit for the configured joint.
- 2 Verify that the configuration for the rectifier unit position is correct.
- 3 Check the cabling between the rectifier unit and the drive unit.

- 4 If the cables are correctly connected, then they may be damaged and should be replaced.

34200, Lost communication with all drive units

Description

In drive module *arg*, the axis computer has lost communication with all drive units.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state with zero torque.

Probable causes

Communication problem between drive units and the axis computer.

Recommended actions

- 1 Check that all cables are properly connected.
- 2 Check that the drive units have logic power.
- 3 Check/replace Ethernet cables.
- 4 Check for other hardware event log messages.
- 5 Check the event log for power supply unit error messages.
- 6 Check the cabling between the power supply unit and the drive unit.
- 7 Check the 24 V output from the power supply unit.

34202, Lost communication with drive unit

Description

In drive module *arg*, the axis computer has lost communication with the drive unit at unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state with zero torque.

Probable causes

Communication problem between the drive unit and the axis computer.

Recommended actions

- 1 Check that all cables are properly connected.
- 2 Check that the drive unit has logic power.
- 3 Check/replace Ethernet cables.
- 4 Check for other hardware event log messages.
- 5 Check the event log for power supply unit error messages.
- 6 Check the cabling between the power supply unit and the drive unit.
- 7 Check the 24 V output from the power supply unit.

Continues on next page

34203, Motor current too high**Description**

The motor current is too high for joint *arg*, connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 The motor configuration is incorrect.
- 2 The axis load may be too high or the motor may have stalled (maybe due to a collision).
- 3 The motor is too small for the drive unit.
- 4 Short circuit between motor phases or protective earth.

Recommended actions

- 1 Check that the motor configuration is correct.
- 2 Check that the robot has not collided.
- 3 If possible, reduce the speed of the user program.
- 4 Check that the axis load is not too high for the motor.
- 5 Verify that the maximum motor current is not too small compared to the maximum current of the drive unit.
- 6 Check the motor cable and motor by measuring their resistance respectively. Disconnect before measuring.

34251, Incoming mains phase missing**Description**

In drive module *arg*, the rectifier unit at drive unit position *arg* has detected a power loss in phase *arg*.

Consequences

The system may stop with DC link too low voltage.

Probable causes

- 1 Incoming mains voltage loss of phase .
- 2 Some malfunction in cabling or internal 3-phase components.
- 3 The rectifier unit is faulty.

Recommended actions

- 1 Check all incoming mains phases to the cabinet.
- 2 Check all internal 3-phase components (main switch, mains filter, fuse, contactors) and cabling in the drive module.

34252, Incoming mains missing**Description**

The rectifier unit at drive unit position *arg* has detected a mains voltage loss.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 Incoming mains voltage loss.
- 2 Some malfunction in the cabling or in internal 3-phase components.
- 3 The rectifier unit is faulty.

Recommended actions

- 1 Check the incoming mains voltage.
- 2 Check all the internal 3-phase components (main switch, mains filter, fuse, contactors) and cabling in the drive module.

34255, Rectifier temperature error**Description**

The rectifier unit at drive unit position *arg* has reached a too high temperature level.

Consequences

No operation will be possible until the rectifier has cooled down. The system goes to Motors Off state.

Probable causes

- 1 The cooling fans may be faulty or the air flow may be obstructed.
- 2 The ambient temperature may be too high.
- 3 The system may be running with a too high torque for extended periods of time.

Recommended actions

- 1 Verify that the fans are running and that the air flow is not obstructed.
- 2 Verify that the ambient temperature does not exceed the cabinet's temperature rating.
- 3 If possible, rewrite the user program to reduce the amount of hard acceleration and hard deceleration.
- 4 Reduce the static torque due to gravity or external forces.

34256, Rectifier temperature warning**Description**

The rectifier unit at drive unit position *arg* is approaching a too high temperature level.

Consequences

It is possible to continue but the margin to maximum allowed temperature is too low to sustain long term operation.

Continues on next page

Continued

Probable causes

- 1 The cooling fans may be faulty or the air flow may be obstructed.
- 2 The ambient temperature may be too high.
- 3 The system may be running with a too high torque for extended periods of time.

Recommended actions

- 1 Verify that the fans are running and that the air flow is not obstructed.
- 2 Verify that the ambient temperature does not exceed the cabinet's temperature rating.
- 3 If possible, rewrite the user program to reduce the amount of hard acceleration and hard deceleration.
- 4 Reduce the static torque due to gravity or external forces.

34257, Open circuit in bleeder resistor circuit

Description

The bleeder resistor connected to the rectifier unit at drive unit position *arg* has too high resistance (open circuit).

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

WARNING HIGH VOLTAGE: THE DC LINK WILL NOT BE DISCHARGED WHEN THE SYSTEM IS POWERED OFF.

Probable causes

This may be caused by a faulty bleeder resistor cable or a faulty bleeder resistor.

Recommended actions

WARNING HIGH VOLTAGE CAN BE PRESENT.

- 1 Make sure the bleeder resistor cable is properly connected to the rectifier unit.
- 2 Disconnect the bleeder and check the cable and measure the bleeder resistance. The expected resistance should be approximately ohms.

34258, Short circuit in bleeder resistor circuit

Description

The bleeder resistor connected to the rectifier unit at drive unit position *arg* is indicating a short circuit.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

WARNING HIGH VOLTAGE: THE DC LINK WILL NOT BE DISCHARGED WHEN THE SYSTEM IS POWERED OFF.

Probable causes

This may be caused by a faulty bleeder resistor cable or a faulty bleeder resistor.

Recommended actions

WARNING HIGH VOLTAGE CAN BE PRESENT.

- 1 Make sure the bleeder resistor cable is correctly connected to the rectifier unit.
- 2 Disconnect the bleeder and check the cable and measure the bleeder resistance. The expected resistance should be approximately ohms.
- 3 Check for bleeder short circuit against protective earth.

34261, Rectifier startup error

Description

The inrush control relay in the rectifier unit at drive unit position *arg* indicates an error.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

This may be caused by a faulty rectifier inrush control relay.

Recommended actions

Restart the controller and try again. If the problem remains then replace the unit.

34263, Rectifier startup error

Description

The dc-link in the rectifier unit at drive unit position *arg* has too low voltage.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 Low AC-voltage level to rectifier input.
- 2 This may be caused by a faulty rectifier inrush control resistor.
- 3 A short circuit is present on the dc-link.

Recommended actions

- 1 Restart the controller and try again.
- 2 Check incoming mains voltage.
- 3 Check all internal 3-phase components (main switch, mains filter, fuse, contactors) and cabling in the drive module.
- 4 If new installed system with mains transformer - check transformer voltage selection.

Continues on next page

- 5 If drive unit has additional axes - check dc-link wiring.
- 6 If the problem remains then replace the unit.

34264, Rectifier inrush limitation active in Motors On

Description

The inrush control resistor in the rectifier unit at drive unit position *arg* is wrongly engaged.

Consequences

The system goes to Motors Off state to protect the hardware.

Probable causes

This error occur when the DC link voltage becomes too low and all mains phases are missing.

Recommended actions

- 1 Check the hardware event log for other errors.
- 2 Check incoming mains voltage.
- 3 Check that the correct voltage is selected with jumpers on the transformer (optional).
- 4 Check all internal 3-phase components (main switch, mains filter, fuse, contactors) and cabling in the drive module.

34265, DC link short circuit error

Description

The DC link in the rectifier unit at drive unit position *arg* is short circuit.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 DC link cables for an additional drive unit is damaged or wrongly connected.
- 2 Internal error in rectifier unit or drive unit.

Recommended actions

Check DC link cables and connectors.

34266, Rectifier inrush limitation and bleeder active

Description

Rectifier unit at drive unit position *arg*, the inrush control resistor is active at the same time as the bleeder resistor is active.

The inrush control resistor is located in the rectifier unit.

The bleeder resistor is connected to the rectifier unit or the drive unit with embedded rectifier.

Consequences

The system goes to Motors Off state to protect the hardware.

Probable causes

This problem is most likely to occur when the incoming mains voltage is too high to the rectifier.

Recommended actions

- 1 Check that the incoming mains voltage is according to specification for the drive unit.
- 2 Check that the correct voltage is selected with jumpers on the transformer (optional).

34267, Too many rectifiers connected

Description

The system has detected more rectifiers than the system can handle. The limit was reached when drive unit at unit position *arg* was detected.

Consequences

No operation will be possible until the fault is corrected. The system goes to system failure state.

Probable causes

- 1 Too many drive units equipped with rectifiers are connected.

Recommended actions

- 1 Verify that the proper drive unit types are connected to the drive unit communication link.
- 2 Disconnect unused drive unit(s).

34268, Rectifier charging error

Description

The dc-link in the rectifier unit at drive unit position *arg* has too low voltage.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 Low AC-voltage level to rectifier input.
- 2 This may be caused by a faulty rectifier bleeder.
- 3 The bleeder resistor or its wiring is faulty.
- 4 A short circuit is present on the dc-link.

Recommended actions

- 1 Restart the controller and try again.
- 2 Check incoming mains voltage.
- 3 If new installed system with mains transformer - check transformer voltage selection.
- 4 Check bleeder resistor and its wiring.

Continues on next page

5 If the problem remains then replace the unit.

34269, AC Over voltage error

Description

The input AC voltage is too high for the rectifier unit at drive unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 High AC-voltage level to rectifier input.

Recommended actions

- 1 Check incoming mains voltage.
- 2 If new installed system with mains transformer - check transformer voltage selection.
- 3 If the problem remains then replace the unit.

34270, AC input not symmetric warning

Description

The input AC voltage is not symmetric between the Mains input phases for the rectifier unit at drive unit position *arg*.

Consequences

Operation will still be possible.

Probable causes

- 1 Main supply is not ok.

Recommended actions

- 1 Check incoming mains voltage.
- 2 Be observant of other supply voltage errors.

34271, AC input rotation warning

Description

The input AC voltage has rotation issue for the rectifier unit at drive unit position *arg*.

Consequences

Operation will still be possible.

Probable causes

- 1 Main supply is not ok.

Recommended actions

- 1 Check incoming mains voltage.
- 2 Be observant of other supply voltage errors.

34272, AC Over current error

Description

The AC current is too high for the rectifier unit at drive unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 DC bus usage is too high.

Recommended actions

- 1 Reduce the number of connected drive units to the Dc bus.
- 2 If the problem remains then replace the unit.

34273, DC intermediate over voltage error

Description

The internal DC voltage is too high for the rectifier unit at drive unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 Intermediate DC bus in the unit is too high.

Recommended actions

- 1 If the problem remains then replace the unit.

34274, DC over voltage error

Description

The output DC voltage is too high for the rectifier unit at drive unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 DC bus in the unit is too high.
- 2 Faulty or not connected bleeder resistor.

Recommended actions

- 1 Check that the right rectifier configuration is loaded for connected hardware.
- 2 Check the bleeder, its resistance and cabling.
- 3 If the problem remains then replace the unit.

34275, DC over current error**Description**

The output DC current is too high for the rectifier unit at drive unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 There are too many users connected to the DC bus.
- 2 Current consumption is too high on one of the connected units.

Recommended actions

- 1 Check DC bus cabling.
- 2 Isolate the drive unit that draws too much current and replace it.
- 3 If the problem remains then replace the unit.

Recommended actions

- 1 Check 24 V brake supply cabling.
- 2 Disconnect the Signal Exchange Proxy and try isolating the problem to a unit.
- 3 If the problem remains then replace either Signal exchange proxy or the rectifier unit.

34278, Rectifier over temperature error**Description**

The temperature is too high for the rectifier unit at drive unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 Cooling of the rectifier has failed.
- 2 The rectifier is overloaded.

Recommended actions

- 1 Check cooling fans and channel.
- 2 Surrounding temperature is too high.
- 3 Check the DC bus usage.
- 4 If the problem remains then replace the unit.

34276, DC short circuit error**Description**

The DC bus output has a short circuit for the rectifier unit at drive unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 DC cabling to the DC bus are faulty .
- 2 One or more of the connected drive units has a short circuit.

Recommended actions

- 1 Check DC bus cabling.
- 2 Isolate the drive unit that has a short circuit and replace it.
- 3 If the problem remains then replace the unit.

34279, Rectifier regulator error**Description**

The regulation of the DC bus has failed for the rectifier unit at drive unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 The DC bus is outside of its capacitance specification.

Recommended actions

- 1 Check the DC bus usage.
- 2 If the problem remains then replace the unit.

34277, Brake supply error**Description**

The output brake supply voltage is malfunctioning for the rectifier unit at drive unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 Brake supply cabling to the signal exchange proxy is faulty

34280, Rectifier shutdown error**Description**

In drive module *arg*, the regulation of the DC bus has been shutdown for the rectifier unit at drive unit position *arg*.

Consequences

Supervision of the regulated rectifier has triggered a shutdown of DC bus. No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Continues on next page

Probable causes

- 1 This can be due to AC input problems.
- 2 This can be due to how the AC Auxiliary output and DC outputs are used.
- 3 Internal status: (,)

Recommended actions

- 1 Check the DC bus usage.
- 2 Check for other error messages.

34300, Unknown drive unit type

Description

In drive module *arg*, the drive unit at unit position *arg* has an unknown hardware identity *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to system failure state.

Probable causes

The drive unit is either unsupported or faulty.

Recommended actions

- 1 Verify that the drive unit is supported by the RobotWare version. Upgrade RobotWare if needed.
- 2 Replace drive unit.

34303, Motor current warning

Description

For joint *arg*, the current controller detected a too large torque current deviation for the motor. The joint is connected to drive module *arg* in the drive unit at unit position *arg* and node *arg*.

Consequences

Operation will be possible but system is close to a stopping error.

Probable causes

- 1 The motor data in the configuration files may be wrong.
- 2 The motor cables are not correctly connected or damaged.
- 3 Short circuit in motor cable between phase to phase or phase to ground.
- 4 The DC link voltage may be too low.
- 5 The incoming mains voltage is not within specification.
- 6 The resolver cables are not correctly connected or damaged.

Recommended actions

- 1 Verify that the motor data in the configuration file is correct for this joint. The configuration data is described in Technical reference manual - System parameters.

- 2 Verify that the motor cables are not damaged or badly connected.
- 3 Verify that the motor cables has no short circuits internally or to ground.
- 4 Verify that no DC link errors are present in the event log.
- 5 Verify that the incoming mains voltage is within the specification.
- 6 Verify that the resolver cables are not damaged or badly connected.

34304, Motor current warning

Description

For joint *arg*, the current controller detected a too large current deviation for the motor. The joint is connected to drive module *arg* in the drive unit at unit position *arg* and node *arg*.

Consequences

Operation will be possible but system is close to a stopping error.

Probable causes

- 1 The motor data in the configuration files may be wrong.
- 2 The motor cables are not correctly connected or damaged.
- 3 Short circuit in motor cable between phase to phase or phase to ground.
- 4 The DC link voltage may be too low.
- 5 The incoming mains voltage is not within specification.
- 6 The resolver cables are not correctly connected or damaged.

Recommended actions

- 1 Verify that the motor data in the configuration file is correct for this joint. The configuration data is described in Technical reference manual - System parameters.
- 2 Verify that the motor cables are not damaged or badly connected.
- 3 Verify that the motor cables has no short circuits internally or to ground.
- 4 Verify that no DC link errors are present in the event log.
- 5 Verify that the incoming mains voltage is within the specification.
- 6 Verify that the resolver cables are not damaged or badly connected.

34306, Drive unit temperature error

Description

The drive unit for joint *arg* has reached a too high temperature level. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 The cooling fans may be faulty or the air flow may be obstructed.
- 2 The cooling fins are covered by dust reducing the cooling effect.
- 3 The ambient temperature may be too high.
- 4 The joint may be running with a too high torque for extended periods of time.

Recommended actions

- 1 Verify that the fans are running and that the air flow is not obstructed.
- 2 Clean the cooling fins.
- 3 Verify that the ambient temperature does not exceed the cabinet's temperature rating.
- 4 If possible, rewrite the user program to reduce the amount of hard acceleration and hard deceleration.
- 5 Reduce the static torque due to gravity or external forces.

34307, Drive unit temperature warning**Description**

The drive unit for joint *arg* is approaching a too high temperature level. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Consequences

It is possible to continue but the margin to maximum allowed temperature is too low to sustain long term operation.

Probable causes

- 1 The cooling fans may be faulty or the air flow may be obstructed.
- 2 The cooling fins are covered by dust reducing the cooling effect.
- 3 The ambient temperature may be too high.
- 4 The joint may be running with a too high torque for extended periods of time.

Recommended actions

- 1 Verify that the fans are running and that the air flow is not obstructed.
- 2 Clean the cooling fins.
- 3 Verify that the ambient temperature does not exceed the cabinet's temperature rating.
- 4 If possible, rewrite the user program to reduce the amount of hard acceleration and hard deceleration.
- 5 Reduce the static torque due to gravity or external forces.

34308, Drive unit critical temperature error**Description**

The drive unit for joint *arg* has reached a critical high temperature level. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state with zero torque.

Probable causes

- 1 The cooling fans may be faulty or the air flow may be obstructed.
- 2 The cooling fins are covered by dust reducing the cooling effect.
- 3 The ambient temperature may be too high.
- 4 The joint may be running with a too high torque for extended periods of time.

Recommended actions

- 1 Verify that the fans are running and that the air flow is not obstructed.
- 2 Clean the cooling fins.
- 3 Verify that the ambient temperature does not exceed the cabinet's temperature rating.
- 4 If possible, rewrite the user program to reduce the amount of hard acceleration and hard deceleration.
- 5 Reduce the static torque due to gravity or external forces.

34309, Drive transistor current too high**Description**

The drive unit transistor current is too high for joint *arg*. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 The motor configuration is incorrect.
- 2 The axis load may be too high or the motor may have stalled (maybe due to a collision).
- 3 Short circuit between motor phases or ground.

Recommended actions

- 1 Check that the motor configuration is correct.
- 2 Check that the robot has not collided.
- 3 If possible, reduce the speed of the user program.
- 4 Check that the axis load is not too high for the drive unit.

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Continued

- 5 Check the motor cable and motor by measuring their resistance respectively. Disconnect before measuring.

34311, Drive inverter saturated warning

Description

The drive unit for joint *arg* has reached maximum output voltage. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Consequences

Operation will be possible but system is close to a stopping error.

Probable causes

- 1 The motor is not properly connected to the drive unit.
- 2 The motor data in the configuration is not correct.
- 3 The DC link voltage is too low.
- 4 Short circuit between motor phases or ground.

Recommended actions

- 1 Check motor cables and connectors.
- 2 Check configuration of motor parameters.
- 3 Check for other hardware event log messages.
- 4 Check incoming mains voltage to the rectifier unit, adjust the mains tolerance min value.
- 5 Check the motor cable and motor by measuring their resistance respectively. Disconnect before measuring.

34312, Missing drive unit

Description

For joint *arg*, the system cannot find configured drive unit. The joint is configured for drive module *arg*, in the drive unit at unit position *arg*.

Consequences

The system goes to system failure state.

Probable causes

A joint is configured but drive unit is not found.

Recommended actions

- 1 Verify that the drive module contains the drive unit for the configured joint.
- 2 Verify that the configuration for the drive unit position is correct.
- 3 Verify that the cables between drive units are correctly inserted in the correct connector position.
- 4 If the cable is correctly connected, then it may be damaged and should be replaced.
- 5 Check the event log for power supply unit error messages.

- 6 Check the cabling between the power supply unit and the drive unit.
- 7 Check the 24 V output from the power supply unit.
- 8 GoFa/CRB 15000 specific: Check the 52V output from the manipulator's power supply cable.
- 9 GoFa/CRB 15000 specific: Verify the status of the LED PWR on the drive unit PCBA.

34313, Wrong type of drive unit

Description

In drive module *arg*, the hardware identity for drive unit at unit position *arg* is different from the one specified in the configuration. Installed drive unit hardware identity is *arg*, and the configured identity is *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to system failure state.

Probable causes

The drive unit type does not match the one specified in the installation key.

Recommended actions

- 1 Verify that the drive unit position is correct, i.e., the Ethernet cables are correctly connected.
- 2 Verify that the drive module key match the installed hardware.
- 3 Replace the drive unit with the one specified in the drive module key.

34314, Missing drive unit node

Description

For joint *arg*, the drive unit does not support the node number configured. The joint is configured for drive module *arg*, in the drive unit at unit position *arg* with node *arg*.

Consequences

The system goes to system failure state.

Probable causes

The configured drive unit node is not supported for the configured type of drive unit.

Recommended actions

Check the drive unit node number in the configuration.

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34316, Motor current error**Description**

For joint *arg*, the current controller detected a too large torque current deviation for the motor. The joint is connected to drive module *arg* in the drive unit at unit position *arg* and node *arg*.

Consequences

The system goes to Motors Off state.

Probable causes

- 1 The motor data in the configuration files may be wrong.
- 2 The motor cables are not correctly connected or damaged.
- 3 Short circuit in motor cable between phase to phase or phase to ground.
- 4 The DC link voltage may be too low.
- 5 The incoming mains voltage is not within specification.
- 6 The resolver cables are not correctly connected or damaged.

Recommended actions

- 1 Verify that the motor data in the configuration file is correct for this joint. The configuration data is described in Technical reference manual - System parameters.
- 2 Verify that the motor cables are not damaged or badly connected.
- 3 Verify that the motor cables has no short circuits internally or to ground.
- 4 Verify that no DC link errors are present in the event log.
- 5 Verify that the incoming mains voltage is within the specification. Change the mains tolerance min so that it reflects the actual mains voltage.
- 6 Verify that the resolver cables are not damaged or badly connected.

34317, Motor current error**Description**

For joint *arg*, the current controller detected a too large current deviation for the motor. The joint is connected to drive module *arg* in the drive unit at unit position *arg* and node *arg*.

Consequences

The system goes to Motors Off state.

Probable causes

- 1 The motor data in the configuration files may be wrong.
- 2 The motor cables are not correctly connected or damaged.
- 3 Short circuit in motor cable between phase to phase or phase to ground.
- 4 The DC link voltage may be too low.
- 5 The incoming mains voltage is not within specification.
- 6 The resolver cables are not correctly connected or damaged.

Recommended actions

- 1 Verify that the motor data in the configuration file is correct for this joint. The configuration data is described in Technical reference manual - System parameters.
- 2 Verify that the motor cables are not damaged or badly connected.
- 3 Verify that the motor cables has no short circuits internally or to ground.
- 4 Verify that no DC link errors are present in the event log.
- 5 Verify that the incoming mains voltage is within the specification. Change the mains tolerance min so that it reflects the actual mains voltage.
- 6 Verify that the resolver cables are not damaged or badly connected.

34318, Drive inverter saturated error**Description**

The drive unit for joint *arg* has reached maximum output voltage. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Consequences

The system goes to Motors Off state.

Probable causes

- 1 The motor is not properly connected to the drive unit.
- 2 The motor data in the configuration is not correct.
- 3 The DC link voltage is too low.
- 4 Short circuit between motor phases or ground.

Recommended actions

- 1 Check motor cables and connectors.
- 2 Check configuration of motor parameters.
- 3 Check for other hardware event log messages.
- 4 Check incoming mains voltage to the rectifier unit.
- 5 Check the motor cable and motor by measuring their resistance respectively. Disconnect before measuring.

34319, Drive unit critical error**Description**

The drive unit for joint *arg* gives an unspecified error, but is likely due to over temperature or short circuit. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state with zero torque.

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Probable causes

- 1 The cooling fans may be faulty or the air flow may be obstructed.
- 2 The cooling fins are covered by dust reducing the cooling effect.
- 3 The ambient temperature may be too high.
- 4 The joint may be running with a too high torque for extended periods of time.
- 5 Short circuit in cables or connectors between the phases or to ground.
- 6 Short circuit in motor between the phases or to ground.

Recommended actions

- 1 Verify that the fans are running and that the air flow is not obstructed.
- 2 Clean the cooling fins.
- 3 Verify that the ambient temperature does not exceed the cabinet's temperature rating.
- 4 If possible, rewrite the user program to reduce the amount of hard acceleration and hard deceleration.
- 5 Reduce the static torque due to gravity or external forces.
- 6 Check/replace cables and connectors.
- 7 Check/replace motor.

34320, Too many drive nodes connected

Description

In drive module *arg* the system has detected more drive nodes than the system can handle. The error occurred when drive unit at unit position *arg* was detected.

Consequences

No operation will be possible until the fault is corrected. The system goes to system failure state.

Probable causes

- 1 Too many drive units is connected to the drive unit communication link.
- 2 The connected drive units can be of wrong types, and may be equipped with too many drive nodes.

Recommended actions

- 1 Verify that the proper drive unit types are connected to the drive unit communication link.
- 2 Disconnect unused drive unit(s).

34321, Drive unit configuration error

Description

In drive module *arg* the drive unit at position *arg* has a configuration error due to a mismatch between the drive unit

and measurement system. The drive unit can only support *arg* joints having same measurement excitation. The error occurred when adding joint *arg* to the system.

Consequences

No operation will be possible until the fault is corrected. The system goes to system failure state.

Probable causes

Too many joints are using same measurement excitation and all are using same drive unit.

Recommended actions

- 1 Move the joint or another joint with same node excitation to the other excitation (EXC1 - EXC2), by reroute the joint measurement node connection both in hardware and in configuration.
- 2 Restart the controller.

34322, Drive unit configuration error

Description

In drive module *arg* the drive unit at position *arg* is using wrong rectifier.

Consequences

No operation will be possible until the fault is corrected. The system goes to system failure state.

Probable causes

A drive unit must always configure a rectifier with lower or same unit position as the inverter. There must not be any other rectifier with unit position between the configured rectifier and drive unit.

Recommended actions

- 1 Check that configuration file for additional axis is of type drive system 09.
- 2 Change used rectifier (dc_link) in the additional axis configuration.
- 3 Remove unused rectifier mounted between configured rectifier and drive unit.

34324, Drive unit junction temperature warning

Description

The drive unit for joint *arg* has reached a high inverter junction temperature. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Consequences

It is possible to continue but margin to max temperature is too low for long term operation.

Continues on next page

Probable causes

- 1 The joint may be running with a too high torque for extended periods of time.
- 2 Short circuit in the manipulator using long motor cables.

Recommended actions

- 1 If possible, rewrite the user program to reduce the amount of high acceleration and high deceleration.
- 2 Reduce the static torque due to gravity or external forces.
- 3 Check for short circuit in the motor cable or in the motor.
- 4 Check for other hardware event logs.

34325, Drive unit junction temperature error**Description**

The drive unit for joint *arg* has reached a too high inverter junction temperature. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Consequences

No operation will be possible until the drive has cooled down. The system goes to Motors Off.

Probable causes

- 1 The joint may be running with a too high torque for extended periods of time.
- 2 Short circuit in the manipulator using long motor cables.

Recommended actions

- 1 If possible, rewrite the user program to reduce the amount of high acceleration and high deceleration.
- 2 Reduce the static torque due to gravity or external forces.
- 3 Check for short circuit in the motor cable or in the motor.
- 4 Check for other hardware event logs.

34326, Drive unit HW temperature warning**Description**

The drive unit for joint *arg* has reached a high inverter temperature. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Consequences

It is possible to continue but the margin to maximum allowed temperature is too low to sustain long term operation.

Probable causes

- 1 The cooling fans may be faulty or the air flow may be obstructed.
- 2 The cooling fins are covered by dust reducing the cooling effect.
- 3 The ambient temperature may be too high.

- 4 The joint may be running with a too high torque for extended periods of time.

Recommended actions

- 1 Verify that the fans are running and that the air flow is not obstructed.
- 2 Clean the cooling fins.
- 3 Verify that the ambient temperature does not exceed the cabinet's temperature rating.
- 4 If possible, rewrite the user program to reduce the amount of hard acceleration and hard deceleration.
- 5 Reduce the static torque due to gravity or external forces.

34327, Drive unit HW temperature error**Description**

The drive unit for joint *arg* has reached a too high inverter temperature. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state with zero torque.

Probable causes

- 1 The cooling fans may be faulty or the air flow may be obstructed.
- 2 The cooling fins are covered by dust reducing the cooling effect.
- 3 The ambient temperature may be too high.
- 4 The joint may be running with a too high torque for extended periods of time.

Recommended actions

- 1 Verify that the fans are running and that the air flow is not obstructed.
- 2 Clean the cooling fins.
- 3 Verify that the ambient temperature does not exceed the cabinet's temperature rating.
- 4 If possible, rewrite the user program to reduce the amount of hard acceleration and hard deceleration.
- 5 Reduce the static torque due to gravity or external forces.

34328, Drive unit HW detected short warning**Description**

The drive unit for joint *arg* has detected a HW inverter short condition. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Continues on next page

34329, Drive unit HW detected short error

Description

The drive unit for joint *arg* has detected a HW inverter short condition. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

34330, Resolver error

Description

The drive unit for joint *arg* has detected too high resolver voltage. Sum of squared X and Y exceeds max. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*. The measurement node is *arg*.

Consequences

The system goes to Motors Off state. The joint will be unsynchronized. No automatic operation is possible.

Recommended actions

- Check resolver and resolver connections.
- Update the revolution counter.
- Replace serial measurement board.
- Replace resolver.

34331, Resolver error

Description

The drive unit for joint *arg* has detected too low resolver voltage. Sum of squared X and Y too low. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*. The measurement node is *arg*.

Consequences

The system goes to Motors Off state. The joint will be unsynchronized. No automatic operation is possible.

Recommended actions

- Check resolver and resolver connections.
- Update the revolution counter.
- Replace serial measurement board.
- Replace resolver.

34332, Motor position consistency error

Description

The drive unit for joint *arg* has detected a motor position consistency error. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*. The

measurement of the motor position is not consistent. Consider clearing the revolution counter.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

34333, Motor position commutation error

Description

The drive unit for joint *arg* has detected an error. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*. The position used for commutating the motor is not working.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

34334, Arm side torque sensor error

Description

The drive unit for joint *arg* has detected an error. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*. The arm side torque sensor is not working.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

34335, Current tracking error

Description

The drive unit for joint *arg* has detected an error. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*. The current controller cannot follow the reference.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

34336, Motor current error

Description

The drive unit for joint *arg* has detected an error. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*. The current through the motor is too high.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Continues on next page

34337, Parameter configuration error**Description**

The drive unit for joint *arg* has detected a problem. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*. Some of the configuration parameter(s) was not accepted.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

34338, Resolver sampling error**Description**

The drive unit for joint *arg* has detected a problem. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*. There were too many lost resolver samples due to communication issues.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

34339, Resolver start position error**Description**

The drive unit for joint *arg* has detected a problem. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*. The measurement node is *arg*. The saved joint position does not match the current resolver position.

Consequences

The system goes to Motors Off state. The joint will be unsynchronized. No automatic operation is possible.

34340, Resolver revolution counter error**Description**

The drive unit for joint *arg* has detected a problem. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*. The measurement node is *arg*. The resolver revolution counter does not have the expected value.

Consequences

The system goes to Motors Off state. The joint will be unsynchronized. No automatic operation is possible.

34341, Torque generation could not be verified**Description**

Torque generation can not be verified for joint *arg*. The joint is connected to the drive unit at drive link position *arg* and node *arg* on the drive link in controller cabinet *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 Motor cable is disconnected in either cabinet, floor cable or in the mechanical unit.
- 2 Motor winding is broken.
- 3 Controller is malfunctioning.

Recommended actions

- 1 Verify that motor is connected properly, all the way from drive unit in the controller to motor on the mechanical unit.
- 2 Verify that motor windings are not broken.
- 3 Check for other event logs.

34400, DC link voltage too high**Description**

In drive module *arg*, the drive unit at unit position *arg* has a DC link voltage that is too high.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

WARNING HIGH VOLTAGE: THE DC LINK MAY BE DISCHARGED VERY SLOWLY (APPROXIMATELY 1 HOUR) WHEN THE SYSTEM IS POWERED OFF.

Probable causes

- 1 The bleeder resistor is not connected or faulty.
- 2 The user program may contain too much deceleration of the manipulator's axes. This fault is more likely if the system contains additional axes.

Recommended actions

WARNING HIGH VOLTAGE CAN BE PRESENT.

- 1 Make sure the bleeder resistor cable is properly connected to the rectifier unit.
- 2 Disconnect the bleeder and check the cable and measure the bleeder resistance. The expected resistance should be approximately ohms.
- 3 Rewrite the user program to reduce the amount of hard decelerations.

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34401, DC link voltage too low warning

Description

In drive module *arg*, the drive unit at unit position *arg* has a DC link voltage that is close to minimum limit.

Consequences

Operation will be possible but the system is close to a stopping error.

Probable causes

The incoming mains voltage to the rectifier unit is out of specification.

Recommended actions

- 1 Check for other hardware event log messages regarding mains voltage problem.
- 2 Check incoming mains voltage. Change the mains tolerance min so that the mains voltage is inside the specified interval.
- 3 Check that the correct voltage is selected with jumpers on the transformer (optional).
- 4 Check all internal 3-phase components (main switch, mains filter, fuse, contactors) and cabling in the drive module.

34402, DC link voltage too low

Description

In drive module *arg*, the DC link voltage is too low for the drive unit at unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

The incoming mains voltage to the rectifier unit is out of specification.

Recommended actions

- 1 Check for other hardware event log messages regarding mains voltage problem.
- 2 Check incoming mains voltage. Change the mains tolerance min so that the mains voltage is inside the specified interval.
- 3 Check that the correct voltage is selected with jumpers on the transformer (optional).
- 4 Check all internal 3-phase components (main switch, mains filter, fuse, contactors) and cabling in the drive module.

34404, DC link voltage is critically high

Description

In drive module *arg*, the drive unit at unit position *arg* has a DC link voltage that is critically high.

Continues on next page

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state with zero torque.

WARNING HIGH VOLTAGE: THE DC LINK MAY BE DISCHARGED VERY SLOWLY (APPROXIMATELY 1 HOUR) WHEN THE SYSTEM IS POWERED OFF.

Probable causes

- 1 The bleeder resistor is not connected or faulty.
- 2 The user program may contain too much deceleration of the manipulator's axes. This fault is more likely if the system contains additional axes.

Recommended actions

WARNING HIGH VOLTAGE CAN BE PRESENT.

- 1 Make sure the bleeder resistor cable is properly connected to the rectifier unit.
- 2 Disconnect the bleeder and check the cable and measure the bleeder resistance. The expected resistance should be approximately ohms.
- 3 Rewrite the user program to reduce the amount of hard decelerations.

34405, DC link voltage too high warning

Description

In drive module *arg*, the drive unit at unit position *arg* has a DC link voltage that is close to maximum limit.

Consequences

Operation will be possible but the system is close to a stopping error.

WARNING HIGH VOLTAGE: THE DC LINK MAY BE DISCHARGED VERY SLOWLY (APPROXIMATELY 1 HOUR) WHEN THE SYSTEM IS POWERED OFF.

Probable causes

- 1 The bleeder resistor is not connected or faulty.
- 2 The user program may contain too much deceleration of the manipulator's axes. This fault is more likely if the system contains additional axes.

Recommended actions

WARNING HIGH VOLTAGE CAN BE PRESENT.

- 1 Make sure the bleeder resistor cable is properly connected to the rectifier unit.
- 2 Disconnect the bleeder and check the cable and measure the bleeder resistance. The expected resistance should be approximately ohms.
- 3 Rewrite the user program to reduce the amount of hard decelerations.

34406, Drive unit power supply error**Description**

In drive module *arg*, the drive unit with unit position *arg* has detected problem with the logic power.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state with zero torque.

Probable causes

The 24 V logic supply to the drive is temporary or constantly lost.

Recommended actions

- 1 Check the event log for power supply unit error messages.
- 2 Check the cabling between the power supply unit and the drive unit.
- 3 Check the 24 V output from the power supply unit.

34407, Drive unit internal error**Description**

In drive module *arg*, the drive unit at unit position *arg* has indicated an internal error: *arg*.

Consequences

The system goes to system failure state with zero torque.

Probable causes

An internal error has occurred in the drive unit firmware.

Recommended actions

Restart the controller by using the main power switch.

34408, Drive unit hardware data error**Description**

In drive module *arg*, the drive unit at unit position *arg* has corrupt information stored on the unit.

Consequences

The system goes to system failure state.

Probable causes

The integrity check of the drive unit information stored on the drive unit has failed.

Recommended actions

- 1 Retry again by restarting the controller using the main power switch.
- 2 Replace the faulty drive unit.

34409, Drive unit startup error**Description**

The system has failed to complete the initialization phase of a drive unit. The drive unit is located in drive module *arg* at unit position *arg*.

Consequences

The system goes to system failure state.

Probable causes

The system has failed to complete the initialization phase of the drive unit.

Recommended actions

- 1 Retry by restarting the controller using the main power switch.
- 2 Check for other hardware event log messages.

34410, Too many drive units connected**Description**

In drive module *arg* the system has detected more drive units than the system can handle. The maximum number of drive units supported is *arg*, but *arg* was detected.

Consequences

No operation will be possible until the fault is corrected. The system goes to system failure state.

Probable causes

Too many drive unit that are connected.

Recommended actions

Disconnect unused drive unit(s).

34411, DC link error**Description**

The system has detected an unexpected low DC bus voltage in a drive unit that is not used by any joints. The drive unit is located in drive module *arg* at unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 Incoming mains are missing.
- 2 The DC bus cable is faulty connected to the drive unit.
- 3 Short circuit on a DC bus. It can be both inside the drive unit and in the cables.

Recommended actions

- 1 Check incoming mains.

Continues on next page

Continued

- 2 Check DC cabling.
- 3 Check if there are any short circuit.
- 4 Replace the drive unit(s).

34412, DC ground error

Description

The system has detected a ground error on the DC bus. The drive unit is located in drive module *arg* at unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 Damage to the floor motor cable.
- 2 Damage to motor.

Recommended actions

- 1 Inspect the motor cabling for damage and replace if necessary.
- 2 Check if any of the motor phases are shorted to ground and replace motor if necessary.

34413, DC short error

Description

The system has detected a short error on the DC bus. The drive unit is located in drive module *arg* at unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 Damage to the floor motor cable.
- 2 Damage to motor.

Recommended actions

- 1 Inspect the motor cabling for damage and replace if necessary.
- 2 Check if any of the motor phases are shorted to ground and replace motor if necessary.

34415, Drive unit communication warning

Description

In drive module *arg*, the drive unit at unit position *arg* has detected communication problems with the main computer.

Consequences

Operation will still be possible.

Probable causes

Communication problem between drive units and the main computer.

Recommended actions

- 1 Check that all cables are properly connected.
- 2 Check that the drive unit has logic power.
- 3 Check/replace Ethernet cables.
- 4 Check for other hardware event log messages.
- 5 Check the event log for power supply unit error messages.
- 6 Check the cabling between the power supply unit and the drive unit.
- 7 Check the 24 V output from the power supply unit.

34416, Drive unit communication error

Description

In drive module *arg*, the drive unit at unit position *arg* has detected communication errors with the main computer.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state with zero torque.

Probable causes

Communication problem between drive units and the main computer.

Recommended actions

- 1 Check that all cables are properly connected.
- 2 Check that the drive unit has logic power.
- 3 Check/replace Ethernet cables.
- 4 Check for other hardware event log messages.
- 5 Check the event log for power supply unit error messages.
- 6 Check the cabling between the power supply unit and the drive unit.
- 7 Check the 24 V output from the power supply unit.

34417, Drive unit internal warning

Description

In drive module *arg*, the drive unit at unit position *arg* has indicated an internal warning: *arg*.

Probable causes

An internal warning has occurred in the drive unit firmware.

34423, Incompatible drive unit types

Description

The configured drive system in drive module *arg* contains incompatible drive unit types.

Continues on next page

Consequences

The system goes to system failure state.

Probable causes

Drive units of type DSQC462 are not compatible with any other drive unit types and may not be used in the same drive module.

Recommended actions

- 1 Check the configuration to make sure that only compatible drive unit types are use within the same drive module.

34430, Serial measurement board not found**Description**

In drive module *arg*, the drive unit at unit position *arg* indicates a missing serial measurement board.

Probable causes

- Badly connected or damaged serial measurement board cables.
- Bad 24 V supply to the serial measurement board.
- Short circuit or an over-current condition of SMB 24 V power supply.
- Disturbances.

Recommended actions

- Check system configuration parameters.
- Check connections and cables to serial measurement board.
- Replace serial measurement board.

34431, Serial measurement board communication warning**Description**

In drive module *arg*, the drive unit at unit position *arg* has problems communicating with its serial measurement board.

Probable causes

- Badly connected or damaged serial measurement board cables.
- Bad 24 V supply to the serial measurement board.
- Short circuit or an over-current condition of SMB 24 V power supply.
- Disturbances.

Recommended actions

- Check system configuration parameters.
- Check connections and cables to serial measurement board.
- Replace serial measurement board.

34432, Serial measurement board communication error**Description**

In drive module *arg*, the drive unit at unit position *arg* has lost communication with its serial measurement board.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state. All joints connected to the SMB become unsynchronized.

Probable causes

- Badly connected or damaged serial measurement board cables.
- Bad 24 V supply to the serial measurement board.
- Short circuit or an over-current condition of SMB 24 V power supply.
- Disturbances.

Recommended actions

- Check connections and cables to the serial measurement board.
- Update revolution counters.
- Restart the controller.
- Replace serial measurement board.

34433, Serial measurement board battery low warning**Description**

In drive module *arg*, the drive unit at unit position *arg* detects a low battery charge on its serial measurement board. Battery on serial measurement board will soon be depleted. Replace battery at a suitable opportunity.

Recommended actions

- Do not turn off the controller until the battery is replaced.
- Replace battery on serial measurement.

34434, Brake short circuit**Description**

In drive module *arg*, the drive unit at unit position *arg* has detected a short circuit in the brake.

Recommended actions

Check brake cabling

Continues on next page

34435, Manual brake release switch faulty

Description

In drive module *arg*, the drive unit at unit position *arg* has detected a fault in the manual brake release switch.

Recommended actions

- 1 Clear the fault as described in the CRB15000 Product Manual, Section 7, Troubleshooting.
- 2 Ensure that the fault has been cleared on all axes.
- 3 If, after multiple reset attempts, the fault still persists, contact ABB Customer Support.

34436, Manual brake release switch fault cleared successfully

Description

In drive module *arg*, the drive unit at unit position *arg* has detected that the manual brake release switch fault has been cleared.

34437, Emergency brake supply failure

Description

In drive module *arg*, the drive unit at unit position *arg* has detected an emergency brake supply failure.

Probable causes

- The brake output supply from the drive unit has been overloaded.

Recommended actions

- Check the load and make sure the brake is not loaded too much.
- In order to run the motors again, the controller must be restarted.

34438, Brake switch short and emergency brake supply failure

Description

In drive module *arg*, the drive unit at unit position *arg* has detected a brake switch short and emergency brake supply failure.

34439, Emergency brake switch short

Description

In drive module *arg*, the drive unit at unit position *arg* has detected an emergency brake switch short.

34440, Short circuit of the brake and the emergency brake

Description

In drive module *arg*, the drive unit at unit position *arg* has detected a short circuit of the brake and the emergency brake.

34441, Manual brake release switch timeout

Description

In drive module *arg*, the drive unit at unit position *arg* has detected that the manual brake release switch did not operate within the expected time.

34442, Drive Unit Power Board Temperature 1 Warning

Description

In drive module *arg*, the drive unit at unit position *arg* has detected a high temperature on sensor 1.

34443, Drive Unit Power Board Temperature 1 Error

Description

In drive module *arg*, the drive unit at unit position *arg* has detected a high temperature on sensor 1.

34444, Drive Unit Power Board Temperature 2 Warning

Description

In drive module *arg*, the drive unit at unit position *arg* has detected a high temperature on sensor 2.

34445, Drive Unit Power Board Temperature 2 Error

Description

In drive module *arg*, the drive unit at unit position *arg* has detected a high temperature on sensor 2.

34446, Parity warning, detected by the serial measurement board

Description

In drive module *arg*, the drive unit at unit position *arg* has encountered a parity warning detected by the SMB.

Consequences

Operation will be possible but the system is close to a stopping error.

Probable causes

- Badly connected or damaged serial measurement board cables.
- Bad 24 V supply to the serial measurement board.
- Short circuit or an over-current condition of SMB 24 V power supply.
- Disturbances.

Recommended actions

- Check the serial measurement board cables.
- Check the 24 V power supply to the serial measurement board.

34447, Parity error, detected by the serial measurement board
Description

In drive module *arg*, the drive unit at unit position *arg* has encountered a parity error detected by the SMB.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state. All joints connected to the SMB become unsynchronized.

Probable causes

- Badly connected or damaged serial measurement board cables.
- Bad 24 V supply to the serial measurement board.
- Short circuit or an over-current condition of SMB 24 V power supply.
- Disturbances.

Recommended actions

- Check connections and cables to the serial measurement board.
- Update revolution counters.
- Restart the controller.
- Replace serial measurement board.

34448, Timeout warning in the communication with the serial measurement board
Description

In drive module *arg*, the drive unit at unit position *arg* has encountered a serial measurement board communication timeout warning.

Consequences

Operation will be possible but the system is close to a stopping error.

Probable causes

- Badly connected or damaged serial measurement board cables.
- Bad 24 V supply to the serial measurement board.
- Short circuit or an over-current condition of SMB 24 V power supply.
- Disturbances.

Recommended actions

- Check the serial measurement board cables.
- Check the 24 V power supply to the serial measurement board.

34449, Timeout error in the communication with the serial measurement board
Description

In drive module *arg*, the drive unit at unit position *arg* has encountered a serial measurement board communication timeout error.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state. All joints connected to the SMB become unsynchronized.

Probable causes

- Badly connected or damaged serial measurement board cables.
- Bad 24 V supply to the serial measurement board.
- Short circuit or an over-current condition of SMB 24 V power supply.
- Disturbances.

Recommended actions

- Check connections and cables to the serial measurement board.
- Update revolution counters.
- Restart the controller.
- Replace serial measurement board.

34450, Parity warning, detected by the FPGA
Description

In drive module *arg*, the drive unit at unit position *arg* has encountered a parity warning detected by the FPGA.

Consequences

Operation will be possible but the system is close to a stopping error.

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Probable causes

- Badly connected or damaged serial measurement board cables.
- Bad 24 V supply to the serial measurement board.
- Short circuit or an over-current condition of SMB 24 V power supply.
- Disturbances.

Recommended actions

- Check the serial measurement board cables.
- Check the 24 V power supply to the serial measurement board.

34451, Parity error, detected by the FPGA

Description

In drive module *arg*, the drive unit at unit position *arg* has encountered a parity error detected by the FPGA.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state. All joints connected to the SMB become unsynchronized.

Probable causes

- Badly connected or damaged serial measurement board cables.
- Bad 24 V supply to the serial measurement board.
- Short circuit or an over-current condition of SMB 24 V power supply.
- Disturbances.

Recommended actions

- Check connections and cables to the serial measurement board.
- Update revolution counters.
- Restart the controller.
- Replace serial measurement board.

34452, Brake over current error

Description

The brake circuit in controller module *arg*, drive unit at drive link position *arg* is consuming unexpected high current. Limit is *argA*.

Consequences

The system goes to Motors Off state.

Probable causes

- A short in the brake circuit.
- Incompatible robot connected to controller.

Recommended actions

- Check for short circuit in motor floor cable.
- Check for short circuit in robot harness and motors.
- Check that correct robot type is connected to controller.

34453, Emergency brake over current error

Description

The emergency brake circuit in controller module *arg*, drive unit at drive link position *arg* is consuming unexpected high current. Limit is *arg*.

Consequences

The system goes to Motors Off state.

Probable causes

- A short in the emergency brake circuit.
- Incompatible robot connected to controller.
- Faulty brake release board.

Recommended actions

- Check for short circuit in motor floor cable.
- Check for short circuit robot harness and motors.
- Check that correct robot type is connected to controller.
- Check brake release board in the robot or SMB box.

34454, Drive unit internal error

Description

In drive module *arg*, the drive unit at unit position *arg* has indicated an internal error: *arg*.

Consequences

System goes to Guard Stop state. No operation will be possible until the fault has been corrected.

Probable causes

An internal error has occurred in the drive unit firmware.

34455, Drive unit internal failure

Description

In drive module *arg*, the drive unit at unit position *arg* has indicated an internal failure: *arg*.

Consequences

The system goes to system failure state. No operation will be possible until the fault has been corrected.

Probable causes

An internal failure has occurred in the drive unit firmware.

34456, Drive system does not allow Motors On**Description**

The Motors On state change is restricted due to previous error(s) in the drive system.

Consequences

The system will not enter Motors On state.

Probable causes

See previous drive system error(s).

Consequences

The Connected Services gateway is not properly configured.

Probable causes

- Missing or invalid configuration.
- Faulty Connected Services gateway.

Recommended actions

- 1 Check the event log for internal error messages.
- 2 Check the status LED of the Connected Services gateway.
- 3 Change configuration.

34457, DC bus midpoint voltage out of range warning**Description**

It has been detected that the dc bus midpoint voltage is out of range in controller cabinet *arg*, drive unit at unit position *arg*.

Consequences

Operation will be possible but the system will trigger a stopping error if the issue persists.

Probable causes

The capacitors on the drive unit dc bus have reached their end of life.

Recommended actions

Replace the drive unit.

36502, Could not communicate with the Connected Services gateway**Description**

The main computer is unable to communicate with the Connected Services gateway.

Consequences

The Connected Services gateway is in an undefined state.

Probable causes

Software or hardware failure.

Recommended actions

- 1 Check the event log for internal error messages.
- 2 Check the status LED of the Connected Services gateway.
- 3 Restart the controller by using the main power switch.
- 4 Check the cables.

34458, DC bus midpoint voltage out of range error**Description**

It has been detected that the dc bus midpoint voltage in controller cabinet *arg*, drive unit at unit position *arg* has been outside its permissible range for a substantial amount of time.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

The capacitors on the drive unit dc bus have reached their end of life.

Recommended actions

Replace the drive unit.

36503, Connected Services gateway firmware upgrade required**Description**

The firmware is about to be upgraded from version *arg.arg* to version *arg.arg*.

Consequences

The Connected Services gateway firmware will be upgraded and the device will then reboot.

Recommended actions**36504, Connected Services gateway firmware upgrade done****Description**

A firmware upgrade has been successfully done.

Recommended actions**36500, Failed to configure the Connected Services gateway****Description**

An error occurred during the configuration phase of the interface towards the Connected Services gateway.

Continues on next page

36505, Connected Services gateway detected

Description

The Connected Services gateway has identified itself as type: *arg*.

Recommended actions

36506, Connected Services gateway connected

Description

The Connected Services gateway has established external communications.

Recommended actions

36507, Connected Services gateway failed to go online

Description

Could not go online in *arg* seconds. Resetting the modem as a possible remedy.

Recommended actions

- Verify that the antenna is correctly connected and that the signal strength is sufficient.
- Verify that a sim card is installed (applies to 3G version only).
- Contact ABB support if no connection is established within 48 hours.

36508, Firmware update of Connected Services gateway failed

Description

There was a problem updating the firmware on the Connected Services gateway. Elapsed time: *arg* minutes

Recommended actions

- 1 Check the status LED of the Connected Services gateway.
- 2 Restart the controller by using the main power switch.
- 3 Perform a factory reset of the Connected Services gateway by pressing and holding the reset button on the gateway front until it restarts.
- 4 Contact ABB support if the problem persists.

36509, Connected Services gateway configuration parameter could not be decrypted

Description

Failed to decrypt the Connected Services gateway configuration parameter: *arg*.

Recommended actions

The encrypted *arg* has to be applied to the controller from which it was originally generated from.

- From the configuration editor in RobotStudio or in the sio.cfg, remove the encrypted and enter the again and restart the controller.
- Or verify that the sio.cfg applies to the controller it was generated from.

36600, Failed to initialize the robot signal exchange proxy interface

Description

An error occurred during the initialization phase of the interface towards the robot signal exchange proxy unit *arg*.

Consequences

The hardware will not be able to start up properly.

Probable causes

- 1 An external switch or I/O device with DHCP server functionality is located on the private network. This is the most probable cause.
- 2 Internal error in the robot signal exchange proxy.
- 3 Communication error between the main computer and the robot signal exchange proxy.

Recommended actions

- 1 Remove any external switch or I/O device with DHCP server functionality from the private network. The private network is described in the product manual for the robot controller.
- 2 Remove any other device with IP address 192.168.125.1 from the private network.
- 3 Remove any other device with IP address 192.168.125.90 from the private network.
- 4 Check the event log for internal error messages.
- 5 Switch off the controller and wait for at least 15 minutes before switching it back on.

36601, Failed to start up the robot signal exchange proxy interface

Description

An error occurred during the start-up phase of the interface towards the robot signal exchange proxy unit *arg*.

Consequences

The hardware will not be able to start up properly.

Probable causes

- 1 An external switch or I/O device with DHCP server functionality is located on the private network. This is the most probable cause.
- 2 Internal error in the robot signal exchange proxy.
- 3 Communication error between the main computer and the robot signal exchange proxy.

Recommended actions

- 1 Remove any external switch or I/O device with DHCP server functionality from the private network. The private network is described in the product manual for the robot controller.
- 2 Remove any other device with IP address 192.168.125.1 from the private network.
- 3 Remove any other device with IP address 192.168.125.90 from the private network.
- 4 Check the event log for internal error messages.
- 5 Switch off the controller and wait for at least 15 minutes before switching it back on.

36602, Energy bank not charged**Description**

The robot signal exchange proxy unit *arg* has not reported that the energy bank is fully charged.

Consequences

The main computer has aborted the power-up sequence.

Probable causes

Internal error in the robot signal exchange proxy.

Recommended actions

- 1 Check the event log for internal error messages.
- 2 Restart the controller.

36603, Default turn off behavior not overridden**Description**

Failed to override the robot signal exchange proxy unit *arg* default turn off behavior on loss of incoming power.

Consequences

On loss of incoming power, the robot signal exchange proxy will turn off the main computer immediately.

Probable causes

Communication error between the main computer and the robot signal exchange proxy.

Recommended actions

- 1 Check the event log for internal error messages.
- 2 Restart the controller.

36604, Power-up sequence failed.**Description**

The robot signal exchange proxy unit *arg* failed to power up the power-rails properly.

Consequences

Hardware devices in the controller might not start.

Probable causes

- 1 Internal error in the robot signal exchange proxy.
- 2 Communication error between the main computer and the robot signal exchange proxy.

Recommended actions

- 1 Check the event log for internal error messages.
- 2 Restart the controller.

36605, Robot signal exchange proxy module error.**Description**

The robot signal exchange proxy unit *arg* has reported module status: *arg*.

Consequences

The robot signal exchange proxy is not working properly.

Probable causes

Internal error in the Robot signal exchange proxy.

Recommended actions

- 1 Check the event log for internal error messages.
- 2 Save System Diagnostics and view log.

36606, Fan Control parameters not set**Description**

All parameters need to be set in order to turn off the fan in the cabinet.

Consequences

The fan in the cabinet will always run also during motors OFF.

Probable causes

Some Fan Control parameters are not set.

Recommended actions

- 1 Set the Controller Encapsulation parameter.
- 2 Set the Input Voltage parameter.

36607, Failure on the 24V_PC power rail**Description**

There is a failure reported on the 24V_PC power rail on robot signal exchange proxy unit *arg*.

Continues on next page

Continued

Consequences

HW units on the 24V_PC power rail might not power up or function properly.

Probable causes

For example over/under voltage or short circuit due to a malfunctioning HW unit on the 24V_PC power rail.

Recommended actions

- Check the PC power LED of the robot signal exchange proxy.
- If the LED does not light up solid green, shut down the controller. Remove all modules on the 24V_PC power rail, including the ethernet switch and the main computer. Restart the controller and check the PC power LED again.
- If the LED lights up solid green after restart, the issue is most likely in the ethernet switch or the main computer. Try to replace those units.
- If the LED does not light up solid green after restart, try to replace the cabling between the robot signal exchange proxy and the main computer, and between the robot signal exchange proxy and the ethernet switch.
- If you still experience issues, replace the robot signal exchange proxy.

36608, Failure on the 24V_HMI power rail

Description

There is a failure reported on the 24V_HMI power rail on robot signal exchange proxy unit *arg*.

Consequences

HW units, for example the FlexPendant, on the 24V_HMI power rail might not power up or function properly.

Probable causes

For example over/under voltage or short circuit due to a malfunctioning HW unit on the 24V_HMI power rail.

Recommended actions

- Check the HMI power LED of the robot signal exchange proxy.
- If the LED does not light up solid green, shut down the controller and detach the FlexPendant. Restart the controller and check the HMI power LED again.
- If the LED lights up solid green after restart, the issue is most likely in the FlexPendant. Try to replace the FlexPendant.
- If the LED does not light up solid green after restart, try to replace the internal cabling towards the FlexPendant, or replace the robot signal exchange proxy.

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36609, Failure on the 24V_SYS power rail

Description

There is a failure reported on the 24V_SYS power rail on robot signal exchange proxy unit *arg*.

Consequences

HW units on the 24V_SYS power rail might not power up or function properly. Secondary errors might be reported, but they are not the actual root cause of the issue.

Probable causes

For example over/under voltage or short circuit due to a malfunctioning HW unit on the 24V_SYS power rail.

Recommended actions

- Shut down the controller and remove all modules on the 24V_SYS power rail by disconnecting all cables on the robot signal exchange proxy X3 connector.
- Restart the controller and check if this error still exists. Secondary faults will be observed.
- If this error is not shown, shut down the controller, reconnect one module at a time and restart, repeat until this error is shown. Replace the module that generates the error.
- If this error is still shown, replace the robot signal exchange proxy.

36610, Failure on the 24V_SYS_DRV power rail

Description

There is a failure reported on the 24V_SYS_DRV power rail on robot signal exchange proxy unit *arg*.

Consequences

HW units on the 24V_SYS_DRV power rail might not power up or function properly. Secondary errors might be reported, but they are not the actual root cause of the issue.

Probable causes

For example over/under voltage or short circuit due to a malfunctioning HW unit on the 24V_SYS_DRV power rail.

Recommended actions

- Shut down the controller. Remove all modules on the 24V_SYS_DRV power rail, including the drive module and the power module.
- Restart the controller and check if this error still exists. Secondary faults might be reported.
- If this error is not shown, shut down the controller, reconnect one module at a time and restart, repeat until this error is shown. Replace the module that generates the error.
- If this error is still shown, replace the robot signal exchange proxy.

36611, Failure on the 24V_IO power rail**Description**

There is a failure reported on the 24V_IO power rail on robot signal exchange proxy unit *arg*.

Consequences

HW units on the 24V_IO power rail might not power up or function properly. Secondary errors might be reported, but they are not the actual root cause of the issue.

Probable causes

For example over/under voltage or short circuit due to a malfunctioning HW unit on the 24V_IO power rail.

Recommended actions

- Shut down the controller. Remove all modules on the 24V_IO power rail by disconnecting all cables on the robot signal exchange proxy X19 connector.
- Restart the controller and check if this error still exists. Secondary faults might be reported.
- If this error is not shown, shut down the controller, reconnect one module at a time and restart, repeat until this error is shown. Replace the module that generates the error.
- If this error is still shown, replace the robot signal exchange proxy.

36612, Failure on the 24V_COOL_MAN power rail**Description**

There is a failure reported on the 24V_COOL_MAN power rail on robot signal exchange proxy unit *arg*.

Consequences

HW units on the 24V_COOL_MAN power rail might not power up or function properly.

Probable causes

For example over/under voltage or short circuit due to a malfunctioning HW unit on the 24V_COOL_MAN power rail.

Recommended actions

- Shut down the controller. Disconnect all fans from the power module.
- Restart the controller and check if this error still exists.
- If this error is not shown, replace the fans connected to the power module.
- If this error is still shown, replace the robot signal exchange proxy.

36613, Failure on the 24V_BRAKE power rail**Description**

There is a failure reported on the 24V_BRAKE power rail on robot signal exchange proxy unit *arg*.

Consequences

HW units on the 24V_BRAKE power rail might not power up or function properly.

Probable causes

For example when the brake related cabling is not connected properly to the power module.

Recommended actions

- Shut down the controller. Check and make sure that the brake related cabling is connected properly to the power module.
- Restart the controller and check if this error still exists.
- If this error is still shown, replace the robot signal exchange proxy.

36614, Failure on the 24V_COOL_INT power rail**Description**

There is a failure reported on the 24V_COOL_INT power rail on robot signal exchange proxy unit *arg*.

Consequences

HW units on the 24V_COOL_INT power rail might not power up or function properly.

Probable causes

For example when the internal fan related cabling has a short circuit.

Recommended actions

- Shut down the controller. Disconnect the internal fan from the robot signal exchange proxy.
- Restart the controller and check if this error still exists.
- If this error is not shown, replace the internal fan.
- If this error is still shown, replace the robot signal exchange proxy.

36615, Failure on the 24V_COOL_EXT power rail**Description**

There is a failure reported on the 24V_COOL_EXT power rail on robot signal exchange proxy unit *arg*.

Consequences

HW units on the 24V_COOL_EXT power rail might not power up or function properly.

Continues on next page

Continued

Probable causes

For example when the external fan(s) related cabling has a short circuit.

Recommended actions

- Shut down the controller. Disconnect the external fan(s) from the robot signal exchange proxy.
- Restart the controller and check if this error still exists.
- If this error is not shown, replace the internal fan(s).
- If this error is still shown, replace the robot signal exchange proxy.

36616, Ambient temperature is too high

Description

The ambient temperature sensor on robot signal exchange proxy unit *arg* has registered a temperature of *argC* which is above recommended limit of 70C.

Consequences

The system might get damaged.

Probable causes

The controller may be overloaded, its fans may be malfunctioning or the air flow may be restricted.

Recommended actions

- Make sure the controller fans are operating.
- Check that air flow to the controller fans is not restricted.

36617, Failed to initialize the robot signal exchange proxy interface

Description

An error occurred during the initialization phase of the interface towards the robot signal exchange proxy unit *arg*.

Consequences

The hardware will not be able to start up properly.

Probable causes

- 1 Internal error in the robot signal exchange proxy.
- 2 Communication error between the main computer and the robot signal exchange proxy.

Recommended actions

- 1 Check the event log for internal error messages.
- 2 Perform a warm restart and monitor the result.
- 3 Switch off the controller and wait for at least 15 minutes before switching it back on.

36618, Failed to start up the robot signal exchange proxy interface

Description

An error occurred during the start-up phase of the interface towards the robot signal exchange proxy unit *arg*.

Consequences

The hardware will not be able to start up properly.

Probable causes

- 1 Internal error in the robot signal exchange proxy.
- 2 Communication error between the main computer and the robot signal exchange proxy.

Recommended actions

- 1 Check the event log for internal error messages.
- 2 Perform a warm restart and monitor the result.
- 3 Switch off the controller and wait for at least 15 minutes before switching it back on.

36619, Communication issue with the Robot Signal Exchange Proxy

Description

A communication issue with robot signal exchange proxy unit *arg* has been detected.

Consequences

The system goes to status SYS HALT.

Probable causes

- Internal error in the robot signal exchange proxy.
- Network issues on the private network. The private network is described in the product manual for the robot controller.

Recommended actions

- An attempt to re-establish communication is made automatically every 30 seconds, an informative elog (6620) will indicate when successful.
- Wait for the informative elog for 3 minutes. If not triggered by then, restart the controller.

36620, Communication re-established with the Robot Signal Exchange Proxy

Description

The communication with robot signal exchange proxy unit *arg* has been re-established.

Continues on next page

36700, LED board firmware upgrade required**Description**

The firmware is about to be upgraded from version *arg.arg* to version *arg.arg*.

Recommended actions**36701, LED board firmware upgrade done****Description**

A firmware upgrade has been successfully done.

Recommended actions**36702, LED board firmware upgrade failed****Description**

There was a problem updating the firmware on the LED board.

Recommended actions

- 1 Restart the controller by using the main power switch.
- 2 Replace LED board.

36703, LED board disconnected**Description**

Communication was lost between the LED board and the main computer.

Recommended actions

- 1 Check if cable between the LED board and main computer has ben disconnected.
- 2 Replace cable between the LED board and the main computer.

36704, LED board reconnected**Description**

Communication was re-established between the LED board and the main computer.

Recommended actions**36705, LED board reports a warning condition****Description**

An internal diagnostics test was run on the LED board which reported a warning condition.

Recommended actions

- 1 Restart the system to see if the warning persists.
- 2 Replace LED board.

36706, LED board reports an error condition**Description**

An internal diagnostics test was run on the LED board which reported an error condition.

Recommended actions

- 1 Restart the system to see if the error persists.
- 2 Replace LED board.

37001, Motors On contactor activation error**Description**

Motors On contactor *arg* in drive module *arg* failed to close when ordered.

Consequences

The mechanical unit cannot be run manually or automatically.

Probable causes

- 1 The run chain for the contactor is open.
- 2 There are problems in the contactor itself, either mechanical or electrical.
- 3 The FlexPendant enabling device may have been toggled too quickly, or the system may not be configured correctly. On rare occasions, this fault may occur in combination with other faults, in which case this may be found in the error log.

Recommended actions

- 1 To resume normal operation, first acknowledge the error, then release the enabling device and press it again after approx. one second.
- 2 Check cables and connections on the safety system.
- 3 Check any other error log messages coinciding in time with this one for clues.
- 4 Check the system motion configuration regarding Motors On relay. The configuration data is described in Technical reference manual - System parameters.

Warning: Further use of robot is not permitted until the fault is found and eliminated.

37043, Safety signals overloaded**Description**

The AC_ON or SPEED signals draw too much current.

Consequences

The safety system shuts down the signals, causing the system to go to either system failure state (for AC_ON) or status SYS HALT (for SPEED).

Continues on next page

Continued

Probable causes

A load connected to the circuit may be too high, or the safety system may be malfunctioning. See the circuit diagram!

Recommended actions

- 1 Check all loads connected to the AC_ON and SPEED circuits.
- 2 Check the safety system cabling and connectors, and replace any faulty unit if required.

37044, Overload on Panel Board digital output signals

Description

The panel board user digital outputs draw too much current.

Consequences

The panel board shuts down the signals, causing the system to go to status SYS HALT.

Probable causes

A load connected to the circuit may be too high, or the panel board may be malfunctioning. See the circuit diagram!

Recommended actions

- 1 Check all loads connected to the user digital outputs.
- 2 Check the panel board cabling and connectors, and replace any faulty unit if required.

37045, Faulty external computer fan

Description

The external computer fan in the control module spins too slowly.

Consequences

No system consequence. The control module temperature will rise.

Probable causes

Faulty fan, cabling or power supply. See the circuit diagram!

Recommended actions

- 1 Check the cabling to the external computer fan.
- 2 Check the fan, and replace any faulty unit if required.

37046, Safety signals overloaded

Description

The 24 V PANEL supply draws too much current.

Consequences

The safety system shuts down the signal, causing the system to go to status SYS HALT.

Continues on next page

Probable causes

A load connected to the circuit may be too high, or the safety system unit may be malfunctioning. See the circuit diagram!

Recommended actions

- 1 Check all loads connected to the 24 V PANEL circuit.
- 2 Check cabling on the safety system.

37049, Activation contactor activation error

Description

The activation relay for mechanical unit *arg* failed to close.

Consequences

The mechanical unit cannot be run manually or automatically.

Probable causes

The activation relay configured within the system may be faulty, or the system may not be configured correctly.

Recommended actions

- 1 Check the contactor and make sure its connections are connected correctly.
- 2 Check the system motion configuration regarding the activation relay. The configuration data is described in Technical reference manual - System parameters.

37056, Cooling fan error

Description

Cooling unit fan has stopped or is rotating very slowly (Less than *arg* rpm).

Recommended actions

- 1 Check the fan cables.
- 2 Replace the fan.

37094, Activate connection error

Description

Could not activate *arg*. Connection relay input *arg* indicates no connection.

Recommended actions

- 1 Check that if mechanical unit is connected.
- 2 Check the connection relay input signal setup.

37101, Brake Failure

Description

The brakes for mechanical unit *arg* fail to engage.

Consequences

The mechanical unit may collapse when the motors are turned off.

Probable causes

The configuration of brake relay may be incorrect, or the brake relay may be faulty. If an external brake relay is being used, the relay must be correctly defined in the motion configuration file.

Recommended actions

- 1 Check that the external brake relay (if used) is correctly defined in the configuration file.
- 2 Check that the corresponding I/O signal is correctly defined in the I/O configuration file. The configuration data is described in Technical reference manual - System parameters.

37109, Brake Release Failure**Description**

The brakes for mechanical unit *arg* fail to release.

Consequences

System goes to Guard Stop state.

Probable causes

The configuration of brake relay may be incorrect, or the brake reply and is cabling may be faulty. If an external brake relay is being used, the relay must be correctly defined in the motion configuration file.

Recommended actions

- 1 Check that the external brake relay (if used) is correctly defined in the configuration file.
- 2 Check that the corresponding I/O signal is correctly defined in the I/O configuration file. The configuration data is described in Technical reference manual - System parameters.
- 3 Check I/O signals are correctly connected.

37110, Missing signal for Leak Detection**Description**

Leak detection is enabled, but no signal is configured for the supervision.

Recommended actions

Configure the signal under Configuration/Process/Foundry Prime Leak Detection.

37111, Leak Detected**Description**

Too high leak detected for more than *arg* seconds.

Recommended actions

Check the system for leaks.

37230, Brake Performance Warning**Description**

The cyclic brake check indicates that the brake for the mechanical unit *arg* axis no *arg* has not full braking torque.

Consequences

This is only a warning and no immediate action need to be taken.

37231, Brake Performance Error**Description**

The function Cyclic Brake Check has found that the mechanical brake for the mechanical unit *arg* axis no *arg* has too low braking torque.

Consequences

WARNING: The brake performance is too low for this axis. Until the brake is verified to have sufficient/approved braking torque, it is only possible to move the robot with the specified manual reduced speed ("Reduced max speed (mm/s)") according to the setup in the configurator for Cyclic Brake Check.

Recommended actions

- 1 Run the Cycle Brake Check once more.
- 2 Replace the motor with its brake.

37232, Cyclic Brake Check Configuration Error**Description**

The cyclic brake check has found that the mechanical brake for the mechanical unit *arg* axis no *arg* has no defined brake torque requirement level.

Consequences

The cyclic brake check will continue but no valid brake check will be done for this axis.

Probable causes

The motion configuration data are not correct specified for this axis.

Continues on next page

Recommended actions

The motion configuration data are not correct specified for this axis:

- 1 Specify a value for parameter max_static_arm_torque if axis shall be tested.
- 2 Deactivate Cyclic Brake Check in the configuration if the axis should not be tested. Parameter 'Deactivate Cyclic Brake Check for axis', topic Motion, type 'Arm'.

37233, Cyclic Brake Check Configuration Error

Description

The cyclic brake check has found that the mechanical brake for the mechanical unit *arg* axis no *arg* should be tested according to the configuration. But the actual mechanical unit cannot be included in the Safety Controller, because activation/deactivation at runtime is allowed.

Consequences

The cyclic brake check will continue with other mechanical units.

Probable causes

The motion configuration data are not correct specified for this axis.

Recommended actions

The motion configuration data are not correct specified for this axis:

- 1 Cyclic Brake Check has been specified but should not be done for this axis.
- 2 The mechanical unit must be active at startup and deactivation must not be allowed.

37234, Brake Performance Warning

Description

The Brake Check indicates that the mechanical brake for the mechanical unit *arg* axis no *arg* has not full braking torque.

Consequences

This is only a warning and no immediate action need to be taken.

37235, Brake Performance Error

Description

The Brake Check has found that the mechanical brake for the mechanical unit *arg* axis no *arg* has too low braking torque.

Consequences

WARNING: The brake performance is too low for this axis.

Recommended actions

- 1 Run the Brake Check once more.
- 2 Replace the motor with its brake.

37236, Brake Check Configuration Error

Description

The Brake Check has found that the mechanical brake for the mechanical unit *arg* axis no *arg* should be tested. The actual mechanical unit cannot be included in the test, because activation/deactivation at runtime is allowed.

Consequences

The Brake Check will continue with other mechanical units.

Probable causes

The motion configuration data are not correct specified for this axis.

Recommended actions

The motion configuration data are not correct specified for this axis:

- 1 Brake Check has been specified but should not be done for this axis.
- 2 The mechanical unit must be active at startup and deactivation must not be allowed.

37237, Brake Check Configuration Error

Description

The brake check has found that the mechanical brake for the mechanical unit *arg* axis no *arg* has no defined brake torque requirement level.

Consequences

The brake check will continue but no valid brake check will be done for this axis.

Probable causes

The motion configuration data are not correct specified for this axis.

Recommended actions

The motion configuration data are not correct specified for this axis:

- 1 Specify a value for parameter max_static_arm_torque if axis shall be tested.
- 2 Deactivate BrakeCheck in the configuration if the axis should not be tested. Parameter 'Deactivate Cyclic Brake Check for axis', topic Motion, type 'Arm'.

37274, Brake Maintenance**Description**

The *arg* indicates that the mechanical brake for axis *arg* on mechanical unit *arg* is in need of brake maintenance.

Consequences

The brake maintenance is automatically started on axis *arg*.
The brake will then be tested again.

37275, Brake Performance**Description**

The *arg* shows that the mechanical brake for axis *arg* for mechanical unit *arg* is fully functional.

38100, Configuration failure**Description**

Drive module has detected configuration failure at measurement link.

Drive module: *arg*.

Measurement link: *arg*.

Board position: *arg*.

Recommended actions

- Check configuration for measurement link.
- Check configuration for measurement board.
- Check configuration for measurement nodes.

38101, SMB Communication Failure**Description**

A transmission failure has been detected between the axis computer and the serial measurement board on measurement link *arg* in drive module *arg*.

Consequences

The system goes to system failure state and loses its calibration information.

Probable causes

This may be caused by bad connections or cables (screening), especially if non-ABB cables are used for additional axes.
Possible causes are also faulty serial measurement board or axis computer.

Recommended actions

- 1 Reset the robot's revolution counters as detailed in the robot Product Manual.
- 2 Make sure the cable between serial measurement board and axis computer is connected correctly, and that it meets the specification set by ABB.

- 3 Make sure the cable screen is correctly connected at both ends.
- 4 Make sure no extreme levels of electromagnetic interference are emitted close to the robot cabling.
- 5 Make sure the serial measurement board and axis computer are fully functional. Replace any faulty unit.

38102, Internal failure**Description**

The measurement system has detected a hardware or software fault on measurement link *arg* in drive module *arg*.

Consequences

The system goes to system failure state and loses its calibration information.

Probable causes

This may be caused by some temporary disturbance in the robot cell or by a faulty axis computer.

Recommended actions

- 1 Restart the controller.
- 2 Reset the robot's revolution counters as detailed in the robot Product Manual.
- 3 Make sure no extreme levels of electromagnetic interference are emitted close to the robot cabling.
- 4 Make sure the axis computer is fully functional. Replace any faulty unit.

38103, Lost communication with the SMB**Description**

The communication has been lost between the axis computer and the serial measurement board on measurement link *arg* in drive module *arg*.

Consequences

The system goes to system failure state and loses its calibration information.

Probable causes

This may be caused by bad connections or cables (screening), especially if non-ABB cables are used for additional axes.
Possible causes are also faulty serial measurement board or axis computer.

Recommended actions

- 1 Reset the robot's revolution counters as detailed in the robot Product Manual.
- 2 Make sure the cable between serial measurement board and axis computer is connected correctly, and that it meets the specification set by ABB.

Continues on next page

- 3 Make sure the cable screen is correctly connected at both ends.
- 4 Make sure no extreme levels of electromagnetic interference are emitted close to the robot cabling.
- 5 Make sure the serial measurement board and axis computer are fully functional. Replace any faulty unit.

38104, Overspeed During Teach Mode

Description

Joint *arg* connected to drive module *arg* has exceeded the maximum speed for teach mode operation.

Consequences

The system goes to status SYS HALT.

Probable causes

The robot may have been moved manually while in state Motors Off. The error may also be caused by a maladjustment in the relation, commutation, between motor shaft and resolver on an additional axis, primarily during installation.

Recommended actions

- 1 Press the Enabling Device to attempt resuming operation.
- 2 Check other event log messages occurring at the same time to determine the actual cause.
- 3 Perform a re-commutation of the motor at hand. How to do this is specified in the Additional Axes Manual.

38106, Drive unit is not connected to an SMB link

Description

In controller cabinet *arg*, the drive unit at unit position *arg* is not connected to a serial measurement board (SMB) link.

Consequences

The system goes to system failure state.

Probable causes

The drive unit may have a faulty or disconnected SMB cable inside or outside the cabinet.

Recommended actions

- 1 Verify that the SMB cable is connected to the drive unit inside the cabinet.
- 2 Verify that the SMB signal cable is connected to the cabinet.
- 3 Switch the connected SMB cable for another one and restart the controller.

38107, Wrong order of chain connection serial measurement board (SMB) link

Description

In controller cabinet *arg*, drive unit at unit position *arg* is a chain-connected SMB drive unit and is connected before the corresponding direct-connected SMB master drive unit (link position *arg*) on the drive link.

Consequences

The system goes to system failure state.

Probable causes

The chain-connected SMB drive unit is connected before the direct-connected SMB drive unit on the drive link.

Recommended actions

- 1 Modify the chain-connected SMB drive unit order so that all SMB links are placed with its direct-connected SMB drive unit first, followed by the chain-connected SMB drive unit in the same order as they are connected on the drive link.

38108, Broken sequence order of serial measurement board (SMB) link for chain-connected drive unit

Description

In controller cabinet *arg*, the drive unit at unit position *arg*) is chain connected to an SMB and is not connected in correct sequence on the drive link. The chain connection, for an SMB link, between drive units should be connected in a sequence without any interruption from other drive units on the drive link.

Consequences

The system goes to system failure state.

Probable causes

The chained SMB link sequence is broken on the drive link.

Recommended actions

- 1 Modify the chain-connected SMB drive unit order so that all SMB links are placed with its direct-connected SMB drive unit first, followed by the chain-connected SMB drive unit in the same order as they are connected on the drive link.

38109, SMB Communication failure

Description

A transmission failure has been detected between the measurement board and the drive unit at drive link position *arg* in cabinet *arg*.

Consequences

The system goes to system failure state and loses its calibration information.

Probable causes

This may be caused by bad connections or cables (screening), especially if non-ABB cables are used for additional axes.

Possible causes are also faulty serial measurement board or main computer.

Recommended actions

- 1 Reset the robot's revolution counters as detailed in the robot Product Manual.
- 2 Make sure the cable between serial measurement board and the main computer are connected correctly, and that it meets the specification set by ABB.
- 3 Make sure the cable screen is correctly connected at both ends.
- 4 Make sure no extreme levels of electromagnetic interference are emitted close to the robot cabling.
- 5 Make sure the serial measurement board and axis computer are fully functional. Replace any faulty unit.

38110, Configuration failure**Description**

Controller has detected configuration failure for the measurement link.

Cabinet: *arg*.

Drive link position: *arg*.

Board position: *arg*.

Recommended actions

- 1 Check configuration for cabinet.
- 2 Check configuration for drive link.
- 3 Check configuration for measurement board.

38200, Battery backup lost**Description**

The battery backup to serial measurement board (SMB) *arg* in the robot connected to drive module *arg* on measurement link *arg* has been lost.

Consequences

When the SMB battery power supply is interrupted, the robot will lose the revolution counter data. This warning will also repeatedly be logged.

Probable causes

This may be due to an SMB battery that is discharged or not connected. For some robot models, the SMB battery power is

supplied through a jumper in the robot signal cable (see the circuit diagram for the controller), and disconnecting the cable interrupts the battery power supply. Some earlier robot versions used rechargeable batteries, and these must be charged for at least 18 hours before working correctly.

Recommended actions

- 1 Make sure a charged SMB battery is connected to the board.
- 2 NOTE! Disconnecting the robot signal cable may disconnect the SMB battery power supply, triggering the battery warning to be logged.
- 3 Reset the battery power warning by updating the revolution counters as detailed in the robot's product manual.
- 4 Replace the battery if discharged.

38201, Serial Board not found**Description**

Serial measurement board not found on measurement link.

Drive module: *arg*.

Measurement link: *arg*.

Measurement board: *arg*.

Recommended actions

- Check system configuration parameters.
- Check connections and cables to serial measurement board.
- Replace serial measurement board.

38203, SMB offset X error**Description**

Offset error for X signal at serial measurement board.

Drive module: *arg*.

Measurement link: *arg*.

Measurement board: *arg*.

Recommended actions

- Replace serial measurement board.

38204, SMB offset Y error**Description**

Offset error for Y signal at serial measurement board.

Drive module: *arg*.

Measurement link: *arg*.

Measurement board: *arg*.

Recommended actions

- Replace serial measurement board.

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38208, Resolver error

Description

Too high voltage from X or Y resolver signals.

Sum of squared X and Y exceeds max.

Joint: *arg*.

Drive module: *arg*.

Measurement link: *arg*.

Measurement board: *arg*.

Board node: *arg*.

Recommended actions

- Check resolver and resolver connections.
- Replace serial measurement board.
- Replace resolver.

38209, Resolver error

Description

Too low voltage from X or Y resolver signals.

Sum of squared X and Y too low.

Joint: *arg*.

Drive module: *arg*.

Measurement link: *arg*.

Measurement board: *arg*.

Board node: *arg*.

Recommended actions

- Check resolver and resolver connections.
- Replace serial measurement board.
- Replace resolver.

38211, Measurement functionality error

Description

The serial measurement board does not support 7 axes.

Drive module: *arg*.

Measurement link: *arg*.

Measurement board: *arg*.

Recommended actions

- Check configurations of the 7th axis.
- Replace serial measurement board to a board with 7 axes functionality.

38213, Battery charge low

Description

Battery on serial measurement board will soon be depleted.

Replace battery at a suitable opportunity.

Drive module: *arg*.

Measurement link: *arg*.

Continues on next page

Measurement board: *arg*.

Recommended actions

- Do not turn off the controller until the battery is replaced.
- Replace battery on serial measurement.

38214, Battery failure

Description

Transportation shut down of battery failed. The battery will still be in normal mode.

Drive module: *arg*.

Measurement link: *arg*.

Measurement board: *arg*.

Recommended actions

- Retry shut down.
- Replace serial measurement board.

38215, Battery supervision failure

Description

Failure occurred during reset of battery supervision circuit in serial measurement board.

Drive module: *arg*.

Measurement link: *arg*.

Measurement board: *arg*.

Recommended actions

- Repeat update of revolution counter for joint connected to the SMB.
- Replace serial measurement board.

38216, SMB functionality error

Description

The serial measurement board does not support needed functionality. The needed functionality is available in DSQC633C or better SMB.

Drive module: *arg*.

Measurement link: *arg*.

Measurement board: *arg*.

Consequences

The motion performance will be lower compared with what it should be with DSQC633C or better SMB.

Recommended actions

- Replace serial measurement board with a board with at least DSQC633C functionality.

38217, SMB functionality error**Description**

The serial measurement board does not support needed functionality. The needed functionality is available in DSQC633D or better SMB.

Drive module: *arg*.

Measurement link: *arg*.

Measurement board: *arg*.

Consequences

The motion performance will be lower compared with what it should be with DSQC633D or better SMB.

Recommended actions

- Replace serial measurement board with a board with at least DSQC633D functionality.

38218, Encoder high temperature**Description**

The temperature of the motor encoder is too high.

Joint: *arg*.

Drive module: *arg*.

Measurement link: *arg*.

Measurement board: *arg*.

Board node: *arg*.

Consequences

The lifetime of the encoder can be reduced.

Recommended actions

Stop robot and wait for motor/encoder to cool down.

- Reduce ambient temperature.
- Change robot program to avoid high speeds and torques.

38219, SMB version not supported**Description**

A serial measurement board (SMB) in the system is not supported. DSQC633C or later is required. The unsupported SMB is connected to the drive unit in position *arg* on the drive link in controller cabinet *arg*.

Consequences

The system goes to system failure state.

Recommended actions

- Replace the unsupported SMB with an SMB of version DSQC633C or later.

38220, SMB battery backup lost**Description**

The battery backup of a serial measurement board (SMB), in the robot or SMB box for external axis, has been lost. The SMB is connected to drive unit at position *arg* on the drive link and in controller cabinet *arg*.

Consequences

When the SMB battery power supply is interrupted, the robot will lose the revolution counter data. This warning will also repeatedly be logged.

Probable causes

This may be due to an SMB battery that is discharged or not connected. For some robot models, the SMB battery power is supplied through a jumper in the robot signal cable (see the circuit diagram for the controller), and disconnecting the cable interrupts the battery power supply.

Recommended actions

- 1 Make sure a charged SMB battery is connected to the board.
- 2 NOTE! Disconnecting the robot signal cable may disconnect the SMB battery power supply, triggering the battery warning to be logged.
- 3 Reset the battery power warning by updating the revolution counters as detailed in the robot's product manual.
- 4 Replace the battery if discharged.

38221, SMB functionality error**Description**

The serial measurement board does not support needed functionality. The needed functionality is available in DSQC633D or better SMB.

Cabinet: *arg*.

Drive unit link: *arg*.

Measurement board: *arg*.

Consequences

The motion performance will be lower compared with what it should be with DSQC633D or better SMB.

Recommended actions

- Replace serial measurement board with a board with at least DSQC633D functionality.

38233, Force sensor safety channel error**Description**

The safety channel in the cable between the force sensor and measurement board is under configured safety channel voltage

Continues on next page

Continued

level. The force sensor is connected to the axis computer in drive module *arg*.

Consequences

The system will go to SYS HALT and the application that uses this sensor cannot be run until cable is connected or replaced. Safety channel supervision can be disconnected in the motion configuration.

Probable causes

- 1 The cable is not attached correctly.
- 2 The cable has damage to the connectors or the cable itself.
- 3 The sensor cable does not have safety channel.

Recommended actions

Assure that the cable is connected properly and inspect the connectors at both ends of the cable and the cable itself. Replace if damaged.

38234, Max Force or Torque reached

Description

The measured force or torque in the force sensor attached to the axis computer in drive module *arg* has higher value than it is configured for.

Consequences

The system will not stop due to this.

Probable causes

The applied force or torque on the sensor is higher than configured. Too high ordered reference can be the cause. The configuration might also be faulty.

Recommended actions

Check the force and torque references in the program and if the environment have applied too high force or torque to the sensor.

38235, Saturation warning of force sensor input

Description

The analog input values of the measurement board connected to the force sensor have saturated and the time in saturation has reached the warning level.

The measurement board is connected to the axis computer in drive module *arg*.

Recommended actions

Check the load that was applied to the force/torque sensor. Check that the cable, sensor and measurement board is not damaged.

Increase the system parameter: time in saturation before warning.

38236, Saturation error of force sensor input

Description

The analog input values of the measurement board connected to the force sensor have saturated and the time in saturation has reached the error level. The measurement board is connected to the axis computer in drive module *arg*.

Consequences

System will stop.

Recommended actions

Check the load that was applied to the force/torque sensor. Check that the cable, sensor and measurement board is not damaged. Increase the system parameter: time in saturation before error.

38237, Configuration error for Force Measurement Board

Description

The configuration input values for the Force Measurement Board connected to the force sensor is erroneous. The board is connected to drive module *arg*, link *arg*.

Consequences

The system goes to system failure state.

Recommended actions

Check the configuration.

38238, Force Sensor has too noisy signals

Description

The force sensor detected signals with noise level higher than expected.

Task: *arg*.

Program Ref. *arg*.

Consequences

The force control application cannot be run.

Probable causes

The cause of noisy signals can be from tool vibrations attached to the sensor.

It can also be an electrical issue such as bad grounding or insufficient shielding of other devices, for instance an electrical tool causing electrical disturbances on the measurements.

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Recommended actions

If the probable cause is vibrations the recommended action is to try build the tool in such a way that it reduces the vibration. It can also be tested to run the RAPID instruction that fails with the vibrating tool turned off during the FCCalib or FCLoadId. If there are no visible vibrations then it should be investigated if this is an electrical disturbance problem.

Use TuneMaster to compare signals 1001-1006 when:

- Robot is in motors off state
- Robot is run by slow jogging.
- The electrical tool is running.

The level of sensitivity for the check can be changed by parameter Noise Level that belongs to the type FC Sensor, in the topic Motion. It is however only recommended to change this level if the investigation of the cause has been done and shows that the level is only a bit too low.

38239, Battery failure**Description**

Transportation shut down of battery failed. The battery will still be in normal mode.

Cabinet: *arg*.

Drive unit link: *arg*.

Measurement board: *arg*.

Recommended actions

- 1 Retry shut down.
- 2 Replace serial measurement board.

38240, Serial Board not found**Description**

Serial measurement board not found on measurement link.

Cabinet: *arg*.

Drive link: *arg*.

Measurement board: *arg*.

Recommended actions

- 1 Check system configuration parameters.
- 2 Check connections and cables to serial measurement board.
- 3 Replace serial measurement board.

38502, Rectifier bleeder open circuit warning**Description**

In controller cabinet *arg*, the rectifier unit at drive link position *arg* has detected a bleeder resistor open circuit warning. Too little current going through the bleeder.

Consequences

Operation will still be possible.

Probable causes

Damaged bleeder or cable.

Recommended actions

Verify that bleeder is connected properly. Verify that bleeder is not broken. Verify that bleeder has the correct resistance.

38503, Rectifier bleeder open circuit error**Description**

In drive module *arg* and drive unit *arg*, bleeder resistor is open circuit or there is too little current going through the bleeder.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

Damaged bleeder or cable.

Recommended actions

Verify that bleeder is connected properly. Verify that bleeder is not broken. Verify that bleeder has the correct resistance.

38504, Rectifier bleeder short circuit warning**Description**

Drive module *arg* and drive unit *arg*. Bleeder resistor has short circuit or there is too high current going through the bleeder.

Consequences

Operation will still be possible.

Probable causes

Damaged bleeder or cable.

Recommended actions

Verify that bleeder is connected properly. Verify that bleeder is not broken. Verify that bleeder has the correct resistance.

38505, Rectifier bleeder short circuit error**Description**

Drive module *arg* and drive unit *arg*. Bleeder resistor has short circuit or there is too high current going through the bleeder.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

Damaged bleeder or cable.

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Recommended actions

Verify that bleeder is connected properly. Verify that bleeder is not broken. Verify that bleeder has the correct resistance.

38506, Rectifier phase voltage too low

Description

Drive module *arg* and drive unit *arg*. A phase voltage is too low.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

One or several phase supplies are obstructed.

Recommended actions

Verify that phase is connected properly and no fuse has triggered. Verify that grid voltage is high enough. Verify that grid inductance is not too high, making the grid weak.

38507, Rectifier mains missing

Description

Drive module *arg* and drive unit *arg*. One or more grid parameters has been out of range for a certain time.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

Unstable or weak grid.

Recommended actions

Verify grid stability, check if there are a lot of long dips. Verify that grid inductance is not too high. This code should come together with other more specific grid warnings.

38508, Rectifier grid voltage is too low

Description

Drive module *arg* and drive unit *arg*. Grid voltage is too low.

Consequences

Operation will still be possible.

Probable causes

Weak grid.

Recommended actions

Verify that grid voltage is high enough. Verify that grid is connected properly and no fuse has triggered. Verify that grid inductance is not too high, making the grid weak.

38509, Rectifier grid frequency is out of range.

Description

Drive module *arg* and drive unit *arg*. Grid frequency is out of range.

Consequences

Operation will still be possible.

Probable causes

Weak grid.

Recommended actions

Verify that grid frequency is within specification. Verify that grid is connected properly and no fuse has triggered. Verify that grid inductance is not too high, making the grid weak.

38510, Rectifier DC bus is charging

Description

Drive module *arg* and drive unit *arg*. DC bus is charged with limited current.

Consequences

DC bus is not guaranteed to provide high power.

Recommended actions

Check other error codes.

38511, Rectifier over current on grid side

Description

Drive module *arg* and drive unit *arg*. Over current protection has triggered on grid side.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

Weak grid.

Recommended actions

Verify that the load cycle is within specification. Verify grid voltage is high enough. Verify that grid inductance is not too high, making the grid weak and unstable.

38512, Rectifier error

Description

In controller cabinet *arg*, the rectifier unit at drive link position *arg* has unexpectedly triggered a shutdown of DC bus output supply power.

Consequences

No operation will be possible until the fault has been corrected.
The system goes to SYS HALT.

Probable causes

The reason is unknown.

Recommended actions

Check event log for other messages with detailed description.

38513, Rectifier AC input overload**Description**

Drive module *arg* and drive unit *arg*. Too high average power for too long time registered on grid side.

Consequences

No operation will be possible until the fault has been corrected.
The system goes to SYS HALT.

Probable causes

Grid voltage low or DC bus overload.

Recommended actions

Verify that DC bus load cycle is within specification. Verify grid voltage is high enough.

38514, Rectifier 24 V Trunk overload**Description**

Drive module *arg* and drive unit *arg*. 24 V Trunk voltage too low.

Consequences

No operation will be possible until the fault has been corrected.
The system goes to SYS HALT.

Probable causes

24 V Trunk overloaded.

Recommended actions

Verify that 24 V Trunk does not have short circuit. Verify 24 V Trunk load is within specification.

38515, Rectifier AC input over voltage warning**Description**

Drive module *arg* and drive unit *arg*. Grid voltage is too high.

Consequences

Operation will still be possible.

Probable causes

Weak grid.

Recommended actions

Verify that grid voltage is within specification. Verify that grid inductance is not too high, making the grid weak.

38516, Rectifier AC input over voltage error**Description**

Drive module *arg* and drive unit *arg*. Grid voltage is too high.

Consequences

No operation will be possible until the fault has been corrected.
The system goes to SYS HALT.

Probable causes

Weak grid.

Recommended actions

Verify that grid voltage is within specification. Verify that grid inductance is not too high, making the grid weak.

38517, Rectifier grid open circuit**Description**

Drive module *arg* and drive unit *arg*. Grid connection appear to be open circuit on one or more phases.

Consequences

Operation will still be possible.

Probable causes**Recommended actions**

Verify that grid is connected properly and no fuse has triggered.
Verify protective earth connection.

38518, Rectifier 24 V Trunk timeout**Description**

Drive module *arg* and drive unit *arg*. 24 V Trunk unable to reach nominal voltage.

Consequences

No operation will be possible until the fault has been corrected.
The system goes to SYS HALT.

Probable causes

Trunk overloaded

Recommended actions

Verify that 24 V Trunk does not have short circuit. Verify 24 V Trunk load is within specification.

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38519, Rectifier AC input over current warning

Description

Drive module *arg* and drive unit *arg*. Over current protection has triggered on grid side.

Consequences

Operation will still be possible.

Probable causes

Weak grid.

Recommended actions

Verify load cycle is within specification. Verify grid voltage is high enough. Verify that grid inductance is not too high, making the grid weak and unstable.

38520, Rectifier AC input over current error

Description

Drive module *arg* and drive unit *arg*. Over current protection has triggered on grid side.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

Weak grid.

Recommended actions

Verify load cycle is within specification. Verify grid voltage is high enough. Verify that grid inductance is not too high, making the grid weak and unstable.

38521, Rectifier ACOUT OFF warning

Description

Drive module *arg* and drive unit *arg*. User AC output from the rectifier unit has been turned off.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

AC output has been turned off to protect other hardware.

Recommended actions

See other error messages.

38522, Rectifier buck over voltage software error

Description

Drive module *arg* and drive unit *arg*. DC bus voltage too high.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

If there is a grid dip while feeding energy to grid, DC bus voltage will increase as a result. If grid voltage and inductance is too high, feeding energy to grid will increase grid voltage to maximum value and then result in DC bus voltage increasing.

Recommended actions

- 1 Verify that bleeder is not open and has no short circuit (should have reported separate errors).
- 2 Verify that configured DC bus capacitance is correct.
- 3 Verify that grid is able to receive energy.

38523, Rectifier buck over current software error

Description

In controller cabinet *arg*, the rectifier unit at drive link position *arg* has detected a over current usage of the DC bus.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

DC bus overloaded.

Recommended actions

- 1 Verify that configured DC bus capacitance is correct.
- 2 Verify that DC bus does not have short circuit.
- 3 Verify that load cycle is within specification.
- 4 Verify that correct drive system is configured via RobotStudio.

38524, Rectifier buck over current hardware error

Description

Drive module *arg* and drive unit *arg*. Hardware over current protection has triggered on DC bus side.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

DC bus overloaded.

Recommended actions

- 1 Verify that DC bus does not have short circuit.
- 2 Verify that load cycle is within specification.
- 3 Verify that configured DC bus capacitance is correct.

38525, Rectifier 24 V Brake power not ok**Description**

Drive module *arg* and drive unit *arg*. 24 V Brake voltage too low.

Consequences

No operation will be possible until the fault has been corrected.
The system goes to SYS HALT.

Probable causes

24 V Brake overloaded.

Recommended actions

Verify that 24 V Brake does not have short circuit. Verify 24 V Brake load is within specification.

38526, Rectifier heatsink over temperature warning**Description**

Drive module *arg* and drive unit *arg*. Heatsink temperature close too high.

Consequences

Operation will still be possible.

Probable causes

Inadequate cooling of unit.

Recommended actions

- 1 Verify that fans in cooling channel is OK and according to specification.
- 2 Verify that temperature in cabinet is within specification.
- 3 Verify that load on all outputs are within specification.

38527, Rectifier heatsink over temperature error**Description**

In controller cabinet *arg*, the rectifier unit at drive link position *arg* has experienced too high heatsink temperature.

Consequences

No operation will be possible until the fault has been corrected.
The system goes to SYS HALT.

Probable causes

Inadequate cooling of unit.

Recommended actions

- 1 Verify that fans in cooling channel are OK and according to specification.
- 2 Verify that temperature in cabinet is within specification.
- 3 Verify that load on all outputs are within specification.

38528, Rectifier CPU temperature too high**Description**

Drive module *arg* and drive unit *arg*. CPU temperature too high.

Consequences

No operation will be possible until the fault has been corrected.
The system goes to SYS HALT.

Probable causes

Inadequate cooling of unit.

Recommended actions

- 1 Verify that fans in cooling channel is OK and according to specification.
- 2 Verify that temperature in cabinet is within specification.
- 3 Verify the internal housing fan.
- 4 Verify that load on all outputs are within specification.

38529, Rectifier brake power good timeout**Description**

Drive module *arg* and drive unit *arg*. 24 V Brake unable to reach nominal voltage.

Consequences

No operation will be possible until the fault has been corrected.
The system goes to SYS HALT.

Probable causes

Brake 24 V overloaded.

Recommended actions

Verify that 24 V Brake does not have short circuit. Verify 24 V Brake load is within specification.

38530, Rectifier brake 24 V over voltage**Description**

Drive module *arg* and drive unit *arg*. 24 V Brake voltage too high.

Consequences

No operation will be possible until the fault has been corrected.
The system goes to SYS HALT.

Probable causes

Brake 24 V is fed from other device.

Recommended actions

Verify that there isn't any other power supply feeding energy to 24 V Brake.

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Continued

38531, Rectifier brake 24 V overload

Description

Drive module *arg* and drive unit *arg*. 24 V Brake load too high for too long time.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

Brakes are faulty or shorted.

Recommended actions

Verify that load on 24 V Brake is within specification. Brake release action requires a current peak. Don't do too fast cycles of activating and deactivating the brakes.

38532, Rectifier bleeder overload

Description

Drive module *arg* and drive unit *arg*. Bleeder transistor overload.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

If there is a grid dip while feeding energy to grid, DC bus voltage will increase as a result. If grid voltage and inductance is too high, feeding energy to grid will increase grid voltage to maximum value and then result in DC bus voltage increasing. If a separate error occur in the unit, the regenerative energy will be handled by the bleeder and could potentially trigger this error.

Recommended actions

Verify that load cycle is within specification. Verify that grid is able to handle energy.

38533, Rectifier CPU temperature too low

Description

Drive module *arg* and drive unit *arg*. CPU temperature too low.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

The cabinet is used, or has been stored, outside its temperature specification.

Recommended actions

Verify that room and cabinet temperature is within specification. If recently moved from cold storage, wait until unit has reached room temperature.

38534, Rectifier heatsink temperature too low

Description

Drive module *arg* and drive unit *arg*. Heatsink temperature too low.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

The cabinet is used, or has been stored, outside temperature specification.

Recommended actions

Verify that room and cabinet temperature is within specification. If recently moved from cold storage, wait until unit has reached room temperature.

38535, Rectifier AC out overload

Description

Drive module *arg* and drive unit *arg*. ACOUT load too high for too long time.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

ACOUT is overloaded or shorted.

Recommended actions

Verify that ACOUT load is within specification. Verify that ACOUT does not have short circuit.

38536, Rectifier AC Out over current Common Mode error

Description

In drive module *arg* the rectifier unit at drive unit position *arg* a hardware common mode over current protection has triggered on AC Out.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

A and B current differs too much.

Continues on next page

Recommended actions

Verify that AC Out does not have normal short circuit or short circuit to protective earth. Verify that AC Out load is within specification.

38537, Rectifier DC bus charge timeout**Description**

In drive module *arg* the rectifier unit at drive unit position *arg*, DC bus could not charge to setpoint within certain time.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

The DC bus is overloaded.

Recommended actions

Verify DC bus does not have short circuit. Verify that DC bus load is within specification. Verify that capacitor bank is within specification.

38538, Rectifier holdup supervision too low**Description**

In drive module *arg* the rectifier unit at drive unit position *arg*, internal DC bus voltage reached limit to turn off 24 Trunk and 24 V Brake.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

This error code normally comes as a result of loosing grid for a long time.

Recommended actions

Verify that grid voltage is high enough. Verify that grid is connected properly and no fuse has triggered. Verify that grid inductance is not too high, making the grid weak.

38539, Rectifier fan speed too low**Description**

In drive module *arg* the rectifier unit at drive unit position *arg* has detected the fan connected to the unit is not rotating.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

Broken fan or disconnected fan cable

Recommended actions

Verify that the internal housing fan is properly connected. Verify that the fan is not broken. If broken, replace the fan and try again.

38540, Rectifier 24 V Sys lost**Description**

In drive module *arg* the rectifier unit at drive unit position *arg* has detected 24V_SYS input voltage too low.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

Missing supply of 24 V Sys or the cabling may be broken.

Recommended actions

Verify that the 24 V Sys supply is present and stable. See controller manual to find the unit providing the 24 V Sys.

38541, Rectifier 24 V Trunk over voltage**Description**

In drive module *arg* the rectifier unit at drive unit position *arg* has detected that 24 V Trunk voltage too high.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

Other devices are feeding the 24 V Trunk.

Recommended actions

Verify that there isn't any other power supply feeding energy to 24 V Trunk.

38542, Rectifier communication failure**Description**

In drive module *arg* the rectifier unit at drive unit position *arg* lost the communication with the main computer.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

There may be a damage in the communication link cable between the main computer and the rectifier unit, the rectifier unit may be incorrectly grounded or excessive noise may interfere with the communication signals.

Continues on next page

Recommended actions

- 1 Check that all cables are properly connected.
- 2 Check that the rectifier unit have logic power.
- 3 Check/replace Ethernet cables.
- 4 Check for other hardware event log messages.
- 5 Check the event log for power supply unit error messages.
- 6 Check the cabling between the power supply unit and the rectifier unit.
- 7 Check the 24 V output from the power supply unit.

38543, Rectifier power supply error

Description

In drive module *arg* the rectifier unit at drive unit position *arg* has detected a problem with the logic power.

Consequences

No operation will be possible until the fault has been corrected.
The system goes to SYS HALT.

Probable causes

The 24 V logic supply to the drive is temporary or constantly lost.

Recommended actions

- 1 Check the cabling between the power supply unit and the rectifier unit.
- 2 Check the 24 V output from the power supply unit.

38544, Rectifier DC voltage too low

Description

In drive module *arg*, the DC link voltage is too low for the rectifier unit at unit position *arg*.

Consequences

Operation will still be possible.

Probable causes

The incoming mains voltage to the rectifier unit is out of specification.

Recommended actions

- 1 Check for other hardware event log messages regarding rectifier problems.
- 2 Check incoming mains voltage.
- 3 Check all internal 3-phase components (main switch, mains filter, fuse) and cabling in the drive module.

38545, Rectifier DC under voltage warning

Description

In drive module *arg*, the rectifier unit at unit position *arg* has a DC link voltage that is close to minimum limit.

Consequences

Operation will still be possible.

Probable causes

The incoming mains voltage to the rectifier unit is out of specification.

Recommended actions

- 1 Check for other hardware event log messages regarding rectifier problems.
- 2 Check incoming mains voltage.
- 3 Check all internal 3-phase components (main switch, mains filter, fuse) and cabling in the drive module.

38546, Rectifier DC over voltage warning

Description

In drive module *arg*, the rectifier unit at unit position *arg* has a DC link voltage that is close to maximum limit.

Consequences

Operation will still be possible.

Probable causes

The bleeder resistor is not connected or faulty.

Recommended actions

Disconnect the bleeder and check the cable and measure the bleeder resistance.

38547, Rectifier DC over voltage error

Description

In drive module *arg*, the rectifier unit at unit position *arg* has a DC link voltage that is over maximum limit.

Consequences

No operation will be possible until the fault has been corrected.
The system goes to SYS HALT.

Probable causes

The bleeder resistor is not connected or faulty.

Recommended actions

Disconnect the bleeder and check the cable and measure the bleeder resistance.

38548, Rectifier critical DC voltage error**Description**

In drive module *arg*, the rectifier unit at unit position *arg* has a DC link voltage that is close to critical maximum limit.

Consequences

No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

The bleeder resistor is not connected or faulty.

Recommended actions

Disconnect the bleeder and check the cable and measure the bleeder resistance.

39351, The drive system communication link is down**Description**

The drive system communication link is down.

Consequences

No robot movements are possible. No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

The drive system communication link cable between the main computer and the drive system may be broken, not connected or not properly connected.

Recommended actions

Check that the drive system communication link cable between the main computer and the drive system is correctly connected.

39352, Drive system communication error.**Description**

Too many communication packets have been lost between the main computer and the drive system.

Consequences

No robot movements are possible. No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

The drive system communication link cable between the main computer and the drive system may be broken, not connected or not properly connected.

Recommended actions

- 1 Check that the drive system communication link cable between the main computer and the drive system is correctly connected.
- 2 Check for external electromagnetic noise sources close to the drive module.

39353, Drive link unit communication error.**Description**

Too many communication packages have been lost between the main computer and the drive unit in cabinet *arg* at link position *arg*.

Consequences

No robot movements are possible. No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

The drive unit is not able to respond in a correct way. Might be because high cpu load or that the drive system communication link cable between the main computer and the drive system may be broken or not properly connected.

Recommended actions

- 1 Check that the drive system communication link cable between the main computer and the drive system is correctly connected.
- 2 Check for external electromagnetic noise sources close to the drive module.

39354, No drive system detected during startup.**Description**

No drive system detected during startup.

Consequences

No robot movements are possible. No operation will be possible until the fault has been corrected. The system goes to SYS HALT.

Probable causes

- 1 The drive system communication link cable between the main computer and the drive system may be broken or not properly connected.
- 2 Too short time between power-off and power-on.

Recommended actions

- 1 Check that the drive system communication link cable between the main computer and the drive system is correctly connected.

Continues on next page

- 2 Power off controller and wait at least 5 seconds before power on controller again.

39355, No drive system interrupts received.

Description

The system has not generated drive system interrupts within timeout.

Consequences

The system goes to system failure state.

Probable causes

High system interrupt load or in rare cases hardware error.

Recommended actions

- 1 Restart the controller to resume operation.
- 2 Check any other error log messages coinciding in time with this one for clues.
- 3 Replace the main computer if faulty.

39408, Rectifier Unit has the wrong type code

Description

The type code for rectifier unit *arg* in drive module *arg* is different from the one specified in the configuration file. Installed rectifier unit type is *arg*, and the configured type is *arg*.

Consequences

No operation will be possible until after correcting the fault. The system goes to system failure state.

Probable causes

The configuration file may contain incorrect values, the configuration key may be incorrect or the hardware may be of the wrong type. If the rectifier unit was recently replaced, a rectifier unit with the wrong type code may have been fitted or the key was not replaced with one for the correct hardware/software combination.

Recommended actions

- 1 Make sure the values in the configuration file match the installed hardware.
- 2 Make sure the configuration key match the installed hardware/software combination. The configuration data is described in Technical reference manual - System parameters.
- 3 If the rectifier unit was recently replaced, make sure a unit of the correct type code is used.

39409, Capacitor Unit has the wrong type code

Description

The type code for capacitor unit *arg* in drive module *arg* is different from the one specified in the configuration file. Installed capacitor unit type is *arg*, and the configured type is *arg*.

Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

Probable causes

The configuration file may contain incorrect values, the configuration key may be incorrect or the hardware may be of the wrong type. If the capacitor unit was recently replaced, a capacitor unit with the wrong type code may have been fitted or the key was not replaced with one for the correct hardware/software combination.

Recommended actions

- 1 Make sure the values in the configuration file match the installed hardware.
- 2 Make sure the configuration key match the installed hardware/software combination. The configuration data is described in Technical reference manual - System parameters.
- 3 If the capacitor unit was recently replaced, make sure a unit of the correct type code is used.

39479, External Motor PTC Temperature Error

Description

The temperature in one or more additional axis motors connected to drive module *arg* has reached a too high level.

Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

Probable causes

The motor may have stalled (possibly due to a collision), the motor may be overloaded or the ambient temperature may be higher than the rated level for the motor.

Recommended actions

- 1 Check that the additional axis has not collided.
- 2 Check that the ambient temperature does not exceed the rating.
- 3 Allow the motor to cool down, and then run the system again. Replace any motors damaged by the excessive heat.
- 4 If possible, rewrite the user program to reduce the amount of hard acceleration.

39487, PTC Temperature Supervision Not Supported**Description**

The hardware does not support PTC supervision for additional axes in drive module *arg*.

Consequences

No supervision of PTC temperature will be performed for drive module *arg*.

Recommended actions

Disable additional axes PTC supervision in the motion configuration, i.e., in Drive Module User Data.

39488, Missing sensor for force control**Description**

A sensor for force control is configured to be used for robot *arg*, but it is not available on the drive communication link in cabinet *arg*.

Consequences

The force control functionality will not work properly.

Probable causes

The sensor for force control is not connected to the drive communication link in cabinet *arg*, or it does not have any electrical power.

Recommended actions

Verify the communication and the power connections for the force control sensor.

39503, Power Supply Overtemperature**Description**

The temperature in the drive module power supply of drive module *arg* has reached a critical level.

Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

Probable causes

The fan unit may be faulty, the cooling air flow may be obstructed or the ambient temperature may be too high.

Recommended actions

- 1 NOTE! Do not try to restart the controller for approx. ten minutes to let it cool down.
- 2 Make sure the fans are running and that the air flow is not obstructed.
- 3 Make sure the ambient temperature does not exceed the drive module rating.

- 4 Make sure the power supply connectors are correctly connected to the axis computer.

39504, Power Supply to Brakes Overload**Description**

The brake power circuit in drive module *arg* draws too much current.

Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

Probable causes

The brake power cable may be faulty (short circuit), or additional axis motors with brakes consuming too much power may be used. The fault may also occur if the cable from the power supply unit is not correctly connected to the drive module.

Recommended actions

- 1 Make sure the power supply cable is correctly connected to the drive module.
- 2 Check the brake supply cable for short circuits.
- 3 Make sure the total current consumed by additional axes' motors does not exceed the specification for the drive module.
- 4 Make sure the power supply connectors are correctly connected to the axis computer.
- 5 Make sure the 24 V brake voltage is within specified limits. See the circuit diagram for the controller.

39505, Mains Voltage to Power Supply Lost**Description**

The mains power supply to the power supply unit in drive module *arg* is missing.

Consequences

No operation will be possible until after correcting the fault. The system goes to system failure state.

Probable causes

The main power switch on the drive module may be turned off. The incoming mains cable may be faulty (break), or the circuit breaker for the power supply may have tripped. The fault may also occur if the connector from the power supply unit is not correctly connected to the axis computer.

Recommended actions

- 1 Check that the main power switch is turned on for the drive module and restart the controller.
- 2 Check that the connector from the power supply unit is correctly connected to the axis computer.

Continues on next page

Continued

- 3 Measure the voltage at the mains contactor to ensure that the mains is present.
- 4 Check that the power supply fuses/circuit breakers in the drive module have not tripped.

39520, Communication lost with Drive Module

Description

The main computer has lost contact with drive module *arg*.

Consequences

The system goes to status SYS HALT No operation will be possible until the fault has been corrected.

Probable causes

This may be due to a cable break, badly connected connector or high levels of interference in the cable.

Recommended actions

- 1 Make sure the cable between control module and drive module is not damaged and that both connectors are correctly connected.
- 2 Make sure no extreme levels of electromagnetic interference are emitted close to the robot cabling.

39522, Axis computer not found

Description

The axis computer in drive module *arg* is not connected to the main computer.

Consequences

The system goes to system failure state. No operation will be possible until the fault has been corrected.

Probable causes

This may be due to a cable break, badly connected connectors, or loss of power supply.

Recommended actions

- 1 Make sure that the cable between the main computer and the axis computer is not damaged and that both connectors are correctly connected.
- 2 Make sure that the power supply to the axis computer is working correctly.
- 3 Restart the controller.

39523, Unused Axis computer connected

Description

Axis computer in the drive module *arg* is connected to the main computer but not in use.

Probable causes

This can be due to configuration problem.

Recommended actions

- 1 Disconnect the unused axis computer or setup the system to use the axis computer.
- 2 Restart the controller.

39525, Drive Module startup error

Description

The system has failed to complete the initialization phase of drive module *arg*.

Consequences

The system goes to system failure state.

Probable causes

The system has failed to complete the initialization phase of the drive module.

Recommended actions

- 1 Retry by restarting the controller using the main power switch.
- 2 Check for other hardware event log messages.

39526, Axis computer not found in Multi Move system

Description

The axis computer in drive module *arg* is not connected to the main computer.

Consequences

The system goes to system failure state. No operation will be possible until the fault has been corrected.

Probable causes

This may be due to a cable break, badly connected connectors, missing axis computer switch, or loss of power supply.

Recommended actions

- 1 Make sure that the main power switch on drive module has been switched ON.
- 2 Make sure that the cable from the main computer through the switch to the drive module is not damaged and that both connectors are correctly connected.
- 3 Make sure that the cable is connected to the correct port on the axis computer switch.
- 4 Make sure that the power supply unit in drive module is working correctly.
- 5 Restart the controller.

Continues on next page

39527, Axis computer not found in single Multi Move system**Description**

The axis computer in drive module *arg* is not connected to the main computer.

Consequences

The system goes to system failure state. No operation will be possible until the fault has been corrected.

Probable causes

This may be due to a cable break, badly connected connectors, missing axis computer switch, or loss of power supply.

Recommended actions

- 1 Make sure that the cable from the main computer through the switch to the axis computer is not damaged and that all connectors are correctly connected.
- 2 Make sure that the power supply to the axis computer is working correctly.
- 3 Restart the controller.

39530, Axis Computer Lost Communication With Safety System**Description**

Communication has been lost between axis computer and the safety system in drive module *arg*.

Consequences

System goes to system failure state.

Probable causes

This may be due to a faulty communication cable or connection between the axis computer and the safety system. It may also be due to severe interference or if the safety system has lost its power.

Recommended actions

- 1 Check cable between the axis computer and the safety system is intact and correctly connected.
- 2 Check power supply connected to the safety system.
- 3 Make sure no extreme levels of electromagnetic interference are emitted close to the robot cabling.

39531, Run chain glitch test not running**Description**

The glitch test of the run chain has not been performed. The problem was discovered by the safety system connected to the axis computer in drive module *arg*.

Consequences

System goes to status SYS HALT.

Probable causes

This may be due internal errors.

Recommended actions

Contact your local ABB support office.

39600, Invalid unit position for drive module**Description**

No unit is located at unit_position *arg* on the EtherCAT network.

Consequences

The system goes to system failure state. No operation will be possible until the fault has been corrected.

Probable causes

This may be due to a cable break or badly connected connectors.

Recommended actions

- 1 Make sure that the cable from the controller to the robot is not damaged and that all connectors are correctly connected.
- 2 Restart the controller.

39601, Wrong unit position for drive module**Description**

Unexpected type of unit is located at unit_position *arg* on the EtherCAT network.

Consequences

The system goes to system failure state. No operation will be possible until the fault has been corrected.

Probable causes

The units on the EtherCAT network is connected in the wrong order.

Recommended actions

- 1 Make sure that the cable from the main computer goes to the MRU and the cable from the MRU goes to the robot.
- 2 Restart the controller.

39602, Communication failure**Description**

IRB14100 GW has stopped responding on SDO accesses.

Consequences

System failure state is entered.

Recommended actions

Power cycle the system.

Continues on next page

39603, Communication lost with Power Unit

Description

The communication with the Power Unit has been lost.

Consequences

The system goes to Motors Off state.

Probable causes

- The communication cable between the Main Computer and the Power Unit has been disconnected.
- The communication cable to the robot has been disconnected.
- The power unit or the robot has lost its logical power.

Recommended actions

- Check communication cabling to power unit and robot.
- Check power logic supply to power unit and robot.

39604, Power Unit reports communication error

Description

The Power Unit reports intermittent communication status with main computer.

Consequences

The system goes to Motors Off state.

Probable causes

- 1 The communication cable between the Main Computer and the Power Unit has been disconnected and reconnected.
- 2 The communication link between Main Computer and the Power Unit has been disturbed.

Recommended actions

- Check communication cabling to power unit and robot.
- Check power logic supply to power unit and robot.
- Check possible disturbance sources.

39605, Power Unit 24 V supply error

Description

The Power Unit with unit position *arg* has detected problem with the logic power.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state with zero torque.

Probable causes

The 24 V logic supply to the drive is temporary or constantly lost.

Recommended actions

- 1 Check the event log for power supply unit error messages.

- 2 Check the cabling between the power supply unit and the drive unit.
- 3 Check the 24 V output from the power supply unit.

39606, Power Unit internal error

Description

In the Power Unit at unit position *arg* has indicated an internal error. (*arg*).

Consequences

The system goes to system failure state.

Probable causes

An internal error has occurred in the drive unit firmware.

Recommended actions

Restart the controller by using the main power switch.

39607, DC link voltage too high

Description

In Power Unit at unit position *arg* has a DC link voltage that is too high.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 The bleeder resistor is not connected or faulty.
- 2 The user program may contain too much deceleration of the manipulator's axes. This fault is more likely if the system contains additional axes.

Recommended actions

- 1 Make sure the bleeder resistor cable is properly connected to the rectifier unit.
- 2 Disconnect the bleeder and check the cable and measure the bleeder resistance.
- 3 Rewrite the user program to reduce the amount of hard decelerations.

39608, DC link voltage too low

Description

The DC link voltage is too low for the Power Unit at unit position *arg*.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Continues on next page

Probable causes

The incoming mains voltage to the rectifier unit is out of specification.

Recommended actions

- 1 Check for other hardware event log messages regarding mains voltage problem.
- 2 Check incoming mains voltage. Change the mains tolerance min so that the mains voltage is inside the specified interval.
- 3 Check that the correct voltage is selected with jumpers on the transformer (optional).
- 4 Check all internal main-phase components (main switch, mains filter, fuse, contactors) and cabling.

39609, Open circuit in bleeder resistor circuit**Description**

The Power Unit at drive unit position *arg* has too high resistance (open circuit).

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

This may be caused by a faulty bleeder resistor cable or a faulty bleeder resistor.

Recommended actions

- 1 Make sure the bleeder resistor cable is properly connected to the rectifier unit.
- 2 Disconnect the bleeder and check the cable and measure the bleeder resistance.

39610, Short circuit in bleeder resistor circuit**Description**

The bleeder resistor connected to the Power Unit at unit position *arg* is indicating a short circuit.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

This may be caused by a faulty bleeder resistor cable or a faulty bleeder resistor.

Recommended actions

- 1 Make sure the bleeder resistor cable is correctly connected to the rectifier unit.
- 2 Disconnect the bleeder and check the cable and measure the bleeder resistance.

- 3 Check for bleeder short circuit against protective earth.

39611, Incoming mains missing**Description**

In the Power Unit at unit position *arg* has detected a mains supply loss.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state.

Probable causes

- 1 Incoming mains voltage loss.
- 2 Some malfunction in the cabling or in internal 1-phase components.
- 3 The rectifier unit is faulty.

Recommended actions

- 1 Check the incoming mains voltage.
- 2 Check all the internal 1-phase components (main switch, mains filter, fuse, contactors) and cabling in controller.

39612, Rectifier temperature warning**Description**

In Power Unit at drive unit position *arg* is approaching a too high temperature level.

Consequences

It is possible to continue but the margin to maximum allowed temperature is too low to sustain long term operation.

Probable causes

- 1 The cooling fans may be faulty or the air flow may be obstructed.
- 2 The ambient temperature may be too high.
- 3 The system may be running with a too high torque for extended periods of time.

Recommended actions

- 1 Verify that the fans are running and that the air flow is not obstructed.
- 2 Verify that the ambient temperature does not exceed the cabinet's temperature rating.
- 3 If possible, rewrite the user program to reduce the amount of hard acceleration and hard deceleration.
- 4 Reduce the static torque due to gravity or external forces.

Continues on next page

39613, Rectifier temperature error

Description

In Power Unit at unit position *arg* has reached a too high temperature level.

Consequences

No operation will be possible until the rectifier has cooled down.
The system goes to Motors Off state.

Probable causes

- 1 The cooling fans may be faulty or the air flow may be obstructed.
- 2 The ambient temperature may be too high.
- 3 The system may be running with a too high torque for extended periods of time.

Recommended actions

- 1 Verify that the fans are running and that the air flow is not obstructed.
- 2 Verify that the ambient temperature does not exceed the cabinet's temperature rating.
- 3 If possible, rewrite the user program to reduce the amount of hard acceleration and hard deceleration.
- 4 Reduce the static torque due to gravity or external forces.

39700, Roberta first HW elog

Description

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Consequences

Probable causes

Recommended actions

5 Number series: 4 xxxx

40001, Argument error

Description

The optional argument *arg* has been used more than once in the same routine call.

Recommended actions

- 1 Make sure the optional parameter is not used more than once in the same routine call.

40002, Argument error

Description

The argument *arg* has been specified for more than one parameter.

Recommended actions

The parameter list, from which the parameter is selected, contains parameters mutually exclusive.

- 1 Make sure the argument is used for one parameter only.

40003, Argument error

Description

An argument for the required parameter *arg* was expected, but the optional argument *arg* was found.

Recommended actions

- 1 Make sure all arguments are specified in the same order as the parameters for the routine called.

40004, Argument error

Description

The argument for REF parameter *arg* is not a data reference.

Recommended actions

- 1 Make sure the argument is a data or a parameter reference.

40005, Argument error

Description

The argument for INOUT parameter *arg* is not a variable or persistent reference, or it is read-only.

Recommended actions

- 1 Make sure the argument is a variable or a persistent variable parameter or a persistent parameter reference and that it is NOT read-only.
- 2 Also make sure the argument is NOT written within brackets ().

40006, Argument error

Description

Parameter *arg* is missing an optional argument value.

Recommended actions

The only parameters that may be specified by a name only are "switch" parameters. All others must be assigned a value.

- 1 Make sure parameter has a value.

40007, Argument error

Description

The optional argument *arg* is not found in its correct position in the argument list.

Recommended actions

- 1 Make sure all arguments are specified in the same order as the parameters for the routine called.

40008, Argument error

Description

A reference to the optional parameter *arg* is missing.

Recommended actions

Each optional parameter must have a reference argument, specified with a leading backslash character (\).

- 1 Change the required argument into an optional argument.

40009, Argument error

Description

A reference to the required parameter *arg* in a conditional argument is missing.

Recommended actions

Each conditional value for an optional parameter must refer to an optional parameter in the calling routine.

- 1 Change the conditional value.

40010, Argument error

Description

A reference to the required parameter *arg* in an optional argument is missing.

Recommended actions

Each required parameter must have a reference argument, specified with a leading backslash character (\).

Continues on next page

- 1 Change the optional argument into a required argument.

40011, Argument error

Description

The required argument *arg* is not found in its correct position in the argument list.

Recommended actions

Make sure all arguments are specified in the same order as the parameters for the routine called.

40012, Argument error

Description

The "switch" argument *arg* has a value.

Probable causes

An argument corresponding to a "switch" parameter may not be assigned a value.

Recommended actions

- 1 Remove the value.

40013, Argument error

Description

The call to routine *arg* has too few arguments.

Recommended actions

A routine call must supply values for all required parameters of the routine being called. The argument list must have as many arguments, as the parameter list has parameters.

- 1 Add more arguments to fit the parameter list.

40014, Argument error

Description

The call to routine *arg* has too many arguments.

Recommended actions

No arguments, more than those defined by the called routine parameter list, must be supplied. The argument list must have as many arguments, as the parameter list has parameters.

- 1 Remove excessive arguments from the argument list.

40015, Data declaration error

Description

The number of array dimensions is *arg*, but may be 1, 2 or 3 only.

Recommended actions

- 1 Change the dimension expression.

Continues on next page

40016, Data declaration error

Description

Too many dimensions in array definition.

Recommended actions

An array may have at most 3 dimensions. Rewrite the program so that no more than 3 dimensions are needed.

40017, Type error

Description

Indexed data *arg*, *arg* is not of array type.

Recommended actions

Only data that have been declared to be arrays may be indexed.

- 1 Remove the index or indices.
- 2 Declare the data to be an array.

40018, Type error

Description

Data *arg*, *arg* is not of record type.

Recommended actions

Components are only available for data of record type.

- 1 Check the type and name of the referenced data.

40019, Limit error

Description

Error when creating the persistent variable *arg*. The error occurred when the persistent variable was to be inserted into the database.

Consequences

The created persistent variable cannot be used in a RAPID program.

Probable causes

The program memory is full or fragmented.

Recommended actions

Check if large data structures could be split into smaller blocks. Use of installed modules can save program memory.

40020, Data declaration error

Description

Expression *arg* is not a constant expression.

Recommended actions

Any expression contained within a data declaration must be a constant expression.

- 1 Make sure no expression contains variables or persistent references, or function calls.

40021, Instruction error

Description

Missing expression in RETURN instruction.

Probable causes

A RETURN instruction within a function must specify a value to be returned.

Recommended actions

- 1 Add a value expression.

40022, Type error

Description

Illegal combination of operand types *arg* and *arg* for the ***** operator.

Recommended actions

Allowed operand type combinations are: "num"***"num", "num"***"pos", "pos"***"num", "pos"***"pos" and "orient"***"orient".

- 1 Check the operand types.

40023, Instruction error

Description

Cannot transfer control into another instruction list.

Recommended actions

It is not possible to jump into a program flow instruction.

- 1 Make sure that the label is located in the same instruction list as the GOTO instruction, at the same or an outer level.

40024, Type error

Description

Illegal type *arg* for left operand of binary '+' or '-' operator.

Recommended actions

Allowed operand types for the binary "+" operator are "num", "pos" and "string", and for the binary "-" operator "num" and "pos".

- 1 Check the operand types.

40025, Type error

Description

Illegal type *arg* for operand of unary '+' or '-' operator.

Recommended actions

Allowed operand types for the unary "+" and "-" operators are "num" and "pos".

- 1 Check the operand types.

40026, Type error

Description

Illegal type *arg* for right operand of binary '+' or '-' operator.

Recommended actions

Allowed operand types for the binary "+" operator are "num", "pos" and "string", and for the binary "-" operator "num" and "pos".

- 1 Check the operand types.

40027, Type error

Description

Illegal type *arg* for left operand of '*arg*' operator.

40028, Type error

Description

Illegal type *arg* for right operand of '*arg*' operator.

40029, Type error

Description

Illegal type *arg* for left operand of '<', '<=', '>' or '>=' operator.

Recommended actions

Allowed operand type for the "<", "<=", ">" or ">=" operators is "num".

- 1 Check the operand types.

40030, Type error

Description

Illegal type *arg* for right operand of '<', '<=', '>' or '>=' operator.

Recommended actions

Allowed operand type for the "<", "<=", ">" or ">=" operators is "num".

- 1 Check the operand types.

40031, Type error

Description

Illegal type *arg* for left operand of ***** operator.

Continues on next page

Continued

Recommended actions

Allowed operand types for the "" operator are "num", "dnum", "pos" or "orient".

- 1 Check the operand types.

40032, Type error

Description

Illegal type *arg* for right operand of '*' operator.

Recommended actions

Allowed operand types for the "" operator are "num", "pos" or "orient".

- 1 Check the operand types.

40033, Type error

Description

Illegal type *arg* for operand of 'NOT' operator.

Recommended actions

Allowed operand type for the "NOT" operator is "bool".

- 1 Check the operand types.

40034, Type error

Description

Illegal type *arg* for left operand of 'OR', 'XOR' or 'AND' operator.

Recommended actions

Allowed operand type for the "OR", "XOR" or "AND" operators is "bool".

- 1 Check the operand types.

40035, Type error

Description

Illegal type *arg* for right operand of 'OR', 'XOR' or 'AND' operator.

Recommended actions

Allowed operand type for the "OR", "XOR" or "AND" operators is "bool".

- 1 Check the operand types.

40036, Type error

Description

Incorrect number of indices in index list for array *arg* with *arg* dimension(s).

Recommended actions

- 1 Make sure that the number of indices in the index list corresponds to the number of dimensions of the indexed data array.

40037, Data declaration error

Description

LOCAL illegal in routine constant declaration.

Recommended actions

Only program data declarations may have the LOCAL attribute. Remove the LOCAL attribute or move the declaration outside of the routine.

40038, Data declaration error

Description

LOCAL illegal in routine variable declaration.

Recommended actions

Only program data declarations may have the LOCAL attribute. Remove the LOCAL attribute or move the declaration outside of the routine.

40039, Name error

Description

Constant name *arg* ambiguous.

Recommended actions

Routine data must have names that are unique within the routine. Program data must have names that are unique within the module. Rename the data or change the conflicting name.

40040, Name error

Description

Global constant name *arg* ambiguous.

Recommended actions

Global data must have names that are unique among all the global types, data, global routines and modules in the entire program. Rename the data or change the conflicting name.

40041, Name error

Description

Global persistent name *arg* ambiguous.

Recommended actions

Global data must have names that are unique among all the global types, data, global routines and modules in the entire program. Rename the data or change the conflicting name.

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40042, Name error**Description**

Global routine name *arg* ambiguous.

Recommended actions

Global routines must have names that are unique among all the global types, data, global routines and modules in the entire program. Rename the routine or change the conflicting name.

40043, Name error**Description**

Global variable name *arg* ambiguous.

Recommended actions

Global data must have names that are unique among all the global types, data, global routines and modules in the entire program. Rename the data or change the conflicting name.

40044, Name error**Description**

Label name *arg* ambiguous.

Recommended actions

Labels must have names that are unique within the routine. Rename the label or change the conflicting name.

40045, Name error**Description**

Module name *arg* ambiguous.

Recommended actions

Modules must have names that are unique among all the global types, global data, global routines and modules in the entire program. Rename the module or change the conflicting name.

40046, Name error**Description**

Parameter name *arg* ambiguous.

Recommended actions

Parameters must have names that are unique within the routine. Rename the parameter or change the conflicting name.

40047, Name error**Description**

Persistent name *arg* ambiguous.

Recommended actions

Program data must have names that are unique within the module. Rename the data or change the conflicting name.

40048, Name error**Description**

Routine name *arg* ambiguous.

Recommended actions

Routines must have names that are unique within the module. Rename the routine or change the conflicting name.

40049, Name error**Description**

Variable name *arg* ambiguous.

Recommended actions

Routine data must have names that are unique within the routine. Program data must have names that are unique within the module. Rename the data or change the conflicting name.

40050, Type error**Description**

Operand types *arg* and *arg* for binary '+' or '-' operator not equal.

Recommended actions

The two operands of the '+' and '-' operators must have equal type. Check the operand types.

40051, Type error**Description**

Operand types *arg* and *arg* for '=' or '<>' operator not equal.

Recommended actions

The two operands of the '=' and '<>' operators must have equal type. Check the operand types.

40052, Instruction error**Description**

RETURN with expression only allowed in function.

Recommended actions

In a procedure or trap the return instruction must not specify a return value expression. Remove the expression.

40054, Type error**Description**

Different dimension of array type (*arg*) and aggregate (*arg*).

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Recommended actions

Make sure that the number of expressions in the aggregate is the same as the dimension of the data array.

40055, Type error

Description

Assignment target type *arg* is not value type.

Recommended actions

The type, of the data to be assigned a value, must be a value type. Data of semi-value or non-value types may only be set by special type specific predefined instructions or functions.

40056, Type error

Description

Type *arg* for left operand of '=' or '<>' operator not value or semi-value type.

Recommended actions

The '=' and '<>' operators may only be applied to expressions of value or semi-value type. If comparisons are to be made, special type specific predefined functions are needed.

40057, Type error

Description

Type *arg* for right operand of '=' or '<>' operator not value or semi-value type.

Recommended actions

The '=' and '<>' operators may only be applied to expressions of value or semi-value type. If comparisons are to be made, special type specific predefined functions are needed.

40058, Type error

Description

TEST expression type *arg* not value or semi-value type.

Recommended actions

The TEST instruction may only be applied to an expression of value or semi-value type. If comparisons are to be made, special type specific predefined functions are needed.

40059, Data declaration error

Description

Place holder for value expression not allowed in definition of named constant.

Recommended actions

Complete the data declaration or change the data name to a place holder.

40060, Data declaration error

Description

Place holder for array dimension not allowed in definition of named constant or variable.

Recommended actions

Complete the data declaration or change the data name to a place holder.

40061, Routine declaration error

Description

Place holder for parameter array dimensions not allowed in definition of named routine.

Recommended actions

Complete the parameter declaration or change the routine name to a place holder.

40062, Name error

Description

Place holder for parameter name not allowed in definition of named routine.

Recommended actions

Complete the routine declaration or change the routine name to a place holder.

40063, Data declaration error

Description

Place holder for initial value expression not allowed in definition of named persistent.

Recommended actions

Complete the data declaration or change the data name to a place holder.

40064, Routine declaration error

Description

Place holder for parameter not allowed in definition of named routine.

Recommended actions

Complete the parameter declaration, remove the place holder or change the routine name to a place holder.

40065, Reference error**Description**

Place holder for type not allowed in definition of named data, record component or routine.

Recommended actions

Complete the data or routine declaration or change the data or routine name to a place holder.

40066, Data declaration error**Description**

Place holder for initial value expression not allowed in definition of named variable.

Recommended actions

Complete the data declaration or change the data name to a place holder.

40067, Type error**Description**

Too few components in record aggregate of type *arg*.

Recommended actions

Make sure that the number of expressions in the aggregate is the same as the number of components in the record type.

40068, Type error**Description**

Too many components in record aggregate of type *arg*.

Recommended actions

Make sure that the number of expressions in the aggregate is the same as the number of components in the record type.

40069, Reference error**Description**

Data reference *arg* is ambiguous.

Recommended actions

At least one other object sharing the same name as the referred data is visible from this program position. Make sure that all object names fulfill the naming rules regarding uniqueness.

40070, Reference error**Description**

Function reference *arg* is ambiguous.

Recommended actions

At least one other object sharing the same name as the referred function is visible from this program position. Make sure that all object names fulfill the naming rules regarding uniqueness.

40071, Reference error**Description**

Label reference *arg* is ambiguous.

Recommended actions

At least one other object sharing the same name as the referred label is visible from this program position. Make sure that all object names fulfill the naming rules regarding uniqueness.

40072, Reference error**Description**

Procedure reference *arg* is ambiguous.

Recommended actions

At least one other object sharing the same name as the referred procedure is visible from this program position. Make sure that all object names fulfill the naming rules regarding uniqueness.

40073, Reference error**Description**

Trap reference *arg* is ambiguous.

Recommended actions

At least one other object sharing the same name as the referred trap is visible from this program position. Make sure that all object names fulfill the naming rules regarding uniqueness.

40074, Reference error**Description**

arg not entire data reference.

Recommended actions

The specified name identifies an object other than data. Check if the desired data is hidden by some other object with the same name.

40075, Reference error**Description**

arg not function reference.

Recommended actions

The specified name identifies an object other than a function. Check if the desired function is hidden by some other object with the same name.

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40076, Reference error

Description

arg not label reference.

Recommended actions

The specified name identifies an object other than a label. Check if the desired label is hidden by some other object with the same name.

40077, Reference error

Description

arg not optional parameter reference in conditional argument value.

Recommended actions

The specified name identifies an object other than an optional parameter. Change the name to refer to an optional parameter.

40078, Reference error

Description

arg not optional parameter reference.

Recommended actions

The specified name identifies an object other than an optional parameter. Change the name to refer to an optional parameter.

40079, Reference error

Description

Task *arg*: *arg* is not a procedure reference.

Recommended actions

The specified name identifies an object other than a procedure. Check if the desired procedure is hidden by some other object with the same name.

40080, Reference error

Description

arg not required parameter reference.

Recommended actions

The specified name identifies an object other than a required parameter. Change the name to refer to a required parameter.

40081, Reference error

Description

arg not trap reference.

Recommended actions

The specified name identifies an object other than a trap. Check if the desired trap is hidden by some other object with the same name.

40082, Reference error

Description

arg not type name.

Recommended actions

The specified name identifies an object other than a type. Check if the desired type is hidden by some other object with the same name.

40083, Type error

Description

arg not value type.

Recommended actions

Only variables that lack initial value, and 'VAR' mode parameters may be of semi-value or non-value type.

40086, Reference error

Description

Reference to unknown label *arg*.

Recommended actions

The routine contains no label (or other object) with the specified name.

40087, Reference error

Description

Reference to unknown optional parameter *arg*.

Recommended actions

The called routine contains no optional parameter (or other object) with the specified name.

40089, Reference error

Description

Reference to unknown record component *arg*.

Recommended actions

The record type contains no record component with the specified name.

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40090, Reference error**Description**

Reference to unknown required parameter *arg*.

Recommended actions

The called routine contains no required parameter (or other object) with the specified name.

40092, Reference error**Description**

Unknown type name *arg*.

Recommended actions

No data type (or other object) with the specified name is visible from this program position.

40093, Instruction error**Description**

Assignment target is read only.

Recommended actions

The data to be assigned a value may not be a constant, read only variable or read only persistent.

40094, Data declaration error**Description**

Persistent declaration not allowed in routine.

Recommended actions

Persistents may only be declared at module level. Move the persistent declaration from the routine.

40095, Instruction error**Description**

RAISE without expression only allowed in error handler.

Recommended actions

Add an error number expression to the RAISE instruction.

40096, Instruction error**Description**

RETRY only allowed in error handler.

Recommended actions

The RETRY instruction may only be used in error handlers. Remove it.

40097, Instruction error**Description**

TRYNEXT only allowed in error handler.

Recommended actions

The TRYNEXT instruction may only be used in error handlers. Remove it.

40098, Parameter error**Description**

'switch' parameter must have transfer mode IN.

Recommended actions

Remove the parameter transfer mode specifier. If IN transfer mode is not sufficient, change the data type of the parameter.

40099, Parameter error**Description**

'switch' parameter cannot be dimensioned.

Recommended actions

Remove the array dimension specification, or change the data type of the parameter.

40100, Parameter error**Description**

'switch' only allowed for optional parameter.

Recommended actions

Change the parameter into an optional parameter, or change the data type of the parameter. If the object is not a parameter, change the data type.

40101, Type error**Description**

Type mismatch of expected type *arg* and found type *arg*.

Recommended actions

The expression is not of the expected data type.

40102, Type error**Description**

Type mismatch of aggregate, expected type *arg*.

Recommended actions

The aggregate does not match the expected data type.

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40103, Type error

Description

Persistent *arg*, *arg* type mismatch.

Recommended actions

There is already a persistent data with the same name but with another data type. Rename the persistent, or change its data type.

40104, Data declaration error

Description

Cannot determine array dimensions (circular constant references?).

Recommended actions

Check that any referred constants are correctly defined. If so, the program is too complex. Try to rewrite the declarations.

40105, Data declaration error

Description

Cannot determine type of constant value (circular constant references?).

Recommended actions

Check that any referred constants are correctly defined. If so, the program is too complex. Try to rewrite the declarations.

40106, Data declaration error

Description

Cannot evaluate constant value expression (circular constant references?).

Recommended actions

Check that any referred constants are correctly defined. If so, the program is too complex. Try to rewrite the declarations.

40107, Data declaration error

Description

Cannot determine type of variable value (circular constant references?).

Recommended actions

Check that any referred constants are correctly defined. If so, the program is too complex. Try to rewrite the declarations.

40108, Type error

Description

Unknown aggregate type.

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Recommended actions

An aggregate may not be used in this position since there is no expected data type. Declare data with the desired data type and aggregate value. Use the name of the data instead of the aggregate.

40109, Type definition error

Description

Cannot determine type of record component *arg* (circular type definitions?).

Recommended actions

Check that the type of the component is correctly defined. If so, it could be a circular definition, the type of a component could not refer to its own record type.

40110, Reference error

Description

Record name *arg* is ambiguous.

Recommended actions

At least one other object sharing the same name as the referred record name is visible from this program position. Make sure that all object names fulfill the naming rules regarding uniqueness.

40111, Name error

Description

Global record name *arg* ambiguous.

Recommended actions

Global type must have names that are unique among all the global types, data, global routines and modules in the entire program. Rename the record or change the conflicting name.

40112, Reference error

Description

Alias name *arg* is ambiguous.

Recommended actions

At least one other object sharing the same name as the referred alias name is visible from this program position. Make sure that all object names fulfill the naming rules regarding uniqueness.

40113, Name error

Description

Global alias name *arg* ambiguous.

Recommended actions

Global type must have names that are unique among all the global types, data, global routines and modules in the entire program. Rename the alias or change the conflicting name.

40114, Type definition error**Description**

Type reference of alias name *arg* is an alias type.

Recommended actions

Check that the type of the component is correctly defined. If so, it could be a circular definition. The type of a component could not refer to its own record type.

40115, Type definition error**Description**

Cannot determine type of alias *arg* (circular type definitions?).

Recommended actions

Check that the type of the alias is correctly defined. If so, it could be a circular definition, the type of an alias could not refer to a record that use this alias as a component.

40116, Reference error**Description**

Record component name *arg* is ambiguous.

Recommended actions

At least one other object sharing the same name as the referred component is visible from this program position. Make sure that all object names fulfill the naming rules regarding uniqueness.

40117, Type definition error**Description**

Place holder for record component not allowed in definition of named record.

Recommended actions

Complete the definition or change the data name to a place holder.

40120, Reference error**Description**

Illegal reference to installed task object *arg* from shared object.

Recommended actions

Install the referred object shared, or install the referring Real object/ archive or RAPID module in each task (not shared).

40122, Reference error**Description**

arg not procedure reference.

Recommended actions

The specified name identifies an object other than a procedure. Check if the desired procedure is hidden by some other object with the same name.

40123, Argument error**Description**

Argument for 'PERS' parameter *arg* is not a persistent reference or is read only.

Recommended actions

Make sure the argument is just a persistent or persistent parameter reference and that it is writable. Do not use () around the argument.

40124, Argument error**Description**

Argument for 'VAR' parameter *arg* is not variable reference or is read only.

Recommended actions

Make sure the argument is just a variable or variable parameter reference and that it is writable. Do not use () around the argument.

40125, Instruction error**Description**

The Interrupt number is not static variable reference, or it is shared, or it is read only.

Recommended actions

Make sure the interrupt number is just a variable or variable parameter reference. The variable must be static and not shared. The variable may not be read only.

40126, Value error**Description**

Integer value *arg* is too large.

Recommended actions

The value of the expression must be an integer value. The current value is outside the integer range.

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40127, Value error

Description

arg is not an integer value.

Recommended actions

The value of the expression must be an exact integer value.

The current value has a fraction part.

40128, Reference error

Description

Reference to unknown entire data *arg*.

Recommended actions

No data (or other object) with the specified name is visible from this program position.

40129, Reference error

Description

Reference to unknown function *arg*.

Recommended actions

No function (or other object) with the specified name is visible from this program position.

40130, Reference error

Description

Reference to unknown procedure *arg*.

Recommended actions

No procedure (or other object) with the specified name is visible from this program position.

40131, Reference error

Description

Reference to unknown trap *arg*.

Recommended actions

No trap (or other object) with the specified name is visible from this program position.

40135, Syntax error

Description

Expected *arg*.

Recommended actions

40136, Syntax error

Description

Unexpected *arg*.

Recommended actions

40137, Syntax error

Description

Expected *arg* but found *arg*.

Recommended actions

40138, Syntax error

Description

Syntax error, stack backed up.

Recommended actions

40139, Syntax error

Description

Syntax error, parsing terminated.

Recommended actions

40140, Numerical value for symbol *arg* is out of range

Description

Numerical value for symbol *arg* is out of range according to IEEE 754 floating point standard single precision.

Recommended actions

Take one of the following actions:

- Change the symbol data type to dnum.
- Make the value smaller.
- Make the value bigger.

40141, String too long

Description

The string *arg* is too long.

Recommended actions

Make the string shorter.

40144, Integer out of range

Description

The integer *arg* is out of range.

Recommended actions

Make the integer smaller.

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40145, Parser stack is full**Description**

The parser stack is full.

Recommended actions

Reduce program complexity.

40146, Not enough heap space**Description**

There is not enough heap space to fulfill the action.

Recommended actions

Rewrite your program.

40147, Identifier is reserved word in current language**Description**

The identifier *arg* is a reserved word in current language.

Recommended actions

Change the name of the identifier.

40148, Identifier too long**Description**

The name of the identifier *arg* is too long.

Recommended actions

Rename the identifier with a shorter name.

40149, Placeholder too long**Description**

The placeholder *arg* is too long.

Recommended actions

Rename the placeholder with a shorter name.

40150, Unexpected unknown token**Description**

Unexpected unknown token.

Recommended actions

Remove the unknown token.

40152, Data declaration error**Description**

TASK illegal in routine variable declaration.

Recommended actions

Only program data declarations may have the TASK attribute. Remove the TASK attribute or move the declaration outside of the routine.

40155, Argument error**Description**

Task *arg*: Argument for 'PERS' parameter *arg* is not persistent reference or is read only.

Recommended actions

Make sure the argument is just a persistent or persistent parameter reference and that it is writable. Do not use () around the argument. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_ARGNOTPER".

40156, Argument error**Description**

Task *arg*: Argument for 'VAR' parameter *arg* is not variable reference or is read only.

Recommended actions

Make sure the argument is just a variable or variable parameter reference and that it is writable. Do not use () around the argument. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_ARGNOTVAR".

40157, Instruction error**Description**

Task *arg*: Interrupt number is not a static variable reference, is shared, or is read only.

Recommended actions

Make sure the interrupt number is just a variable or variable parameter reference. The variable must be static and not shared. The variable may not be read only. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_CNTNOTVAR".

40158, Value error**Description**

Task *arg*: Integer value *arg* too large.

Recommended actions

The value of the expression must be an integer value. The current value is outside the integer range. To avoid run time

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errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_MAXINTVAL".

40159, Value error

Description

Task *arg*: *arg* not integer value.

Recommended actions

The value of the expression must be an exact integer value.
The current value has a fraction part. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_NOTINTVAL".

40160, Errors in RAPID program

Description

Task *arg*: There are errors in the RAPID program.

Recommended actions

Check for RAPID errors using Check program in the Program editor and correct the program.

40161, Option is missing

Description

The instruction *arg* requires the option *arg*.

Consequences

The program will not execute properly.

Probable causes

The system image doesn't include the required option.

Recommended actions

Update the system image with the required option.

40162, Errors in RAPID program

Description

Task *arg*: There are errors in the RAPID program.

Recommended actions

Take the following actions to be able to debug the program:

- 1 Change the type of the task to NORMAL.
- 2 Restart the controller.
- 3 Check for RAPID errors and correct the program.

40163, Module error

Description

The module *arg* has too many lines to be loaded. Maximum number of lines allowed in a module is *arg*.

Consequences

Module (or program if the module was part of a program) cannot be loaded.

Probable causes

The module has too many lines.

Recommended actions

Split the module in two or several smaller modules.

40165, Reference error

Description

Task *arg*: Reference to unknown entire data *arg*.

Recommended actions

No data (or other object) with the specified name is visible from this program position. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "SYS_ERR_ARL_REFUNKDAT".

40166, Reference error

Description

Task *arg*: Reference to unknown function *arg*.

Recommended actions

No function (or other object) with the specified name is visible from this program position. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_REFUNKFUN".

40168, Reference error

Description

Task *arg*: Reference to unknown procedure *arg*.

Recommended actions

No procedure (or other object) with the specified name is visible from this program position. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_REFUNKPRC".

40170, Reference error

Description

Task *arg*: Reference to unknown trap *arg*.

Recommended actions

No trap (or other object) with the specified name is visible from this program position. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_REFUNKTRP".

40171, Reference error**Description**

Task *arg*: Reference to unknown data (or other object) found during execution of module *arg*.

Recommended actions

Check the program for unresolved references.

40176, Instruction error**Description**

A Break or Continue instruction was encountered outside of a loop.

Recommended actions

The Break and Continue instructions can only be used in FOR and WHILE instruction lists. Remove the instruction.

40191, Instruction error**Description**

Task *arg*: Variable and trap routine already connected.

Recommended actions

It is not legal to connect a specific variable with a trap routine more than once. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_ALRDYCNT".

40192, Argument error**Description**

Task *arg*: *arg* is second present conditional argument for excluding parameters.

Recommended actions

Arguments may not be present for more than one parameter from a list of parameters that exclude each other. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_ARGDUPCND".

40193, Execution error**Description**

Task *arg*: Late binding procedure call error *arg*.

Recommended actions

There is an error in the procedure call instruction. See previous message for the actual cause. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_CALLPROC".

40194, Value error**Description**

Task *arg*: Division by zero.

Recommended actions

Cannot divide by 0. Rewrite the program so that the divide operation is not executed when the divisor is 0. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_DIVZERO".

40195, Limit error**Description**

Task *arg*: The configured maximum number of RETRYs (*arg* retries) is exceeded.

Recommended actions

The error correction performed before the RETRY instruction is executed, is probably not enough to cure the error. Check the error handler. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_EXCRTYMAX". RAISE or TRYNEXT can be used to handle this error.

40196, Instruction error**Description**

Task *arg*: Attempt to execute place holder.

Recommended actions

Remove the place holder or the instruction containing it, or make the instruction complete. Then continue execution. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_EXECPHR".

40197, Execution error**Description**

Task *arg*: Function does not return any value.

Program ref: *arg*.

Recommended actions

The end of the function has been reached without a RETURN instruction being executed. Add a RETURN instruction specifying a function return value. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_FNCNORET".

40198, Value error**Description**

Task *arg*: Illegal orientation value *arg*.

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Recommended actions

Attempt to use illegal orientation (quaternion) value. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_ILLQUAT".

40199, Value error

Description

Task *arg*: Illegal error number *arg* in *arg*.

Recommended actions

Use error numbers in the range 1-90 or book error numbers with the instruction BookErrNo. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_ILLRAISE".

40200, Limit error

Description

Task *arg*: No more interrupt number available.

Recommended actions

There is a limited number of interrupt numbers available. Rewrite the program to use fewer interrupt numbers. This message may also occur as a consequence of a system error. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_INOMAX".

40202, Type error

Description

Task *arg*: Dimensions *arg* and *arg* of conformant array dimension number *arg* are incompatible.

Recommended actions

The array is not of the expected size. Array assignment may only be performed on arrays of identical size. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_NOTEQDIM".

40203, Reference error

Description

Task *arg*: Optional parameter *arg* not present.

Recommended actions

The value of a non-present optional parameter may not be referred. Use the predefined function 'Present' to check the presence of the parameter before using its value. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_NOTPRES".

40204, Value error

Description

Task *arg*: Array index *arg* for dimension number *arg* out of bounds (1-*arg*).

Recommended actions

The array index value is non-positive or violates the declared size of the array. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_OUTOFBND".

40205, Value error

Description

Task *arg*: RAPID String *arg* too long.

Recommended actions

- 1 String value exceeds the maximum allowed length. Rewrite the program to use strings of shorter length. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_STRTOOLNG".
- 2 Set system parameter "TruncateLongRapidStrings" in Domain:"Controller", Type:"GeneralRapid" to avoid execution error.

40206, Interrupt queue full

Description

Execution of all normal tasks has stopped. Too many interrupts has occurred in *arg* while executing a trap routine.

Consequences

The system goes to blocked state and cannot be restarted before moving the program pointer to an arbitrary position.

Probable causes

Too many interrupts has occurred while executing a trap routine. This can be caused by heavy CPU load.

Recommended actions

- 1 Minimize execution time in the trap routine.
- 2 Disable/enable interrupts while executing a trap routine using the Isleep or lwatch commands.

40207, Value error

Description

Task *arg*: Illegal error number *arg* in *arg*.

Recommended actions

Error numbers used in an ERROR handler must be positive.

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40208, Error event queue full**Description**

Task *arg*: The program was already executing an error event when a new event occurred.

Recommended actions

Attend the cause of the error event and restart the program.

40209, Error handler already executed**Description**

An error event in task *arg* has occurred while executing the error handler. The context of the RAPID instruction that has generated this event is however already consumed. No error handling is therefore possible to execute.

Recommended actions

Attend the cause of the error event and restart the program.

40210, Interrupt removed from queue**Description**

All interrupts have been deleted from the interrupt queue in task *arg*.

Consequences

No trap routines, connected with the interrupt, may be executed.

Probable causes

- The program has been stopped.
- A service routine or an event routine may be executing.
- The program is executing in step mode.

Recommended actions

40211, Value error**Description**

Task *arg*: RAPID String *arg* too long.

Recommended actions

- 1 String value exceeds the maximum allowed length. Rewrite the program to use strings of shorter length.
- 2 Set system parameter "TruncateLongRapidStrings" in Domain:"Controller", Type:"GeneralRapid" to avoid execution error.

40221, Execution error**Description**

Task *arg*: Execution aborted.

Recommended actions

Execution was aborted due to a fatal error.

40222, Limit error**Description**

Task *arg*: Execution stack overflow.

Recommended actions

The program is too complex to execute. Probably the program contains recursive routines.

40223, Execution error**Description**

The execution of task *arg* has been stopped by a runtime error.

Consequences

The program execution is immediately halted.

Probable causes

The program error is considered UNRECOVERABLE so no error recovery attempt by an error handler routine (if used) was allowed. The actual cause of the error may vary, and is likely to be specified in an event log message logged simultaneously as this one.

Recommended actions

- 1 Check other event log messages logged simultaneously to determine the actual cause.

40224, Execution error**Description**

Task *arg*: Illegal return code *arg* from ReaL routine. This is always caused by an internal error in the ReaL routine.

Recommended actions

40225, Execution error**Description**

Task *arg*: Execution could not be restarted. Execution of the program could not be continued after power failure.

Recommended actions

Restart the program.

40226, Name error**Description**

Task *arg*: Procedure name *arg* is not a RAPID identifier excluding reserved words.

Recommended actions

The procedure name, must be a legal RAPID identifier not equal to any of the reserved words of the RAPID language. Change the name expression.

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40227, Limit error

Description

Task *arg*: Runtime stack overflow. The program is too complex to execute. Probably the program contains recursive routines.

Recommended actions

40228, Execution error

Description

The execution of task *arg* has been stopped by a runtime error *arg*.

Consequences

The program execution is immediately halted.

Probable causes

The program error is considered RECOVERABLE but the error was not recovered. The actual cause of the error may vary, and is likely to be specified in an event log message logged simultaneously as this one.

Recommended actions

- 1 Check other event log messages logged simultaneously to determine the actual cause.

40229, Execution error

Description

Task *arg*: Unhandled error.

Recommended actions

An error occurred in called instruction but was not handled by any ERROR clause in the program. Check the previous error or warning in the common log for the cause.

40230, Execution error

Description

Task *arg*: Unhandled non-fatal runtime error.

Recommended actions

A non-fatal runtime error has occurred but was not handled by any ERROR clause.

40241, Value error

Description

Task *arg*: Array dimension number *arg* out of range (1-*arg*).

Recommended actions

The value of the 'DimNo' parameter of the 'Dim' function must be an integer value in the specified range. To avoid run time

errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_ILLDIM".

40242, Type error

Description

Task *arg*: Data is not an array.

Recommended actions

The 'DatObj' parameter of the 'Dim' function must be an array. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_NOTARR".

40243, Value error

Description

Task *arg*: Unknown interrupt number.

Recommended actions

Check that the specified interrupt variable has been initialized by CONNECT, and that the interrupt has been defined using the ISignalDI or other interrupt definition instruction. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_UNKINO".

40244, Value error

Description

Task *arg*: Object *arg* is of non-value type.

Recommended actions

Use expression or data object of value or semi-value type.

40245, Parameter error

Description

Parameters in *arg* and *arg* is not matching (late binding).

Recommended actions

Make sure that all procedures that are called from the same late binding node have matching parameters. I.e. they should be matching concerning base type, mode and required/optional parameters.

40246, Cannot Deactivate Safe Interrupt

Description

Task: *arg*: It is not possible to deactivate a Safe Interrupt with the instruction ISleep.

Program ref: *arg*.

Recommended actions

Recovery: *arg*. To avoid run time errors like this, add code in error handler to handle this. ERRNO will be set to "ERR_INOISSAFE".

40247, Persistent variable size error**Description**

Task *arg*: Persistent variable *arg*: has changed size and must be reinitialized.

Recommended actions

Reload all modules in all tasks accessing the persistent variable.

40251, Name error**Description**

Task *arg*: Ambiguous symbol name *arg*.

Recommended actions

Installed objects must have names that are unique. Rename the object or change the conflicting name.

40252, Limit error**Description**

Task *arg*: Error *arg* when creating sdb entry for *arg*.

Recommended actions

An error occurred when the persistent was to be inserted into the shared database. Probably the database is full.

40253, Type definition error**Description**

Task *arg*: Alias *arg* of alias *arg* not allowed.

Recommended actions

It is not possible to define an alias type equal to another alias type. Instead, define two alias types equal to the same atomic or record type.

40254, Symbol definition error**Description**

Task *arg*: 'ANYTYPE#' parameter *arg* cannot be dimensioned.

Recommended actions

Remove the dimension specification. 'ANYTYPE#' includes array types.

40255, Symbol definition error**Description**

Task *arg*: 'ANYTYPE#' only allowed for parameter (not for *arg*).

Recommended actions

Use another type.

40256, Parameter error**Description**

Task *arg*: 'alt' must not be set for first optional parameter *arg* in alternatives list.

Recommended actions

Make sure that only the second and following in each list of excluding optional parameters are marked as alternatives.

40257, Parameter error**Description**

Task *arg*: REF mode parameter *arg* cannot be dimensioned.

Recommended actions

Remove the array dimension specification, or change the mode of the parameter.

40258, Parameter error**Description**

Task *arg*: 'switch' parameter *arg* cannot be dimensioned.

Recommended actions

Remove the array dimension specification, or change the data type of the parameter.

40259, Parameter error**Description**

Task *arg*: 'switch' parameter *arg* must have transfer mode IN (specified value *arg*).

Recommended actions

Remove the parameter transfer mode specifier. If IN transfer mode is not sufficient, change the data type of the parameter.

40260, Symbol definition error**Description**

Task *arg*: 'switch' only allowed for optional parameter (not for *arg*).

Continues on next page

Continued

Recommended actions

Change the parameter into an optional parameter, or change the data type of the parameter. If the object is not a parameter, change the data type.

40261, Type definition error

Description

Task *arg*: Value type class for *arg* must be one of REAL_SYMVALTYP_VAL, _SEMIVAL, _NONVAL or _NONE (specified value *arg*).

Recommended actions

Change the value type class.

40262, Data declaration error

Description

Task *arg*: Too many array dimensions for *arg* (specified value *arg*).

Recommended actions

An array may have at most 3 dimensions.

40263, Name error

Description

Task *arg*: Symbol name *arg* is not a RAPID identifier excluding reserved words.

Recommended actions

The names of installed objects, including parameters and components, must be legal RAPID identifiers not equal to any of the reserved words of the RAPID language. Change the name.

40264, Symbol definition error

Description

Task *arg*: Missing C function for *arg*.

Recommended actions

A C-function that executes the ReaL function being defined, must be specified.

40265, Symbol definition error

Description

Task *arg*: Missing value initialization function for *arg*.

Recommended actions

A value initialization function must be specified.

40266, Reference error

Description

Task *arg*: *arg* is not a data type name (object *arg*). The specified name identifies an object other than a type.

Recommended actions

40267, Reference error

Description

Task *arg*: *arg* is not a value data type (object *arg*). Only record components, alias types, variables and 'VAR' mode parameters may be of semi-value or non-value type.

Recommended actions

40268, Symbol definition error

Description

Task *arg*: Missing value conversion function for *arg*.

Recommended actions

A value conversion function must be specified for a semi-value type.

40269, Symbol definition error

Description

Task *arg*: Not enough memory for value of data *arg*.

Recommended actions

More memory required.

40270, Type definition error

Description

Task *arg*: Private type *arg* can only be semi-value or non-value type (specified value *arg*).

Recommended actions

Change the value type class.

40271, Type definition error

Description

Task *arg*: Private type *arg* size must be multiple of 4 (specified value *arg*).

Recommended actions

All RAPID types must have a size that is a multiple of four. Change the specified type size.

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40272, Type error**Description**

Task *arg*: Persistent type mismatch for *arg*.

Recommended actions

There is already a persistent data with the same name but with another data type. Rename the persistent, or change its data type.

40273, Reference error**Description**

Task *arg*: Unknown data type name *arg* for *arg*.

Recommended actions

There is no data type (or other object) with the specified name.

40274, Parameter error**Description**

Task *arg*: Unknown parameter transfer mode *arg* for *arg*.

Recommended actions

The specified parameter transfer mode is not one of IN, 'VAR', 'PERS', 'INOUT' or REF. Use corresponding REAL_SYMPARMOD_x.

40275, Symbol definition error**Description**

Task *arg*: Unknown symbol definition type *arg*. The symbol definition type tag does not specify one of the allowed symbol types (REAL_SYMDEF_x).

Recommended actions

40277, Undo Aborted**Description**

Task *arg*: The program execution was stopped while processing the UNDO statements. UNDO was not fully executed. The routine *arg* was executing when UNDO was stopped.

Recommended actions

If the processing of UNDO takes too long, try to remove time-consuming instructions from the UNDO-clause. If the undo processing never seems to finish, make sure any loops in the undo-statements are correct.

40278, Undo Aborted**Description**

Task *arg*: The processing of UNDO was aborted due to an EXIT-statement in the routine *arg*. UNDO was not fully executed.

Recommended actions

40279, Undo Aborted**Description**

Task *arg*: The processing of UNDO was aborted due to a run-time error in routine *arg*. UNDO was not fully executed.

Recommended actions

Investigate the cause of the error.

40280, Undo Aborted**Description**

Task *arg*: The instructions BREAK, RAISE, RETURN and STOP are not allowed to use in an undo-clause or any routine that is called from an undo-clause. The instruction *arg* was found in UNDO context when executing the routine *arg*.

Recommended actions

Avoid executing the instruction when in undo-context.

40281, Undo Aborted**Description**

Task *arg*: The program execution of UNDO statements was aborted due to edit operation.

40301, File access error**Description**

Task *arg* is trying to access file *arg*, but failing.

Consequences

No data in the file may be accessed.

Probable causes

File may be write protected.

Recommended actions

- 1 Check if the file is write protected, and in such case change the setting.

40302, File access error**Description**

Task *arg* is trying to access file *arg*, but does not find file or directory.

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Consequences

If the missing file is a module, no automatic loading to a task is possible.

Probable causes

- File may not have been correctly copied to the target directory.
- File or directory may have incorrect name.

Recommended actions

- 1 Make sure the file and directory names are correct.

40303, File access error

Description

Task *arg* is trying to access file *arg*, but failing.

Consequences

No data in the file may be accessed.

Probable causes

No storage space available on device.

Recommended actions

- 1 Make sure there is enough storage space available.

40304, File access error

Description

Task *arg* is trying to access file *arg*, but failing.

Consequences

No data in the file may be accessed.

Probable causes

- File may be write protected.
- File or directory may have incorrect name.
- No storage space available on device.

Recommended actions

- 1 Check if the file is write protected, and in such case change the setting.
- 2 Make sure the file and directory names are correct.
- 3 Make sure there is enough storage space available.

40322, Load error

Description

Task *arg*: RAPID syntax error(s) in file *arg*.

Recommended actions

The source file to be loaded contains RAPID syntax errors.
Correct the source file.

40323, Load error

Description

Task *arg*: Syntax error(s) in header in file *arg*.

Recommended actions

The source file to be loaded contains syntax error in the file header. Correct the source file. The syntax errors are logged in a separate file.

40324, Load error

Description

Task *arg*: Keywords not defined in specified language (file *arg*).

Recommended actions

Cannot load RAPID source code in the national language specified in the file header.

40325, Load error

Description

Task *arg*: A big enough free program memory block is not available. The ordered operation could not be completed.

Probable causes

The program memory is full or fragmented.

Recommended actions

Check if large data structures could be split into smaller blocks.
Use of installed modules can save program memory.

40326, Load error

Description

Task *arg*: Parser stack full (file *arg*).

Recommended actions

The program is too complex to load.

40327, Load error

Description

Task *arg*: Not current RAPID version (file *arg*).

Recommended actions

Cannot load RAPID source code of the version specified in the file header.

40328, Load error

Description

Task: *arg*.

Program memory is full. *arg*.

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Recommended actions

The module *arg* could not be loaded because the program memory is full.

Recovery: *arg*.

40329, Module installation failure**Description**

Task: *arg*.

It is not possible to install a module from file *arg*.

Consequences

The module will not be installed.

Probable causes

There can be several different reasons.

- 1 The RAPID module may have RAPID errors.
- 2 The file might not exist.

Recommended actions

- 1 Check the event messages in the Elog domain RAPID.
Correct the RAPID errors and Reset RAPID.
- 2 Or make sure the correct file is available to load. Reset RAPID.

40330, RAPID errors in installed module**Description**

Task: *arg*. Module (line/column): *arg*. There is an error with symbol: *arg*.

Consequences

The module will not be installed.

40331, Type error**Description**

Operand types *arg* and *arg* for the '/', 'DIV' or 'MOD' operator not equal.

Recommended actions

The two operands of the '/', 'DIV' or 'MOD' operators must have equal type. Check the operand types.

40332, Type error**Description**

Operand types *arg* and *arg* for the '<', '<=', '>' or '>=' operator not equal.

Recommended actions

The two operands of the '<', '<=', '>' or '>=' operators must have equal type. Check the operand types.

40351, Memory allocation error**Description**

Task *arg*: Failed to allocate hash table, use linear list.

Recommended actions**40352, Memory allocation error****Description**

Task *arg*: Failed to update persistent expression, keep old one.

Recommended actions**40353, Mechanical Unit *arg* Missing!****Description**

The mechanical unit component of the workobject *arg* is faulty.

Probable causes

- No mechanical unit is defined.
- The mechanical unit defined cannot be found.
- The robot cannot move the workobject by itself.

Recommended actions

Check the mechanical unit component of the workobject.

40354, A copy of a dynamic loaded module has been saved**Description**

Task: *arg*.

A dynamic loaded module *arg* has been changed. The module is lost when PP is set to main. A copy of the changed module is saved on *arg*.

Probable causes

- A dynamic loaded module has been changed.
- PP is set to main.
- The dynamic loaded module is removed.
- A copy of the changed module is saved.

Recommended actions

If the changes shall be saved, replace the original file with the copy.

40355, A Stop/QStop event routine has been stopped**Description**

Task: *arg*.

A *arg* event routine has been stopped by an external stop command. Any running Stop/QStop event routines will be

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stopped after *arg* ms when controller receives second stop command.

Recommended actions

Keep all event routines short and free from RAPID instructions of type WaitTime, WaitDI, etc.

40357, Missing Error Handler

Description

There is no error handler that deals with the process error for task *arg*.

Consequences

The program will not be able to execute past the next move instruction.

Probable causes

The error handler is missing.

Recommended actions

Add an error handler. The error handler should include the StartMove (StartMoveRetry) instruction.

40358, RMQ message discarded

Description

A RMQ message was discarded in task *arg*. *arg* received a RMQ message that couldn't be handled.

Consequences

The RMQ message was discarded without any notification to the sender.

Probable causes

There can be several different reasons.

- 1 No interrupt is connected to the type of the received message.
- 2 No interrupt could be created because the interrupt queue was full.
- 3 The received message was corrupt.

Recommended actions

Make sure that the task has connected an interrupt to all types of messages that is possible to receive. Read about IRMQMessage in the RAPID reference manual.

40359, An event routine has been stopped

Description

Task: *arg*.

A *arg* event routine has been stopped by an external stop command.

Recommended actions

Keep all event routines short and free from RAPID instructions of type WaitTime, WaitDI, etc.

40360, Module name contain illegal characters

Description

Task: *arg*.

It is not possible to load *arg*.

Probable causes

There can be several different reasons.

- 1 The module is encoded in UTF8, but named .mod or .sys.
- 2 The identifiers in the module has characters that are not ISO-8859-1 compatible.

Recommended actions

Check that the module has correct characters and encoding. Modules with encoding UTF8 shall be named .modx or sysx.

40361, Module name too long

Description

Task *arg*: the module name *arg* is too long.

Recommended actions

Make the string shorter.

40362, String contains illegal characters

Description

Task: *arg*.

The string starting with *arg* on line *arg* in file/module *arg* is not correct.

Probable causes

There can be several different reasons.

- 1 The module is encoded in ISO, but named .modx or .sysx.

Recommended actions

Check that the module has correct characters and encoding. Modules with UTF8 encoding shall be named .modx or sysx. Modules with ISO encoding shall be named .mod or .sys.

40363, Execution error

Description

Task: *arg*.

Cannot execute because task memory is full.

The module *arg* on line *arg* cannot execute because task memory is full.

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Recommended actions

- 1 Use parameter reference argument instead of data when making a procedure call
- 2 Remove some other module and try again.
- 3 Check if large data structures could be split into smaller blocks.
- 4 Use of installed modules can save program memory.

40502, Digital Input Break**Description**

Task: *arg*.

A digital input interrupted the execution.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

40506, System Access Error**Description**

Task: *arg*.

arg

arg

arg.

Recommended actions

Recovery: *arg*.

40507, Limit Error**Description**

Task: *arg*.

Cannot step further back on path *arg*.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

40508, Orientation Value Error**Description**

Task: *arg*.

Wrong orientation value in *arg*.

Program ref: *arg*.

Recommended actions

All used orientations must be normalized, i.e. the sum of the quaternion elements squares must equal 1.

40511, Parameter Error**Description**

Task: *arg*.

The parameter *arg* in *arg* is specified with a negative value.

Program ref: *arg*.

Recommended actions

The parameter must be set to a positive value.

40512, Missing External Axis Value**Description**

Some active external axis have incorrect or no order value.

Recommended actions

Reprogram the position.

40513, Mechanical Unit Error**Description**

Task: *arg*.

Not possible to activate or deactivate mechanical unit. Previous message may contain more information.

Program ref: *arg*.

40514, Execution Error**Description**

Task: *arg*.

The robot is too far from path to perform StartMove of the interrupted movement.

Program ref: *arg*.

Recommended actions

Position the robot to the interrupted position in the program.

Recovery: *arg*.

40515, Type Error**Description**

Task: *arg*.

Illegal data type of argument for parameter *arg*.

Recommended actions

Change the parameter to a legal type. Make sure the value type is value or semi-value.

40518, Type Error**Description**

Task: *arg*.

Expected type differs from read type in *arg*.

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Program ref: *arg*.

Recommended actions

Check the type in the argument.

40519, End Of File

Description

Task: *arg*.

End of file was found before all bytes were read in *arg*.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

40522, Limit Error

Description

Task: *arg*.

Stop watch overflow.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

40523, Mechanical Unit Conflict

Description

Not possible to activate mechanical unit *arg* since mechanical unit *arg* is already active.

Recommended actions

Check the Motion Configuration. Active mechanical units use same configuration. Check item *arg* for details:

- 1 Physical Axis.
- 2 Logical Axis.
- 3 Drive Unit Configuration.

40524, Conveyor Access Error

Description

Task: *arg*.

The conveyor is not activated.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

40525, Conveyor Access Error

Description

Task: *arg*.

No single number defined.

Program ref: *arg*.

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40526, Conveyor Access Error

Description

Task: *arg*.

The mechanical unit *arg* is not a single.

Program ref: *arg*.

40527, File Access Error

Description

Task: *arg*.

Unable to open *arg*.

Program ref: *arg*.

Probable causes

- The I/O device reference is already in use.

Recommended actions

- If the I/O device reference is already in use, close it or use another.

Recovery: *arg*.

40528, File Access Error

Description

Task: *arg*.

File or I/O device is not open.

Program ref: *arg*.

Probable causes

- The I/O device reference is not open, or has already been closed.

Recommended actions

- Check that device is open.

Recovery: *arg*.

40529, File Access Error

Description

Task: *arg*.

Could not access the file *arg*.

Program ref: *arg*.

Probable causes

- The path or filename is wrong.
- The I/O device reference is already in use.
- The maximum number of simultaneously opened files is exceeded.
- The disk is full.

Recommended actions

- Check the path or filename.

- If the I/O device reference is already in use, close it or use another.
- Check the disk space.

Recovery: *arg*.

40530, Parameter Error

Description

Task: *arg*.

The number of characters, parameter *arg* in WriteBin, you want to write to the I/O device is greater than the size of the array containing the characters to be written.

Program ref: *arg*.

Recommended actions

Make the array bigger or decrease the parameter.

40531, Parameter Error

Description

Task: *arg*.

The array *arg* in WriteBin is smaller than 0 or greater than 255.

Program ref: *arg*.

Recommended actions

Change the size of the array to be 0 - 255.

40534, Timeout

Description

Task: *arg*.

A timeout interrupted the execution.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

40535, Type Error

Description

Task: *arg*.

The data you was trying to read in the file was not a numeric type.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

40536, System Access Error

Description

Task: *arg*.

Too many pending read requests.

Program ref: *arg*.

40537, File Access Error

Description

Task: *arg*.

The I/O device is not open, or you are trying to use the instruction on a file.

Program ref: *arg*.

Recommended actions

- Open the I/O device.
- Check that the instruction is used on a I/O device.

Recovery: *arg*.

40538, Max Time Expired

Description

Task: *arg*.

The programmed waiting time has expired.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

40539, System Access Error

Description

Task: *arg*.

Not allowed option in this task.

Program ref: *arg*.

40540, File Access Error

Description

Task: *arg*.

arg is not a directory.

Program ref: *arg*.

Recommended actions

Check that the path is the correct path to the directory you want to open.

Recovery: *arg*.

40541, File Access Error

Description

Task: *arg*.

Directory *arg* is not accessible.

Program ref: *arg*.

Recommended actions

Check the directory you are trying to open.

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Recovery: *arg*.

40542, File Access Error

Description

Task: *arg*.

Could not access the file system *arg*.

Program ref: *arg*.

Recommended actions

- Check the path and filename.

Recovery: *arg*.

40543, File Access Error

Description

Task: *arg*.

You cannot open *arg*.

Program ref: *arg*.

Probable causes

There are too many directories already open.

Recommended actions

Close one of the already open directories.

Recovery: *arg*.

40544, File Access Error

Description

Task: *arg*.

Could not create the directory *arg*.

Program ref: *arg*.

Recommended actions

- Check the path.
- Check write and execute permission for the directory under which the new directory should be created.

Recovery: *arg*.

40545, File Access Error

Description

Task: *arg*.

Could not remove the directory *arg*.

Program ref: *arg*.

Recommended actions

- Check the path.
- Check write and execute permission for the directory under which the directory you want to remove is located.

Recovery: *arg*.

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40546, File Access Error

Description

Task: *arg*.

Could not remove the file *arg*.

Program ref: *arg*.

Recommended actions

- Check the path.
- Check if you have write permission for the file.
- Check write and execute permission for the directory under which the file you want to remove is located.

Recovery: *arg*.

40547, File Access Error

Description

Task: *arg*.

Could not rename the file *arg*.

Program ref: *arg*.

Recommended actions

- Check the path.
- Check write permission for the file you want to rename.
- Check write and execute permission for the directory under which the file you want to rename is located.

Recovery: *arg*.

40548, File Access Error

Description

Task: *arg*.

Could not copy the file *arg*.

Program ref: *arg*.

Recommended actions

- Check the path.
- Check write permission for the directory that you want to copy the file to.
- Check the available space.

Recovery: *arg*.

40549, System Access Error

Description

Task: *arg*.

Unknown mechanical unit *arg*. The data of type mecunit is unknown for the system.

Program ref: *arg*.

Probable causes

Data of type mecunit has been declared in the program.

Recommended actions

Remove the declaration of mecunit data in the program and use one of the predefined data of type mecunit (automatic defined by the system).

40555, I/O Error**Description**

Task: *arg*.

Unable to read I/O signal.

Program ref: *arg*.

40556, I/O Error**Description**

Task: *arg*.

Unable to write I/O signal.

Program ref: *arg*.

40558, I/O Error**Description**

Task: *arg*.

Unable to read the I/O signal *arg* in I/O device *arg*.

Program ref: *arg*.

40559, I/O Error**Description**

Task: *arg*.

Unable to write to the I/O signal *arg* in I/O device *arg*.

Program ref: *arg*.

40560, System Access Error**Description**

Task: *arg*.

Can't save program module *arg*.

Program ref: *arg*.

40561, System Access Error**Description**

Task: *arg*.

arg is not a module name.

Program ref: *arg*.

Consequences

You cannot unload, save or erase this module.

Recommended actions

Check the name of the module.

40562, Parameter Error**Description**

Task: *arg*.

Unknown axis number for the mechanical unit *arg*.

Program ref: *arg*.

Recommended actions

Check the value for argument AxisNo.

Recovery: *arg*.

40563, System Access Error**Description**

Task: *arg*.

Mechanical unit *arg* is not active.

Program ref: *arg*.

Recommended actions

Activate the mechanical unit.

Recovery: *arg*.

40564, Argument Error**Description**

Task: *arg*.

Orientation definition error. GripLoads attach frame in tool or work object (user + object) is unnormalized.

Program ref: *arg*.

Recommended actions

Check the orientation. All used orientations must be normalized i.e. the sum of the quaternion elements squares must equal 1.

40565, Parameter Error**Description**

Task: *arg*.

Both arguments must be > 0. First argument must be <= 100.

Program ref: *arg*.

Recommended actions

Check the value of the arguments.

40566, Parameter Error**Description**

Task: *arg*.

All arguments must be > *arg* and <= *arg*.

Program ref: *arg*.

Recommended actions

Check the value of the arguments.

Continues on next page

Continued

40567, Parameter Error

Description

Task: *arg*.

Quaternion error.

Program ref: *arg*.

Recommended actions

Check the aom component of loaddata.

40568, Parameter Error

Description

Task: *arg*.

Axis may not have a value less than 0.

Program ref: *arg*.

Recommended actions

Change to a positive value.

40569, Argument Error

Description

Task: *arg*.

The argument AccMax must be set if the argument AccLim is set to TRUE.

Program ref: *arg*.

Recommended actions

Set a value to argument AccMax.

40570, Argument Error

Description

Task: *arg*.

The argument DecelMax must be set if argument DecelLim is set to TRUE.

Program ref: *arg*.

Recommended actions

Set a value to argument DecelMax.

40571, Argument Error

Description

Task: *arg*.

The value of parameter AccMax is too low.

Program ref: *arg*.

Recommended actions

Increase the value of parameter AccMax.

Recovery: *arg*.

40572, Argument Error

Description

Task: *arg*.

The value of parameter DecelMax is too low.

Program ref: *arg*.

Recommended actions

Increase the value of parameter DecelMax.

Recovery: *arg*.

40573, Argument Error

Description

Task: *arg*.

The value of argument On is too low.

Program ref: *arg*.

Recommended actions

Increase the value of argument On.

Recovery: *arg*.

40574, Search Warning

Description

Task: *arg*.

Number of hits during search was *arg*. Before performing next search, make sure that TCP is moved back to the start position of the search path.

Program ref: *arg*.

Consequences

If no repositioning is done, before restart of circular search, movement that can cause damage might occur.

Recommended actions

Recovery: *arg*.

40576, ParId Error

Description

Task: *arg*.

The array size of argument AxValid is not equal to number of axes.

Program ref: *arg*.

Recommended actions

Check the size of the array.

40577, ParId Error

Description

Task: *arg*.

Continues on next page

Function ParldRobValid needs to be executed before function ParldPosValid.

Program ref: *arg*.

Probable causes

Function ParldRobValid needs to be executed before function ParldPosValid.

Recommended actions

Check that function ParldRobValid has been executed before ParldPosValid.

40578, Parld Error

Description

Task: *arg*.

The optional argument PayLoad is missing. For PayLoad identification the argument must be given.

Program ref: *arg*.

Recommended actions

Give a value to the argument PayLoad.

40579, Parld Error

Description

Task: *arg*.

The optional argument PayLoad may only be used for PayLoad identification.

Program ref: *arg*.

Recommended actions

Remove the argument PayLoad.

40580, Parld Error

Description

Task: *arg*.

Faulty state for LoadIdInit.

Program ref: *arg*.

Recommended actions

Check the whole Parld sequence.

40581, Parld Error

Description

Task: *arg*.

Faulty state for ParldMoveSeq.

Program ref: *arg*.

Recommended actions

Check the whole Parld sequence.

40582, Parld Error

Description

Task: *arg*.

Faulty state for LoadIdInit.

Program ref: *arg*.

Recommended actions

Check the whole Parld sequence.

40583, Parld Error

Description

Task: *arg*.

Backward execution not allowed.

Program ref: *arg*.

40584, Parld Error

Description

Task: *arg*.

ParldMoveSeq / Parameter NextMove: Faulty array size.

Program ref: *arg*.

Recommended actions

Check the size of the array.

40585, Parld Error

Description

Task: *arg*.

Missed argument WObj in LoadId for PayLoad with roomfix TCP.

Program ref: *arg*.

Recommended actions

Add argument WObj.

40586, Parld Error

Description

Task: *arg*.

Not allowed argument WObj. The argument is only to be used for PayLoad with roomfix TCP.

Program ref: *arg*.

Recommended actions

Remove argument WObj.

40587, Parld error

Description

Task: *arg*.

Continues on next page

Continued

ParIdMoveSeq / Parameter MoveData: Faulty array size.

Program ref: *arg*.

Recommended actions

Check the size of the array.

40588, ParId Error

Description

Task: *arg*.

ParIdMove / Parameter StartIndex: Faulty StartIndex.

Program ref: *arg*.

Recommended actions

Check the StartIndex.

40589, ParId Error

Description

Task: *arg*.

ParIdMove / Parameter StartIndex: Point at negative move type.

Program ref: *arg*.

40590, ParId error

Description

arg

arg.

Recommended actions

arg.

40591, Argument Error

Description

Task: *arg*.

Unknown type of parameter identification.

Program ref: *arg*.

Recommended actions

Check the argument ParIdType.

40592, Program Stop During Load Identification

Description

Task: *arg*.

No type of program stop is allowed during load identification.

Program ref: *arg*.

Recommended actions

Start the identification procedure from the beginning again.

Recovery: *arg*.

Continues on next page

40593, Power Fail During Load Identification

Description

Task: *arg*.

A Power Fail during load identification results in faulty load result.

Program ref: *arg*.

Recommended actions

Restart the program execution again with the same run mode (without PP move) for load identification from the beginning.

Recovery: *arg*.

40594, User Error During Load Identification

Description

Task: *arg*.

Error resulting in raise of PP to the beginning of the load identification procedure.

Program ref: *arg*.

Recommended actions

Start the identification procedure from the beginning again.

Recovery: *arg*.

40595, Argument Error

Description

Task: *arg*.

Unknown type of load identification.

Program ref: *arg*.

Recommended actions

Check the argument LoadIdType.

40596, Program Stop During Load Identification

Description

Task: *arg*.

Any type of program stop during load identification is not allowed.

Program ref: *arg*.

Recommended actions

Restart the program execution again for load identification from beginning.

40597, Speed Override

Description

Task: *arg*.

Speed override is not 100 percent.

Program ref: *arg*.

Recommended actions

- Change the speed override to 100.
- Restart the program execution again for load identification from beginning.

40598, Program Stop during Load Identification**Description**

No type of Program Stop is allowed during the Load Identification movements.

Consequences

It is not possible to complete the Load Identification sequence. Note that some axes for the actual mechanical unit are now in independent mode.

Probable causes

Interrupt of the Load Identification sequence with Program Stop or release of the Enable Device.

Recommended actions

- 1 Restart the program. It will then be possible to return to the Load Identification start position. Then the movement sequence can be started again.
- 2 Also possible to cancel the Service Routine to completely skip the Load Identification.

40599, Program Stop during Load Identification**Description**

No type of Program Stop is allowed during the Load Identification movements.

Consequences

It is not possible to complete the Load Identification sequence. Note that some axes for the actual mechanical unit are now in independent mode.

Probable causes

A program stop caused errors in the measurements, and this was detected when restarting the Load Identification movements.

Recommended actions

- 1 Restart the program. It will then be possible to return to the Load Identification start position. Then the movement sequence can be started again.
- 2 Also possible to cancel the Service Routine to completely skip the Load Identification.

40603, Argument Error**Description**

Argument *arg* may not have a negative value.

Recommended actions

Set argument *arg* to a positive value.

40607, Execution Error**Description**

Task: *arg*.

Not allowed to change run mode from forward to backward or vice versa when running a circular movement.

Program ref: *arg*.

Recommended actions

If possible, select the original run mode and press start to continue the stopped circular movement. If this is not possible, move robot and program pointer for a new start.

40609, Argument Error**Description**

Task: *arg*.

Argument \WObj specifies a mechanical unit with too long name.

Program ref: *arg*.

Recommended actions

Use max. 16 characters to specify the name of a mechanical coordinated unit.

40611, Execution Error**Description**

Task: *arg*.

Not allowed to step backwards with this move instruction.

Program ref: *arg*.

Consequences

Step backwards to a position defined with another tool or work object could result in faulty path.

Recommended actions

Check tool and work object.

40612, Argument Error**Description**

Task: *arg*.

No argument programmed for the name of the output signal.

Program ref: *arg*.

Continues on next page

Continued

Recommended actions

Possible to set one position fix I/O such as digital, group of digital or analog output signals during the robot movement.

40614, Argument Error

Description

Task: *arg*.

Argument *arg* is not 0 or 1.

Program ref: *arg*.

Recommended actions

Digital signals can only be set or checked to 0 or 1.

40615, Argument Error

Description

Task: *arg*.

Argument *arg* is not an integer value.

Program ref: *arg*.

Recommended actions

Digital group of in/out signals, process identity or process selector can only have an integer value.

40616, Argument Error

Description

Task: *arg*.

Argument *arg* is outside allowed limits.

Program ref: *arg*.

Recommended actions

Used group of digital in/out signals can only be set or checked within 0 to *arg* according to configuration in system parameters.
Recovery: *arg*.

40617, Argument Error

Description

Task *arg*: One of the arguments SetValue, SetDvalue, CheckValue or CheckDvalue is outside allowed limits.

Program ref: *arg*.

Probable causes

The analog signal can only be set/checked within *arg* and *arg* according to the I/O system parameter configuration.

Recommended actions

Check the RAPID program or the I/O configuration.

Recovery: *arg*.

Continues on next page

40620, Argument Error

Description

Task: *arg*.

Argument *arg* have too large negative value.

Program ref: *arg*.

Recommended actions

Set argument *arg* to *arg* or more.

40622, Argument Error

Description

Task: *arg*.

The value of argument Time is too low for cyclic interrupts.

Program ref: *arg*.

Recommended actions

Change the value for Time, to a value greater than or equal to 0.1 s.

40623, Argument Error

Description

Task: *arg*.

The value of argument Time is too low for single interrupts.

Program ref: *arg*.

Recommended actions

Change the value for Time to a value greater than or equal to 0.01 s.

40624, Argument Error

Description

Task: *arg*.

Argument *arg* is not between 0 and 2.

Program ref: *arg*.

Recommended actions

Specify the flank to generate the interrupt.

0 = Negative flank (high -> low).

1 = Positive flank (low -> high).

2 = Both negative and positive flank.

40625, Limit Error

Description

Task: *arg*.

The robot is outside its limits.

Program ref: *arg*.

Probable causes

- Axis outside working area.

- Limits exceeded for at least one coupled joint.

Recommended actions

Recovery: *arg*.

40631, Instruction Error**Description**

Task: *arg*.

Too many move instructions in sequence with concurrent RAPID program execution.

Program ref: *arg*.

Recommended actions

Edit the program to max. 5 MoveX \Conc in sequence on the basic execution level of the program.

Recovery: *arg*.

40632, Instruction Error**Description**

Task: *arg*.

No move instructions with concurrent RAPID program execution are allowed within the StorePath-RestoPath part of the program.

Program ref: *arg*.

Recommended actions

Edit the program so it does not contain any MoveX \Conc instructions within the StorePath-RestoPath part of the program.

40634, Reference Error**Description**

Task: *arg*.

The signal *arg* is unknown in the system.

Program ref: *arg*.

Probable causes

If the signal is defined in the RAPID program, it must be connected to the configured signal with instruction AliasIO.

Recommended actions

All signals (except AliasIO signals) must be defined in the system parameters and cannot be defined in the RAPID program.

Recovery: *arg*.

40648, Search Error**Description**

Task: *arg*.

Not allowed to do StorePath while searching is active on motion base path level.

Program ref: *arg*.

Consequences

Program is stopped.

Probable causes

Executing of instruction StorePath while searching is active.

Recommended actions

Not possible to use StorePath in TRAP, event or service routine while searching is active on motion base path level. If using interrupts in the program for execution of TRAPs, such interrupt must be deactivated during any search. E.g. ISleep - SearchL - IWatch.

40649, Path Limitation**Description**

Task: *arg*.

arg is already done or executing. Instruction *arg* must first be executed, before a new *arg* can be done.

Program ref: *arg*.

Recommended actions

Check the RAPID program.

40650, Wrong Combination Of Parameters**Description**

Task: *arg*.

Optional parameters and switches are not used in a correct combination.

Program ref: *arg*.

Recommended actions

- No optional parameters and no switch keep the old coordinate system.
- The switch Old has the same function.
- RefPos or RefNum has to be defined with Short, Fwd or Bwd.

40651, Use Numeric Input**Description**

Task: *arg*.

Use numeric input for the position instead of a robtarget.

Program ref: *arg*.

Recommended actions

The position cannot be defined with a robtarget for robot axes. Use the optional parameter for numeric input of the position.

Continues on next page

Continued

40652, Axis Is Moving

Description

Task: *arg*.

A Robot axis, an external axis or an independent axis is moving.

Program ref: *arg*.

Recommended actions

All Robot axes, external axes and independent axes have to stand still. Use MoveL with Fine argument for the Robot and external axes. Use IndRMove for the independent axes.

Recovery: *arg*.

40654, Axis Not Active

Description

Task: *arg*.

The axis destination position to move to is undefined (9E9) or the axis to move is not active at present.

Program ref: *arg*.

Probable causes

- 1 The position to move to has been programmed with no active mechanical unit.
- 2 The position to move to has been modified with the mechanical unit deactivated.
- 3 The mechanical unit is not active at present.

Recommended actions

The mechanical unit has to be activated before modifying or moving to the destination position.

Recovery: *arg*.

40655, Axis Is Not Independent

Description

Task: *arg*.

The axis is not in independent mode.

Program ref: *arg*.

Consequences

It is only possible to get the status from an axis in independent mode.

Recommended actions

Set the axis to independent.

Recovery: *arg*.

40658, Parameter Error

Description

Task: *arg*.

Parameter *arg* can only be used, if parameter *arg* is greater than zero.

Program ref: *arg*.

Recommended actions

Parameter *arg* has effect only in the first TriggX instruction, in a sequence of several TriggX instructions, that controls the speed proportional AO signal.

40661, Search Error

Description

Task: *arg*.

The signal *arg* for the SearchX instruction is already set to the specified value (high or low) at the start of searching, or the I/O-device for the signal isn't up and running for the occasion.

Before performing next search, make sure that TCP is moved back to the start position of the search path.

Program ref: *arg*.

Consequences

If no repositioning is done, before restart of circular search, movement that can cause damage might occur.

Recommended actions

Recovery: *arg*.

40662, Invalid Worldzone Type

Description

Task: *arg*.

The switch \arg must be associated with a *arg* worldzone.

Program ref: *arg*.

Recommended actions

If use of switch \Temp, the datatype must be wztemporary in WorldZone. If use of switch \Stat, the datatype must be wzstationary in WorldZone.

40663, World Zone Not In Use

Description

Task: *arg*.

The argument *arg* of the instruction *arg* refers to a not used worldzone.

Program ref: *arg*.

Recommended actions

The worldzone must have been defined and activated by a WZLimSup or WZDOSet instruction.

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40664, World Zone Already In Use**Description**Task: *arg*.

The '*arg*' worldzone has already been defined and activated. A world zone can only be defined once.

Program ref: *arg*.**Recommended actions**

Use a worldzone with another name.

40665, Too Many World Zones**Description**Task: *arg*.

It is not possible to add the world zone *arg*. The world zone table is full.

Program ref: *arg*.**Recommended actions**

Check the RAPID program to see if any word zone might be removed.

40666, Illegal World Zones**Description**Task: *arg*.

Worldzone '*arg*' is defined locally in current routine.

Program ref: *arg*.**Recommended actions**

Define the world zone as global or local in module.

40667, Illegal World Zones**Description**Task: *arg*.

WorldZone *arg* is not entire data reference.

Program ref: *arg*.**Recommended actions**

Check the value of argument WorldZone.

40668, Shapedata Not In Use**Description**Task: *arg*.

The '*arg*' argument of the instruction *arg* must refer to a defined shapedata.

Program ref: *arg*.**Recommended actions**

A shapedata is used to store a volume definition. It must have been defined by WZBoxDef, WZSphDef or WZCylDef before it can be used by WZLimSup or WZDOSet.

40669, World Zone Too Small**Description**Task: *arg*.

At least one side or radius is less than the minimal allowed in instruction *arg*.

Program ref: *arg*.**Recommended actions**

Check previous volume definition instruction.

40670, Invalid World Zone**Description**Task: *arg*.

The index of the world zone argument *arg* in *arg* is not a valid index defined by WZLimSup or WZDOSet.

Program ref: *arg*.**Recommended actions**

Check the RAPID program.

40671, Illegal Use Of World Zone**Description**Task: *arg*.

The argument '*arg*' for *arg* must be a temporary world zone.

Program ref: *arg*.**Recommended actions**

Check the argument.

40672, World Zone Already In Use**Description**Task: *arg*.

It is not possible to add the world zone *arg*. Another world zone with the same name is already defined in the system.

Program ref: *arg*.**Recommended actions**

Check the name of the world zone.

40673, I/O Access Error**Description**Task: *arg*.

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Continued

The signal given in parameter *arg* is write protected for RAPID access.

Program ref: *arg*.

Recommended actions

Select other user signal or change the access mode for the signal.

40674, I/O Access Error

Description

Task: *arg*.

The I/O signal *arg* is not write protected for user access from FlexPendant or RAPID.

Program ref: *arg*.

Recommended actions

Change the access mode to type ReadOnly for the signal in the I/O configuration.

40675, Execution Error

Description

Not allowed changing the run mode from forward to backward or vice versa when running an invisible trap routine.

Recommended actions

If possible, select the original run mode and press start to continue.

40676, Parameter Error

Description

Task: *arg*.

The DeltaJointVal for robot axis *arg* is ≤ 0 .

Program ref: *arg*.

Recommended actions

Check the value for DeltaJointVal. The DeltaJointVal for all axes to supervise must be > 0 mm or degrees.

40677, Parameter Error

Description

Task: *arg*.

The DeltaJointVal for external axis *arg* is ≤ 0 .

Program ref: *arg*.

Recommended actions

Check the value for DeltaJointVal. The DeltaJointVal for all axes to supervise must be > 0 mm or degrees.

40678, Parameter Error

Description

Task: *arg*.

LowJointVal is higher than or equal to HighJointVal for robot axis *arg*.

Program ref: *arg*.

Recommended actions

Check the values for HighJointVal and LowJointVal. The HighJointVal must be higher than the LowJointVal for all axes with defined high or/and low limits.

40679, Parameter Error

Description

Task: *arg*.

LowJointVal is higher than or equal to HighJointVal for external axis *arg*.

Program ref: *arg*.

Recommended actions

Check the values for HighJointVal and LowJointVal. The HighJointVal must be higher than the LowJointVal for all axes with defined high or/and low limits.

40680, Parameter Error

Description

Task: *arg*.

Error in used WZHomeJointDef. It is not allowed to specify supervision of not active axis *arg*.

Program ref: *arg*.

Recommended actions

Set the argument MiddleJointVal to 9E9 for the actual axis.

40681, Parameter Error

Description

Task: *arg*.

Error in used WZLimJointDef. It is not allowed to specify limitation of not active axis *arg*.

Program ref: *arg*.

Recommended actions

Set the argument LowJointVal and HighJointVal to 9E9 for the actual axis.

40698, Read error

Description

Task *arg* is trying to read file *arg*, but is failing.

Continues on next page

Consequences

It was not possible to read/load *arg*.

Probable causes

If trying to access file on FTP mounted disc, make sure that the size of *arg* isn't larger than the maximum file size configured in the FTP protocol settings.

40699, Program Memory Full**Description**

The task *arg*, has only *arg* bytes in its program memory.

Consequences

It was not possible to load module *arg*.

Recommended actions

- 1 Remove some other module and try again.
- 2 Check if large data structures could be split into smaller blocks.
- 3 Use of installed modules can save program memory.

40700, Syntax Error**Description**

Task: *arg*.

Syntax error. *arg*.

40701, Program Memory Full**Description**

The task *arg*, has only *arg* free bytes in its user space.

Consequences

The ordered operation could not be completed.

Recommended actions

- 1 Remove some modules and try again.
- 2 Check if large data structures could be split into smaller blocks.
- 3 Use of installed modules can save program memory.

40702, File Not Found**Description**

Task: *arg*.

The file *arg* was not found.

Program ref: *arg*.

Recommended actions

- Check the file path and the file name.
- Check if the file exists.

Recovery: *arg*.

40703, Unload Error**Description**

Task: *arg*.

The program module could not be unloaded. The reason is that the module is changed but not saved.

Program ref: *arg*.

Recommended actions

The instruction UnLoad: Use the optional switch ErrIfChanged, without recover from this situation, in an Error handler.

Recovery: *arg*.

40704, UnLoad Error**Description**

Task: *arg*.

arg. The program module couldn't be unloaded.

Program ref: *arg*.

Probable causes

- Module not loaded with Load instr.
- Not same file path as used for Load.

Recommended actions

- Check if the program module has been loaded with the instruction Load.
- Check if the file path and name are the same in the UnLoad and Load instruction.

Recovery: *arg*.

40706, Load Error**Description**

Task: *arg*.

The program module is already loaded.

Program ref: *arg*.

Probable causes

The module name in the head of the file *arg* already exists in the program memory.

Recommended actions

Recovery: *arg*.

40707, I/O Device Name Invalid**Description**

Task: *arg*.

The I/O device name *arg* does not exist.

Program ref: *arg*.

Recommended actions

- Check if the I/O device name is misspelled.

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Continued

- Check if the I/O device is defined.

Recovery: *arg*.

40708, I/O Device Is Not Enabled

Description

Task: *arg*.

I/O device *arg* was not enabled.

Program ref: *arg*.

Probable causes

The maximum period of waiting time was too short.

Recommended actions

Increase the waiting time or make a retry.

Recovery: *arg*.

40709, I/O Device Is Not Deactivated

Description

Task: *arg*.

I/O device *arg* was not deactivated.

Program ref: *arg*.

Probable causes

The maximum period of waiting time was too short.

Recommended actions

Increase the waiting time or make a retry.

Recovery: *arg*.

40710, Argument Error

Description

Task: *arg*.

The argument *arg* is an expression value, is not present or is of the type switch.

Program ref: *arg*.

Recommended actions

Change the parameter *arg* to a valid one.

Recovery: *arg*.

40711, Alias Type Error

Description

Task: *arg*.

The data types for the arguments FromSignal and ToSignal must be the same and must be of signalxx type.

Program ref: *arg*.

Recommended actions

Change the type to a valid one (signalai/ao, signaldi/do, signalgi/go).

Continues on next page

Recovery: *arg*.

40712, Event Routine Error

Description

Task: *arg*.

Too many event routines, the routine *arg* will not be executed.

Recommended actions

Encapsulate the routine in one of the others that are specified for the same event.

40713, Alias Define Error

Description

Task: *arg*.

The signal in argument FromSignal: *arg*, must be defined in the I/O configuration and the signal in argument ToSignal: *arg*, must be declared in the RAPID program and not defined in the I/O configuration.

Program ref: *arg*.

Recommended actions

Check the I/O configuration and the RAPID program.

Recovery: *arg*.

40714, Argument Error

Description

Task: *arg*.

Orientation definition error in *arg*.

Program ref: *arg*.

Recommended actions

This is probably an off-line generated "dummy" position (undefined orientation), which needs to be modified with modpos.

40720, Alias I/O Installation

Description

The system could not refresh all I/O signals as RAPID symbols.

Consequences

No I/O signals can be used in a RAPID program.

Probable causes

- Incorrect I/O configuration.
- Incorrect task configuration.

Recommended actions

Restart the controller.

40721, I/O Installation**Description**

Task *arg*: The system could not refresh all I/O signals as RAPID symbols.

Consequences

No I/O signals can be used in a RAPID program.

Probable causes

- Incorrect I/O configuration.
- Incorrect task configuration.

Recommended actions

Restart the controller.

40722, Mechanical Units**Description**

The system could not refresh all mechanical units as RAPID symbols.

Consequences

No mechanical units can be used in a RAPID program.

Probable causes

- Incorrect Motion configuration.
- Incorrect task configuration.

Recommended actions

Restart the controller.

40723, Camera Installation**Description**

Task *arg*: The system could not refresh all camera units as RAPID symbols.

Consequences

No camera units can be used in a RAPID program.

Probable causes

- Incorrect camera configuration.
- Incorrect task configuration.

Recommended actions

Restart the controller.

40724, Save or Erase Error**Description**

Task: *arg*.

The program module *arg* could not be saved or could not be erased.

Program ref: *arg*.

Recommended actions

- Check the spelling of the module name.
- Check if the module is loaded.

Recovery: *arg*.

40726, Reference Error**Description**

Task: *arg*.

The reference to the load session is not valid.

Program ref: *arg*.

Recommended actions

Check if the specified reference is the same as in StartLoad.

Recovery: *arg*.

40727, Save Error**Description**

Task: *arg*.

Missing file source *arg*.

Program ref: *arg*.

Recommended actions

Use FilePath argument to specify the file destination.

Recovery: *arg*.

40728, Frame Error**Description**

Task: *arg*.

Unable to calculate new frame.

Program ref: *arg*.

Probable causes

The positions have not the required relations or are not specified with enough accuracy.

Recommended actions

Check if the positions are too close or not specified with enough accuracy.

Recovery: *arg*.

40730, Symbol Definition Error**Description**

Task: *arg*.

The string in text table *arg* at index *arg* and the used format string(s) will be too long to store in a RAPID string.

Program ref: *arg*.

Continues on next page

Continued

Probable causes

A combination of used text resource with used format strings will exceed max length for a RAPID string.

Recommended actions

Change the file for the text table.

Check used format string(s) in function *arg*.

40731, Value Error

Description

Task: *arg*.

The value of the argument *arg* for signal *arg* is above its maximum logical value.

Program ref: *arg*.

Recommended actions

Change the argument or change the maximum logical value parameter for the signal.

Recovery: *arg*.

40732, Value Error

Description

Task: *arg*.

The value of the argument *arg* for signal *arg* is below its minimum logical value.

Program ref: *arg*.

Recommended actions

Change the argument or change the min logical value parameter for the signal.

Recovery: *arg*.

40733, Value Error

Description

Task: *arg*.

The value of the argument *arg* for signal *arg* is below the value for argument *arg*.

Program ref: *arg*.

Recommended actions

Change the values of the arguments.

40734, Symbol Definition Error

Description

Task: *arg*.

The string in text table *arg* at index *arg* is too long.

Program ref: *arg*.

Recommended actions

Change the file for the text table and perform a system reset.

40736, Mechanical Unit Error

Description

Task: *arg*.

It is not possible to define a payload on the robot with this instruction.

Program ref: *arg*.

Recommended actions

Use the instruction GripLoad instead of MechUnitLoad.

40737, Symbol Definition Error

Description

Task: *arg*.

The requested text or text package does not exist. Text table *arg*, Index *arg*.

Program ref: *arg*.

Recommended actions

Check the arguments.

Recovery: *arg*.

40738, I/O Error

Description

Unable to access the I/O signal *arg* on I/O device *arg*. Impossible to restart.

Probable causes

The connection with the I/O module is broken.

Recommended actions

Re-establish the connection with the I/O device. To make it possible to restart the program move PP to a safe restart position.

40739, Parameter Error

Description

Task: *arg*.

None of the option arguments DO1, GO1, GO2, GO3 or GO4 are specified.

Program ref: *arg*.

Recommended actions

Specify at least one of the arguments.

Continues on next page

40740, Execution Error**Description**

The PERS variable specified in the instruction TriggStopProc cannot be updated, because it does not exist anymore.

Probable causes

The program module with the PERS variable is probably removed from the program memory.

Recommended actions

Check if the module with the PERS variable is removed, if so put it back.

Recommended actions

Check the argument.

40741, Context Error**Description**

Task: *arg*.

Instruction *arg* may only be used in an event routine.

Program ref: *arg*.

Recommended actions

Remove the instruction.

40742, Parameter Error**Description**

Task: *arg*.

The timing parameter DipLag is larger than the system parameter Event preset time.

Program ref: *arg*.

Recommended actions

Increase the system parameter Event preset time or check the equipment dip lag (delay) compensation.

Recovery: *arg*.

40743, Parameter Error**Description**

Task: *arg*.

Not a valid subtype in argument *arg*.

Program ref: *arg*.

Recommended actions

Check the argument.

40744, Parameter Error**Description**

Task: *arg*.

Invalid value in *arg* in argument *arg*.

Program ref: *arg*.

40745, Parameter Error**Description**

Task: *arg*.

arg is less than *arg* in argument *arg*.

Program ref: *arg*.

Recommended actions

Check the argument.

40746, Parameter Error**Description**

Task: *arg*.

arg TRUE in parameter *arg* in combination with conveyor coordination.

Program ref: *arg*.

Recommended actions

Cannot use fine points when leaving conveyors after coordinated stop point. Use a zone instead.

40747, Access Error**Description**

Task: *arg*.

Cannot read or write to the system parameter *arg*. The parameter is internal and protected from reading and writing.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

40748, Value Error**Description**

Task: *arg*.

The data to write from parameter CfgData to the system parameter, is outside valid limits.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

40749, Execution Error**Description**

Task: *arg*.

It is not possible to execute StartMove when the robot is moving.

Program ref: *arg*.

Continues on next page

Continued

Recommended actions

Recovery: *arg*.

40752, Argument Error

Description

Task: *arg*.

Some load session with StartLoad - WaitLoad has not been finished.

Program ref: *arg*.

Recommended actions

Finish the load session with WaitLoad, cancel it with CancelLoad or set PP to main.

Recovery: *arg*.

40753, Memory Fault

Description

Task: *arg*.

Because of power fail in executed Load or StartLoad ... WaitLoad instruction, the RAPID program memory is inconsistent. *** TO REPAIR DO ADVANCED RESTART "Reset RAPID" ***.

Program ref: *arg*.

Recommended actions

Important to do Reset RAPID, because the RAPID program memory is destroyed:

- Faulty init value of PERS variables.
- Reduction of the available program memory size.

40754, Argument Error

Description

Task: *arg*.

There are no arguments given.

Program ref: *arg*.

Recommended actions

If you want a limitation set the optional argument On with a value, otherwise set to Off.

40755, Context Error

Description

Task: *arg*.

Instruction *arg* may only be used in a trap routine.

Program ref: *arg*.

Recommended actions

Remove the instruction.

Continues on next page

40756, Context Error

Description

Task: *arg*.

Instruction *arg* may only be used in a trap routine ordered through instruction *arg*.

Program ref: *arg*.

Recommended actions

Check that INTNO has the interrupt number used by *arg*.

40757, Argument Error

Description

Task: *arg*.

The load session you are trying to cancel is not in use.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

40759, Parameter Error

Description

Task: *arg*.

The argument Data in *arg* has improper data type.

Program ref: *arg*.

Recommended actions

Check the data type. Non-value and semi-value types may not be used.

40761, Parameter Error

Description

Task: *arg*.

The argument *arg* has a negative value.

Program ref: *arg*.

Recommended actions

Set the value positive or to zero.

40762, Value Error

Description

Task: *arg*. The value of argument *arg* forces the robot out of workspace.

Program ref: *arg*.

Recommended actions

Decrease the value.

40763, Execution Error**Description**

Task: *arg*. The instruction *arg* cannot be executed while the system is in a stop state.

Program ref: *arg*.

No system symbol *arg* is accessible in the system.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

40764, Switch Argument Error**Description**

Task: *arg*. The instruction *arg* must be used with one switch argument.

Program ref: *arg*.

Description

Task: *arg*.

The symbol *arg* is not a readable object.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

Recommended actions

Use one of the switch Total or Free.

40765, Argument Error**Description**

Task: *arg*.

In the instruction *arg* the argument *arg* is not an open directory.

Program ref: *arg*.

40770, Symbol Type Error**Description**

Task: *arg*.

The symbol *arg* is of type *arg* and not the expected type *arg*.

Program ref: *arg*.

Recommended actions

Check the RAPID program.

Recovery: ERR_SYMBOL_TYPE.

Recommended actions

Open the directory before trying to read it.

Recovery: *arg*.

40766, Parameter Error**Description**

Task: *arg*.

In the instruction *arg* the argument *arg* can't be used without the argument *arg*.

Program ref: *arg*.

40771, Symbol Access Error**Description**

Task: *arg*.

The symbol *arg* is not accessible in this scope.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

Recommended actions

Check the RAPID program.

40767, Search Error**Description**

Task: *arg*.

Object of the type *arg* could not be searched for.

Program ref: *arg*.

40772, I/O Error**Description**

Task: *arg*.

The *arg* instruction has lost contact with the conveyor.

Program ref: *arg*.

Recommended actions

Check the RAPID program.

40773, Instruction Interrupted**Description**

Task: *arg*.

The instruction *arg* was interrupted, reason unknown.

Program ref: *arg*.

40768, Symbol Access Error**Description**

Task: *arg*.

Continues on next page

Continued

40774, Object Dropped

Description

Task: *arg*.

The object that the instruction *arg* was waiting for has been dropped.

Program ref: *arg*.

Probable causes

Start window passed or Checkpoint not satisfied.

Recommended actions

If Checkpoint not used, Checkpoint Distance and Checkpoint Window Width must be set to zero. Rerun the instruction.

Recovery: *arg*.

40775, Conveyor Error

Description

Task: *arg*.

Another *arg* instruction is waiting for a distance to the object.

Program ref: *arg*.

40776, Conveyor Error

Description

Task: *arg*.

Another *arg* instruction is waiting for the object.

Program ref: *arg*.

40777, Conveyor Error

Description

Task: *arg*.

The *arg* instruction is already connected.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

40778, Value Error

Description

Task: *arg*.

Booking of the new error number *arg* failed. The init value must be -1 or the old number.

Program ref: *arg*.

Recommended actions

Check the init value of the new *errnum* variable.

40779, Error Number Local

Description

Task: *arg*.

The RAPID user error number *arg* must not be declared as local in routine.

Program ref: *arg*.

Recommended actions

Check the *errnum* declaration.

40780, Data Object Error

Description

Task: *arg*.

There is no valid data object for the argument *arg* of the instruction *arg*.

Program ref: *arg*.

Recommended actions

Check if there is a right data object.

40781, File Error

Description

Task: *arg*.

The parameter *arg* does not correspond to any loaded text file.

Program ref: *arg*.

Recommended actions

Check if the text file is (correct) installed.

40782, Mode Error

Description

Task: *arg*.

File or I/O device is not opened for writing.

Program ref: *arg*.

Recommended actions

Check how the file or I/O device was opened.

40783, Mode Error

Description

Task: *arg*.

File or I/O device is not opened in a character-based mode.

Program ref: *arg*.

Recommended actions

Check how the file or I/O device was opened.

Continues on next page

40784, Mode Error**Description**Task: *arg*.

File or I/O device is not opened in a binary mode.

Program ref: *arg*.**Recommended actions**

Check how the file or I/O device was opened.

40785, Mode Error**Description**Task: *arg*.

File or I/O device is not opened for reading.

Program ref: *arg*.**Recommended actions**

Check how the file or I/O device was opened.

40786, Read Error**Description**Task: *arg*.

One or more bytes is not read properly. The value of the read data might be inconsistent.

Program ref: *arg*.**Consequences**

Because the checksum for the received message is not the same as calculated at sending, the message data cannot be used.

Probable causes

The reason can be:

- Communication problem.
- Different WriteAnyBin.
- ReadAnyBin software version between the sending WriteAnyBin and the receiving ReadAnyBin.

Recommended actionsError Recovery for communication problem: *arg*.

40787, User Frame Error**Description**Task: *arg*.

Not possible to get the coordinated user frame.

Program ref: *arg*.

40788, Axis Error**Description**Task: *arg*.

The single axis is not init correctly.

Program ref: *arg*.

40789, Limitation Error**Description**Task: *arg*.

The string length of the argument for the file path is too long.

Program ref: *arg*.**Probable causes**The maximum allowed string length for the full system file path is *arg* characters.**Recommended actions**

Shorten the length of the path.

40790, Value Error**Description**Task: *arg*.

The RAPID string is too long.

Program ref: *arg*.**Probable causes**

String value exceeds the maximum allowed length.

Recommended actions

Rewrite the program to use strings of less length.

40791, I/O Error**Description**Task: *arg*.No space left on device (file name *arg*).Program ref: *arg*.**Recommended actions**Recovery: *arg*.

40792, I/O Error**Description**Task: *arg*.File open/access error for path *arg*.Program ref: *arg*.**Recommended actions**

- Check permission, is the file write protected?
- Check if the file or directory exists.
- Check if there is any space left on device.

Recovery: *arg*.*Continues on next page*

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40793, Error Installing Text Table

Description

Task: *arg*.

No or faulty text resource name or index number in the text file.

Program ref: *arg*.

Consequences

The contents of some of the text tables may have been destroyed.

Recommended actions

Correct the error, reset the system and try again.

40794, Error Installing Text Table

Description

Task: *arg*.

The specified index within the text resource already exists in the system.

Program ref: *arg*.

Probable causes

- Error in the index numbering.
- The file has been installed twice.

Recommended actions

If error in the index, correct it, reset the system and try again.

40795, Error Installing Text Table

Description

Task: *arg*.

System memory for text tables is full.

Program ref: *arg*.

Recommended actions

Reduce the amount of user defined text string installed from RAPID. Reset the system and try again.

40796, Overload Error

Description

Task: *arg*.

The system is overloaded so the actual order cannot be ready in time.

Program ref: *arg*.

Recommended actions

Reduce the main computer load, for example by:

- Add WaitTime in RAPID loops.
- Increase filter time for I/O signals.
- Avoid cyclic interrupts.

Continues on next page

40797, I/O Error

Description

Unable to access the I/O signal *arg* on I/O device *arg*.

Probable causes

The connection with the I/O module is broken.

Recommended actions

Re-establish the connection with the I/O device.

40798, System Access Error

Description

arg.

40799, Execution Error

Description

Task: *arg*.

TestSignRead is using a channel without a defined signal.

Program ref: *arg*.

Recommended actions

Use TestSignDefine to define a signal to the channel.

40800, Tool Error

Description

Task: *arg*.

The component robhold in the tool has not got the correct value.

Program ref: *arg*.

Recommended actions

Change the value of robhold. If the robot is holding the tool the value should be TRUE. If the robot is not holding the tool, i.e. a stationary tool, the value should be FALSE.

40801, Calculation error

Description

Task: *arg*.

Cannot calculate the tool frame.

Program ref: *arg*.

Probable causes

It is not possible to calculate the tool frame with the selected approach points.

Recommended actions

Select new approach points as accurate as possible.

40802, Execution Error**Description**Task: *arg*.

Not possible to do subscribe.

Program ref: *arg*.**Probable causes**

There is no memory left to make another subscription on this variable.

Recommended actions

To continue, PP must be moved to main!

Recommended actions

To be able to rename or copy: Change the file name or remove the existing file.

Recovery: *arg*.

40811, No Contact With I/O Device**Description**Task: *arg*.

There is no contact with I/O device.

Program ref: *arg*.**Probable causes**

- The device may have been deactivated.
- No power to the I/O device.

40803, Error message too long**Description**

The length of the following error message was too long and has been cut. This means you will not be able to read the whole message.

40812, Execution Error**Description**Task: *arg*.

Not allowed to run this program in non_motion_execution_mode.

Program ref: *arg*.**Recommended actions**

Change mode.

40804, Argument Error**Description**Task: *arg*.

The argument "type" in stoppointdata may not be followtime in the instructions MoveJ, MoveAbsJ and MoveExtJ.

Program ref: *arg*.**Recommended actions**

Change "type" to inpos or stoptime.

40813, Execution Error**Description**Task: *arg*.

The task is not allowed to execute the instruction *arg*.

Program ref: *arg*.**Probable causes**

The task is not configured to control mechanical units.

Recommended actions

Change the configuration or remove the instruction.

40805, Motion Error**Description**Task: *arg*.

Error from MocGenInstr. Ref to former message for reason.

Program ref: *arg*.

40814, Execution Error**Description**Task: *arg*.

StartMove could not get the regain distance.

Program ref: *arg*.**Probable causes**

Application error.

Recommended actions

Please restart the path.

Recovery: *arg*.

40806, IOF Error**Description**Task: *arg*.

Error from IofGenInstr. Ref to former message for reason.

Program ref: *arg*.

40807, File Error**Description**Task: *arg*.

The file *arg* already exists.

Program ref: *arg*.

Continues on next page

Continued

40816, RolGenInstr Error

Description

Task: *arg*.

Error from instruction RolGenInstr. Ref. to former user or internal error message for reason.

Program ref: *arg*.

Recovery: *arg*.

40817, Symbol Definition Error

Description

Task: *arg*.

The string and the used format string(s) will be too long to store in a RAPID string.

Program ref: *arg*.

Probable causes

A combination of used text with used format strings will exceed max length for a RAPID string.

Recommended actions

Change the original text.

Check used format string(s) in function *arg*.

41050, Profile not activated

Description

Profile record not ready.

Consequences

Profile data not activated.

Probable causes

Try to activate recorded profile too early.

Recommended actions

Instruction RecordProfile must be called before ActivateProfile.

41051, Recorded profile not stored

Description

No valid profile data to store.

Consequences

Nothing stored.

Probable causes

Try to store a recorded profile not existing or not activated.

Recommended actions

Instruction ActivateProfile must be called before StoreProfile.

41052, Can't use this profile data file

Description

File not found or data not valid.

Consequences

Profile not used.

Probable causes

File not found or data not valid.

Recommended actions

Check file directory and name and profile data.

41100, Too Many Corrections

Description

Task: *arg*.

Max 5 correction descriptors are allowed to be connected.

Program ref: *arg*.

Recommended actions

Check number of connected descriptors.

Recovery: *arg*.

41101, Correction Not Connected

Description

Task: *arg*.

Cannot write to correction descriptor.

Program ref: *arg*.

Recommended actions

Check that the current correction descriptor is connected.

Recovery: *arg*.

41102, No Corrections Connected

Description

Task: *arg*.

Correction unable to be read.

Program ref: *arg*.

Probable causes

No correction descriptor connected.

Recommended actions

Check if any correction generator is connected.

Recovery: *arg*.

41200, Servo Tool Open Error

Description

Task: *arg*.

Not possible to open servo gun in motors off state.

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Program ref: *arg*.

Recommended actions

Retry after setting motors on.

Recovery: *arg*.

41203, Servo Tool Error

Description

Task: *arg*.

Servo tool *arg* does not exist.

Program ref: *arg*.

Recommended actions

Check mechanical unit name.

Recovery: *arg*.

41204, Servo Tool error

Description

Task: *arg*.

Emergency stop when executing instruction in background task.

Program ref: *arg*.

Recommended actions

Retry after emergency stop reset.

Recovery: *arg*.

41205, Servo Tool Error

Description

Task: *arg*.

Not possible to close servo gun. The gun is not open.

Program ref: *arg*.

Recommended actions

Retry after opening the gun.

Recovery: *arg*.

41206, Servo Tool Parameter Error

Description

Task: *arg*.

The parameter PrePos must be a positive value.

Program ref: *arg*.

Recommended actions

Change the parameter value.

Recovery: *arg*.

41207, Servo Tool Init Error

Description

Task: *arg*.

The position for servo tool *arg* is not initialized.

Program ref: *arg*.

Recommended actions

Change the parameter value or perform a tip change calibration.

Recovery: *arg*.

41208, Servo Tool Synchronization Error

Description

Task: *arg*.

The tips for servo tool *arg* are not synchronized.

Program ref: *arg*.

Recommended actions

Synchronize via ManServiceCalib or perform a tool change calibration.

Recovery: *arg*.

41209, Servo Tool Activation Error

Description

Task: *arg*.

Servo tool *arg* is not activated.

Program ref: *arg*.

Recommended actions

Use ActUnit to activate.

Recovery: *arg*.

41210, Servo Tool Error

Description

Task: *arg*.

Not possible to execute instruction in motors off state for servo tool *arg*.

Program ref: *arg*.

Recommended actions

Retry after setting motors on.

Recovery: *arg*.

41211, Servo Tool Error

Description

Task: *arg*.

Not possible to perform a recalibration of the gun *arg*.

Program ref: *arg*.

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Recommended actions

Retry after checking values.

Recovery: *arg*.

41212, Servo Tool Error

Description

Task: *arg*.

Not possible to change force. The gun is not closed.

Program ref: *arg*.

Recommended actions

Retry after closing the gun.

Recovery: *arg*.

41300, Argument Error

Description

The argument Joint must be between 1 and *arg*.

Recommended actions

Check and change the value.

41301, Argument Error

Description

The argument Type doesn't correspond to a service value.

41302, Argument Error

Description

The argument Type does not correspond to a service value.

41303, Argument Error

Description

The argument Robot must be between 1 and *arg*.

Recommended actions

Check and change the value.

41304, Argument Error

Description

The argument Level doesn't correspond to a service level.

41400, Parameter Error

Description

Task: *arg*.

Faulty AxisNo.

Program ref: *arg*.

Recommended actions

Check and change the value. Press Start to continue.

41401, I/O Error

Description

Unable to access the I/O signal. Signal and I/O device unknown.

Probable causes

The connection with the I/O module is broken.

Recommended actions

Re-establish the connection with the I/O device.

41404, Parameter Error

Description

Task: *arg*.

Argument On or Off missing.

Program ref: *arg*.

Recommended actions

Check the RAPID program. One of the switch On or Off must be given.

41405, Parameter Error

Description

Task: *arg*.

Argument *arg* not allowed together with argument Off.

Program ref: *arg*.

Recommended actions

Check and change the RAPID program.

41406, Parameter Error

Description

Task: *arg*.

This TuneType is only valid for option Advanced Shape Tuning.

Program ref: *arg*.

Recommended actions

Change TuneType or install option.

41407, Parameter Error

Description

Task: *arg*.

Symbol *arg* is read-only.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

Continues on next page

41408, Parameter Error**Description**Task: *arg*.The symbol *arg* was not found.Program ref: *arg*.**Recommended actions**Recovery: *arg*.

41409, Parameter Error**Description**Task: *arg*.Ambiguous symbol *arg*.Program ref: *arg*.**Recommended actions**

Check and change the RAPID program.

41410, Parameter Error**Description**Task: *arg*.Search error for symbol *arg*.Program ref: *arg*.**Recommended actions**Recovery: *arg*.

41411, Parameter Error**Description**Task: *arg*.Unknown module name *arg*.Program ref: *arg*.**Probable causes**

The module does not exist, or module is installed -Shared or -Installed, and therefore not available.

Recommended actions

Check and change the RAPID program.

41412, Parameter Error**Description**Task: *arg*.Ambiguous module *arg*.Program ref: *arg*.**Recommended actions**

Check and change the RAPID program.

41413, Parameter Error**Description**Task: *arg*.Ambiguous routine name *arg*.Program ref: *arg*.**Recommended actions**

Check and change the RAPID program.

41414, Parameter Error**Description**Task: *arg*.Unknown routine name *arg*.Program ref: *arg*.**Probable causes**

The routine does not exist.

Recommended actions

Check and change the RAPID program.

41415, Parameter Error**Description**Task: *arg*.The module name *arg* does not exist.Program ref: *arg*.**Recommended actions**

Check and change the RAPID program.

Recovery: *arg*.

41416, Parameter Error**Description**Task: *arg*.The symbol *arg* is not a module.Program ref: *arg*.**Recommended actions**

Check and change the RAPID program.

Recovery: *arg*.

41417, System Access Error**Description**Task: *arg*.

Cannot convert date.

Program ref: *arg*.**Recommended actions**

Restart the controller and retry.

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41419, Parameter Error

Description

Task: *arg*.

arg must be num, bool, string or dnum.

Program ref: *arg*.

Recommended actions

Check and change the RAPID program.

41420, Parameter Error

Description

Task: *arg*.

The argument type of *arg* is not compatible with cfg type.

Expected *arg*.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

41421, Parameter Error

Description

Task: *arg*.

Unknown cfg domain in argument *arg*.

Program ref: *arg*.

Recommended actions

Check and change the RAPID program.

Recovery: *arg*.

41422, Parameter error

Description

Task: *arg*.

Unknown cfg type in argument *arg*.

Program ref: *arg*.

Recommended actions

Check and change the RAPID program.

Recovery: *arg*.

41423, Parameter Error

Description

Task: *arg*.

Unknown cfg instance in argument *arg*.

Program ref: *arg*.

Recommended actions

Check and change the RAPID program.

Recovery: *arg*.

41424, Parameter Error

Description

Task: *arg*.

Unknown cfg attribute in argument *arg*.

Program ref: *arg*.

Recommended actions

Check and change the RAPID program.

Recovery: *arg*.

41425, Parameter Error

Description

Task: *arg*.

The path '*arg*' in argument *arg* is incorrect.

Program ref: *arg*.

Recommended actions

Check and change the path.

Recovery: *arg*.

41426, I/O Error

Description

Unable to access the I/O signal. Signal and I/O device unknown.

Consequences

Impossible to restart.

Probable causes

The connection with the I/O module is broken.

Recommended actions

Re-establish the connection with the I/O device. To make it possible to restart the program move PP to a safe restart position.

41427, Argument Error

Description

Task *arg*: The delaytime has to be positive.

Program ref: *arg*.

Recommended actions

Change the value of delaytime.

41428, Axis Error

Description

Task: *arg*.

The single axis is not init correctly. The sensor is not activated.

Program ref: *arg*.

Continues on next page

41429, Axis Error**Description**Task: *arg*.

The single axis is not init correctly. The sensor process is not init correctly.

Program ref: *arg*.

Cannot reset all test signals.

Program ref: *arg*.**Recommended actions**

Restart the controller and retry.

41431, System Access Error**Description**Task: *arg*.

Unknown LOGSRV instance.

Program ref: *arg*.**Recommended actions**

Restart the controller and retry.

41438, Undefined Load**Description**Task: *arg*.WARNING! Argument *arg* has undefined load (mass=0).Program ref: *arg*.**Consequences**

IMPORTANT TO DEFINE CORRECT LOAD to avoid mechanical damages of the robot.

Recommended actions

Define the actual load for the tool or the grip load before program movement or jogging. A good motion performance requires a correctly defined load.

41432, System Access Error**Description**Task: *arg*.

Cannot set test signals.

Program ref: *arg*.**Recommended actions**

Restart the controller and retry.

41439, Undefined Load**Description**Task: *arg*.WARNING! Argument *arg* has undefined load center of gravity.Program ref: *arg*.**Consequences**

IMPORTANT TO DEFINE CORRECT LOAD to avoid mechanical damage of the robot.

Recommended actions

Define the actual center of gravity for the tool load or the grip load before program movement or jogging (cog.x, cog.y and cog.z cannot be 0 mm at the same time). Load identification can be done with the service routine LoadIdentify.

41433, Parameter Error**Description**Task: *arg*.

Unknown mechanical unit.

Program ref: *arg*.**Recommended actions**

Check if the mechanical unit exists in the system.

Recovery: *arg*.

41440, Argument Is Missing**Description**Task: *arg*.One of the switch parameter *arg* or *arg* has to be defined.Program ref: *arg*.**Consequences**

The called RAPID routine could not be executed.

Recommended actions

An argument of the data type switch must be specified.

41435, Parameter Error**Description**Task: *arg*.

Argument Channel is out of range.

Program ref: *arg*.**Recommended actions**

Check and change the value of argument Channel.

41437, System Access Error**Description**Task: *arg*.

Continues on next page

Continued

41441, UnLoad Error

Description

Task: *arg*.

Module loaded with path *arg* is active and therefore cannot be erased.

Program ref: *arg*.

Probable causes

Instruction UnLoad or WaitLoad is executed in the same module as the module that should be removed. Instruction UnLoad or WaitLoad is in a trap that is executed earlier than expected. If there is a CONNECT to a trap routine in the module, an IDelete on the trap has to be done before the module can be unloaded.

Recommended actions

Check that the module does not contain routines or data that are still active, for example CONNECT.

Recovery: *arg*.

41442, Reference Error

Description

Task: *arg*.

The reference in argument *arg* is not an entire persistent variable.

Program ref: *arg*.

Recommended actions

It is not possible to use record component or array element in *arg*. *arg*. It is only possible to use entire persistent variables for Tool, WObj or Load in any motion instruction.

41443, Argument Error

Description

Task: *arg*.

Argument Tool has negative load of the tool.

Program ref: *arg*.

Recommended actions

Define the correct load of the tool before use of the tool for jogging or program movement. Load identification of the tool can be done with the service routine LoadIdentify.

41444, Argument Error

Description

Task: *arg*.

Argument Tool has at least one inertia data component with negative value.

Program ref: *arg*.

Recommended actions

Define all inertia data components (ix, iy or iz) to actual positive values.

41445, Argument Error

Description

Task: *arg*.

No \WObj specified for movement with stationary TCP.

Program ref: *arg*.

Recommended actions

Add argument \WObj for actual work object. If not movement with stationary TCP, change the component "robhold" in argument Tool to TRUE (robot holds the tool).

41446, Argument Error

Description

Task: *arg*.

It is undefined if the robot holds the tool or the work object.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

Mismatch of component robhold in the tool and the work object.

Recommended actions

Check if mismatch between argument Tool and argument \WObj for data component robhold.

41447, Argument Error

Description

Task: *arg*.

Argument *arg* has at least one data component with negative value.

Program ref: *arg*.

Recommended actions

Set all data components in argument *arg* to positive values.

41448, Argument Error

Description

Task: *arg*.

Argument *arg* may not have a negative value.

Program ref: *arg*.

Recommended actions

Set argument *arg* to a positive value.

Continues on next page

41449, Value Error**Description**Task: *arg*.Illegal value *arg* in argument *arg*.Program ref: *arg*.**Recommended actions**

Check the RAPID program.

41450, Argument Error**Description**Task: *arg*.

Argument \WObj specifies a mechanical unit name, which is not activated or is unknown in the system.

Program ref: *arg*.**Recommended actions**

The mechanical unit name defined in \WObj must correspond to the name earlier defined in the system parameters and must be activated.

41451, Argument Error**Description**Task: *arg*.Argument *arg* contains an illegal interrupt number.Program ref: *arg*.**Probable causes**

Input interrupt number is illegal because it has not been allocated by the instruction CONNECT.

Recommended actions

Use the instruction CONNECT to allocate and connect an interrupt number to a trap routine.

41452, Argument Error**Description**Task: *arg*.Argument *arg* contains an interrupt number, which is already in use for other purposes.Program ref: *arg*.**Recommended actions**

Before reuse of an interrupt variable in the program, it must have been cancelled with the instruction IDelete.

41453, Type Error**Description**Task: *arg*.Illegal data type of argument *arg*.Program ref: *arg*.**Recommended actions**

Check the RAPID program.

41454, Reference Error**Description**Task: *arg*.Trigg parameter number *arg*, reference to undefined trigg data.Program ref: *arg*.**Recommended actions**

Define trigg data by executing instruction TriggIO, TriggInt, TriggEquip, TriggSpeed or TriggCheckIO before current instruction.

41455, System Access Error**Description**Task: *arg*.

Operative system get time failed.

Program ref: *arg*.**Recommended actions**

Restart the controller and retry.

41456, Argument Error**Description**Task: *arg*.Argument *arg* not within range.Program ref: *arg*.**Recommended actions**The argument must be in range *arg*.

41457, Argument Error**Description**Task: *arg*.

Missing optional argument.

Program ref: *arg*.**Recommended actions**Add one of the optional arguments *arg* or *arg*.

41458, Argument Error**Description**Task: *arg*.Argument *arg* or *arg* not within range.Program ref: *arg*.

Continues on next page

Continued

Recommended actions

Check and change the value of the argument.

41459, Argument Error

Description

Task: *arg*.

Argument *arg* not within range.

Program ref: *arg*.

Recommended actions

Check and change the value of the argument.

41460, Argument Error

Description

Task: *arg*.

Argument *arg* or *arg* or *arg* not within range.

Program ref: *arg*.

Recommended actions

Check and change the argument.

41461, Value Error

Description

Task: *arg*.

Illegal value of argument *arg*.

Program ref: *arg*.

Recommended actions

The index must be an integer and in range 1 to 1024.

41462, Value Error

Description

Task: *arg*.

Illegal value of argument for parameter *arg*.

Program ref: *arg*.

Recommended actions

The value must be an integer and in the correct range.

41463, Argument Switch Is Missing

Description

Task: *arg*.

There is an argument missing.

Program ref: *arg*.

Recommended actions

One of the switch parameters \Hex1, \Long4, \Float4, \UTF8Encoding or \ISOLatin1Encoding has to be defined.

Continues on next page

41464, Index Too High

Description

Task: *arg*.

Illegal value in argument *arg*.

Program ref: *arg*.

Recommended actions

Check the RAPID program.

41465, The String Is Empty

Description

Task: *arg*.

Illegal value in argument *arg*.

Program ref: *arg*.

Recommended actions

Check the argument, and use a non-empty string.

41466, The Variables Are Equal

Description

Task: *arg*.

The argument FromRawData and ToRawData are equal.

Program ref: *arg*.

Recommended actions

Check and change the RAPID program.

41467, Value Error

Description

Task: *arg*.

Illegal value in argument *arg*.

Program ref: *arg*.

Recommended actions

Check and change the value. It must be an integer and in range 0 to 255.

41468, Value Error

Description

Task: *arg*.

Illegal value in argument *arg*.

Program ref: *arg*.

Recommended actions

Check and change the value. NoOfBytes must be an integer and in range 1 to 1024, and not higher than RawData length.

41469, Value Error**Description**Task: *arg*.Illegal value in argument *arg*.Program ref: *arg*.**Recommended actions**

Check the value. NoOfBytes must not be higher than RawData length.

41470, Argument Error**Description**Task: *arg*.Argument *arg* or *arg* not within range.Program ref: *arg*.**Recommended actions**

Check and change the value of the argument.

41471, Instruction Error**Description**Task: *arg*.You are not allowed to deactivate I/O device *arg*.Program ref: *arg*.**Recommended actions**Recovery: *arg*.

41472, Instruction Error**Description**Task: *arg*.

There is no client e.g. a FlexPendant taking care of instruction.

Program ref: *arg*.**Recommended actions**Recovery: *arg*.

41474, Value Error**Description**Task: *arg*.Illegal value in argument *arg*.Program ref: *arg*.**Recommended actions**Check the value: *arg arg* must be a positive integer.

41475, Wrong size of task list**Description**Task: *arg*.The task list has wrong number of elements. It must not have less than 1 or more than *arg*.Program ref: *arg*.**Recommended actions**

Check and change the number of arguments in the task list.

41476, Non-consistent task list**Description**Task: *arg*.*arg* in the task list is not one of the tasks that are configured in the system (max *arg* tasks can be configured).Program ref: *arg*.**Recommended actions**

Add the task to the system (in Controller configuration) or remove it from the task list.

41477, TimeOut**Description**Task: *arg*.The time set in argument *arg* in instruction WaitSyncTask has expired.Program ref: *arg*.**Recommended actions**Recovery: *arg*.

41480, UnpackRawBytes Error**Description**Task: *arg*.The number of bytes to unpack is too high, and has been reduced. Length: *arg*.Program ref: *arg*.**Consequences**

The string has been filled with data, but only the valid amount.

Probable causesThe value used in *arg* optional argument is too high.**Recommended actions**Check the RAPID program. Use function *arg* to get the current length of valid bytes in the rawbytes variable.*Continues on next page*

41483, Argument Error

Description

Task: *arg*.

The value of the ID is negative or is not an integer.

Program ref: *arg*.

Recommended actions

Check the value of the optional argument ID. The value must be a nonnegative integer.

41484, TimeOut

Description

Task: *arg*.

The time set in argument *arg* in instruction SyncMoveOn has expired.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

41486, Instruction Error

Description

Task: *arg*.

The instruction *arg* is only available if there is a TCP-robot defined in the program task.

Program ref: *arg*.

Recommended actions

- Check the configuration.
- The instruction must be removed, if the task is not supposed to have a TCP-robot.

41487, Instruction Error

Description

Task: *arg*.

The instruction *arg* only works if the TCP-robot is active.

Program ref: *arg*.

Recommended actions

Activate the TCP-robot in the task.

41488, Value Error

Description

Task: *arg*.

There is no TCP-robot defined in the program task. One or several robot axis value input is not equal to 9E9.

Program ref: *arg*.

Recommended actions

Change the robot axis value to 9E9.

41490, TimeOut

Description

Task: *arg*.

The time set in argument *arg* in instruction SyncMoveOff has expired.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

41491, Instruction Error

Description

Task: *arg*.

The instruction *arg* is not available if there is a TCP-robot defined in the program task.

Program ref: *arg*.

Recommended actions

- Check the configuration.
- The instruction must be removed, if the task is supposed to have a TCP-robot.

41492, Instruction Error

Description

Task: *arg*.

The instruction *arg* only works if the mechanical unit is active.

Program ref: *arg*.

Recommended actions

Activate the mechanical unit in the task.

41493, Execution Error

Description

Task: *arg*.

There is no TCP-robot available in the task.

Program ref: *arg*.

Recommended actions

To be able to run the instruction a TCP-robot must be available in the task.

41494, Instruction error

Description

Task: *arg*.

The task does not control mechanical unit: *arg*.

Continues on next page

Program ref: *arg*.

Recommended actions

Check the configuration.

41495, Move PP Error

Description

Task: *arg*.

Not ready with the switch from independent to synchronized mode.

Program ref: *arg*.

Consequences

Restart of current instruction is blocked. The system can either be in synchronized motion mode or still in independent motion mode.

Probable causes

Stop of program when having an active instruction. Then a PP movement within program has been done.

Recommended actions

Move PP to start the program again. PP must be moved in all program tasks. To have a well-defined state of the system you should move PP to main.

41496, Move PP Error

Description

Task: *arg*.

Not ready with the switch from synchronized to independent mode.

Program ref: *arg*.

Consequences

Restart of current instruction is blocked. The system can either be in synchronized motion mode or still in independent motion mode.

Probable causes

Stop of program when having an active instruction. Then a PP movement within program has been done.

Recommended actions

Move PP to start the program again. PP must be moved in all program tasks. To have a well-defined state of the system you should move PP to main.

41497, Move PP Notification

Description

Task: *arg*.

Instruction *arg* was active in this task. Moving PP within the program can be dangerous in some cases.

Program ref: *arg*.

Consequences

Moving PP in the RAPID program can result in unsynchronized RAPID tasks or/and collision between robots.

Probable causes

PP movement within RAPID program when having active *arg* instruction.

Recommended actions

Move PP to suitable position in this program task.

41498, No Defined UserFrame In Mechanical Unit *arg*!

Description

The workobject *arg* contains a coordinated mechanical unit which has no defined user frame.

Recommended actions

Check the mechanical unit component of the workobject.

41499, Synchronized Mode

Description

Task: *arg*.

System is in synchronized mode. Instruction must have an ID.

Program ref: *arg*.

Recommended actions

Add switch \ID with an identification number to the instruction.

41500, Independent Mode

Description

Task: *arg*.

System is in independent mode. Instruction must not have an ID.

Program ref: *arg*.

Recommended actions

Remove switch \ID from the instruction.

41501, Illegal Id

Description

Task: *arg*.

ErrorId has wrong value. It must be an integer in interval *arg* - *arg*.

Program ref: *arg*.

Continues on next page

Continued

Recommended actions

Change the value.

41502, Illegal Domain

Description

Task: *arg*.

Domain *arg* cannot be used.

Program ref: *arg*.

Recommended actions

Choose another Elog Domain.

41503, Illegal Error Type

Description

Task: *arg*.

Error type TYPE_ALL cannot be used.

Program ref: *arg*.

Recommended actions

Use another Error Type.

41504, No Mechanical Unit Stated

Description

Task: *arg*.

No TCP in the system and no mechanical unit added to the instruction.

Program ref: *arg*.

Recommended actions

Add a mechanical unit that exists in the task, to the instruction.

41505, Mechanical Unit Not In Task

Description

Task: *arg*.

The mechanical unit stated does not exist in the task.

Program ref: *arg*.

Recommended actions

Add another mechanical unit to the instruction.

41506, Task Does Not Read a TCP Robot

Description

Task: *arg*.

The read task does not read a tcp robot.

Program ref: *arg*.

Recommended actions

Change the configuration or add a mechanical unit, that exists in the task, to the instruction.

Continues on next page

41508, LoadId Error

Description

Task: *arg*.

Load Identification is not available for this robot type.

Program ref: *arg*.

Recommended actions

Check next Event Log message, for the next user action to do.

41509, LoadId Error

Description

Task: *arg*.

Not valid load identification position.

Program ref: *arg*.

Recommended actions

Change the position for the robot. Check next Event Log message, for the next user action to do.

41510, LoadId Error

Description

Task: *arg*.

Not allowed to identify (or use) tool0.

Program ref: *arg*.

Recommended actions

Set the tool that should be identified, active in the jogging window. Check next Event Log message, for the next user action to do.

41511, LoadId Error

Description

Task: *arg*.

Not allowed to identify load0.

Program ref: *arg*.

Recommended actions

Use another load for identification. Check next Event Log message, for the next user action to do.

41512, Internal Error

Description

Task: *arg*.

Measurement axes > 2 at the same time.

Program ref: *arg*.

Recommended actions

Check next Event Log message, for the next user action to do.

41513, LoadId Error**Description**Task: *arg*.

Selection of PayLoad out of limits.

Program ref: *arg*.**Recommended actions**

Select a PayLoad in the system. Press Start to continue.

41514, LoadId Error**Description**Task: *arg*.

wobj0 cannot be active for roomfix TCP.

Program ref: *arg*.**Recommended actions**

Select another Work Object. Check next Event Log message, for the next user action to do.

41515, LoadId Error**Description**Task: *arg*.

Selection of method out of limits.

Program ref: *arg*.**Recommended actions**

Select one of the identification methods given. Press Start to continue.

41516, LoadId Error**Description**Task: *arg*.

The configuration angle is not adequate.

Program ref: *arg*.**Consequences**

It is not possible to run the identification.

Probable causes

The selected value of the configuration angle is less than 30, or has another value that is not possible to use for identification.

Recommended actions

Select a configuration angle between +/- 30 and +/- 90 degrees. Press Start to continue.

41517, LoadId Error**Description**Task: *arg*.

PP has been moved to the beginning of the Load Identification routine and is now ready for a new restart.

Program ref: *arg*.**Probable causes**

Service routine was stopped during measurement, interrupted with cancel by the user or interrupted because some type of other error. Check former Event Log message for reason.

Recommended actions

- 1 Start service routine again
- 2 Use Debug - Cancel Call Routine to quit execution of service routine. NOTE: Cancel Call Routine will result in a lost Program Pointer. Use Debug - PP to Main to get a new Program Pointer.

41518, LoadId Error**Description**Task: *arg*.

Selection of MechUnit out of limits.

Program ref: *arg*.**Recommended actions**

Select one of the Mechanical Units displayed. Press Start to continue.

41519, LoadId Error**Description**Task: *arg*.

Mass must be > 0 kg.

Program ref: *arg*.**Recommended actions**

Specify the mass to something greater than 0. Press Start to continue.

41520, Error Recovery Constant Not Booked**Description**Task: *arg*.Error recovery constant *arg* is not booked.Program ref: *arg*.**Recommended actions**

Use instruction BookErrNo to book the constant or use an error recovery constant booked by the system (cannot be used with ErrRaise).

Continues on next page

41521, Task Status Error

Description

Task: *arg*.

None of the tasks in the task list is a NORMAL, activated task.

Program ref: *arg*.

Recommended actions

Check in the Task Selection Panel that at least one of the tasks in the task list are selected = activated. Check in the .cfg-file that at least one of the tasks selected is NORMAL.

41522, Wrong Error Recovery Constant Used

Description

Task: *arg*.

Error recovery constant *arg* has been booked by the system.

The constant cannot be used with instruction ErrRaise.

Program ref: *arg*.

Recommended actions

Book a new error recovery constant with instruction BookErrNo.

41523, Argument Error

Description

Task: *arg*.

Argument *arg* is not an integer or is negative.

Program ref: *arg*.

Recommended actions

Change the value of the argument to a non-negative integer.

41524, Instruction Error

Description

Task: *arg*.

The program is executing in an UNDO handler. It is not allowed to execute the instruction *arg* in an UNDO handler.

Program ref: *arg*.

Recommended actions

Remove the instruction.

41525, Instruction Error

Description

Task: *arg*.

The program is executing in an EVENT routine. It is not allowed to execute the instruction *arg* in an EVENT routine.

Program ref: *arg*.

Recommended actions

Remove the instruction.

Continues on next page

41526, Instruction Error

Description

Task: *arg*.

Instruction *arg* may only be used in an ERROR handler.

Program ref: *arg*.

Recommended actions

Remove the instruction or move it to an ERROR handler.

41527, Argument Switch Is Missing

Description

Task: *arg*.

There is an argument missing.

Program ref: *arg*.

Recommended actions

One of the switch parameters \Continue or \BreakOff in *arg* has to be defined.

41528, Instruction Error

Description

Task: *arg*.

Instruction *arg* may only be used in a no-stepin routine.

Recommended actions

Remove the instruction or move it to a no-stepin routine.

41529, Instruction Error

Description

Task: *arg*.

The switch \Inpos is only allowed when the task is in control of a mechanical unit.

Program ref: *arg*.

Recommended actions

Remove the switch \Inpos from the instruction.

41530, Instruction error

Description

Task: *arg*.

It is not possible to execute the instruction *arg*, while the coordinated workobject has a reference to the mechanical unit *arg*, located in another task.

Program ref: *arg*.

Recommended actions

Change to a workobject with reference to a mechanical unit located in the same task as the TCP robot. Function CalcJointT

can be used even when the coordinated workobject is located in another task if:

- Switch \UseCurWObjPos is used.
- The coordinated workobject is standing still.

41531, Task Not In TaskList

Description

Task: *arg*.

arg is not one of the tasks in the TaskList, or there is a mismatch between the task lists in the different tasks.

Program ref: *arg*.

Recommended actions

- Add current task to the TaskList.
- Check that the task lists in the different tasks are similar.
When using PERS variables, it might be necessary to unload the modules containing the task lists, and then reload them again.

41532, Mismatch of task list

Description

Task: *arg*.

Failed to synchronize because of:

- 1 The task list, , does not match with the task lists with the same SyncID in the other tasks, or a task name is used multiple times in the task list.
- 2 Not the same active tasks in task selection panel in the first executed instruction as in the following instructions.

Program ref: *arg*.

Consequences

The program execution is immediately halted.

Probable causes

The reason for this error is one of the following:

- 1 Task lists do not have the same content for the same SyncID or a task name is used multiple times.
- 2 One or several tasks has been enabled/disabled in the task selection panel after first instruction was executed.

Recommended actions

- 1 Check and modify task lists and SyncIDs, or the same error will occur again.
- 2 Start again. The instructions will be executed with the current status of the task selection panel.

41533, Mismatch Of SyncID

Description

Task: *arg*.

SyncID *arg* does not match with SyncID in the other task/tasks.
Program ref: *arg*.

Probable causes

Use of task lists that are non-global can cause this error.

Recommended actions

Change SyncID and check the task lists. PP must be moved to main in all tasks before you can continue.

41534, Inconsistent Synch Data

Description

Task: *arg*.

Inconsistent synchdata in TaskList *arg*.

Program ref: *arg*.

Recommended actions

Change content of the TaskList. PP must be moved to main in all tasks before you can continue.

41535, Unexpected SyncMoveOn

Description

Task: *arg*.

Unexpected SyncMoveOn (SyncID *arg*). The system is already in synchronized mode.

Program ref: *arg*.

Probable causes

The program task is already in synchronized mode because SyncMoveOn has already been executed. Use of task lists that are non-global can cause this error.

Recommended actions

PP must be moved to main in all task before you can continue the program execution. Remove the SyncMoveOn instruction. Every SyncMoveOn must be followed by a SyncMoveOff instruction. Check your task lists.

41536, Unexpected SyncMoveOn

Description

Task: *arg*.

Unexpected SyncMoveOn (SyncID *arg*). The system is waiting for a SyncMoveOff.

Program ref: *arg*.

Recommended actions

Remove the SyncMoveOn instruction. Every SyncMoveOn must be followed by a SyncMoveOff instruction.

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41537, Unexpected SyncMoveOff

Description

Task: *arg*.

Unexpected SyncMoveOff (SyncID *arg*). The system is waiting for a SyncMoveOn.

Program ref: *arg*.

Recommended actions

Remove the SyncMoveOff instruction. Every SyncMoveOn must be followed by a SyncMoveOff instruction.

41538, Wrong TaskList

Description

Task: *arg*.

The task, *arg*, in the TaskList is a read task and cannot be synchronized.

Program ref: *arg*.

Recommended actions

Change the TaskList or the configuration.

41539, Speed Too High

Description

Task: *arg*.

Speed is over *arg* mm/s. This is too fast when Stiff Stop (switch \Stop) is used.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Change the speed, or change type of stop.

41540, Wrong Mechanical Unit

Description

Task: *arg*.

The task reads the control task, *arg*, which does not control the mechanical unit *arg*.

Program ref: *arg*.

Recommended actions

Change \MechUnit or the configuration.

41541, Not Allowed From a Read Task

Description

Task: *arg*.

The instruction is not allowed to execute in a read task.

Program ref: *arg*.

Continues on next page

Recommended actions

Remove the instruction.

41542, Program Stop

Description

Task: *arg*.

Not possible to regain to path because of program stop in the system.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

41543, Argument Error

Description

Task: *arg* .

A loaddata (*arg*) has been defined, but is no longer available in the system.

Program ref: *arg* .

Probable causes

The reason for this error is one of the following:

- 1 The instruction GripLoad might have been run in a module that is no longer available in the system.
- 2 A movement instruction with an optional argument Tload might have been run in a module that is no longer available in the system.

Recommended actions

Be sure to run GripLoad load0, to reset loaddata. If using Tload optional argument in movement instructions, run SetSysData load0 to reset loaddata.

41544, Obsolete Instruction

Description

Task: *arg*.

The procedure *arg* is obsolete. It will work for now, but might be removed in a later release. Use *arg* instead and you will have the same functionality.

Program ref: *arg*.

41545, Argument Error

Description

Task: *arg*.

The argument *arg* may not be of type LOCAL PERS.

Program ref: *arg*.

Recommended actions

Remove the directive LOCAL from the data declaration.

41546, Argument Error**Description**

Task: *arg*.

The object *arg* does not exist in the system or is of type LOCAL PERS.

Program ref: *arg*.

Recommended actions

- Declare the object.
- Remove the directive LOCAL from the data declaration.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

The reason for this error is one of the following:

- 1 The PathRecorder has not been started.
- 2 The program pointer has been moved manually.
- 3 The limit of recorded move instructions has been exceeded.
- 4 Program execution has been limited by a WaitSyncTask or SyncMoveOff.

Recommended actions

Check RAPID program.

41547, Argument Error**Description**

Task: *arg* The \Corr switch cannot be used without the option Path Offset.

Program ref: *arg*.

Recommended actions

Remove the argument or install the option.

41552, PathRecorder Path Level Error**Description**

Task: *arg*.

Cannot execute *arg* on current path level.

Program ref: *arg*.

Recommended actions

- Switch to trap-level.
- Execute StorePath to switch path level.

41549, Unexpected SyncMoveOn or SyncMoveOff**Description**

Task: *arg*.

Wrong path level. It is not possible to use SyncMoveOn or SyncMoveOff on StorePath level. Used *arg*: *arg*.

Program ref: *arg*.

Recommended actions

Check the RAPID program.

41553, Destroyed Data**Description**

System data *arg* in one of the tasks has been changed. It is NOT allowed to change this data.

Recommended actions

The system has restored the data when it was started, but the program has to be checked. Remove where *arg* has been assigned a value.

41550, PathRecorder Start/Stop Error**Description**

Task: *arg*.

Unable to execute *arg*.

Program ref: *arg*.

Recommended actions

Ensure that a backward motion has not been initiated with PathRecMoveBwd without being terminated with PathRecMoveFwd.

41554, Synchronized Mode**Description**

Task: *arg*.

It is not possible to use the optional parameter \Conc when the system is in synchronized mode.

Program ref: *arg*.

Recommended actions

Remove the optional parameter \Conc from any move instruction used in synchronized mode.

41551, PathRecorder Move Error**Description**

Task: *arg*.

Unable to execute *arg*. The given identifier cannot be reached.

41555, No Contact With I/O Device**Description**

Task: *arg*.

Continues on next page

Continued

There is no contact with the I/O device *arg*.

Program ref: *arg*.

Probable causes

The I/O device may have been deactivated. No power to the I/O device.

Recommended actions

Recovery: *arg*.

41556, No Contact With I/O Device

Description

Task: *arg*.

There is no contact with I/O device.

Program ref: *arg*.

Probable causes

The I/O device may have been deactivated. No power to the I/O device.

Recommended actions

Recovery: *arg*.

41557, Mechanical Unit not stopped

Description

Task: *arg*.

Not allowed to change run mode, if not all Motion tasks are stopped.

Program ref: *arg*.

Recommended actions

Do program stop and try again.

41558, Argument Switch Missing

Description

Task: *arg*.

An argument is missing to instruction *arg*.

Program ref: *arg*.

Recommended actions

Add switch SyncOrgMoveInst or SyncLastMoveInst to the instruction.

41559, Not PERS variable

Description

Task: *arg*.

The task list, *arg*, is either LOCAL or TASK persistent. It is not allowed. It has to be global.

Program ref: *arg*.

Recommended actions

Change the task list to PERS.

41560, No Start of Movement

Description

Task: *arg*.

It was not possible to start the movement.

Program ref: *arg*.

Probable causes

- 1 There has been an emergency stop.
- 2 There was another error in the system.

Recommended actions

- 1 Reset the emergency stop, if there has been one.
- 2 Check former error messages for reason.

Recovery: *arg*.

41561, No Text in Function Key

Description

Task: *arg*.

The instruction TPReadFK has no text in either of the function keys.

Program ref: *arg*.

Consequences

When the instruction is executing there will be no button available to press.

Recommended actions

Put a text in at least one of the function keys TPFK1 .. TPFK5.

41562, Risk for faulty circular movement

Description

Task: *arg*.

Risk for faulty circular movement because of:

- 1 An asynchronous process error has occurred and was not handled in any error handler.
- 2 Program Pointer at circular instruction in combination with done MODPOS of any previous move instruction.

Program ref: *arg*.

Consequences

The Program may not be started from the current position, because there is a risk that the robot might perform an unexpected movement.

Probable causes

One of following:

Continues on next page

- 1 The RAPID program is missing an error handler or the error handler does not handle this specific error.
- 2 MODPOS operation done when not running in step or move step mode.

Recommended actions

One of following:

- 1 Edit the program.
- 2 Move the program pointer to be able to start the program.

41563, Argument Error**Description**

Task: *arg*.

The mechanical unit *arg* specified in the WObj for this MOVE instruction is the same mechanical unit *arg* as the robot for this program task.

Program ref: *arg*.

Consequences

It is not possible that the robot moves the work object itself.

Recommended actions

Edit the used wobjdata.

41564, Not allowed to run from a Motion Task**Description**

Task: *arg*.

The instructions StopMove, StartMove and StopMoveReset with the option parameter \AllMotionTasks are not allowed to run from a Motion task.

Program ref: *arg*.

Probable causes

It is only allowed to do stop and restart of all movements in the system from a supervision program task running as a read (or background) program task.

Recommended actions

Remove the instruction.

41565, Not allowed value**Description**

Task: *arg*.

Illegal value in argument *arg*.

Program ref: *arg*.

Recommended actions

Check and change the value. It must be an integer between *arg* and *arg*.

41566, Signal exceeds max number of allowed bits**Description**

Task: *arg*.

The signal *arg* is too big.

Program ref: *arg*.

Recommended actions

Group signals consisting of 23 bits or less can be represented by the num data type, and group signals of 32 bits or less can be represented by the dnum data type, if they are used in a RAPID program.

41567, Digital Output Break**Description**

Task: *arg*.

A digital output interrupted the execution.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

41568, Specified name is not a network**Description**

Task: *arg*.

The network name *arg* doesn't exist.

Program ref: *arg*.

Probable causes

The I/O device name is misspelled or not defined.

Recommended actions

Recovery: *arg*.

41569, Socket error**Description**

Task: *arg*.

The socket is already connected and cannot be used to listen for incoming connections.

Program ref: *arg*.

Recommended actions

Use another socket to listen for incoming connections.

Recovery: *arg*

41570, Socket error**Description**

Task: *arg*.

Continues on next page

Continued

The socket cannot accept incoming connection requests since it is not set to listen state.

Program ref: *arg*.

Probable causes

SocketAccept is used before SocketListen.

Recommended actions

Set socket to listen for incoming connections before trying to accept.

41571, Socket error

Description

Task: *arg*.

The address and port is already in use and cannot be used by this socket.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

41572, Socket error

Description

Task: *arg*.

Unexpected error creating socket. Check log for further messages of possible cause.

Program ref: *arg*.

Recommended actions

Move program pointer to main and restart program.

Recovery: *arg*

41573, Socket error

Description

Task: *arg*.

No more sockets can be created. The maximum number of concurrent sockets is 32.

Program ref: *arg*.

Recommended actions

Close one or more sockets, to allow a new socket to be created.

41574, Socket error

Description

Task: *arg*.

The socket must be created before it can be used in any socket instruction.

Program ref: *arg*.

Probable causes

The reason for this error is one of the following:

- 1 Socket not created at all.
- 2 PP movements has been done.
- 3 Start of program after power fail.
- 4 The socket has been closed after SocketCreate.

Recommended actions

Insert a SocketCreate instruction at a suitable place in the program before the socket is used.

Recovery: *arg*.

41575, Socket error

Description

Task: *arg*.

The specified address is invalid. The only valid addresses are any public WAN addresses or the service port address, 192.168.125.1.

Program ref: *arg*.

Recommended actions

Specify a WAN address or the service port address.

Recovery: *arg*

41576, Socket error

Description

Task: *arg*.

The specified port *arg* is invalid for address *arg*.

Program ref *arg*.

Recommended actions

It is recommended that a port number in the range 1025-4999 is used, and for address 127.0.0.1 and other local networks it is a demand to use that range.

41577, Socket error

Description

Task: *arg*.

The timeout specified in the instruction is too low. The timeout is specified in seconds and must not be zero.

Program ref: *arg*.

Recommended actions

Use a timeout value greater than zero.

41578, Socket error

Description

Task: *arg*.

Continues on next page

Unexpected error when connecting socket. Check event log for other messages for possible cause.

Program ref: *arg*.

Recommended actions

Move program pointer to Main and restart program.

Recovery: *arg*

41579, Socket error

Description

Task: *arg*.

The connection was refused by the remote host.

Program ref: *arg*.

41580, Socket error

Description

Task: *arg*.

The socket is already connected and cannot be connected again.

Program ref: *arg*.

Probable causes

SocketConnect has already been executed for the specified socket.

Recommended actions

Close the socket and recreate before connecting.

Recovery: *arg*

41581, Socket error

Description

Task: *arg*.

The instruction was not finished within the timeout period.

Program ref: *arg*.

Recommended actions

Use a higher timeout value or use an error handler to retry the instruction.

Recovery: *arg*.

41582, Socket error

Description

Task: *arg*.

Empty data was specified to be sent or as storage in receive.

Program ref: *arg*.

Recommended actions

Use a string, rawbyte or byte array with size greater than zero.

41583, Socket error

Description

Task: *arg*.

The specified data is too big.

Program ref: *arg*.

Recommended actions

A socket can handle at most 1024 bytes in one instruction.

41584, Socket error

Description

Task: *arg*.

The specified string or data to be sent is empty.

Program ref: *arg*.

Recommended actions

Check that the data is correct.

41585, Socket error

Description

Task: *arg*.

The number of bytes to send has to be a value bigger than zero.

Program ref: *arg*.

Recommended actions

Change the value for the optional parameter NoOfBytes to a value bigger than zero.

41586, Socket error

Description

Task: *arg*.

The specified number of bytes to be sent is longer than the length of the actual data.

Program ref: *arg*.

Recommended actions

Change the value for the optional parameter NoOfBytes to be less than or equal to the actual data. If all data should be sent remove the optional parameter.

41587, Socket error

Description

Task: *arg*.

An unexpected error occurred when sending data. Check the event log for other messages for the possible cause.

Program ref: *arg*.

Recommended actions

Move the program pointer to Main and restart the program.

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Continued

Recovery: *arg*

41588, Socket error

Description

Task: *arg*.

Network is unreachable.

A socket operation was attempted to an unreachable network. This usually means the local software knows no route to reach the remote host.

Program ref: *arg*.

Consequences

The operation was aborted.

Recommended actions

Check your connection and network settings.

Recovery: *arg*

41589, Socket error

Description

Task: *arg*.

The firewall manager is not configured for RAPID sockets.

Program ref: *arg*.

Consequences

The operation was aborted.

Recommended actions

Check your settings in Communication/Firewall manager/RAPID sockets.

41590, Socket error

Description

Task: *arg*.

The byte array is invalid. A byte array can only contain integers between 0 and 255.

Program ref: *arg*.

Recommended actions

Change the byte array to contain valid data or use rawbytes to send complex data.

41591, Socket error

Description

Task: *arg*.

Unexpected error when trying to get socket state.

Program ref: *arg*.

Recommended actions

Move program pointer to Main and restart program.

Continues on next page

41592, Socket error

Description

Task: *arg*.

No data was received.

Program ref: *arg*.

Probable causes

The connection may have been closed by the remote host.

Recommended actions

Move program pointer to Main and restart program.

41593, Socket error

Description

Task: *arg*.

The data received is too long to be stored in a string. The maximum length of data that can be stored in a string is 80 bytes.

Program ref: *arg*.

Recommended actions

Use a byte array or rawbytes to receive data longer than 80 bytes.

41594, Socket error

Description

Task: *arg*.

The socket is not connected.

Program ref: *arg*.

Probable causes

For client, use SocketConnect before receiving/sending/peeking data. For server, use SocketAccept before receiving/sending/peeking data.

Recommended actions

Use SocketConnect or SocketAccept to connect socket before trying to receive/send/peek.

Recovery: *arg*

41595, Socket error

Description

Task: *arg*.

The connection has been closed by the remote host.

Program ref: *arg*.

Recommended actions

Use error handler to re-establish connection before retrying to send/receive/peek.

Recovery: *arg*.

41596, Socket error**Description**Task: *arg*.

Unexpected error binding socket.

Program ref: *arg*.**Recommended actions**

Move program pointer to Main and restart program.

Recovery: *arg*Program ref: *arg*.**Probable causes**

SocketAccept has already been executed for the specified socket.

Recommended actions

Close the client socket before using it in the call to

SocketAccept, or remove multiple SocketAccept with same client socket.

41597, Socket error**Description**Task: *arg*.

The socket has already been bound to an address and cannot be bound again.

Program ref: *arg*.**Recommended actions**

Close socket and recreate before trying to bind socket to a new address.

Recovery: *arg*

41601, Socket error**Description**Task: *arg*.

Unexpected error accepting connection.

Program ref: *arg*.**Recommended actions**

Move program pointer to Main and restart program.

Recovery: *arg*

41598, Socket error**Description**Task: *arg*.

Unexpected error trying to listen for connections.

Program ref: *arg*.**Recommended actions**

Move program pointer to Main and restart program.

Recovery: *arg*

41602, Socket error**Description**Task: *arg*.

Unexpected error receiving data.

Program ref: *arg*.**Recommended actions**

Move program pointer to Main and restart program.

41599, Socket error**Description**Task: *arg*.

The socket has not been bound to an address.

Program ref: *arg*.**Recommended actions**

Use SocketBind to specify which address to listen for incoming connections.

Recovery: *arg*

41603, Socket error**Description**Task: *arg*.

The socket has already been created. A socket can only be created once and must be closed before it can be created again.

Program ref: *arg*.**Recommended actions**

Use another socket or close socket before creating.

41600, Socket error**Description**Task: *arg*.

The specified client socket is already in use. The client socket must not be created before calling SocketAccept.

41604, Socket error**Description**Task: *arg*.

The socket is already listening for incoming connections. A socket can only be used once to listen for incoming connections.

Program ref: *arg*.**Probable causes**

Multiple use of SocketListen with same socket.

Continues on next page

Continued

Recommended actions

Use another socket or close socket before using it again.

41605, Socket error

Description

Task: *arg*.

The socket is not valid anymore.

Program ref: *arg*.

Consequences

The program execution is immediately halted.

Probable causes

The socket used is not valid.

- 1 The has probably been copied with instruction . Then the original has been closed with . If using the copied you will have this problem.
- 2 A module that has been installed shared has a declaration of a variable of the data type socketdev. The variable has been used when creating a new socket. When moving PP to main, the socketdev variable keeps its value, but is not valid anymore.

Recommended actions

Use socket instructions when handling data types of *arg*. Do not declare and use socketdev variables in a shared module.

41606, Socket error

Description

Task: *arg*.

The socket type is of the type datagram protocol UDP/IP.

Current instruction *arg* is only supported for stream type protocol TCP/IP.

Program ref: *arg*.

Consequences

The program execution is immediately halted.

Probable causes

The socket type used is not valid.

Recommended actions

Check how the socket was created.

41607, Socket error

Description

Task: *arg*.

The socket type is of the type stream type protocol TCP/IP.

Current instruction *arg* is only supported for datagram protocol UDP/IP.

Continues on next page

Program ref: *arg*.

Consequences

The program execution is immediately halted.

Probable causes

The socket type used is not valid.

Recommended actions

Check how the socket was created.

41608, Socket error

Description

Task: *arg*.

Use of socket instructions on different RAPID execution levels at the same time.

Program ref: *arg*.

Probable causes

Execution of a socket instruction on TRAP level at the same time as a waiting socket instruction is active on normal level.

Recommended actions

Use an error handler and try again after a while.

Recovery: *arg*

41609, Socket error - not valid UTF-8 character

Description

Task: *arg* .

The data received contains non valid UTF-8 characters. If the data was sent as ISO 8859-1 you need to receive it as ISO 8859-1.

Program ref: *arg* .

Consequences

Not possible to continue the program execution.

Probable causes

- 1 Receiving data that is ISO 8859-1 encoded but handle it as it would be UTF-8 encoded.
- 2 Multibyte character has been cut due to use of ReadNoOfBytes optional argument.

Recommended actions

- 1 Check the data that are received and the encoding of it. Use switch ISOLatin1Encoding on instruction .
- 2 Do not use ReadNoOfBytes for languages where all or some characters are multibyte characters.

41612, MinValue greater than MaxValue

Description

Task: *arg*.

In function *arg*, the argument \MinValue is greater than \MaxValue.

Program ref: *arg*.

Consequences

Not possible to continue the program execution.

Recommended actions

Change the RAPID program so argument \MaxValue is greater than \MinValue.

Recovery: *arg*.

41613, InitValue not within specified value range

Description

Task: *arg*.

In function *arg*, the argument \InitValue is not specified within the range \MaxValue ... \MinValue.

Program ref: *arg*.

Consequences

Not possible to continue the program execution.

Recommended actions

Change the argument \InitValue so it's inside the value range.

Recovery: *arg*.

41614, InitValue is not an integer

Description

Task: *arg*.

In function *arg*, the argument \InitValue is not an integer value as specified in argument \AsInteger.

Program ref: *arg*.

Consequences

The program execution cannot continue.

Recommended actions

Change the argument \InitValue to an integer.

Recovery: *arg*.

41615, Reference Error

Description

Task: *arg*.

The datapos *arg* is undefined.

Program ref: *arg*.

Recommended actions

All datapos is retrieved with the function GetNextSym.

41616, Reference Error

Description

Task: *arg*.

The taskid *arg* is unknown in the system.

Program ref: *arg*.

Recommended actions

Program tasks must be defined in the system parameter and not in the RAPID program. (Taskid can be used as a parameter when declaring a routine).

41617, Too intense frequency of Write Instructions

Description

A high usage frequency of user interface write instructions, such as TPWrite, has forced the program execution to slow down.

Recommended actions

Decrease the usage frequency of user interface write instructions. Add wait instructions, such as WaitTime, when many write instructions are used in conjunction.

41618, Argument error buttodata

Description

Task: *arg*.

The argument Buttons of type buttodata has not allowed value. Only allowed to use the predefined data of type buttodata.

Program ref: *arg*.

Probable causes

Buttodata must be:

- an integer,
- have a value within the predefined range.

Recommended actions

Edit the program.

41619, Argument error icondata

Description

Task: *arg*.

The argument Icon of type icondata has not allowed value. Only allowed to use the predefined data of type icondata.

Program ref: *arg*.

Probable causes

Icondata must be:

- an integer,
- have a value within the predefined range.

Continues on next page

Continued

Recommended actions

Edit the program.

41620, Socket Error

Description

Task: *arg*.

The Socket Messaging subsystem is overloaded.

Program ref: *arg*.

Probable causes

This can happen if sockets are created and closed frequently and very rapidly.

Recommended actions

Try to rewrite the program in such a way that sockets are reused instead of closed and then recreated.

41621, StorePath Error

Description

Task: *arg*.

Instruction *arg* is used with *arg* switch in one or several tasks together with *arg* without *arg* switch.

Program ref: *arg*.

Consequences

The program execution is immediately halted.

Probable causes

Error in the RAPID programs.

Recommended actions

Check that no mix of StorePath and StorePath \KeepSync is used. Change the program. PP must be moved in all tasks before you can continue.

41622, Unexpected instruction

Description

Task: *arg*.

The instruction *arg* can only be used in between instruction *arg* and instruction *arg* (on store path level).

Program ref: *arg*.

Consequences

The program execution is immediately halted.

Probable causes

Error in the RAPID program.

Recommended actions

Check and change the RAPID program. PP must be moved in all tasks before you can continue.

41623, Faulty use of *arg*

Description

Task: *arg*.

Instruction *arg* is used multiple times, or the instruction is used when already in synchronized motion mode. *arg* suspends synchronized coordinated movements. *arg* resumes synchronized coordinated movements.

Program ref: *arg*.

Consequences

The program execution is immediately halted.

Probable causes

Error in the RAPID program.

Recommended actions

Check and change the RAPID program. PP must be moved in all tasks before you can continue.

41625, Unexpected *arg*

Description

Task: *arg*.

Instruction *arg* is used directly after instruction *arg*, or the system is not in synchronized motion mode. A change to independent motion mode cannot be done.

Program ref: *arg*.

Consequences

The program execution is immediately halted.

Probable causes

Error in the RAPID program.

Recommended actions

Check and change the RAPID program. PP must be moved in all tasks before you can continue.

41626, Unexpected *arg \arg*

Description

Task: *arg*.

Instruction *arg \arg* is used in independent motion mode.

Program ref: *arg*.

Consequences

The program execution is immediately halted.

Probable causes

Error in the RAPID program.

Recommended actions

Check and change the RAPID program. PP must be moved in all tasks before you can continue.

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41627, Faulty use of *arg***Description**Task: *arg*.

arg is used on store path level and system was not in synchronized motion mode before *arg*.

Program ref: *arg*.**Consequences**

The program execution is immediately halted.

Probable causes

Error in the RAPID program.

Recommended actions

Check and change the RAPID program. PP must be moved in all tasks before you can continue.

41630, Unsafe Synchronization**Description**Task: *arg*.

To reach safe synchronization functionality, variable *arg* should be used only one time, not in several *arg* or *arg* instructions.

Program ref: *arg*.**Consequences**

Program tasks/movements may not always be synchronized.

Probable causes

Use of *arg* several times in the same program.

Recommended actions

Check and change the RAPID program.

41631, Instruction Error**Description**Task: *arg*.

The program is executing in an EVENT routine. It is not allowed to execute the current instruction in an EVENT routine with shelf *arg*.

Program ref: *arg*.**Recommended actions**

Remove the instruction.

41632, Argument does not exist**Description**Task: *arg*.

Only TP_LATEST is supported in TPShow instruction.

Program ref: *arg*.**Consequences**

Using other argument than TP_LATEST, nothing will happen.

Recommended actions

Remove the instruction.

41633, Can only be used in an UNDO handler**Description**Task: *arg*.

The instruction *arg* can only be used in an UNDO handler.

Program ref: *arg*.**Consequences**

Program execution will be stopped.

Recommended actions

Use another instruction and/or move this instruction to the UNDO handler.

41634, Unknown Task Name**Description**Task: *arg*.

The task name *arg* is unknown in the system.

Program ref: *arg*.**Consequences**

It is not possible to execute this instruction with a task name that is not found in the system.

Probable causes

- 1 The program task is not defined in the system parameters.
- 2 The task name is wrong spelled.

Recommended actions

Recovery: *arg*.

41635, Unexpected SyncMoveOff**Description**Task: *arg*.

Unexpected SyncMoveOff (SyncID *arg*). The system is already in unsynchronized mode.

Program ref: *arg*.**Probable causes**

Use of task lists that are non-global can cause this error.

Recommended actions

Remove the SyncMoveOff instruction. Every SyncMoveOn must be followed by one SyncMoveOff instruction. Check your task lists.

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41636, Unexpected SyncMoveOff

Description

Task: *arg*.

Unexpected SyncMoveOff (SyncId *arg*) from Task not included in synchronized group.

Program ref: *arg*.

Probable causes

Use of task lists that are non-global can cause this error.

Recommended actions

Remove the SyncMoveOff instruction. Every SyncMoveOn must be followed by one SyncMoveOff instruction. Check your task lists.

41637, Task not active in task selection panel anymore

Description

Task: *arg*.

The task *arg* is not active in the task selection panel anymore. The task *arg* was active in task selection panel at start from main. Because of that not possible to pass this *arg* instruction.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

The task *arg* has been deactivated in the task selection panel.

Recommended actions

- 1 Activate task in the task selection panel.
- 2 To permanent skip task for the rest of this cycle run the service routine SkipTaskExec. After that restart the instruction .

41638, Not allowed task activation

Description

Task: *arg*.

The task *arg* is active in the task selection panel. This task was not active in the task selection panel when start from main was done. It is not allowed to add tasks in the task selection panel after start from main.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

- 1 The task was not active when start from main was done.

- 2 Deactivation of task with service routine , but not deactivating the task in the task selection panel.

- 3 Activation of task that earlier was deactivated in task selection panel and deactivated with service routine .

Recommended actions

Move PP to main to reset tasks used at start from main. Then use the task selection panel to select which tasks that you want to execute.

41640, Move PP Warning

Description

Task: *arg*.

Move of program pointer when path is stored may cause problems if moved to a place after the path restore.

Consequences

Path may unintentionally stay in a stored state.

Probable causes

Stop of program when having a stored path. Then a PP movement within the program has been done.

Recommended actions

Ensure that restore of path is not skipped by moving PP to a RestoPath instruction if necessary.

41641, Move PP Warning

Description

Task: *arg*.

Move of program pointer when stop motion is active may cause problems if moved to a place after stop motion deactivation.

Consequences

Restart of motion may be blocked. Program execution may be waiting at motion instructions.

Probable causes

Stop of program when stop motion is active. Then a PP movement within the program has been done.

Recommended actions

Ensure that stop motion deactivation is not skipped.

41642, Argument Error

Description

Task: *arg*.

Argument *arg* not within range.

Program ref: *arg*.

Recommended actions

arg must be > 0 when *arg* = 0.

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41643, Argument Error**Description**Task: *arg*.Argument *arg* not within range.Program ref: *arg*.**Recommended actions***arg* must be an integer when *arg* < 0.

41644, Argument Error**Description**Task: *arg*.Argument *arg* not within range.Program ref: *arg*.**Recommended actions***arg* must greater or equal to 0.

41645, Program Stopped from RAPID**Description**Task: *arg*.

Program and movement are stopped with System Stop from RAPID.

Program ref: *arg*.**Consequences**

Due to a programmed System Stop in RAPID both program execution and movements are stopped. The problem causing the stop has preferable been presented in another log.

Recommended actions

Find out why the program has been stopped (maybe in other logs), correct the problem and restart the program.

41646, Program Blocked from RAPID**Description**Task: *arg*.

Program and movement are stopped and blocked with System Stop RAPID Block from RAPID.

Program ref: *arg*.**Consequences**

Due to a programmed System Stop RAPID Block in RAPID both program execution and movements are stopped. The problem causing the stop has preferable been presented in another log. If the robot is performing a circular movement, the robot has to be moved to the beginning of the circular movement before restarting the program.

Recommended actions

Find out why the program has been blocked (maybe in other logs), correct the problem and move program pointer in all Motion tasks before restarting the program.

41647, Program Halted from RAPID**Description**Task: *arg*.

Program and movement are halted with System Halt from RAPID.

Program ref: *arg*.**Consequences**

Due to a programmed System Halt in RAPID both program execution and movements are stopped. The problem causing the stop has preferable been presented in another log.

Recommended actions

Find out why the program has been halted (maybe in other logs), correct the problem and turn motors on before restarting the program.

41648, Execution Error**Description**Task: *arg*.

Not allowed to change run mode from forward to backward, from continues to stepwise or vice versa.

Program ref: *arg*.**Recommended actions**

Select the original run mode and continue program execution.

41649, Incorrect Error Message**Description**Task: *arg*.

At least one of the arguments in the instruction *arg* exceeds the limitations described in the manual.

Program ref: *arg*.**Probable causes**

The arguments to instruction *arg* contain limitations both on each string and the total amount of characters used in the instruction. This is described in the manual.

Recommended actions

Consult the manual and correct the arguments.

Continues on next page

41650, Task already stopped by another task

Description

The non-Motion task *arg* has executed a StopMove instruction. No stop action has, however, been taken because the Motion task *arg* was already stopped by task *arg*.

Program ref: *arg*.

Consequences

The Motion task must be started, with the instruction StartMove, from the task that stopped it or the switch \AllMotionTasks has to be used in StartMove from this task.

41651, Ignored StartMove actions for task

Description

The non-Motion task *arg* has executed a StartMove instruction. The Motion task *arg* has, however, not been started.

Program ref: *arg*.

Consequences

No movements can be performed if the Motion task has been stopped by another non-Motion task.

Probable causes

- 1 The Motion task has not been stopped.
- 2 The Motion task was stopped by another non-Motion task. This time the cause was *arg*.

Recommended actions

Use the switch \AllMotionTasks in StartMove if this instruction should start a movement that is stopped by another non-Motion task.

41652, Forced StartMove action

Description

The non-Motion task *arg* has executed a StartMove instruction. The instruction discovered that the Motion task *arg* has been stopped by this task. That Motion task will be started to prevent inexplicable stopped movements.

Program ref: *arg*.

Probable causes

- 1 The Motion task has been stopped with the switch \AllMotionTasks active in the StopMove instruction but not in the StartMove instruction.
- 2 The StopMove instruction has been executed in synchronized mode and the StartMove in independent mode.

41653, Argument error CalcJointT

Description

Task: *arg*.

It is not possible to execute the function CalcJointT with argument \UseCurWObjPos, if the coordinated workobject moved by some mechanical unit is located in the same task as the TCP robot or if the workobject is not moved by any mechanical unit at all.

Program ref: *arg*.

Recommended actions

Remove the argument \UseCurWObjPos, so can the function CalcJointT be executed and the calculation can be done with data solely from the RAPID program.

41654, Execution error CalcJointT

Description

Task: *arg*.

It was not possible to execute the function CalcJointT with argument \UseCurWObjPos, because the mechanical unit *arg* was moving at the time of execution of CalcJointT.

Program ref: *arg*.

Recommended actions

Function CalcJointT with argument \UseCurWObjPos can only be executed without error, if the coordinated workobject moved by another task is standing still.

Recovery: *arg*.

41655, Argument not a Motion task

Description

Task: *arg*.

The function/instruction *arg* has been used with an argument that refer to a task, *arg*. That task is not a Motion task (controlling mechanical units) and can therefore not be used.

Program ref: *arg*.

Probable causes

arg with argument \TaskRef or \TaskName can only be used without errors if the task that the arguments refer to is a Motion task.

Recommended actions

Change the argument \TaskRef or \TaskName or remove it and restart the program execution.

Recovery: *arg*.

Continues on next page

41656, Not allowed value**Description**Task: *arg*.Illegal value in argument *arg*.Program ref: *arg*.**Recommended actions**Check and change the value. It must be between *arg* and *arg*.

41657, File Access Error**Description**Task: *arg*.Could not access the file/device *arg*.Program ref: *arg*.**Probable causes**

- The path or filename is wrong.
- The maximum number of simultaneously opened files is exceeded.
- The disk is full.
- Function does not support check of selected device.

Recommended actions

- Check the path or filename.
- Check the disk space.

Recovery: *arg*.

41658, Program task is in StopMove state**Description**Task: *arg*.

No movement will be performed in this Motion task, because the task is currently set in StopMove state ordered by some non-Motion task.

Consequences

Not possible to start any movements.

Probable causes

Some non-Motion task connected to this Motion task has set the task in StopMove state.

Recommended actions

To perform movements in this Motion task, the StopMove state must be reset by the responsible non-Motion task with one of the following actions:

- 1 Execute StartMove.
- 2 Start the non-Motion task from main. a) Do power off-on if semi static non-Motion task. b) Do installation start if static non-Motion task. c) Set PP to main if normal non-Motion task.

41660, No space left for the new view**Description**Task: *arg*.

Maximum number of views has been exceeded. There is no space left on the FlexPendant for the new view.

Program ref: *arg*.**Consequences**

The view will not be launched.

Probable causes

Too many open views.

Recommended actions

Close one view and try again.

Recovery: *arg*.

41661, Assembly could not be found**Description**Task: *arg*.

- 1 The assembly could not be found, or does not exist.
- 2 The FlexPendant Interface option is missing.

Status *arg*.Program ref: *arg*.**Consequences**

The view will not be launched.

Probable causes

- 1 The assembly could not be found.
- 2 The system image does not include the required option FlexPendant Interface.

Recommended actions

- 1 Check inparameters. Make sure that the modules been loaded correctly to the robot controller.
- 2 Check that FlexPendant Interface option is used.

Recovery: *arg*.

41662, Assembly could not be loaded**Description**Task: *arg*.The assembly was found but could not be loaded. Status *arg*.Program ref: *arg*.**Consequences**

The view will not be launched.

Recommended actions

Make sure that the loaded modules are executable files for the FlexPendant.

Recovery: *arg*.*Continues on next page*

Continued

41663, Instance could not be created

Description

Task: *arg*.

The assembly exist but no new instance could be created.

Status *arg*.

Program ref: *arg*.

Consequences

The view will not be launched.

Recommended actions

Make sure that the loaded modules are executable files for the FlexPendant.

Recovery: *arg*.

41664, The typename is invalid for this assembly

Description

Task: *arg*.

The inparameter *arg* is invalid. The typename does not match the assembly. Status *arg*.

Program ref: *arg*.

Consequences

The view will not be launched.

Recommended actions

Check the inparameters.

Recovery: *arg*.

41665, *arg* does not match assembly to load

Description

Task: *arg* The type or name of the assembly does not match with the used *arg*. Status *arg*.

Program ref: *arg*.

Consequences

The view will not be launched.

Probable causes

Use of *arg* without setting it to 0 first.

Recommended actions

Set *arg* to 0 before using it.

Recovery: *arg*.

41666, Fatal UIShow error

Description

Task: *arg*.

Unknown error code *arg* received.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Report this to ABB Robotics.

41667, Fatal UI error

Description

Task: *arg*.

Instruction or function used with switch *arg* and without optional argument *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

An illegal combination of optional arguments and switches was used.

Recommended actions

Correct the RAPID program.

41670, Entire Array Not Allowed As Argument

Description

Task: *arg*.

The argument *arg* is of data type 'any type' and can for that reason only be checked during runtime. An entire array cannot be used as argument even if the array is of right data type.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Replace the array with a valid argument.

41671, Too high poll rate

Description

Task: *arg*.

The specified poll rate is too high for the robot system.

Program ref: *arg*.

Consequences

The system can be overloaded.

Recommended actions

Change instruction WaitUntil, argument \PollRate to a value greater than or equal to 0.01 s.

Continues on next page

41672, Invalid Combination**Description**Task: *arg*.

Invalid combination of parameters in Trigg.

Program ref: *arg*.**Recommended actions**

Either run Trigg without \Time optional argument, or use TriggRampAO with optional argument \Time to specify that the RampLength is seconds instead of distance.

Recovery: *arg*.

41677, Device access error**Description**Task: *arg*.Unable to write to file: *arg*, the disc is full.Program ref: *arg*.**Recommended actions**

Make sure there are enough free space on the disc.

Recovery: *arg*.

41673, Index Out Of Bounds**Description**Task: *arg*.

Index for cfg instance was out of bounds.

Program ref: *arg*.**Recommended actions**

Check and change the RAPID program.

Recovery: *arg*.

41678, Device access error**Description**Task: *arg*.Unable to write to file: *arg*, the file is write-protected.Program ref: *arg*.**Recommended actions**

Remove the write protection of the file or select a different filename.

Recovery: *arg*.

41674, Value Out Of Bounds**Description**Task: *arg*.Parameter *arg* is not in the range of 0 to 100.Program ref: *arg*.**Recommended actions**

Check and change the RAPID program.

Recovery: *arg*.

41679, Device access error**Description**Task: *arg*.

The maximum number of simultaneously opened files is exceeded.

Program ref: *arg*.**Recommended actions**

Close one or more I/O devices and try again.

Recovery: *arg*.

41675, Not Integer**Description**Task: *arg*.Parameter *arg* is not an integer.Program ref: *arg*.**Recommended actions**

Check the RAPID program, or use ERROR handler.

Recovery: *arg*.

41680, String too long**Description**Task: *arg*.The string *arg* exceeds the maximum number of characters allowed for a module.Program ref: *arg*.**Recommended actions**

Change the string for module name.

Recovery: *arg*.

41676, Device access error**Description**Task:*arg* Unable to open File or Serial channel, '*arg*' does not exist.Program ref: *arg*.**Recommended actions**

Check file or I/O device name.

41682, Too many subscriptions from I/O**Description**Task: *arg*.*Continues on next page*

Continued

The number of simultaneous subscriptions on signal events has been exceeded.

Program ref: *arg*.

Recommended actions

Remove some subscriptions on signals or change the time for the event. (i.e. any ISignalXX or TriggIO).

41683, Argument Error

Description

Task: *arg*.

The argument *arg* must be given when searching for a not named parameter.

Program ref: *arg*.

Recommended actions

Add the parameter *arg* to the instruction.

41685, Not valid value

Description

Task: *arg*.

A wrong combination of switch and value is used. The signal can have values between:

Min: *arg*.

Max: *arg*.

Switch and value used: *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

Wrong value used, or wrong switch used.

Recommended actions

Change the value used, or change the switch argument.

41687, File Open Error

Description

Task: *arg*.

Unable to open *arg*.

Program ref: *arg*. An unknown error occurred while opening the file.

Probable causes

- Check that the given file is not a directory.

Recommended actions

Do a check of Probable Causes.

Recovery: *arg*.

Continues on next page

41688, Invalid Argument

Description

Task: *arg*.

Inparameter *arg* is declared as a PERS.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

Using a PERS in argument *arg* to instruction *arg*.

Recommended actions

Replace the PERS with a valid argument.

41690, Parameter Error

Description

Task: *arg*.

The argument *arg* is of the type *arg* and is not valid to use.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Check the data type. Non-value, semi-value types or motsetdata data type cannot be used.

41691, RMQ Error - Client name not valid

Description

Task: *arg*.

The name *arg* cannot be found. It is not a valid RMQ client name.

Program ref: *arg*.

Probable causes

A non-valid name is used.

Recommended actions

Change name to search for.

Recovery: *arg*.

41692, RMQ Error - Not valid Slot

Description

Task: *arg*.

The *arg* used is not valid.

Program ref: *arg*.

Consequences

Communication with client with current *arg* is no longer possible.

Probable causes

- 1 The has not been initialized.
- 2 The destination slot is not valid anymore. This can happen if a remote client has disconnected from the controller.
- 3 Instruction RMQSendWait was restarted after a power fail. When the instruction is restarted, the is set to 0.

Recommended actions

Recovery: *arg*.

41693, RMQ Error - Max size for message exceeded
Description

Task: *arg*.

The size of the data in *arg* exceeds maximum size.

Program ref: *arg*.

Consequences

The message will not be sent.

Probable causes

Trying to send larger messages then *arg*. Due to limitations in RMQ, such big messages cannot be sent.

Recommended actions

Send smaller messages.

Recovery: *arg*.

41694, RMQ Error - Not equal data types
Description

Task: *arg*.

The data type in the rmqmessage is of the type *arg* and the data type in argument Data is of the type *arg*.

Program ref: *arg*.

Consequences

No data can be fetched.

Probable causes

- 1 The data type in the rmqmessage is of type and the data type used in argument Data is of type .
- 2 If the data types has equal names, the structure of the data can be different.

Recommended actions

- 1 Use data type in argument Data.
- 2 Check that the data types are equal defined in both sender and receiver code.

Recovery: *arg*.

41695, RMQ Error - Not equal dimensions on data
Description

Task: *arg*.

The data types are equal, but the dimensions differs between the data in the message and the parameter used in argument *arg*.

Program ref: *arg*.

Consequences

The data could not be copied.

Recommended actions

Use a parameter in argument *arg* with equal dimensions as the data in the message.

Recovery: *arg*.

41696, RMQ Error - Not valid use of instruction
Description

Task: *arg*.

The instruction *arg* is only supported on TRAP level.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

Instruction *arg* is used either on user execution level or normal execution level.

Recommended actions

Remove instruction, or move it to a TRAP routine.

41697, RMQ Error - No RMQ configured
Description

Task: *arg*.

No RMQ is configured for task *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

No configuration has been added for the RAPID Message Queue.

Recommended actions

Add configuration for the RAPID Message Queue.

41698, RMQ Error - Faulty use of instruction
Description

Task: *arg*.

Continues on next page

Continued

Instruction *arg* can only be used on normal level, not in a TRAP routine or service routine.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

Instruction *arg* used on wrong level.

Recommended actions

Use instruction on normal level.

41699, RMQ Error - Max size for message exceeded

Description

Task: *arg*.

The size of the data in *arg* exceeds maximum size.

Program ref: *arg*.

Consequences

The message will not be sent.

Probable causes

Trying to send larger messages than allowed. The receiving client is not configured to receive the size of the message sent.

Recommended actions

Change the size of the RMQ for the receiver, or send smaller messages.

Recovery: *arg*.

41700, RMQ Error - Interrupt setup failed

Description

Task: *arg*.

Two different interrupt identities cannot be used for the same data type in instruction *arg*. Each data type need a unique interrupt identity and unique TRAP routine.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

Same data type is used in two *arg* instructions with two different interrupt identities.

Recommended actions

A unique interrupt identity is needed for each data type when order and enable interrupts for a specific data type.

41701, RMQ Error - No message to collect

Description

Task: *arg*.

Instruction *arg* failed. There was no message to collect.

Program ref: *arg*.

Consequences

No message was collected.

Probable causes

- 1 This can happen if the power fail occur between the trap was ordered and the instruction was executed.
- 2 If multiple use of in a TRAP routine.
- 3 If using in a TRAP routine that execute without any new message in the RMQ.

Recommended actions

Recovery: *arg*.

41702, RMQ Error - *arg* not valid

Description

Task: *arg*.

Use of non-valid data in argument *arg*.

Program ref: *arg*.

Consequences

The program execution is immediately stopped.

Probable causes

Use of a variable *arg* that not contain any valid data. The variable has only been initialized, no valid data has been copied to the variable.

Recommended actions

Check the RAPID program.

41703, RMQ Error - Data could not be copied

Description

Task: *arg*.

The data type *arg* exceeds the maximum size supported for the RMQ configured for task *arg*.

Program ref: *arg*.

Consequences

No message has been received.

Probable causes

The RMQ of the receiving task is not configured for the size of the data sent. The sending client have sent data that is bigger than the size the RMQ for task *arg* can receive.

Continues on next page

Recommended actions

Increase the size of the RMQ for task *arg*. Or, send less data.

Recovery: *arg*.

41704, RMQ Error - Full Queue**Description**

Task: *arg*.

The client named *arg* cannot receive more messages.

Program ref: *arg*.

Consequences

The sent message will be thrown.

Probable causes

The client does not receive in the same pace as the sender is sending messages. If using instruction *arg*, you might need a wait time between each *arg* instruction.

Recommended actions

The client should receive messages to make room for new messages. Or the sender should limit the number of messages sent.

Recovery: *arg*.

41705, RMQ Error - Max Time Expired**Description**

Task: *arg*.

The programmed waiting time has expired.

Program ref: *arg*.

Consequences

There is no guarantee that the message has arrived to the client.

Probable causes

- 1 The client that should receive the message is not interested of receiving data of the specified data type. The message has been discarded.
- 2 The client has received the message, and in the answer sent a data type not matching with the specified data type used in of instruction .
- 3 The client has received the message. The answer is delayed so the time out time for instruction expired.

Recommended actions

- 1 Check the client program.
- 2 Increase the waiting time for instruction .

Recovery: *arg*.

41706, RMQ Error - Max Time Expired**Description**

Task: *arg*.

The programmed waiting time has expired.

Program ref: *arg*.

Consequences

No message has been received.

Probable causes

The time out time for instruction *arg* expired.

Recommended actions

Increase the waiting time for instruction *arg*.

Recovery: *arg*.

41707, RMQ Error - Instruction invalid in current mode**Description**

Task: *arg*.

arg is only allowed when RMQ is configured in *arg* mode.

Program ref: *arg*.

Consequences

The program execution is immediately stopped.

Probable causes

The RMQ is configured in *arg* mode.

Recommended actions

Change the configuration of the RAPID Message Queue in *arg* to *arg* mode, or use an instruction that is allowed in the current mode.

41708, RMQ Error - Invalid message**Description**

Task: *arg*.

The received RMQ message was invalid.

Program ref: *arg*.

Consequences

The received RMQ message was discarded.

Probable causes

A received RMQ message had a corrupt header or data part.

Recommended actions

Recovery: *arg*.

41711, Value is not percent**Description**

Task: *arg*.

Continues on next page

Continued

The value of argument *arg* is not a valid percent.

Program ref: *arg*.

Recommended actions

Check that the value is in the range of 0 to 100.

41712, Argument Error

Description

Task: *arg*.

Tooldata *arg* has been defined, but is no longer available in the system.

Program ref: *arg*.

Probable causes

Tooldata might have been defined in a module that is no longer available in the system.

41713, Argument Error

Description

Task: *arg*.

Wobjdata *arg* has been defined, but is no longer available in the system.

Program ref: *arg*.

Consequences

Wobjdata might have been defined in a module that is no longer available in the system.

41714, Too many error events

Description

Execution of task *arg* has stopped. There are too many unhandled error events in queue. The system can only handle one error event at a time.

Consequences

The system goes to blocked state and cannot be restarted before moving the program pointer to an arbitrary position.

Probable causes

A power off or restart of the controller occurred while handling a process error.

Recommended actions

Never restart the controller while handling a process error. If a restart is needed, first move PP to Main in all tasks to reset the process error.

41715, Invalid Direction

Description

Task: *arg*.

Continues on next page

The argument *arg* must be either CSS_X, CSS_Y, CSS_Z, CSS_XY, CSS_XZ, CSS_YZ, CSS_XYZ, CSS_XYRZ.

Program ref: *arg*.

Recommended actions

Check the value of *arg*.

41716, Invalid Offset Direction

Description

Task: *arg*.

The argument *arg* must be either CSS_POSX, CSS_NEGX, CSS_POSY, CSS_NEGY, CSS_POSZ, CSS_NEGZ.

Program ref: *arg*.

Recommended actions

Check the value of *arg*.

41717, Too Low Value

Description

Task: *arg*.

The value of argument *arg* is too low.

Program ref: *arg*.

Recommended actions

Increase the value of *arg*.

41718, Invalid Dimensions

Description

Task: *arg*.

Dimension *arg* on searched symbol is incompatible with dimension *arg* in argument.

Program ref: *arg*. A dimension of '{0}' means given symbol is of non-array type.

Recommended actions

Recovery: *arg*.

41719, Illegal Parameter

Description

Task: *arg*.

The symbol in argument *arg* is an array from a parameter.

Arrays from parameters are illegal to use in

SetDataVal/GetDataVal.

Program ref: *arg*.

41720, Path Not In Stop Point

Description

Task: *arg*.

The path did not finish for the following task(s): *arg* make sure the task is running.

Program ref: *arg*.

Probable causes

The task is not running, the movement has been stopped, or a movement use low speed.

Recommended actions

Recovery: *arg*.

41721, Invalid Argument

Description

Task: *arg*.

The type *arg* in argument *arg* is invalid.

Program ref: *arg*.

Recommended actions

Change the type to a valid one (*arg*).

41722, Too High Value

Description

Task: *arg*.

The value of argument *arg* is too high. The value must be between *arg* and *arg*.

Program ref: *arg*.

41723, Network is in error state

Description

Task: *arg*.

The I/O device *arg* cannot be activated. The network *arg* is in error state.

Program ref: *arg*.

Consequences

Device *arg* could not be activated.

Probable causes

Network is in error state.

Recommended actions

Recovery: *arg*.

41724, Current Work Object is Invalid

Description

Task: *arg*.

Cartesian Soft Servo Activation is not allowed with a moving work object. Only a programmed user frame is allowed.

Program ref: *arg*.

41725, Invalid Configuration Settings

Description

Task: *arg*.

The configuration parameters for Cartesian Soft Servo are invalid. The current combination can lead to unstable behavior.

Program ref: *arg*.

Recommended actions

Change the configuration for Cartesian Soft Servo.

41726, Ignored StopMoveReset actions for task

Description

Task: *arg*.

The StopMoveReset instruction had no impact on the system.

Program ref: *arg*.

Consequences

The StopMove was not reset.

Probable causes

- 1 The Motion task has not been stopped.
- 2 The Motion task was stopped by another non-Motion task:

.

This time the cause was *arg*.

Recommended actions

Use the switch \AllMotionTasks in StopMoveReset if this instruction should reset a StopMove from another non-Motion task.

41727, The size cannot be represented in a num

Description

Task: *arg*.

When using instruction *arg* to read the size of the file system, it was detected that the value is too big to be set in a num.

Program ref: *arg*.

Consequences

The size cannot be read.

Probable causes

The value cannot be represented in a num.

Recommended actions

Use a switch to specify another unit to show the size in.

Recovery: *arg*.

Continues on next page

Continued

41730, Signal exceeds max number of allowed bits

Description

Task: *arg*.

The signal *arg* is too big. If using signals over 23 bits, use the data type *triggiosdnum* that accept signals up to 32 bits.

Program ref: *arg*.

Recommended actions

Group signals can have 23 bits or less if using datatype *triggios* in *arg* instruction.

41731, Signal name undefined

Description

Task: *arg*.

The signal *arg* is unknown in the system.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

The signal must be defined in the system parameters.

Recommended actions

Define the signal in the system parameters.

41732, Too many trigs used

Description

Task: *arg*.

Too many trigs has been set up for instruction *arg*. The limit is *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Remove some trig actions in *arg* instruction.

41737, Instruction order Error

Description

Task: *arg*.

The instruction *arg* needs to be executed before instruction *arg*.

Program ref: *arg*.

Probable causes

Instruction *arg* was executed before instruction *arg*.

Recommended actions

Execute instructions in right order.

Recovery: *arg*.

41738, Wrist Interpolation option needed

Description

Task: *arg*.

Instruction *arg* is used with a switch that requires option Wrist Interpolation.

Program ref: *arg*.

Consequences

The program execution is immediately stopped.

Probable causes

Missing a RobotWare option.

Recommended actions

Do not use any of the following switches: *arg*.

41739, StorePath required

Description

Task: *arg*.

Instruction *arg* is executing in an error handler or a trap routine. Use *arg* before using a movement instruction on other level than base.

Program ref: *arg*.

Probable causes

A movement instruction executed without having the path stored.

Recommended actions

Execute *arg* before using movement instruction *arg*. Read Programming type examples in the RAPID manual to see how to use movement instructions in TRAP routines and error handlers.

41740, Load Identification failed

Description

Task: *arg*.

WARNING! Not possible to identify the mass for the *arg* because of too small weight for automatic load identification.

Program ref: *arg*.

Recommended actions

Do a manually estimation of the actual load and manually edit the RAPID program.

Continues on next page

41744, Instruction Error**Description**Task: *arg*.

The program is executing in an ERROR handler. It is not allowed to execute the instruction *arg* in an ERROR handler.

Program ref: *arg*.**Recommended actions**

Remove the instruction.

41745, Instruction Error**Description**Task: *arg*.

The program is executing in a BACKWARD handler. It is not allowed to execute the instruction *arg* in a BACKWARD handler.

Program ref: *arg*.**Recommended actions**

Remove the instruction.

41746, Instruction Error**Description**Task: *arg*.

The program is executing at USER level, i.e. in an event routine or a service routine. It is not allowed to execute the instruction *arg* at USER level.

Program ref: *arg*.**Recommended actions**

Remove the instruction.

41747, Process signal off**Description**Task: *arg*.

The process signal *arg* is set to off (0).

Program ref: *arg*.**Consequences**

A recoverable error ERR_PROCSIGNAL_OFF is thrown.

Probable causes

The optional argument \ProcSignal has been used for the instruction ProcerrRecovery. The signal makes it possible for the user to turn on/off the instruction ProcerrRecovery.

Recommended actions

Add an error handler for ERR_PROCSIGNAL_OFF error or remove the optional argument \ProcSignal from the instruction call.

41748, Value Error**Description**Task: *arg*.

Illegal value in argument *arg*.

Program ref: *arg*.**Recommended actions**

Check the RAPID program.

Recovery: *arg*.

41749, Value Error**Description**Task: *arg*.

The value for parameter *arg* is out of limit.

Program ref: *arg*.**Probable causes**

The value is too large.

Recommended actionsUse a smaller value for *arg*.Recovery: *arg*.

41750, Not allowed value**Description**Task: *arg*.

Illegal value in argument *arg*.

Program ref: *arg*.**Probable causes**

- 1 The system has interpreted the expression as a num data type, and the value is above the maximum integer value for num (value 8388608).
- 2 The system has interpreted the expression as a dnum data type, and the value is above the maximum integer value for a dnum (value 4503599627370496).

Recommended actions

Check and change the value. The parameter name *arg* can give you information about how the system interpreted the indata.

41751, Array size error**Description**Task: *arg*.

The array *arg* is not big enough to fit *arg* number of elements.

Program ref: *arg*.**Consequences**

The program execution is stopped immediately.

Continues on next page

Continued

Recommended actions

Change the size of the array to fit all elements.

41752, Num Limit Error

Description

Task: *arg*.

The value for parameter *arg* is out of limit.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

41753, Invalid path level

Description

Task: *arg*.

Program ref: *arg arg* requires the robot to run at the first path level.

Consequences

The program execution is stopped immediately.

Probable causes

Executing *arg* on wrong path level.

Recommended actions

Check the RAPID program.

41754, Path Recorder cleared

Description

Task: *arg*.

WARNING! Path Recorder is cleared. The stored path is cleared before doing friction identification.

Program ref: *arg*.

41755, Path time too long

Description

Task: *arg*.

Execution time is too long for friction tuning. *arg* > *arg*, which is the maximum time in seconds.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Increase speed or shorten the length of the path.

41756, Missing FricIdInit

Description

Task: *arg*.

arg must be executed before *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

41757, Mechanical unit not found

Description

Task: *arg*.

Mechanical unit *arg* not found.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Specify another mechanical unit.

41758, Array too small

Description

Task: *arg*.

The array used is too small. The size of the array *arg* must be equal to *arg*, the number of robot axes.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Increase the size of the array *arg*.

41759, Signal exceeds max number of allowed bits

Description

Task: *arg*.

The signal *arg* is too big.

Program ref: *arg*.

Recommended actions

Group signals consisting of 23 bits or less can be used in IF statements and assigned to the num datatype. Group signals consisting of 24 - 32 bits cannot be used in IF statements. Instead use the functions *arg* or *arg*.

Continues on next page

41760, *arg* when in synchronized mode**Description**

Task: *arg arg* cannot be used together with synchronized movement.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Remove any SyncMoveOn between *arg* and *arg*.

Program ref: *arg*.

Consequences

The argument value string is converted but it is set to the highest supported value (9223372036854775807).

Probable causes

The argument string value exceeds the highest supported value.

Recommended actions

Edit the argument value string so it do not exceed the highest supported value.

41761, Value out of range**Description**

Task: *arg*.

The integer value *arg* cannot be copied to a *arg* datatype. The value is out of limit for the data type *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Use a variable of the type *arg* instead of a variable of type *arg*.

41764, Wrong combination in *arg***Description**

Task: *arg*.

When using instruction *arg*, you cannot add a dnum variable/persistent to a num variable/persistent.

Program ref: *arg*.

Probable causes

The value to be added is of the type dnum, and the variable/persistent that should be changed is a num.

Recommended actions

Read about *arg* in RAPID reference manual.

41762, The argument string value is invalid**Description**

Task: *arg*.

The argument string *arg* is invalid and cannot be converted.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

- 1 The only valid letter characters is a-f and A-F and only for HexToDec.
- 2 The ., - and + characters is not valid for HexToDec.
- 3 The - character is not valid for DecToHex.
- 4 The value is not a valid integer.

Recommended actions

Edit the argument value string so it gets valid and can be converted.

41765, The argument value is too high**Description**

Task: *arg*.

Too high value in argument *arg*.

Program ref: *arg*.

Probable causes

The argument value exceeds the highest supported value. (*arg*).

Recommended actions

Decrease the value for argument *arg*.

Recovery: *arg*.

41766, The precision will be lost**Description**

Task: *arg*.

Optional argument *arg* is used, and the group signal has *arg* bits. This can cause loss of precision in the variable used in optional argument *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

41763, The argument string value is too high**Description**

Task: *arg*.

The argument string *arg* value exceeds the highest supported value in the system.

Continues on next page

Continued

Probable causes

Argument *arg* is used, and it is a risk that the precision of the value is lost. Group signals consisting of 23 bits or less can be represented by the num data type, and group signals of 32 bits or less can be represented by the dnum data type, if they are used in a RAPID program.

Recommended actions

To avoid loss of precision in the used variable in *arg*, use optional argument *arg* instead.

41767, Instruction Error

Description

Task: *arg*.

The instruction *arg* is used from a non-Motion task, and the Motion task that task *arg* is connected to does not control a TCP-robot.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

arg is used in a non-Motion task that is connected to a Motion task that does not control a TCP-robot.

Recommended actions

- Check the configuration.
- The instruction must be removed. The non-Motion task is connected to a Motion task that does not control a TCP-robot.

41768, Switch is missing

Description

Task: *arg*.

The switch *arg* is required when executing instruction/function.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Add switch when using instruction/function.

41769, Service data not found

Description

Task: *arg*.

The service data for the mechanical unit *arg* could not be found.

Program ref: *arg*.

Consequences

No service data is read.

Probable causes

There is no such service data present for this mechanical unit.

Recommended actions

Check that the specified service data is defined for the mechanical unit.

41770, System Access Error

Description

Task: *arg*.

Unknown camera unit *arg*. The data of type cameradev is unknown for the system.

Program ref: *arg*.

Probable causes

Data of type cameradev has been declared in the program.

Recommended actions

Remove the declaration of cameradev data in the program and use one of the predefined data of type cameradev (automatically defined by the system).

41771, Cancel load of job

Description

The ongoing loading of the job *arg* for camera *arg* has been cancelled.

Consequences

The job may or may not have been successfully loaded into the camera.

Probable causes

There has been a PP movement in the RAPID program before the job was loaded correctly into the camera. A job is not completely loaded into the camera before the instruction *arg* has been executed.

Recommended actions

Load a new job into the camera named *arg*.

41772, Parameter Error

Description

Task: *arg*.

None of the optional arguments listed below are specified in instruction.

Program ref: *arg*. Missing one of these optional arguments:

arg

arg

Continues on next page

arg.

Consequences

The program execution is stopped immediately.

Recommended actions

Specify at least one of the arguments.

41773, Timeout

Description

Task: *arg.*

A timeout interrupted the execution of instruction using camera *arg.*

Program ref: *arg.*

Recommended actions

Use a higher timeout value or use an error handler to retry instruction.

Recovery: *arg.*

41774, Type error

Description

Task: *arg.*

It is not possible to set value *arg* into a variable of current type (*arg*). Check the used optional argument, and use an argument with proper type.

Program ref: *arg.*

Probable causes

Wrong argument type used.

Recommended actions

Check the RAPID program, and use other type of variable to store the data in.

Recovery: *arg.*

41775, Ongoing request towards camera

Description

Task: *arg.*

It is not allowed to have several parallel requests towards a camera.

Program ref: *arg.*

Consequences

The request was not performed.

Probable causes

There are more than one request towards the camera named *arg.*

Recommended actions

Wait for a while, and then try again. If trying to access the same camera from different tasks, instruction WaitTestAndSet can be used to prevent access of the camera at the same time.

Recovery: *arg.*

41776, No more data available

Description

Task: *arg.*

No more data available for camera *arg.*

Program ref: *arg.*

Consequences

No data could be read.

Probable causes

The reasons are:

- 1 No more data is available.
- 2 There is no result matching the used .

Recommended actions

- 1 Check that the camera has requested an image.
- 2 Check that the result map configured from "output to RAPID" is complete. If a is used, check that it is the correct variable that is used.

Recovery: *arg.*

41777, The camera is not connected

Description

Task: *arg.*

The camera *arg* is not connected. The request has not been sent to the camera.

Program ref: *arg.*

Probable causes

The reasons for this error can be:

- 1 The camera is not connected to the controller.
- 2 There is no power to the camera.
- 3 The camera's IP address is not valid.
- 4 The camera does not have a name.
- 5 The camera is not connected to the management interface.
- 6 The controller is logged into the camera with a user that have incorrect access rights.

Recommended actions

- 1 Check cabling between robot controller and camera.
- 2 Check that the LED power and link indicators on the camera are active.
- 3 Use RobotStudio to check that the IP address has been configured correctly.

Continues on next page

Continued

4 Set a valid name to the camera.

Recovery: *arg*

41778, Failed to load job

Description

Task: *arg*.

Failed to load the job named *arg* for camera *arg*.

Program ref: *arg*.

Consequences

The job couldn't be loaded.

Probable causes

- 1 The job is incorrect or unavailable.
- 2 The camera is not in program mode.
- 3 The name of the job is too long or has invalid characters.

Recommended actions

Check that the job named *arg* exists on the camera and that the camera is in program mode.

Recovery: *arg*

41779, Parameter cannot be modified

Description

Task: *arg*.

The parameter written to the camera *arg* with instruction *arg* cannot be modified, the parameter is not recognized or RAPID data used is of wrong data type.

Program ref: *arg*.

Consequences

Parameter not modified.

Probable causes

The reasons are:

- 1 Wrong optional RAPID argument used.
- 2 Value is out of range.
- 3 A cell with specified name does not exist.
- 4 The cells needs to be of type EditInt, EditFloat or EditString.
- 5 Trying to set wrong type to the cell, e.g. setting a string value to a parameter that is not a string.

Recommended actions

Check the RAPID program, and use an optional argument of correct data type and a value within the supported range.

Recovery: *arg*.

41780, Camera is in program mode

Description

Task: *arg*.

Continues on next page

The operation failed because the camera *arg* is in program mode.

Program ref: *arg*.

Probable causes

The function or instruction can only be used if the camera is in running mode.

Recommended actions

To change to running mode, use instruction *arg*.

Recovery: *arg*.

41781, Camera is in running mode

Description

Task: *arg*.

The operation failed because the camera *arg* is in running mode.

Program ref: *arg*.

Probable causes

The function or instruction can only be used if the camera is in program mode.

Recommended actions

To change to program mode, use instruction *arg*.

Recovery: *arg*.

41782, Camera does not support this

Description

Task: *arg*.

The operation failed because the camera does not support current action (used switch *arg*).

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

Using functionality not supported by this camera type.

Recommended actions

Check what functionality the camera support.

41783, Communication timeout

Description

Task: *arg*.

The communication towards the camera *arg* timed out.

Program ref: *arg*.

Consequences

The camera is in an undefined state. The order against the camera may or may not have been performed.

Probable causes

The camera is not responding.

Recommended actions

- 1 Increase the timeout. Timeout in the RAPID instruction/function or the timeout in the configuration parameter "Communication timeout in ms" .
- 2 Check the connection between the camera and controller.
- 3 Restart the camera and try again.

Recovery: *arg*.

41784, Communication error**Description**

Task: *arg*.

Communication error with camera *arg*. The camera is probably disconnected.

Program ref: *arg*.

Consequences

The camera is in an undefined state. The order against the camera may or may not have been performed.

Recommended actions

- 1 Check the connection between the camera and controller.
- 2 Restart the camera and try again.

Recovery: *arg*.

41785, Failed to request image**Description**

Task: *arg*.

Failed to request image from camera *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

- 1 When using optional argument \AwaitComplete, the Trigger setting of the camera job has to be set to External.
- 2 The camera has to be set to Run Mode.
- 3 The camera has no job loaded.

Recommended actions

- 1 Go to RobotStudio -> Integrated Vision tab -> Setup Image and change the Trigger property to External and save the job.
- 2 Run the instruction CamSetRunMode.
- 3 Load a job into the camera.

Recovery: *arg*.

41786, Parameter out of range**Description**

Task: *arg*.

The value used for the parameter *arg* for camera *arg* is out of range.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

The parameter value cannot be set.

Recommended actions

Check the value used.

41787, Parameter cannot be read**Description**

Task: *arg*.

The parameter *arg* cannot be read or recognized.

Program ref: *arg*.

Probable causes

The parameter cannot be accessed. A parameter with the specified name does not exist.

Recommended actions

Check that the name *arg* is a proper one.

Recovery: *arg*.

41788, No ongoing load of camera task**Description**

Task: *arg*.

There is no ongoing loading of a task to camera *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

No load order has been requested for camera *arg*.

Recommended actions

Check that *arg* has been used before current instruction.

41790, No results in image**Description**

Task: *arg*.

An image was acquired with camera *arg* but the output contained no result.

Program ref: *arg*.

Continues on next page

Continued

Probable causes

- 1 The part is not present, not sufficiently visible or otherwise not detectable in the field of view of the camera.
- 2 The Output to Rapid configuration is not setup correctly.

Recommended actions

Check the following and acquire a new image:

- 1 Verify that the part is in the field of view.
- 2 Check that the image settings and vision tool settings contained in the active vision job are ok.
- 3 Verify that the lighting has not changed since setting up the vision job.
- 4 Verify that the desired vision outputs have been configured in RobotStudio -> Integrated Vision tab -> Output to Rapid.

Recovery: *arg*.

41791, SoftMove is not allowed with zero mass

Description

Task: *arg*.

The current load data that is used when CSSAct is called has a mass of *arg* Kg. SoftMove need to have an accurate load definition. This is normally set by the load definition that is part of the tool definition.

Program ref: *arg*.

Consequences

When SoftMove detects a mass less or equal to 0.001 Kg it will not allow activation. Hence CSSAct instruction will not be possible to run with tool0.

Probable causes

Current tool when the instruction CSSAct was run is tool0 or another tool with too small mass. The current tool is set by a move instruction or by jogging prior to the CSSAct instruction.

Recommended actions

Use as accurate tool definition as possible. Use the load identification. If simple tests of SoftMove is done with only the mounting flange as tool then a tool definition similar to tool0 needs to be created but with a mass greater than 0.002 Kg.

41792, Instruction not allowed

Description

Task: *arg*.

The instruction *arg* can only be executed on normal level in a Motion task.

Consequences

Program execution will stop.

Continues on next page

Probable causes

Instruction *arg* is used from a TRAP or a background task.

41793, TriggInt stop error

Description

No more trig restart actions can be stored. Instructions that can cause this problem is: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

When using movement instructions that use interrupts at a specified position on the robot's movement path, and the events received after a stop is more than the system can handle, this error stops the execution.

Recommended actions

Try to increase the length of the movements, or reduce the speed on the movement can be a solution to this problem. Report this problem to ABB Robotics if this happens.

41794, Search error

Description

Task: *arg*.

The search instruction *arg* has detected that the path and the search object has been removed.

Program ref: *arg*.

Consequences

The position cannot be read by the instruction *arg*. The program execution is stopped immediately.

Probable causes

- 1 A TRAP executes a instruction just before the signal change.
- 2 A TRAP executes a instruction, and when the instruction is ready (no signal detection occurred), detects that the search object has been removed.

Recommended actions

Use error handling with long jump in the TRAP to brake off the *arg* instruction, or rewrite the RAPID program. See documentation of instruction *arg* how to implement error handling with long jump.

41795, Wrong payload mode

Description

Task: *arg*.

Wrong payload mode.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

- 1 If using \TLoad optional argument in a movement instruction, the configuration parameter ModalPayloadMode should be set to NO.
- 2 If using GripLoad instruction, the configuration parameter ModalPayloadMode should be set to YES.
- 3 If using LoadId instruction and the configuration parameter ModalPayloadMode is set to NO, PayLoad identification is not possible.

Recommended actions

Check the value of the configuration parameter ModalPayLoadMode for domain SYS, type SYS_MISC.

41796, Argument Error**Description**

Task: *arg*.

The mass is negative in used loaddata.

Program ref: *arg*.

Recommended actions

Define the correct load of the load before use of it for jogging or program movement. Load identification of the load can be done with the service routine LoadIdentify.

41797, Signal not accessible**Description**

Task: *arg*.

The I/O signal *arg* is not accessible.

Program ref: *arg*.

Probable causes

The reason for this error is one of the following:

- The real input or output, on the I/O device, represented by the I/O signal is not valid.
- The I/O device is not running.
- Error in the configuration of the I/O signal.

Recommended actions

Recovery: *arg*.

41798, No TCP robot found**Description**

Task: *arg*.

This task does not control a mechanical unit that is a TCP robot.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

No TCP robot found for this task.

Recommended actions

Check the RAPID program. Instruction *arg* can only be used in a RAPID task that controls a TCP robot.

41799, Speed value too low**Description**

Task: *arg*.

The speed value (*arg*) used in argument *arg* is too low.

Program ref: *arg*.

Consequences

It is not possible to use current speed value.

Probable causes

A value that is below the minimum value for speed has been used.

Recommended actions

Increase the speed value in argument *arg*.

Recovery: *arg*.

41800, Manual action needed**Description**

Task: *arg*.

Start of robot movements has been ordered from task *arg*.

Reactivation of the enable device is needed when in manual reduced or manual full speed mode.

Probable causes

An order to activate robot movements has been executed in manual reduced or manual full speed mode.

Recommended actions

Release and reactivate enable device. Start RAPID program execution again. NOTE: If using a MultiMove system, all robots and external axis will start their movements after next program start.

41801, In synchronized mode**Description**

Task: *arg*.

Not possible to execute *arg* in synchronized mode.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Continues on next page

Continued

Probable causes

The system is in synchronized mode on basic path level or on store path level.

Recommended actions

Remove synchronization before executing current instruction.

41802, Not supported instruction or function

Description

Task: *arg*.

The RAPID instruction or function *arg* is not supported in this release of RobotWare.

Program ref: *arg*.

Probable causes

Use of a function or instruction that is not supported in current release of RobotWare.

Recommended actions

Remove RAPID instruction or function *arg* from your RAPID program.

41803, Argument Error

Description

Task: *arg*.

The logical output value calculated by the argument ScaleValue in TriggSpeed instruction and the programmed speed in current instruction exceeds the maximum physical output value for the analog signal used in AOp argument in TriggSpeed instruction.

Program ref: *arg*.

Probable causes

Logical analog output exceeds physical output value.

Logical output value = Scale value* programmed TCP speed in mm/s.

Physical output value for analog signal = According definition in configuration for actual analog output signal. The analog signal can only be set within *arg* and *arg* according to the I/O system parameter configuration.

Recommended actions

Decrease the value used in ScaleValue or decrease the programmed speed in current instruction. Another solution is to change configured value for the analog output signal.

Recovery: *arg*.

41804, Not allowed command

Description

Task: *arg*.

Continues on next page

Not allowed to change non-motion execution setting in Manual full speed mode.

Program ref: *arg*.

Consequences

The system remains in the same status, and the requested action will not be performed.

Recommended actions

Make sure that change of non-motion execution setting is not done in Manual full speed Mode.

41805, Illegal dimension

Description

Task: *arg*.

The dimension *arg* used for argument *arg* is not valid. Required dimension: *arg*.

Program ref: *arg*.

Probable causes

Wrong dimensions or wrong values on optional arguments are used.

Recommended actions

Check and change the RAPID program.

Recovery: ERR_ARRAY_SIZE.

41806, The matrix A is singular

Description

Task: *arg*.

The matrix used in argument A is singular, and the linear equation system cannot be solved.

Program ref: *arg*.

Recommended actions

Modify the matrix A.

Recovery: *arg*.

41807, Not enough memory

Description

Task: *arg*.

The memory allocated is not enough to complete the current calculation.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

The memory allocated at startup is too small to handle the calculation.

Recommended actions

Increase memory used for mathematical instructions in the configuration. This can be done in Controller/General RAPID/MathLibMemSize.

41808, Illegal dimension**Description**

Task: *arg* .

The dimension of a matrix is incorrect when multiply one matrix with another.

Requirements when multiply one matrix with another one:

- 1 Number of rows in A must be equal the number of columns in B.
- 2 If A is a $p \times q$ matrix, B is a $q \times r$ matrix and AB (the result matrix) should be a $p \times r$ matrix.

The requirement that is not fulfilled is *arg* .

Program ref: *arg* .

Probable causes

Wrong dimensions on matrix or wrong values on optional arguments that is used to specify how many rows and columns that should be used.

Recommended actions

Check and change the RAPID program.

Recovery: *arg* .

41809, Illegal dimension**Description**

Task: *arg* .

The dimensions of the result matrix is incorrect when transposing the matrix.

Requirements when doing a matrix transposition:

- 1 Number of columns in matrix used in Result must be equal or bigger than the number of rows in matrix A.
- 2 Number of rows in Result must be equal or bigger than the number of columns in matrix A.

The requirement that is not fulfilled is *arg* .

Program ref: *arg* .

Probable causes

Wrong dimensions on matrix or wrong values on optional arguments that is used to specify how many rows and columns that should be used.

Recommended actions

Check and change the RAPID program.

Recovery: *arg* .

41810, Only allowed for 6 axis robot**Description**

Task: *arg*.

The instruction *arg* with switch *arg* is only allowed for a 6 axis robot.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

Instruction *arg* used with switch *arg*.

Recommended actions

Remove *arg* or the switch *arg*.

41811, Not allowed to reset signal**Description**

Task: *arg*.

The instruction *arg* can only be used to reset a signal that has been connected to a configured signal with instruction *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

The signal named *arg* is configured in the I/O configuration and cannot be reset.

Recommended actions

Check the RAPID program and the argument used in instruction *arg*.

41812, Domain not valid or not in use**Description**

Task: *arg*.

The domain *arg* used in instruction *arg* is not valid or is not in use.

Program ref: *arg*.

Probable causes

A domain that is not valid or a domain not in use has been used in instruction *arg*.

Recommended actions

Recovery: *arg*.

41813, File or directory access error**Description**

Task: *arg*.

Continues on next page

Continued

Unable to open file *arg* for writing, or directory specified does not exist.

Program ref: *arg*.

Probable causes

File may be write protected. File or directory may have incorrect name. The directory specified does not exist. No storage space available on device.

Recommended actions

- 1 Check if the file is write protected, and in such case change the setting.
- 2 Make sure the file and directory names are correct.
- 3 Make sure that the directory exist.
- 4 Make sure there is enough storage space available.

Recovery: *arg*.

41814, Reference Error

Description

Task: *arg*.

The reference in argument *arg* is not an entire persistent variable.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

It is not possible to use record component or array element in *arg*. *arg*. It is only possible to use entire persistent variables for *arg*.

41815, Reference error in Cyclic bool

Description

Task: *arg*.

The argument *arg* is not valid as a condition.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

An invalid argument has been used in the condition part of SetupCyclicBool.

Recommended actions

Consult the manual and replace *arg* with a valid argument.

41816, Too many connected Cyclic bool

Description

Task: *arg*.

Continues on next page

It is only allowed to setup *arg* number of cyclic bools.

Consequences

The program execution is stopped immediately. The given condition will not be connected to *arg*.

Probable causes

The maximum number of cyclic bools (*arg*) has already been setup.

Recommended actions

Remove all cyclic bools not used for the moment and try again.

41817, I/O Error in Cyclic bool

Description

Failure while evaluating a logical expression setup with RAPID instruction SetupCyclicBool. The signal *arg* is unknown to the system.

Consequences

The program execution is stopped immediately.

Probable causes

- 1 Connection has been lost with the I/O device.
- 2 If the signal is defined in the RAPID program, it must be connected to the configured signal with instruction AliasIO.

Recommended actions

- 1 Re-establish the connection with the I/O device.
- 2 Re-connect the RAPID program defined signal using AliasIO.

41818, SDB Error in Cyclic bool

Description

Failure while evaluating a logical expression setup with RAPID instruction SetupCyclicBool. The persistent variable *arg* is unknown to the system.

Consequences

The program execution is stopped immediately.

Probable causes

The module containing the declaration of *arg* has probably been unloaded.

Recommended actions

- 1 Reload the module containing the declaration of .
- 2 Disconnect the logical expression containing using RemoveCyclicBool.
- 3 Check that no LOCAL PERS are used in the logical expression.

41819, Integer Error in Cyclic bool**Description**

Failure while adding or evaluating a logical expression, setup with RAPID instruction SetupCyclicBool. The persistent variable *arg* doesn't have an integer value.

Consequences

The program execution is stopped immediately.

Probable causes

arg doesn't have an integer value.

Recommended actions

Make sure that *arg* has an integer value.

41820, Invalid EGM identity**Description**

Task: *arg*.

The EGM identity *arg* is not valid.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

The EGM identity *arg* had not been initialized by means of the RAPID instruction EGMGetId.

Recommended actions

Initialize the EGM identity *arg* using the RAPID instruction EGMGetId.

41821, No EGM signals specified**Description**

Task: *arg*.

No EGM input signal was specified in *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes**Recommended actions**

At least one signal has to be specified in *arg*.

41822, No data from the UdpUc device**Description**

Task: *arg*.

No expected data packets have been received for the EGM instance *arg* during *arg* seconds. Rapid Ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

- 1 Check the connection between the controller and the UdpUc device "".
- 2 Check that the UdpUc device "" is working properly.
- 3 Increase the value () for \CommTimeout in EGMSetupUC. Recovery: ERR_UDPUC_COMM.

41823, Invalid frame type**Description**

Task: *arg*.

The frame type *arg* is not allowed together with the RAPID instruction *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Correct the used frame type.

41824, Not possible to open the UdpUc device**Description**

It was not possible to open the external device *arg* that was specified in the RAPID instruction *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Check if:

- 1 The device name is spelled correctly.
- 2 The device is connected.
- 3 The device is up and running.

41825, EGM not connected**Description**

The state of the EGM instance with EGM identity *arg* is not connected.

Consequences

The program execution is stopped immediately.

Recommended actions

Use the instructions EGMGetId and/or EGMSetupAI, EGMSetupAI, EGMSetupGI or EGMSetupUC, to connect EGM. For more information see the User Manual for EGM.

Continues on next page

Continued

41826, EGM mode mismatch

Description

There is an EGM mode mismatch for EGM identity *arg*. It is important to use the same EGM mode (Joint or Pose) for EGMSetupAI, EGMSetupAO, EGMSetupGI, EGMSetupUdpUc, EGMActXX and EGMRunXX.

Consequences

The program execution is stopped immediately.

Recommended actions

Use EGMSetupAI, EGMSetupAO, EGMSetupGI and EGMSetupUdpUc with the \Joint switch together with EGMActJoint and EGMRunJoint. Use EGMSetupAI, EGMSetupAO, EGMSetupGI and EGMSetupUdpUc with the \Pose switch together with EGMActPose and EGMRunPose.

41827, TCP robot missing

Description

It is not allowed to use EGM in a RAPID task without TCP robot.

Consequences

The program execution is stopped immediately.

Recommended actions

Use EGM in RAPID tasks with TCP robot only.

41828, Too many EGM instances

Description

Task: *arg*.

There are no more EGM instances available. The maximum number per RAPID task is *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

You have to disconnect an EGM instance using EGMReset before you can connect another.

41829, EGM state change error

Description

The state of the EGM instance with EGM identity *arg* could not be changed to *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

- 1 Try to reset the EGM instance using the RAPID instruction EGMReset.
- 2 Move PP to Main to reset all EGM instances.

41830, Error sending EGM UdpUc message

Description

It was not possible to write the whole UdpUc message to the external device *arg* that is connected to EGM. *arg* of *arg* were sent.

Consequences

The program execution is stopped immediately.

Recommended actions

- 1 Check the connection between the controller and the external device .
- 2 Check the UDP server application on the external device .
- 3 Restart the controller and/or the external device .

41831, ContactL Warning

Description

Task: *arg*.

No hit during ContactL. Before performing next instruction, make sure that TCP is moved back to the start position of the ContactL path.

Program ref: *arg*.

Consequences

If no repositioning is done, before restart of ContactL, movement that can cause damage might occur.

Recommended actions

Recovery: *arg*.

41832, EGM UdpUc inbound message contains invalid data

Description

The UdpUc server application on the external device *arg* that is feeding EGM with position data, sent invalid data.

Consequences

The program execution is stopped immediately.

Recommended actions

- 1 Check that the UDP server application on the external device sends data according to the specification in egm.proto.
- 2 Check that the UDP server application on the external device sends data is suitable for the mechanical unit it is aimed for.

Continues on next page

41833, EGM input data from signals is invalid**Description**

The signal *arg* that is feeding EGM with position data, sent invalid data.

Consequences

The program execution is stopped immediately.

Recommended actions

- 1 Check that the input data from the signal sends data that are suitable for the mechanical unit it is aimed for.

41834, ALXT General error**Description**

There was a general error in the communication with the ALXT Power Source connected to device *arg*. The message with identity *arg* got an error status *arg*.

Consequences

Welding might not work.

Recommended actions

You might want to handle errno *arg* in your error handler

41835, ALXT timeout**Description**

There was a timeout error in the communication with the ALXT Power Source connected to device *arg*. The message with identity *arg* was not answered in time.

Consequences

Welding might not work.

Recommended actions

You might want to handle errno *arg* in your error handler.

41836, Wrong dimension in PERS array**Description**

Dimension of *arg* is *arg*, which is too large. Maximal allowed dimension for this array is *arg*. The maximum allowed value is available as RAPID constant EGM_MAX_RAPID_DNUM.

Consequences

The program execution is stopped immediately.

Recommended actions

Change dimension of *arg* to the constraining *arg* values. Check and change the RAPID program. The maximum allowed value is available as RAPID constant EGM_MAX_RAPID_DNUM.

41840, Argument error**Description**

Task: *arg*.

No valid triggdata in TriggArray argument.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Define triggdata by executing instruction TriggIO, TriggInt, TriggEquip, TriggSpeed or TriggCheckIO before current instruction.

41841, Argument error**Description**

Task: *arg*.

The size of the array used in argument *arg* is *arg*. The max size of the array is limited to *arg* elements.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Check and change the RAPID program.

41842, Argument error**Description**

Task: *arg*.

Instruction *arg* used with argument *arg* and one of the optional arguments T2, T3, T4, T5, T6, T7 or T8.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

An illegal combination of arguments was used.

Recommended actions

Correct the RAPID program.

41843, Instruction not allowed in TRAP or service routine**Description**

Task: *arg*. It is not allowed to use the RAPID instruction *arg* in a TRAP or a service routine.

Program ref: *arg*.

Continues on next page

Continued

Consequences

The program execution is stopped immediately.

Recommended actions

Remove the instruction from your RAPID program.

41844, Search Error

Description

Task: *arg*.

The persistent variable *arg* for the SearchX instruction is already set to the specified value (high or low) at the start of searching. Before performing next search, make sure that TCP is moved back to the start position of the search path.

Program ref: *arg*.

Consequences

If no repositioning is done, before restart of circular search, movement that can cause damage might occur.

Recommended actions

Recovery: *arg*.

41845, Outside reach Error

Description

Task: *arg*.

The position (robtarget) is outside the robot's working area.

Program ref: *arg*.

Probable causes

- The robtarget used is outside reach.

Recommended actions

Use a robtarget that is within the robot's working area.

Recovery: *arg*.

41846, Signal not writable

Description

Task: *arg*.

The I/O signals bit(s) is set by a device transfer operation. The signal *arg* is read only.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

The I/O signals bit(s) is set by a device transfer operation.

Recommended actions

Check the I/O configuration for I/O signals and device transfer.

Change signal used in RAPID program.

41847, Signal not writable

Description

The I/O signals bit(s) is set by a device transfer operation. The signal *arg* is read only.

Consequences

The program execution is stopped immediately.

Probable causes

The I/O signals bit(s) is set by a device transfer operation.

Recommended actions

Check the I/O configuration for I/O signals and device transfer.

Change signal used in RAPID program.

41848, Too low visualization time

Description

Task: *arg*.

The specified visualization time is too low.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Check the RAPID documentation regarding the minimum visualization time. Increase the visualization time used in the RAPID program.

41849, Bad combination of values used in arguments

Description

Task: *arg*.

The specified visualization time *arg* is equal or higher than the timeout *arg* for the instruction.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Change the visualization time used in the RAPID program, or change the maximum period of waiting time permitted.

41850, User interface already active

Description

Task: *arg*.

A message is already active on the FlexPendant. A message launched by instruction *arg* must be aborted before launching a new message.

Continues on next page

Program ref: *arg*.

Consequences

The message will not be presented on the FlexPendant. This error can be handled in an error handler.

Probable causes

A *arg* message is already active on the FlexPendant.

Recommended actions

Recovery: *arg*. The current active *arg* message can be deactivated with instruction *arg*.

41851, Wrong value type used

Description

Task: *arg*.

Wrong value type used in optional argument *arg*. The only valid types are bool, num or dnum, or any alias type of those three base types.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

Wrong value type used.

Recommended actions

Change type used in optional argument *arg*.

41852, Wrong signal value for signal *arg*

Description

It is not possible to set the I/O signal *arg* to value *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

The I/O signal *arg* is configured wrong, or the value that should be set is wrong. The signal value that is used has been read from a persistent variable specified in one of the setup instructions used for Trigg defining conditions and actions for setting a digital, a group of digital, or an analog output signal at a fixed position. The error is detected when the actual signal setting should be done.

Recommended actions

Check the I/O configuration for I/O signal. Check the value of the persistent variable that is used in *arg* for the setup instruction(s) for Trigg.

41860, Evaluation error in Cyclic bool

Description

Failure while evaluating the Cyclic bool *arg*.

Consequences

The evaluation of *arg* has been stopped immediately.

Probable causes

- 1 The module containing the declaration of has been unloaded.
- 2 An I/O signal needed to evaluate the logical expression connected to has been lost (see earlier error logs).
- 3 The I/O signal that is updated with the cyclic bool value has been lost.

Recommended actions

- 1 Reload the module containing the declaration of .
- 2 Re-establish the connection with the I/O device.
- 3 Re-connect the RAPID program defined signal using AliasIO.

41861, Cyclic bool has been removed

Description

Failure while evaluating the Cyclic bool *arg*.

Consequences

The evaluation of *arg* has been stopped immediately and the Cyclic bool has been removed.

Probable causes

- 1 The module containing the declaration of has been unloaded.
- 2 An I/O signal needed to evaluate the logical expression connected to has been lost (see earlier error logs).
- 3 The I/O signal that is updated with the cyclic bool value has been lost.

Recommended actions

- 1 Reload the module containing the declaration of .
- 2 Re-establish the connection with the I/O device.
- 3 Re-connect the RAPID program defined signal using AliasIO.
- 4 Re-connect the logical expression.

41862, ASCII log setup failed

Description

Not possible to setup ASCII log for the cyclic bool *arg*.

Probable causes

The cyclic bool is not active when activation of ASCII log is done with RAPID instruction StartAsciiLog.

Recommended actions

Use RAPID instruction SetupCyclicBool using cyclic bool *arg* before using StartAsciiLog.

Continues on next page

41863, Mechanical unit not TCP robot

Description

Task: *arg*.

The mechanical unit *arg* is not a TCP robot. *arg* can only be used if the mechanical unit is a TCP robot.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Use *arg* with TCP robot only.

41864, Argument error

Description

Task: *arg*.

Bad combination of switches.

The switch *arg* can only be combined with switch *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

Correct the RAPID program.

41865, Invalid MAC address

Description

Task: *arg*.

Invalid MAC address *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

The format might be wrong.

Recommended actions

Check the MAC address and correct the address used.

The length of the MAC-address in format XX:XX:XX:XX:XX:XX.

41880, AliasCamera Define Error

Description

Task: *arg*.

The camera in argument CameraName or FromCamera: *arg*, must be defined in the Communication configuration (SIO,cfg) and the camera in argument ToCamera: *arg*, must be declared in the RAPID program and not defined in the Communication configuration (SIO,cfg).

Program ref: *arg*.

Recommended actions

Check the Communication configuration and the RAPID program.

Recovery: *arg*.

41881, Persistent boolean Break

Description

Task: *arg*.

A value change on a persistent boolean variable interrupted the execution.

Program ref: *arg*.

Recommended actions

Recovery: *arg*.

41882, Error in Cyclic bool

Description

Task: *arg*.

The condition used in SetupCyclicBool is too complex.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

The condition used in SetupCyclicBool in SetupCyclicBool is too complex.

Recommended actions

Divide the expression into two subexpressions to make each subexpression less complex than the original expression.

41883, *arg* file is corrupted

Description

Task: *arg*.

The file has been edited or a previous *arg* has been interrupted, and then the file was corrupted.

Program ref: *arg*.

Consequences

The file has been renamed to *arg*.

The *arg* will be created again next time the routine is executed.

All history will be lost in *arg*, but can be found in the file *arg* in the HOME: directory.

Probable causes

File edited or corrupted by a previous interrupted run of the routine.

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41884, CyclicBrakeCheck Error**Description**

Task: *arg*.

SafeMove option or the EPS option is a requirement if running CyclicBrakeCheck.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

Using CyclicBrakeCheck without required options.

Recommended actions

Use BrakeCheck to test brakes when not having any SafeMove option or EPS option.

Recommended actions

- 1 Check that only one task is executing CyclicBrakeCheck routine if using a multimove system.
- 2 If calling CyclicBrakeCheck from a service routine, check that the execution of CyclicBrakeCheck on normal level has been ended.

To cancel an active CyclicBrakeCheck, move program pointer to cursor or move program pointer to main.

41885, BrakeCheck Error**Description**

Task: *arg*.

When having a SafeMove option or the EPS option, CyclicBrakeCheck should be used to test brakes.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

Use of BrakeCheck routine when CyclicBrakeCheck should be used.

Recommended actions

Use CyclicBrakeCheck to test brakes.

41887, BrakeCheck Error**Description**

Task: *arg*.

BrakeCheck is already active.

The BrakeCheck routine cannot be executed from several tasks or execution levels at the same time.

Currently task *arg* is executing BrakeCheck on execution level *arg* (LEVEL_NORMAL=0, LEVEL_SERVICE=2).

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

More than one call to procedure BrakeCheck.

Recommended actions

- 1 Check that only one task is executing BrakeCheck routine if using a multimove system.
 - 2 If calling BrakeCheck from a service routine, check that the execution of BrakeCheck on normal level has been ended.
- To cancel an active BrakeCheck, move program pointer to cursor or move program pointer to main.

41886, CyclicBrakeCheck Error**Description**

Task: *arg*.

CyclicBrakeCheck is already active.

The CyclicBrakeCheck routine cannot be executed from several tasks or execution levels at the same time.

Currently task *arg* is executing CyclicBrakeCheck on execution level *arg* (LEVEL_NORMAL=0, LEVEL_SERVICE=2).

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

More than one call to procedure CyclicBrakeCheck.

41888, Not allowed command**Description**

Task: *arg*.

The instruction/function *arg* cannot be used when you have an ongoing brake check.

Program ref: *arg*.

Consequences

The program execution is stopped immediately. Move PP to main.

Probable causes

A brake check is currently running, and then it is not allowed to use *arg*.

Recommended actions

End execution of CyclicBrakeCheck or BrakeCheck routine before using *arg*.

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Continued

41889, Value error

Description

Task: *arg*.

The value read is an integer and above the maximum integer value for num, 8388608. Value read: *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

A num variable is used to store the read integer value, and that value is above the maximum integer value for a num.

Recommended actions

Change datatype used in *arg* to a dnum variable.

41890, Parameter error

Description

Task: *arg*.

The value used in argument NumPoints (*arg*) is larger than the array size of argument Points (*arg*).

Program ref: *arg*.

Recommended actions

Correct the RAPID program.

Recovery: *arg*.

41891, Too few points

Description

Task: *arg*.

Need at least two points to identify line.

Used points: *arg*.

Program ref: *arg*.

Recommended actions

Correct the RAPID program.

Recovery: *arg*.

41892, Too few points

Description

Task: *arg*.

Need at least three points to identify plane.

Used points: *arg*.

Program ref: *arg*.

Recommended actions

Correct the RAPID program.

Recovery: *arg*.

Continues on next page

41893, Too few points

Description

Task: *arg*.

Need at least three points to identify circle.

Used points: *arg*.

Program ref: *arg*.

Recommended actions

Correct the RAPID program.

Recovery: *arg*.

41894, Too few points

Description

Task: *arg*.

Need at least four points to identify sphere.

Used points: *arg*.

Program ref: *arg*.

Recommended actions

Correct the RAPID program.

Recovery: *arg*.

41895, Too many points

Description

Task: *arg*.

Can handle at most 100 points.

Used points: *arg*.

Program ref: *arg*.

Recommended actions

Correct the RAPID program.

Recovery: *arg*.

41896, Argument error

Description

Task: *arg*.

Cannot calculate a plane because the three points are collinear.

Program ref: *arg*.

Recommended actions

Correct the RAPID program.

Recovery: *arg*.

41897, Argument error

Description

Task: *arg*.

Cannot calculate a line because the two points are too close.

Program ref: *arg*.

Recommended actions

Correct the RAPID program.

Recovery: *arg*.

41898, Argument error**Description**

Task: *arg*.

The point distribution is not a plane.

Program ref: *arg*

arg

arg

arg

Recommended actions

Correct the RAPID program.

Recovery: ERR_FIT_NOT_PLANE.

41899, Argument error**Description**

Task: *arg*.

The point distribution is not a line.

Program ref: *arg*

arg

arg

arg.

Recommended actions

Correct the RAPID program.

Recovery: ERR_FIT_POINTS_NOT_LINE.

41900, Orientation Value Error**Description**

Task: *arg*.

Wrong orientation value in *arg*.

Program ref: *arg*.

Recommended actions

All used orientations must be normalized, i.e. the sum of the quaternion elements squares must equal 1.

Recovery: *arg*.

41901, Text Table Name not valid**Description**

Task: *arg*.

The text table name is too long. Max *arg* characters can be used in the name.

Program ref: *arg*.

Consequences

The text table name is not valid.

Probable causes

Too long name used as text table name.

Recommended actions

Change the name on the text table.

41902, Speed override changed**Description**

Task: *arg*.

The speed override set by the operator from the FlexPendant has been changed. To get right performance, the speed override has to be set to 100%.

Current setting: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

The speed override has been changed during execution of routine.

Recommended actions

Move PP, change the speed to 100%, and restart the routine.

41903, Brake Check, *arg* file renamed**Description**

Task: *arg*.

The Brake Check program has detected that tuning is used or has been used. Current file *arg* cannot be modified with the new entry *arg*.

Program ref: *arg*.

Consequences

arg will be renamed to *arg*. A new file *arg* will be created.

Probable causes

Tuning is used or has been used for Brake Check program. The file *zzz_internal_cbc_tuning.mod* exist in the HOME: directory, or has been used earlier.

Recommended actions

No action needed.

41905, Argument error**Description**

Task: *arg*.

Cannot calculate a sphere because the points are distributed along a line.

Program ref: *arg*.

Continues on next page

Continued

Recommended actions

Correct the RAPID program.

Recovery: *arg*.

41906, Path Not In Stop Point

Description

Task: *arg*.

One or several mechanical units connected to task *arg* is not in a stop point. A path is currently active.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

A mechanical unit is not in a stop point.

The reason for this error is one of the following:

- 1 The break check program is executed as a service routine.
The mechanical units connected to other tasks than the one executing the service routine will not be forced into a fine point.
- 2 One or several tasks is deactivated in the task selection panel, and then the paths cannot be finished for all mechanical units.

Recommended actions

Before executing the brake check program, end the ongoing path for all mechanical units in all tasks. This is done by stepping the movements forward.

41907, Too far from path

Description

Task: *arg*.

One or several mechanical units connected to task *arg* is too far from the path to perform a regain movement.

Program ref: *arg*.

Consequences

The execution of the routine *arg* has been stopped.

Probable causes

The mechanical unit has been jogged from the path.

Recommended actions

- 1 Start execution again and choose if regain or remove path.
- 2 Cancel call routine to end .

41908, Instruction Error

Description

Task: *arg*.

Continues on next page

No user logged on from FlexPendant.

Program ref: *arg*.

Probable causes

Not using any FlexPendant, or running without a Virtual FlexPendant in RobotStudio.

Recommended actions

Recovery: *arg*.

41910, Collision simulated with instruction SimCollision

Description

Task: *arg*

Instruction *arg* has been used to simulate a collision.

Program ref: *arg*

Probable causes

arg simulated a collision.

Recommended actions

Remove *arg* in a RAPID program used in production. The instruction should only be used in tests.

41911, Not valid character used in RAPID string

Description

Task: *arg*

A character used in the RAPID string *arg* can not be converted to an ISO 8859-1 character.

Program ref: *arg*

Consequences

The program execution is stopped immediately.

Recommended actions

Correct the RAPID program.

41912, No ongoing camera set parameter request

Description

Task: *arg*.

There is no ongoing request to set a parameter to camera *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

No set parameter request has been made for camera *arg*.

Recommended actions

Check that *arg* has been used before current instruction.

Recovery: *arg*.

41913, Preceding instruction caused set parameter to fail**Description**

Task: *arg*.

Preceding instruction failed and also caused set parameter to fail for camera *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

A preceding load order was requested but failed for camera *arg*.

Recommended actions

Check the preceding *arg* instruction. Recovery: *arg*.

41914, Cancel set parameter for camera**Description**

The ongoing set parameter *arg* for camera *arg* has been cancelled.

Consequences

The parameter may or may not have been successfully set in the camera.

Probable causes

There has been a PP movement in the RAPID program before the request was completed. The parameter set is not confirmed set into the camera before the instruction *arg* has been executed.

Recommended actions

Check the parameter value or set it again for the camera named *arg*.

41915, Load or Save module with old module format**Description**

The filename *arg* cannot be saved in old module format (.mod).

The file must be loaded or saved in .modx format.

Consequences

The cannot be saved

Probable causes

The current system only fully support saving and loading modules of type modx or sysx(UTF8).

Recommended actions

Use modx or sysx when loading or saving the module.

41916, String too long**Description**

Task: *arg*.

The string is too long (*arg* bytes).

Not valid RAPID string length.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

Some ISO8859-1 characters are multibyte characters in UTF8. Converting data from ISO8859-1 encoded characters to UTF8 encoded characters could cause multibyte in UTF8 .

Recommended actions

Check the RAPID program and the arguments used in *arg*.

41917, The number of characters does not fit in string**Description**

Task: *arg*

The specified number of characters *arg* (argument NoOfChars) to read does not fit in a RAPID string.

A RAPID string can consist of max 80 bytes.

Program ref: *arg*

Probable causes

Some read characters are multibyte characters, or is converted to multibyte characters (if using ISOLatin1Encoding switch).

Recommended actions

Decrease number of characters to read. Analyze characters that is read, and adapt RAPID program.

41918, Execution Error**Description**

Task: *arg*

Automatic or Manual Full Speed operating mode is not used.

Reduced speed affects the functionality.

Consequences

The program execution is stopped immediately.

Probable causes

Current operating mode is *arg*

Recommended actions

Change to automatic or manual full speed operating mode.

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Continued

41919, Undefined value

Description

Task: *arg*

The value of *tan arg* is undefined.

Program ref: *arg*

Recommended actions

Recovery: *arg*

41920, Not accessible path

Description

Task: *arg*

The path *arg* is not a valid path or a path that is not accessible due to restrictions.

Program ref: *arg*

Consequences

The program execution is stopped immediately.

Probable causes

Wrong path used.

Recommended actions

Check the path used.

41921, Parameter Error

Description

Task: *arg*.

The argument *arg* is of the type *arg*.

arg is write protected, and can not be overwritten.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Recommended actions

- Check the data type.
- Datatype *signaldi*, *signaldo*, *signalgi*, *signalgo*, *signalai*, *signalao* and *mecunit* can not be used.
- Use *AliasIO* to get an alias signal name.
- To set a signal value, use *SetDO*, *SetAO* or *SetGO*.
- *GetNextMechUnit* can be used to fetch mechanical units.

41922, Value error

Description

Task *arg*.

Program ref: *arg*.

The string is *arg* bytes, and it exceeds the maximum number of bytes for a RAPID string.

Continues on next page

Recommended actions

Recovery: *arg*.

41923, Obsolete switch *arg*

Description

Task: *arg*.

Program ref: *arg*.

The switch *arg* is obsolete in *arg*. It will work for now, but will be removed in a later release. Use *arg* instead and you will have the same functionality.

41924, Wrong combination of optional arguments

Description

Task *arg*.

Program ref: *arg*.

When using optional argument *arg*, optional argument *arg* must also be used.

Consequences

The program execution is stopped immediately.

Recommended actions

Correct the RAPID program.

41925, Cyclic bool setup error

Description

Task: *arg* .

The boolean persistent variable *arg* used as Flag argument in *SetupCyclicBool* is a LOCAL PERS. Currently, LOCAL PERS is not supported for cyclic bool functionality.

Program ref: *arg* .

Consequences

The program execution is stopped immediately.

Recommended actions

Use PERS bool or TASK PERS bool when working with cyclic bool functionality.

41926, Not enough access rights for the operation on the Camera

Description

Task: *arg* .

The requested operation on the camera *arg* requires access rights that the logged in camera user is missing.

Program ref: *arg* .

Consequences

The program execution is stopped immediately.

Recommended actions

Verify that the user on the camera has required access rights to run the requested operation.

41927, Camera out of memory**Description**

Task: *arg*.

Failed to load the job named *arg* for camera *arg*.

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

The camera *arg* is out of memory.

Recommended actions

Check the size of the job *arg* and the current job size availability on the camera.

41930, App does not exist**Description**

Task: *arg* .

- The app could not be found, or does not exist.

Status *arg* .

Program ref: *arg* .

Consequences

The app will not be launched.

Probable causes

- The app could not be found.

Recommended actions

- Check input parameters.
- Make sure that the app has been loaded correctly to the robot controller.

Recovery: *arg* .

41931, App found but could not be launched.**Description**

Task: *arg* .

- 1 The App found but could not be launched.

Status *arg* .

Program ref: *arg* .

Consequences

The app will not be launched.

Probable causes

- The app will not be launched.

Recommended actions

- Check input parameters.
- Make sure that the app has been loaded correctly to the robot controller.

Recovery: *arg* .

41932, Invalid arguments specified**Description**

Task: *arg* .

- Invalid arguments specified.

Status *arg* .

Program ref: *arg* .

Consequences

The app was launched, but all arguments could not be handled.

Probable causes

- Invalid arguments specified.

Recommended actions

- Check input parameters.

Recovery: *arg* .

41934, Fatal UIDisplay error**Description**

Task: *arg* .

Unknown error code *arg* received.

Program ref: *arg* .

Consequences

The program execution is stopped immediately.

Recommended actions

Report this to ABB Robotics.

41937, Incorrect argument used**Description**

Task: *arg* .

Incorrect combination of arguments used for *arg* .

Program ref: *arg*.

Consequences

The program execution is stopped immediately.

Probable causes

Use of incorrect arguments.

Recommended actions

Check and correct the RAPID program.

Continues on next page

Continued

41938, Incorrect argument used

Description

Task: *arg* .

It is only possible to use one character in the *arg* argument.

Program ref: *arg* .

Consequences

The program execution is stopped immediately.

Probable causes

Use of incorrect argument.

Recommended actions

Check and correct the RAPID program.

41939, Not valid UTF-8 character

Description

Task: *arg* .

The data read contains non valid UTF-8 characters.

Program ref: *arg* .

Consequences

The program execution is stopped immediately.

Probable causes

Reading data that is ISO 8859-1 encoded but handle it as it would be UTF-8 encoded.

Recommended actions

Check the encoding of the data. Use ISOLatin1Encoding switch on instruction *arg* .

41941, UaSessionCreate - EndpointURL Invalid

Description

Task: *arg*.

Invalid value in argument *arg*.

Program ref: *arg*.

Probable causes

The supplied EndpointUrl is empty or contains invalid URL.

Recommended actions

Provide a valid URL.

41942, UaSessionCreate - SecurityMode Invalid

Description

Task: *arg*.

Invalid value in argument *arg*.

Program ref: *arg*.

Probable causes

The supplied SecurityMode value is not supported.

Continues on next page

Recommended actions

Provide a valid SecurityMode value.

41943, UaSessionCreate - Username Invalid

Description

Task: *arg*.

Invalid value in argument *arg*.

Program ref: *arg*.

Probable causes

The supplied Username is empty or contains invalid characters.

Recommended actions

Provide a valid username.

41944, UaSessionCreate - Certificate not found

Description

Task: *arg*.

Invalid value in argument *arg*.

Program ref: *arg*.

Probable causes

The Certificate parameter does not identify a known user certificate.

Recommended actions

Provide the name of a valid user certificate.

41945, UaSessionCreate - Password Invalid

Description

Task: *arg*.

Invalid value in argument *arg*.

Program ref: *arg*.

Probable causes

The supplied Password is rejected when used with Username or Certificate.

Recommended actions

Provide a valid Password.

41946, UaSession Invalid

Description

Task: *arg*.

Invalid value in argument *arg*.

Program ref: *arg*.

Probable causes

The supplied Session is not initialized.

Recommended actions

Initialize the session before use.

41947, UaSession - Connection rejected**Description**

Task: *arg*.

Program ref: *arg*.

Probable causes

The connection attempt was rejected by the OPC UA server.

Recommended actions

- Check that server is running.
- Check that the server trusts this client.

41948, UaSession - Connection timeout**Description**

Task: *arg*.

Program ref: *arg*.

Probable causes

Timeout waiting for connection to be established.

Recommended actions

- Check that server is running.
- Check network connection.

41949, OpcUa Client - Unspecified Error**Description**

Task: *arg*.

Program ref: *arg*.

Probable causes

Unspecified error from underlying system.

Recommended actions

If this error is persistent, please report to ABB Robotics.

41950, Ua NodeId string invalid**Description**

Task: *arg*.

Invalid value in argument *arg*.

Program ref: *arg*.

Probable causes

The supplied NodeId string is invalid.

Recommended actions

Provide a valid NodeId.

41951, UaSession - Not connected**Description**

Task: *arg*.

Program ref: *arg*.

Probable causes

The session has no connection to the OPC UA server.

Recommended actions

Establish the connection to the session server.

41952, Ua Read/Write timeout**Description**

Task: *arg*.

Program ref: *arg*.

Probable causes

Timeout - waiting for value to be returned or waiting for the value to set.

Recommended actions

- Check that server is running.
- Check network connection.

41953, UaVariable invalid**Description**

Task: *arg*.

Invalid value in argument *arg*.

Program ref: *arg*.

Probable causes

The Variable is not properly initialized.

Recommended actions

Initialize the variable before use.

41954, Ua Type mismatch**Description**

Task: *arg*.

Program ref: *arg*.

Probable causes

The data type of the OPC UA value is not compatible with the data type of the RAPID value.

Recommended actions

Verify the OPC UA value and Rapid value is compatible to the other.

Continues on next page

Continued

41955, Ua Read/Write access denied

Description

Task: *arg*.

Program ref: *arg*.

Probable causes

The OPC UA server denied read/write access to the variable.

Recommended actions

- Verify that the OPC UA variable is writable.
- Verify that the user has write access to the variable.

41956, Ua Read/Write Failed

Description

Task: *arg*.

Program ref: *arg*.

Probable causes

The read/write attempt to the variable was rejected.

Recommended actions

- Verify that the OPC UA variable is readable/writable.
- Verify the OPC UA variable and Rapid value variable is compatible to the other.

41957, UaMethod invalid

Description

Task: *arg*.

Invalid value in argument *arg*.

Program ref: *arg*.

Probable causes

The method is not properly initialized.

Recommended actions

Initialize the method before use.

41958, Rapid client not enabled

Description

Task: *arg*.

Client not enabled *arg*.

Program ref: *arg*.

Probable causes

Rapid client not enabled.

Recommended actions

Please enable Rapid client option from configuration.

41959, Rapid client initialization failed

Description

Task: *arg*.

Client initialization failed *arg*.

Program ref: *arg*.

Probable causes

Rapid client initialization failed.

Recommended actions

Please check client initialization process.

41960, Rapid client start failed

Description

Task: *arg*.

Client start failed *arg*.

Program ref: *arg*.

Probable causes

Rapid client start failed.

Recommended actions

Please check client start process.

41961, Session already exists

Description

Task: *arg*.

The program attempted to create a session that already exists *arg*.

Program ref: *arg*.

Probable causes

Attempting to create a session that has already been created.

Recommended actions

Adjust the program structure to ensure that the session is created only once, preventing duplication.

41962, Variable already exists

Description

Task: *arg*.

The program attempted to create a variable that already exists *arg*.

Program ref: *arg*.

Probable causes

Attempting to create a variable that has already been created.

Recommended actions

Adjust the program structure to ensure that the variable is created only once, preventing duplication.

Continues on next page

41963, Method already exists**Description**Task: *arg*.

The program attempted to create a method that already exists *arg*.

Program ref: *arg*.**Probable causes**

Attempting to create a method that has already been created.

Recommended actions

Adjust the program structure to ensure that the method is created only once, preventing duplication.

Program ref: *arg*.**Probable causes**

The number of input and output argument given is mismatching.

Recommended actions

Verify that provided input and output arguments is proper.

41966, Write not supported**Description**Task: *arg*.Program ref: *arg*.**Probable causes**

The Ua node you are trying to write may not have permission.

Recommended actions

Please check if the node you are trying to write has write permission!

41964, UaMethod Call Failed**Description**Task: *arg*.Program ref: *arg*.**Probable causes**

The call attempt to the method was rejected.

Recommended actions

- Verify that the OPC UA method is readable/writable.
- Verify the OPC UA method value and Rapid value is compatible to the other.

41967, Conversion range failed**Description**Task: *arg*.Program ref: *arg*.**Probable causes**

Ua rapid conversion range failed.

Recommended actions

Value for the conversion is out of range, please check the value!

41965, UaMethodCall Argument Mismatch**Description**Task: *arg*.

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6 Number series: 5 xxxx

50021, Joint position error

Description

Actual position of joint *arg* is too far away from the ordered position.

Recommended actions

Check tuning parameters, external forces or hardware.

50024, Corner path failure

Description

Task: *arg*.

Corner path executed as stop point due to some of the following reasons:

- Time delay.
- Closely programmed points.
- System requires high CPU load.

Program ref. *arg*.

Recommended actions

- Reduce the number of instructions between consecutive move instructions.
- Reduce speed, use wider spaced points, use /CONC option.
- Increase system parameter 'Prefetch Time' in topic Motion and type Motion Planner.
- If the stop comes at the first movement after a finepoint, increase the system parameter 'Interpolation Buffer Startup Adjust' in topic Motion and type Motion Planner.
- The warning can be suppressed using the RAPID instruction CornerPathWarning.

50025, Restart interrupted

Description

Current position is too far from path.

Recommended actions

Make a new restart with regain.

50026, Close to singularity

Description

Task: *arg*.

Robot too close to singularity.

Program ref. *arg*.

(Internal status: *arg*).

Recommended actions

Modify the robot path away from the singularity or change the jogging mode for the robot to axis-by-axis jogging.

In the case when the robot position is dependent on an additional axis being jogged then that dependency may also need to be relaxed, that is by changing the jogging coordinate system for the robot from world to base.

50027, Joint Out of Range

Description

Position for *arg* joint *arg* is out of working range.

Recommended actions

Use the joystick to move the joint into its working range.

50028, Jog outside working range

Description

Position for *arg* joint *arg* is out of working range.

Recommended actions

Use the joystick to move the joint in opposite direction.

50031, Command not allowed

Description

System parameters cannot be changed in Motors On state.

Recommended actions

Change to Motors Off state.

50032, Command not allowed

Description

An attempt was made to calibrate while in Motors On state.

Recommended actions

Change to Motors Off state.

50033, Command not allowed

Description

An attempt was made to commutate the motors in Motors On state.

Recommended actions

Change to Motors Off state.

Continues on next page

50035, Command not allowed

Description

An attempt was made to synchronize in Motors On state.

Recommended actions

Change to Motors Off state.

50036, Correct regain impossible

Description

A stop occurred with too many close points with corner zones. At restart the robot will move to a point farther forward in the program.

Recommended actions

Reduce the number of close points, increase the distance between them or reduce the speed.

50037, Motors On order ignored

Description

Motors On order ignored since the previous stop was not yet acknowledged.

Recommended actions

Order Motors On again.

50042, Could not create path

Description

The path could not be created.

Recommended actions

- Increase the distance between close points.
- Decrease speed.
- Change acceleration.

50050, Position outside reach

Description

Position for *arg* joint *arg* is outside working area.

Joint 1-6 : Number of the axis which causes the error.

Joint 23: Combination of axis 2 and 3 causes the error.

Probable causes

The reason may be that ConfL_Off is used and a movement is too large, more than 90 degrees for an axis.

Recommended actions

- Check work object or working range.
- Move the joint in joint coordinates.
- Check Motion system parameters.
- Insert intermediate points on large movements.

Continues on next page

50052, Joint speed error

Description

The speed of joint *arg* is wrong relative the ordered speed due to error in system or collision.

Recommended actions

- Check the tune parameters, external forces on the joint and hardware.
- Reduce programmed speed.

50053, Too large revolution counter difference

Description

Too large revolution counter difference for joint *arg*. The system has detected too large a difference between the actual revolution counter value on the serial measurement board and the value anticipated by the system.

Consequences

The robot is not calibrated and may be jogged manually, but no automatic operation is possible.

Probable causes

The position of the robot arm may have been changed manually while the power supply was switched off. The serial measurement board, resolver or cables may also be faulty.

Recommended actions

- 1 Update the revolution counter.
- 2 Check resolver and cables.
- 3 Check the serial measurement board to determine whether it is faulty. Replace the unit if faulty.

50055, Joint load too high

Description

Actual torque on joint *arg* too high. Might be caused by incorrect load data, too high acceleration, high external process forces, low temperature or hardware error.

Recommended actions

- Check load data.
- Reduce acceleration or speed.
- Check hardware.

50056, Joint collision

Description

Actual torque on joint *arg* is higher than ordered while at low or zero speed. Might be caused by jam error (the arm has got stuck) or hardware error.

Recommended actions

Check that arm is not stuck.
 Check hardware.
 Check for other hardware event logs.

50057, Joint not synchronized**Description**

The position of joint *arg* after power down/failure is too far away from the position before the power down/failure.

Recommended actions

Make a new update of the revolution counter.

50058, Tool coordinate system error**Description**

The z-direction of the tool coordinate system is almost parallel with the path direction.

Recommended actions

Change the tool coordinate system to achieve at least 3 degrees deviation between z-direction and path direction.

50063, Circle uncertain**Description**

Task: *arg*.

The points are misplaced, reason *arg*:

- 1 End point too close to start point.
- 2 Circle point too close to start point.
- 3 Circle point too close to end point.
- 4 Uncertain reorientation.
- 5 Circle too large > 240 degrees.

Program ref. *arg*.

Recommended actions

Check the points of the circle and the end point of the move instruction before. The points of the circle can be verified by stepping through the circle in manual mode.

50065, Kinematics error**Description**

The destination of the movement is outside the reach of the robot or too close to a singularity. Robot *arg*.

Recommended actions

Change the destination position.

50066, Robot not active**Description**

Attempt to coordinate motion or calculate position of deactivated robot *arg*.

Recommended actions

Activate robot from the Jogging window, or program. Check work object and program.

50067, Unit not active**Description**

Attempt to coordinate motion or calculate position of deactivated single unit *arg*.

Recommended actions

Activate robot from the Jogging window, or program. Check work object and program.

50076, Orientation not correct**Description**

Orientation is incorrectly defined.

Recommended actions

Make an accurate normalization of the quaternion elements.

50078, Too many close positions**Description**

Too many consecutive closely spaced positions.

Recommended actions

Increase the distance between consecutive close positions.

50079, Cannot use wrist weaving**Description**

Wrist weaving not possible.

Recommended actions

Use smaller weaving amplitude or a larger TCP.

50080, Position not compatible**Description**

The desired position cannot be reached with the given robot configuration. Robot *arg*.

Recommended actions

Modify the robot position in the program.

Continues on next page

50082, Path calculation time exceeded

Description

The path calculation time for mechanical units running in motion planner *arg* exceeds internal limit. The motion task did not execute within its time limit.

Probable causes

The CPU load is too high. Could for example be generated by too frequent I/O communication.

Recommended actions

- 1 Set system parameter 'High Interpolation Priority' for the affected motion planner.
- 2 Try to reduce the CPU load by one or more of the following actions:
- 3 Reduce speed.
- 4 Change AccSet.
- 5 Avoid singularity (SingArea\Wrist).
- 6 If the error comes directly after start from finepoint, increase the system parameter 'Interpolation Buffer Startup Adjust' in topic Motion and type Motion Planner.

50085, Too many user frames

Description

For mechanical unit *arg* more than one user frame has been defined.

Recommended actions

Take away one user frame or define one more mechanical unit.

50086, Singularity problem

Description

Too close to wrist singularity with respect to numerical resolution for joint 4 of *arg*.

Recommended actions

Change destination position a few increments.

50087, Singularity problem

Description

Too close to wrist singularity with respect to numerical resolution for joint 6 of *arg*.

Recommended actions

Change destination position a few increments.

50088, Restart not possible

Description

It is not possible to restart the path due to a previous error.

Continues on next page

Recommended actions

Move the program pointer to clear the path and start a new movement.

50089, Weaving changed

Description

Task: *arg*.

The ordered weaving is not achieved due to:

- High weaving frequency.
- Not allowed shift of weave method or
- that SingArea/Wrist is used with wrist weave.

Program ref. *arg*.

Recommended actions

Increase weave length or period time.

Don't shift between arm and wrist weave.

Use SingArea/Off with wrist weave.

50091, Restart not possible

Description

Restart no longer possible. Change of mechanical unit state made restart of program impossible.

Recommended actions

Move the program pointer and start a new movement.

50092, Axis computer response

Description

Incorrect response from the axis computer.

Recommended actions

Check Motion system parameters.

Check the axis computer hardware.

50094, TuneServo not possible

Description

Tuning is not implemented for the specified joint.

Recommended actions

Verify that a parameter and/or joint that can be used with TuneServo is chosen.

50096, TuneServo not allowed

Description

Tuning is not allowed for the specified joint.

Recommended actions

Verify that a parameter and/or joint that can be used with TuneServo is chosen.

50124, Zone converted to fine point**Description**

Task: *arg*.

Corner path executed as stop point because the calculated time margin for next segment is 0.

This can be caused by:

- Closely programmed points.
- System requires high CPU load.

Program ref. *arg*.

Recommended actions

- Reduce the number of instructions between consecutive move instructions.
- Reduce speed, use wider spaced points, use /CONC option.
- Increase system parameter 'Prefetch Time' in topic Motion and type Motion Planner.
- If the stop comes at the first movement after a finepoint, increase the system parameter 'Interpolation Buffer Startup Adjust' in topic Motion and type Motion Planner.
- The warning can be suppressed using the RAPID instruction CornerPathWarning.

50132, Commutation failed**Description**

Commutation failed for joint *arg*.

Recommended actions

- Make a new commutation.
- Restart the controller.

50133, No signals available**Description**

Definition of signal *arg* failed for *arg*, axis *arg*.

Probable causes

The signal number does not correspond to a defined log signal.

Recommended actions

Make sure that signal number is supported on Robot or Virtual controller.

50134, Correction vector failed**Description**

Sensor correction vector calculations failed due to previous error.

Recommended actions

50135, SoftAct not possible**Description**

Soft servo is not possible to activate.

Recommended actions

Verify that a joint that can be used with SoftAct is chosen.

50138, Arm check point limit**Description**

The robot *arg* has reached the limit for arm check point.

Recommended actions

Use the joystick to move the involved joint into the working range again.

50139, Arm check point limit**Description**

Jogging was made in wrong direction when arm check point was out of working range for robot *arg*.

Recommended actions

Use the joystick to move the joint in opposite direction.

50140, Payload too large**Description**

Heavy payload caused static torque limit to be exceeded on joint *arg*.

Recommended actions

Check and reduce payload for arm and/or wrist. Reduce joint working range to decrease static torque due to gravity.

50142, Motion configuration**Description**

Configuration of the manipulator failed.

arg

arg.

Recommended actions

Check system parameters in topic Motion.

Use correct parameters and reset the system.

50143, Robot axes configuration**Description**

Actual configuration is not the same as ordered and/or movement of any robot axis is larger than 90 degrees. Robot *arg*, axis *arg*.

Continues on next page

Continued

Recommended actions

Use SingArea_Wrist, Confl_Off, modify position or insert intermediary point.
Proceeding in automatic mode will not be possible without correcting the configuration. To be able to move to the position anyway change to manual mode and repeat start.

50144, Displacement frame uncertain

Description

Calibration of displacement frame uncertain for robot *arg*, due to one or several of:

- Wrong TCP.
- Reference points inaccurate.
- Reference points badly spaced.

Recommended actions

If estimated error is unacceptable:

- Verify that correct TCP is used.
- Try more than 3 reference points.
- Be careful when positioning robot to reference points.

50145, Kinematic limitation

Description

Kinematic limitation for robot *arg*, no solution found.

- Long segment.
- Position close to singularity.
- Joint 1, 2 or 3 out of range.
- Position outside reach.

Recommended actions

- Insert an intermediary point to reduce the length of the segment.
- Use MoveAbsJ.
- Check working range.

50147, Power fail restart failed

Description

Re-creation of the path failed.

Recommended actions

Move the program pointer and start a new movement.

50153, Command not allowed

Description

Task: *arg*.

The given instruction, or command, was not allowed since the robot program was executing in a hold state.

(Internal status: *arg arg*).

Continues on next page

Program ref. *arg*.

Recommended actions

Modify program or stop program execution before issuing command.

50156, Not an Independent Joint

Description

Joint *arg* is not configured as an Independent Joint.

Recommended actions

Modify the program or configure the joint as an Independent Joint in topic Motion and type Arm.

50157, Correction vector X failed

Description

Sensor correction vector X calculations failed due to previous error.

Recommended actions

50158, Sensor process missing

Description

Sensor process missing during initialization. Named sensor process *arg* could not be found or initialized.

Recommended actions

Check process name in topic Motion and type Process.

50159, No external process

Description

Attempt to coordinate motion or calculate position of single *arg* without an external process.

Recommended actions

Check process name in topic Motion and type Process configuration files.

50160, Cannot reach position

Description

Programmed position of independent joint *arg* is outside working range and thus cannot be reached.

Recommended actions

- Change the position.
- Check the joint working area limits.
- Check the used work object.

50163, Position adjustment**Description**

External position adjustment too large. TCP speed, orientation speed, or external position speed exceed allowed robot performance.

Recommended actions

- Reduce programmed TCP- and orientation speeds.
- Modify the path.
- WaitWObj closer to sync.
- Run in automatic mode.

50164, Deactivation not possible**Description**

Deactivation of mechanical unit may not be done while in independent mode.

Recommended actions

Make sure that independent mode is not used and try to deactivate again.

50167, New sync**Description**

New object sync signal has arrived while conveyor is active and program is running.

Recommended actions

50168, New sync on *arg***Description**

New object sync arrived while conveyor was tracking the previous object. Cannot track two objects simultaneously.

Recommended actions

Reduce speed of conveyor. Increase programmed speed.

50172, MoveJ not allowed**Description**

MoveJ not allowed with work object coordinated with external position mechanical unit.

Recommended actions

Change to linear movement or work object.

50174, WObj not connected**Description**

The WObj is not connected to the conveyor *arg*. Robot TCP cannot be coordinated to work object. Object can be dropped because of time synchronization fault on conveyor node.

Recommended actions

Check for missing WaitWObj.

Check for DropWObj occurring before end of coordination.

Check for time synchronization fault, see status on conveyor node.

50175, Conveyor moving**Description**

Conveyor *arg* moving while attempt to coordinate robot TCP to conveyor work object while in prohibited mode.

Recommended actions

It is not possible to coordinate to conveyor while in manual reduced speed, or stepping in automatic mode, and the conveyor is moving.

50176, Conveyor not active**Description**

Conveyor *arg* was not active when attempt to coordinate robot TCP to conveyor work object.

Recommended actions

Make sure conveyor mechanical unit is active. Check for finepoint for last coordinated motion before DeactUnit.

50177, Unable to restart**Description**

Conveyor *arg* moving while attempting to restart or before pressing Stop or stepping through program.

Recommended actions

Make sure conveyor is standing still. Move the program pointer and start a new movement.

50181, Out of coupled range**Description**

Joint *arg* and *arg* are out of coupled working range.

Recommended actions

Use the joystick to move joints into their coupled working range.

Continues on next page

50182, Jog in wrong direction

Description

Joint *arg* and *arg* are out of coupled working range.

Recommended actions

Use the joystick to move joints into their coupled working range.

50183, Robot outside work area

Description

The robot has reached the World Zone *arg*, *arg*.

Recommended actions

Check the reason of the World Zone. Use the joystick to move the robot out of the World Zone if needed.

50184, Correction vector Y failed

Description

Sensor correction vector calculations failed due to previous error.

Recommended actions

50189, Relay signal not found

Description

The signal *arg* for relay *arg* is not found in the I/O configuration. The mechanical unit using this relay is ignored.

Recommended actions

Check I/O signal definitions and system parameters definition in topic Motion and type Relay.

50190, Permanent interpolator lock error

Description

Scanned number of active joints not equal to expected number of joints.

Recommended actions

Check configuration of the unit that is using general kinematics.

50192, Jogging error

Description

Jogging is started too soon after program stop.

Recommended actions

Try to jog the robot again.

50193, Joint not synchronized

Description

The speed of joint *arg* before power down/failure was too high.

Recommended actions

Make a new update of the revolution counter.

50194, Internal position error

Description

Error caused by internal numerical limitation. Joint number *arg*. Calculated reference position = *arg*.

Recommended actions

- Adjust the system parameters in topic Motion and type Uncalibrated Control Master 0.
- If TuneServo is used, adjust parameter 'TUNE_DF'.

50195, Cannot move independent

Description

Joint *arg* cannot be moved in independent mode.

Recommended actions

Make sure that independent mode is not used when trying to move joint.

50196, Calibration failed

Description

Points 0 and 1 too close.

Recommended actions

Make a new calibration with larger distance between points 0 and 1.

50197, Calibration failed

Description

Points 0, 1 and 2 on a line or point 2 too close to points 0 or 1.

Recommended actions

Make a new calibration with points moved so that 0, 1 and 2 are not on a line or with larger distance between point 2 and points 0 and 1.

50198, Calibration failed

Description

Internal error during calibration due to unknown origin switch.

Recommended actions

- Report the occurrence to ABB.
- Make a new calibration.

Continues on next page

50200, Torque error**Description**

Torque calculation error due to high speed for mechanical unit *arg*. Internal status *arg*.

Recommended actions

- Check load data.
- Reduce speed.

50201, Orientation outside reach**Description**

The error of the programmed orientation exceeds the acceptance limit.

Recommended actions

- Adjust robtarget orientation.
- Adjust/check orientations of currently used frames: tool frame, base frame, user frame, object frame.
- It is possible (but not recommendable) to switch off the orientation supervision using the corresponding system parameter. Please see system parameters documentation for details (topic Motion and type Robot).

50203, Measurement node used**Description**

The measurement node for joint *arg* is already used.

Recommended actions

Select another node.

50204, Motion supervision**Description**

Motion supervision triggered for mechanical unit *arg*. The reason was *arg*.

- 1 Motion supervision triggered for axis .
- 2 SafeMove force limit violation prevented.
- 3 SafeMove torque limit violation prevented for axis .

Consequences

The movement of mechanical unit *arg* is halted immediately. It then returns to a position on the path on which it was running. If Collision Error Handling is not configured, the execution will stop and it will remain in Motors On state, awaiting a start request. If Collision Error Handling is configured, the execution will continue into an error handler.

Probable causes

Triggering of the motion supervision may be caused by a collision, incorrect load definition or forces in external process.

The problem may also be caused by old and worn out brakes that are not released within expected time when a movement is started.

Recommended actions

- 1 If execution is stopped, acknowledge the fault, and resume operation by pressing the Start button on the FlexPendant.
- 2 Make sure any loads are defined and identified correctly.
- 3 If the mechanical unit is exposed to forces from the external processes, use RAPID command or system parameters to raise the supervision level.
- 4 Consider to configure Collision Error Handling in topic Controller, type General Rapid and add an error handler for collision errors.

50205, Data logger error**Description**

arg.

Recommended actions

Solution:

arg.

50208, Missing function**Description**

Friction compensation cannot be activated for joint *arg*.

Recommended actions

Install the option Advanced Robot Motion.

50209, Kinematic limitation**Description**

No acceptable solution found. Residual: *arg* deg in orientation, *arg* mm in x, *arg* mm in y, *arg* mm in z.

Recommended actions

Insert an intermediary point. Check singularity. Increase position and orientation tolerance. Use MoveAbsJ. Check working range.

50210, Load identification fail**Description**

Cannot perform load identification because configuration angle is too small.

Recommended actions

- Increase configuration angle.

Continues on next page

Continued

50214, Work area configuration failed

Description

Possibly the defined work area is larger than max allowed area for robot *arg*.

Recommended actions

Adjust the work area parameters in topic Motion and type Robot system parameters and try again.

50215, Load identification fail

Description

Axis *arg* will move outside working range.

Recommended actions

Move the axis to a position further from the working range limit.

50218, Path not finished

Description

Task: *arg*.

Previous motion path was not finished before new motion was sent.

Program ref. *arg*.

Recommended actions

Use StorePath when in Trap routines. Move the program pointer and start a new movement.

50220, No input signal

Description

No input signal to the contactor relay for mechanical unit *arg*.

Recommended actions

Ensure that an input signal is connected and configured.

50221, Object outside limit

Description

Object on conveyor *arg* is outside maximum distance or minimum distance limits. Object Dropped.

Recommended actions

Check limits or reduce conveyor speed.

50222, Mismatch type - MechUnit

Description

Mismatch between selected identification type and selected mechanical unit.

Recommended actions

Make sure that selected type corresponds to selected mechanical unit and try again.

50224, Cannot define load

Description

It is not allowed to define a load on axis *arg* for mechanical unit *arg* or the interpolation is not stopped in a finepoint.

Recommended actions

Change axis number, mechanical unit or change the move before to finepoint.

50225, Synchronization failed

Description

Error in synchronization data.

- Controller updated with new data.
- System unsynchronized.

Recommended actions

Update all revolution counters.

50226, Motor reference error

Description

Calculation time for motor references exceeds internal limits.

Recommended actions

- Reduce load on the main computer.
- Restart the controller.

50227, Invalid log signal channel

Description

Invalid channel number *arg*.

Recommended actions

Test next channel number.

50228, Unknown log signal number

Description

Unknown signal number *arg*.

Recommended actions

Make sure that a valid signal number is defined.

50229, Unknown log signal unit

Description

Unknown mechanical unit *arg*.

Continues on next page

Recommended actions

Check spelling or configuration.

50230, Invalid log signal axis**Description**

Invalid axis number *arg* for mechanical unit *arg*.

Recommended actions

Check mechanical unit and axis number.

50231, Log signal unit not active**Description**

Mechanical unit *arg* not active.

Consequences

Logged signals for deactivated units may be invalid.

Recommended actions

Activate mechanical unit to avoid this event message.

50234, Overflow during logging**Description**

An overflow occurred when logging signals.

Recommended actions

- Define fewer signals.
- Reduce load on the main computer.
- Reduce network load.

50235, No Motion interrupts received**Description**

The system has not generated motion interrupts within timeout.

Consequences

The system goes to system failure state.

Probable causes

High system interrupt load or in rare cases hardware error.

Recommended actions

- 1 Restart the controller to resume operation.
- 2 Check any other error log messages coinciding in time with this one for clues.
- 3 Replace the main computer if faulty.

50239, Emergency Stop change**Description**

Emergency Stop changed brake mode because of acceleration limitation.

Recommended actions

Limit acceleration in the program.

50240, Emergency Stop change**Description**

Emergency Stop changed to brake mode because of torque limitation.

Recommended actions

Check load data.

50241, Missing function**Description**

Absolute Accuracy not purchased.

Recommended actions

Change Robot system parameter 'Use Robot Calibration' in topic Motion to *r#_uncalib*.

50242, Unsync due to system parameters**Description**

- Mismatch between controller and system parameters for joint (calibration offset or calibration position), or
- Valid flags for 'Calibration offset' or 'Commutation offset' not set to 'Yes' in system parameters.

Recommended actions

Update measurement system:

- Update revolution counter.
- Recalibrate joint.
- Change system parameters.

50243, No acceleration limit**Description**

Acceleration limitation is not implemented for robot *arg*.

50244, Absolute Accuracy calibration failed**Description**

Could not perform an Absolute Accuracy calibration for robot *arg*, returned status *arg*.

Recommended actions

- Restart the controller.
- Check that the hard drive isn't full.
- Install more memory.

Continues on next page

50245, Command not allowed

Description

Cannot set non motion execution mode when in Motors On state.

Recommended actions

Change to Motors Off state.

50246, Linked motor error

Description

Large position offset between follower axis and master axis.

Recommended actions

Start linked motor service routine. Jog the follower axis to same position as the master axis.

50247, Clear of Path failed

Description

The movement has to be stopped when the path is to be cleared.

Recommended actions

Use StopMove before the ClearPath instruction. Move the program pointer and start a new movement.

50248, Servo Tool error

Description

Error for tool *arg* in state *arg*

arg

arg

arg.

50249, Programmed force reduced

Description

Programmed tip force too high for tool *arg*. Requested motor torque (Nm) = *arg*. Force was reduced to max motor torque.

Recommended actions

- 1 Reduce programmed tip force.
- 2 Check force vs torque calibration in system parameters.
- 3 Check 'Max Force Control Motor Torque' in system parameters.

50250, Calibration force reduced

Description

Requested calibration force too high for tool *arg*. Requested motor torque (Nm) = *arg*. Force was reduced to max motor torque.

Recommended actions

- 1 Check calibration forces in system parameters.
- 2 Check force vs torque calibration in system parameters.
- 3 Check 'Max Force Control Motor Torque' in system parameters.

50251, Tool opening failed

Description

An ordered tool axis movement of *arg* was detected during tool opening.

Recommended actions

Make sure the tool opening is ready before executing next tool axis movement. Decrease the system parameter 'Post-synchronization Time'.

50252, Tool opening failed

Description

An ordered tool axis movement of *arg* was detected during tool opening in calibration.

Recommended actions

Make sure no movements of the tool axis are ordered during calibration.

50253, Cannot deactivate unit

Description

Deactivation of mechanical unit may not be done while in process mode.

Recommended actions

Make sure to leave process mode before deactivating mechanical unit.

50254, Linked motor error

Description

Too large speed for follower axis when follower axis is in jog mode.

Recommended actions

Start linked motor service routine. Reset jog mode.

50256, Sync pos outside limits**Description**

Sensor movement outside limits. The sensor start pos should be *arg* than *arg* and found *arg*.

Recommended actions

Check programmed sensor position in robtarget. Start sync earlier or change robtarget.

50257, Sync speed outside limits**Description**

Programmed speed outside limits. The speed should be *arg* than *arg* and found *arg*.

Recommended actions

- Check programmed robot speed.
- Check sensor teach pos.
- Check sensor nominal speed.

50258, Sensor direction error**Description**

Programmed sensor pos speed *arg* and found sensor speed *arg* in opposite direction.

Recommended actions

- Check programmed sensor positions in robtarget.
- Start sync earlier or reduce waitsensor distance.

50259, Sensor max distance error**Description**

Distance between sensor position and programmed position too large. *arg*.

Recommended actions

- Check programmed sensor positions in robtarget.
- Check sensor speed.
- Start sync earlier or reduce waitsensor distance.

50260, Sensor Check dist error**Description**

Distance sensor pos to programmed pos *arg* too large *arg*.

Recommended actions

- Check programmed sensor positions in robtarget.
- Check sensor speed.
- Increase max deviation.

50261, WZone outside work area**Description**

The definition of minimum limit for the World Zone *arg* is outside work area for: *arg arg arg*...

Recommended actions

Change the definition of the World Zone so the limit will be inside work area or insert 9E9 to remove an axis from test by the WZone.

50262, WZone outside work area**Description**

The definition of maximum limit for the World Zone *arg* is outside work area for: *arg arg arg*...

Recommended actions

Change the definition of the World Zone so the limit will be inside work area or insert 9E9 to remove an axis from test by the WZone.

50263, Duty factor is too high**Description**

The duty factor for the gearbox of joint *arg* of robot *arg* is too high. Continued running without adjustment may cause damage to motor and gearbox. Contact your local ABB service support center.

Recommended actions

Reduce the speed or increase the wait time.

50265, Thickness out of reach**Description**

Servo tool: *arg* Programmed thickness *arg* mm is out of reach.

Recommended actions

- Adjust programmed thickness.
- Check working range (min. stroke)

50266, Close request failed**Description**

Not allowed to close servo tool: *arg* in reverse direction.

Pre-close position: *arg* mm.

Programmed thickness: *arg* mm.

Recommended actions

- Adjust pre-close position.
- Adjust programmed thickness.

Continues on next page

50267, Open request failed

Description

Not allowed to open servo tool: *arg* in reverse direction.

Recommended actions

Check that programmed robtarget positions of the servo tool are larger than programmed thickness.

50268, Calibration failed

Description

Not allowed to calibrate servo tool: *arg* from negative position.

Recommended actions

Adjust servo tool position before calibration.

50269, Tune value out of limit

Description

Tune value for servo tool: *arg* is out of limit. Parameter: *arg*.

Recommended actions

Adjust tune value.

50271, Poor event accuracy

Description

Task: *arg*.

The system is presently configured with time event supervision, and now an event could not be accurately activated.

Program ref. *arg*.

Recommended actions

Decrease the programmed speed or increase the distance between the programmed positions. Turn off this check by changing the system parameters.

50272, Motion configuration

Description

Failed to read *arg* data for *arg*.

Recommended actions

Check the configuration file.

Use correct parameters and reset the system.

Check both system parameters for the current instance and any instances below in the structure.

50273, Motion configuration

Description

Incorrect system parameter *arg* for *arg*. The system parameter could for instance be an unknown type or a numerical value that is out of range.

Recommended actions

Check the configuration file.

Use correct parameters and reset the system.

50274, Motion configuration

Description

Failed to read or create *arg* with the name: *arg*. If the current instance exists it is read, else it is created. In other words, the instance could not be read or created.

Recommended actions

Check the configuration file.

Use correct parameters and reset the system.

50275, Motion configuration

Description

Failed to read next *arg* name, previous name is *arg*. The previous instance is ok, but the next instance cannot be read. Check also the configuration error log for more details.

Recommended actions

Check the configuration file.

Use correct parameters and reset the system.

50276, Motion configuration

Description

Standard servo queue length (*arg*) out of range (min=1, max=*arg*).

Recommended actions

Check std_servo_queue_length in the configuration file.

Use correct parameters and reset the system.

50277, Motion configuration

Description

Number of joints (*arg*) in dynamic group override. Allowed number is *arg*.

Recommended actions

Check the configuration file.

Use correct parameters and reset the system.

Continues on next page

50278, Motion configuration**Description**

Failed to configure servo gun (*arg*).

Recommended actions

Check the servo gun data in the configuration file.

Use correct parameters and reset the system.

50279, Motion configuration**Description**

Servo tool change requires option Servo Tool Change.

Without this option, installation of this mechanical unit is not allowed.

Mechanical unit *arg* and *arg* have the same configured connection.

Recommended actions

Check the configuration file.

Use correct parameters and reset the system.

50280, System configuration**Description**

Mechanical unit *arg* is defined in more than one RAPID program.

Recommended actions

Check the configuration file.

Use correct parameters and reset the system.

50281, Process failed**Description**

Task: *arg*.

A process in the task *arg* has failed. This is caused by a failure of a process in this task or a synchronized task if MultiMove is used.

arg.

Recommended actions

Check other messages occurring at the same time for the reason.

Recovery: *arg*.

50282, Record not ready**Description**

Record not ready to activate.

Recommended actions

Make sure that record is finished before activating.

Check sensor_start_signal.

50283, Unknown record file name**Description**

Record file name: *arg* is unknown.

Recommended actions

Check file name or existence with file manager.

Record a new file.

50284, Cannot activate Mechanical Unit**Description**

The mechanical unit *arg* cannot be activated because it is not connected to a RAPID task.

Recommended actions

Check that the connection between mechanical unit and RAPID task is done correctly in the Controller topic.

50285, DitherAct not possible**Description**

Dithering is not possible to activate.

Recommended actions

Verify that a joint that can be used with DitherAct is chosen.

50286, Mix of coordinated frames**Description**

Task: *arg*.

More than one unit move frames, reason *arg*:

- 1 It is not allowed to have a chain of coordinated frames.
- 2 It is not allowed to exchange the unit that control the frame in a corner zone.

Program ref. *arg*.

Recommended actions

- 1 Rearrange the units so that all units, which perform coordinated movements, are following the same unit.
- 2 Insert a finepoint or a not coordinated movement between the two coordinated movements.

50287, Unit not stopped in a controlled position**Description**

The robot *arg* is semi coordinated to unit *arg* from another task and the unit has been moved or the regain to the path failed.

Consequences

Program run or restart will be interrupted.

Continues on next page

Continued

Recommended actions

Check all programs that the semi coordinated movement is separated with finepoints and WaitSyncTask instructions before and after the movement and that the unit is not moved between. Note that WaitSyncTask also is needed after the semi coordination before SyncMoveOn and SyncMoveResume. Check that the unit is moved to the wanted position before the semi coordinated movement. After SyncMoveOff, SyncMoveSuspend, ActUnit, DeactUnit or ClearPath the unit must be moved (with a new movement instruction) to a position to define the frame so the other task can read it. The position can be a new position, or the current position of the unit. Check if the program for the unit is active in the task selection panel.

50288, Sync ID mismatch

Description

The specified id number for the move instruction has to be equal for all cooperating program tasks.
Current id number mismatch *arg*, *arg*.

Recommended actions

Verify that the specified id numbers are equal and that all program pointers are synchronized before program start.

50289, Point type mismatch at sync

Description

The move instructions with syncid = *arg*, have a mix between finepoints and zonepoints.

Recommended actions

Make sure that the move instruction in all cooperating program tasks specifies the same kind of point type, either finepoints or zonepoints.

50290, Service unavailable

Description

Unable to obtain correct license.

Recommended actions

Please check the license settings.

50294, Transmission error of data

Description

Transmission of data between controller and robot memory has failed for mechanical unit *arg*.

Probable causes

Cable, or transmission electronics failed. Electrical interference high.

Recommended actions

- Restart try once more.
- Check cables.
- Check the SMB-board.
- Check the drive module.

50295, Motion data missing

Description

Data in robot and controller memory missing for mechanical unit *arg*.

Probable causes

Configuration file missing. New SMB-board together with new controller.

Recommended actions

- Load new configuration files.

50296, Robot memory data difference

Description

Data in robot memory is not same as in controller for mechanical unit *arg*.

Probable causes

Not the same data or serial number in robot and controller memory. Robot (SMB-board) or controller exchanged or system parameters changed.

Recommended actions

Check status via the FlexPendant and check if right system parameters (serial number) loaded in controller. Check that serial number belongs to the robot connected to the controller. If not, replace configuration files or manually transfer data from robot to controller memory if controller has been exchanged. If the serial measurement board is replaced with board from another robot (serial numbers not the same), clear first robot memory via the FlexPendant and then transfer data from controller to robot.

50297, Memory updated in robot

Description

Data for mechanical unit *arg* is moved from controller to robot memory.

Continues on next page

50298, Memory updated in controller**Description**

Data for mechanical unit *arg* is moved from robot to controller memory.

50299, Speed is reduced**Description**

Speed for unit *arg* is reduced due to limiting unit *arg*.

Task: *arg* Instruction line: *arg*.

Probable causes

Programmed speed too high on this unit or movement too long on limiting unit.

Recommended actions

Change path or programmed speed.

Set speed control off.

50300, Robot memory not used**Description**

Robot memory is not used for this mechanical unit.

Probable causes

Additional axes can't and should not use the robot memory.

50301, All robot data missing**Description**

All data is missing in robot memory at SMB-board *arg*, link *arg*, drive module *arg*.

Probable causes

An error in robot memory or communication has occurred. The data has been cleared.

Recommended actions

If proper data exists in controller - transfer the data to robot memory. If still problem - check communication cable to the SMB-board. Replace the SMB-board.

50302, Sensor data missing**Description**

No serial number is defined for mechanical unit *arg* in robot memory.

Probable causes

The robot memory has been cleared or new SMB-board has been installed.

Recommended actions

If proper data exists in controller - transfer the data to robot memory.

50303, Controller data missing**Description**

No serial number is defined for mechanical unit *arg* in controller.

Probable causes

The controller memory has been cleared or new controller has been installed.

Recommended actions

If proper data exists in robot memory - transfer the data to controller memory.

50305, Old SMB board used**Description**

Old SMB board used without data memory.

Recommended actions

Replace board with a new with data memory or set system parameter 'Use old SMB' in topic Motion and type Robot.

50306, Load identification error**Description**

Cannot perform load identification because configuration angle makes inertia matrix singular.

Recommended actions

- Move axis 6 on the robot about 30 degrees in any direction.

50307, Extended working range**Description**

The option Extended working range has been installed.

Make sure that the mechanical stop has been removed.

50308, In Position timeout**Description**

Task: *arg*.

Program ref. *arg*.

Condition for finepoint not fulfilled within *arg* seconds.

Recommended actions

Check tuning of additional axes, In Position Conditions (In Position Range, Zero Speed) and check if disturbance of resolver cables.

Continues on next page

50309, Absolute Accuracy error

Description

Data moved from robot to controller memory. Absolute Accuracy data not valid in robot memory. Absolute Accuracy cleared in controller for mechanical unit *arg*.

Recommended actions

Load new Absolute Accuracy data if data available.

50310, Independent joint not active

Description

Mechanical unit *arg* with independent joint is not active.

Recommended actions

Activate the mechanical unit before executing the independent joint instruction.

50311, Cannot activate Mechanical Unit in task

Description

The mechanical unit *arg* cannot be activated in specified task.

Recommended actions

Check the connection between mechanical unit and RAPID task in the configuration, topic Controller.

50312, Mechanical Unit already active in other task

Description

Cannot activate mechanical unit *arg*, since it is already active in another RAPID task.

50313, Independent move reset restarted

Description

Independent move reset was restarted for *arg*.

Consequences

Delayed completion.

Probable causes

During independent move reset, the target external axis position changed from *arg* mm to *arg* mm.

Recommended actions

Use a constant external axis position in robtargets that may run in parallel with independent move reset.

50314, Independent move outside reach

Description

Programmed independent move position for *arg* is outside reach. Programmed position = *arg* mm.

Recommended actions

Adjust independent move position.
Check working range of the servo tool.

50316, Absolute accuracy not activated

Description

Absolute accuracy function not activated for robot *arg*.

Consequences

Robot positioning will not be absolute accurate.

Recommended actions

Switch Absolute Accuracy on by changing Robot system parameter 'Use Robot Calibration' in topic Motion to *r#_calib*.
Verify status in jogging window.

50317, Disconnecting the drive module not allowed

Description

An attempt was made to disconnect drive module *arg*, which is not allowed.

Consequences

The system goes to state Motors Off, and then disconnects the drive module.

Probable causes

Disconnecting the drive module is only allowed in Motors Off state.

Recommended actions

Make sure that the system is in Motors Off state before disconnecting the drive module.

50318, Reconnecting the drive module not allowed

Description

The drive module should not be reconnected since the system is not in the state Motors Off.

Consequences

An attempt was made to reconnect drive module *arg*, which is not allowed.

Probable causes

Reconnecting the drive module is only allowed in Motors Off state.

Recommended actions

Make sure that the system is in Motors Off state before reconnecting the drive module.

50319, Cannot activate Mechanical Unit**Description**

An attempt was made to activate mechanical unit *arg*, which failed.

Consequences

The mechanical unit remains deactivated.

Probable causes

The mechanical unit is connected to the drive module *arg* which is disconnected.

Recommended actions

- 1 Reconnect the drive module.
- 2 Retry to activate the mechanical unit.

50320, Drive Module has been disconnected**Description**

Drive module *arg* has been disconnected.

Consequences

No mechanical units connected to the drive module may be operated.

50321, Drive Module has been reconnected**Description**

Drive module *arg* has been reconnected after being disconnected.

Consequences

All mechanical units connected to drive module *arg* may be operated.

50322, Mechanical Unit not connected to Motion task**Description**

Cannot activate mechanical unit *arg*, since it is not connected to any motion task.

Recommended actions

Check the connection between mechanical unit and RAPID task in the configuration, topic Controller.

50323, Failed to read force sensor**Description**

Failed to return calibrated force sensor reading.

Probable causes

Force control system not calibrated.

Recommended actions

Use the instruction FCCalib before using this instruction.

50324, Force control calibration failed**Description**

Failed to calibrate the force control system.

Probable causes

The system is not in position control.

Recommended actions

Make sure the robot is in position control mode before using the FCCalib instruction.

50325, Failed to activate force control**Description**

Activation of force control failed.

Probable causes

The system is either not calibrated or we are already in force control. Another reason for this could be incorrect arguments.

Recommended actions

Only use the FCAct or FCPress1LStart instruction when the force control system is calibrated and we are in position control. Check all arguments to the activation instruction.

50326, Failed to deactivate force control**Description**

Failed to return to position control.

Probable causes

Cannot set position control if the robot is moving due to external forces or ordered references.

Recommended actions

Stop any active references and remove any external forces and try again.

50327, Failed to start references**Description**

Failed to start the user specified references.

Continues on next page

Continued

Probable causes

Only allowed to start references when in force control.

Recommended actions

Must activate force control before trying to start references.

50328, Parameter error in FCRefSprForce or FCRefSprTorque

Description

Error in parameter 'Stiffness' in instruction FCRefSprForce or FCRefSprTorque.

Recommended actions

Change the parameter 'Stiffness' in instruction FCRefSprForce or FCRefSprTorque to a value larger than zero.

50329, Parameter error in FCRefSprForce

Description

Error in parameter 'MaxForce' in instruction FCRefSprForce.

Recommended actions

Change the parameter 'MaxForce' in instruction FCRefSprForce to a value larger than zero.

50330, Parameter error in FCRefSprTorque

Description

Error in parameter 'MaxTorque' in instruction FCRefSprTorque.

Recommended actions

Change the parameter 'MaxTorque' in instruction FCRefSprTorque to a value larger than zero.

50333, Error FCRefLine, FCRefRot or FCRefCircle

Description

The parameter 'Distance' in instruction FCRefLine or instruction FCRefRot and the parameters Radius and Speed in instruction FCRefCircle have to be larger than zero.

Recommended actions

Change the parameters above according to the manual.

50335, Parameter error in FCRefSpiral

Description

Not allowed parameter value used in function FCRefSpiral.

Probable causes

Error in parameter values of function FCRefSpiral.

Recommended actions

Modify the parameter values in function FCRefSpiral.

Continues on next page

50336, Parameter error in FCGetProcessData

Description

Failed to retrieve process information.

Probable causes

Using the optional argument 'DataAtTrigTime' in instruction FCGetProcessData. If no trig has occurred this error is reported.

Recommended actions

Remove the optional argument.

50337, Force sensor not setup

Description

Error in the force sensor parameters.

Recommended actions

Check the force sensor system parameters. In a MultiMove system, check that the system parameters 'Use PMC Sensor' and 'Use FC Master' in topic Motion and type Robot have been set correctly.

50338, Parameter error in FCCondAdvanced

Description

Error in parameter 'LogicCond' in instruction FCCondAdvanced.

Recommended actions

Modify the parameter 'LogicCond' in instruction FCCondAdvanced.

50339, Parameter error in FCCondTime

Description

Error in parameter 'Time' in instruction FCCondTime.

Recommended actions

Change the parameter 'Time' in instruction FCCondTime to a value larger than zero.

50340, Error in force control box definition

Description

An error in the parameter 'Box' in either FCCondPos or FCSupvPos.

Recommended actions

Change the parameter 'Box' in either FCCondPos or FCSupvPos.

50341, Error in force control cylinder definition**Description**

An error in the parameter 'Cylinder' in either FCCondPos or FCSupvPos.

Recommended actions

Change the parameter 'Cylinder' in either FCCondPos or FCSupvPos.

Consequences

The robot will stop.

Recommended actions

Deactivate force control.

Modify the supervision or the program.

50342, Error in force control sphere definition**Description**

An error in the parameter 'Sphere' in either FCCondPos or FCSupvPos.

Recommended actions

Change the parameter 'Sphere' in either FCCondPos or FCSupvPos.

50343, Error in force control cone definition**Description**

An error in the parameters for either FCCondOrient or FCSupvOrient.

Recommended actions

Change the parameters in either FCCondOrient or FCSupvOrient.

50344, Joints outside limits in force control**Description**

One or more joints are outside their working range in force control.

Recommended actions

Modify the program to avoid the physical joint limits.

50345, Force control supervision error**Description**

The user specified supervision has triggered. The type is *arg*.

Types:

- 1 TCP position.
- 2 Tool orientation.
- 3 TCP speed.
- 4 Reorientation speed.
- 5 Force.
- 6 Torque.
- 7 Teach TCP speed.
- 8 Teach Reorientation speed.

50346, Motor temperature error**Description**

Motor temperature for joint *arg* is too high.

Consequences

It is not possible to continue until the motor has cooled down.

50348, Log signal definition failed**Description**

Definition of a signal failed for *arg*, axis *arg*.

Probable causes

No free log channel available.

Recommended actions

- Log less signals.
- Turn off other log clients as RobotStudio, FlexPendant or TuneMaster.
- 'Disconnect log client' in TuneMaster 'Tools'.
- Restart the controller.

50349, Same synchronization ID**Description**

Two consecutive synchronized move instructions in *arg* have the same synchronization ID value *arg*.

Consequences

If the ID value is repeated for more than one move instruction it can be very difficult to keep track of which move instructions are synchronized. This can, for example, cause problems when modifying positions.

Recommended actions

Change the synchronized move instruction *arg* in *arg* so that it has a unique synchronization ID value.

50350, Software Equalizing Not Allowed**Description**

It is not possible to run Software Equalizing since Independent Move is active.

Continues on next page

Continued

Recommended actions

Make sure independent move is not active when executing a Software Equalizing servo spot.

50351, Independent Move not allowed

Description

It is not possible to execute an Independent Move when Software Equalizing is active.

Recommended actions

Make sure Software Equalizing is off when executing an Independent Gun Move.

50352, Number of move instruction mismatch

Description

Using the path recorder within synchronized motion requires:
That Tool offset must be present for all or none cooperating program tasks.
That all cooperating program tasks move backwards/forwards the same number of move instructions.

Recommended actions

Verify that the all tasks or none of the tasks use the optional argument Tool Offset.
Verify that the path recorder identifier moving towards are at the same position in all tasks within the synchronized block.

50353, Failed to read data from encoder card

Description

The system has failed to read data from one encoder card.

Consequences

The tracking accuracy during acceleration and deceleration might be reduced.

Probable causes

Wrong unit name has probably been specified in the process parameter for *arg*.

Recommended actions

- 1 Check that the correct unit name is specified in the process parameter I/O unit name for .

50354, Ordered force reference is too large

Description

The ordered force reference is larger than the configured maximum value.

Consequences

The ordered force reference has been reduced to the configured value.

Recommended actions

To allow a larger reference force the system parameters need to be updated. Note that there is an absolute limit of force reference size that depends on the robot type.

50355, Ordered torque reference is too large

Description

The ordered torque reference is larger than the configured maximum value.

Consequences

The ordered torque has been reduced to the configured maximum value.

Recommended actions

To allow a larger reference torque the system parameters need to be updated.

50356, Ordered MaxForce is too large

Description

The parameter 'MaxForce' in instruction FCRefSprForce is larger than the configured maximum value.

Consequences

The parameter 'MaxForce' has been reduced to the configured maximum value.

Recommended actions

To allow a larger value the system parameters need to be updated.

50357, Ordered MaxTorque is too large

Description

The parameter 'MaxTorque' in instruction FCRefSprTorque is larger than the configured maximum value.

Consequences

The parameter 'MaxTorque' has been reduced to the configured maximum value.

Recommended actions

To allow a larger value the system parameters need to be updated.

Continues on next page

50358, Close to singularity when in force control**Description**

Close to singularity when in force control mode for robot *arg*.

Recommended actions

Modify path away from the singularity or change to joint interpolation.

50359, Path Recorder on StorePath level not allowed**Description**

The path recorder can only be used on base path level. The path recorder has been stopped.

Recommended actions

Stop path recorder before StorePath, restart it after RestoPath.

50361, Brake release error**Description**

Too large position error of joint *arg* after brake release.

Probable causes

The joint has for example collided or been blocked just before the error occurred.

Recommended actions

- 1 Try a few more times.
- 2 Check cables and hardware.
- 3 Check tuning if error on additional axis.

50362, Brake release time out**Description**

Joint *arg* was not in position after max time for brake release.

Recommended actions

Try once more. Check cables. Check hardware. Check tuning if error on additional axis.

50363, SyncMoveOn failed**Description**

Starting synchronized movements failed due to an internal error.

Consequences

It is not possible to restart the programs from the current position.

Recommended actions

Move the program pointers and try again.

50364, Axis in current vector mode**Description**

Joint *arg* is configured in *arg* data as a current vector axis. Drive system will be disconnected for this axis during normal operation.

Recommended actions

Run service routine to activate the current vector.

Set system parameter 'Current Vector On' in topic Motion and type Drive System to No, for normal operation.

50366, Reference Error**Description**

An error has occurred in the reference calculation in motion planner *arg*. Internal status *arg*.

Consequences

The controller goes to Motors Off state.

Recommended actions

Check the error logs for previous errors that could be causing this problem.

Try to restart the program possibly after moving the program pointer.

Restart the controller.

50368, Too Short distance between equidistant events**Description**

The events are too close together. End of internal resources (events).

Task: *arg*.

Program ref. *arg*.

Recommended actions

Increase the distance between equidistant events or use intermediate positions to decrease segment length.

50369, Calibration using stored offset failed**Description**

Failed to calibrate the sensor using stored offset.

Consequences

The force control system is not calibrated. It is not possible to activate force control.

Probable causes

Calibration using stored offset is only possible if a normal calibration has been performed earlier.

Continues on next page

50370, Transfer of data to robot memory failed

Description

Transfer of data from controller to robot memory not allowed or interrupted for mechanical unit *arg* due to disconnect of SMB.

Probable causes

SMB was disconnected before or during calibration or manual move of data to robot memory.

Recommended actions

Retry to calibrate or manually move data from controller to robot memory when SMB is reconnected.

50371, The programmed speed is too high

Description

The speed change functionality is only allowed for low programmed speed.

Probable causes

The programmed speed is too high.

Recommended actions

Lower the programmed speed or modify the system parameters.

50372, Contact force too high

Description

The contact force is too high during the recover phase.

Probable causes

The programmed path in the recover function causes too high contact forces.

Recommended actions

Check and modify the recover function or allow higher contact force.

50373, Too high Event Preset Time

Description

The configured Event Preset Time is too high. The maximum value is *arg*.

Consequences

The Event Preset Time is reduced to the maximum value.

Probable causes

This error can occur for robots with a low 'Dynamic Resolution' and a high 'Event Preset Time'. The reason is a computer memory limitation.

Recommended actions

Reduce the system parameter 'Event Preset Time' in topic Motion and type Motion Planner to a value no higher than *arg*.

Continues on next page

50374, FC SpeedChange program stop error

Description

FC SpeedChange cannot stop robot at recover state.

Recommended actions

Move program pointer, jog robot away from current position and restart the program.

50375, Dynamic load too high

Description

Required torque for robot *arg* axis *arg* too high.

Recommended actions

If weaving one of these actions may help:

- Reduce weave frequency or weave amplitude for this movement.
- Reduce process speed.
- Check load data.
- Increase zone size if small zones are used.
- Increase distance between programmed points if they are close.

If Conveyor Tracking: Reduce conveyor speed.

50376, Geometric interpolation failed

Description

Task. *arg*.

Failed to interpolate the desired geometry.

Program ref. *arg*.

(Internal status: *arg*).

Recommended actions

Increase the zone size, move the programmed point, change tool orientation or change interpolation method.

50377, Only allowed in position control

Description

The instruction is only allowed when the robot is in position control mode.

Probable causes

The error depends on calling an instruction that is only allowed to be used in position control while in force control mode.

Recommended actions

Call the instruction only when the robot is in position control mode.

50378, Error in FCSetMaxForceChangeTune**Description**

Incorrect value of the parameter 'ForceChange' in instruction FCSetMaxForceChangeTune.

Consequences

The program will stop.

Probable causes

The parameter must be set larger than zero and less than the configured value.

Recommended actions

Change the parameter value.

Recommended actions

Try to restart the program.

50383, Cartesian Soft Servo configuration error**Description**

Some system parameters for Cartesian Soft Servo is not valid.

Consequences

The system will not start.

Probable causes

Some system parameters has been set to a value that is not allowed.

Recommended actions

Verify that any modified parameter are within allowed limits.

50379, Active mechanical units have changed**Description**

When calling RestoPath all mechanical units have to be in the same active state as when StorePath was called.

Recommended actions

Make sure that all mechanical units that were active when calling StorePath still are and that no other mechanical unit is active when calling RestoPath.

50384, Cartesian Soft Servo quaternions invalid**Description**

The quaternions of the tool, workobject or the argument RefOrient in the CSSAct instruction are invalid.

Consequences

Cartesian Soft Servo will not activate.

Recommended actions

Check the quaternions of the tool, workobject or the argument RefOrient in the CSSAct instruction.

50380, Checksum error**Description**

Data in robot memory for mechanical unit *arg* has erroneous checksum.

Probable causes

New SMB-board. System shut down before data save finished.

Recommended actions

- Load new configuration files.

50385, Cartesian Soft Servo activation failed**Description**

The instruction CSSAct failed.

Probable causes

Cartesian Soft Servo already active.

Recommended actions

Cartesian Soft Servo needs to be deactivated before it can be activated.

50381, Speed too low**Description**

Task. *arg*.

The speed is too low (numerical resolution).

Program ref. *arg*.

Recommended actions

Increase the programmed speed.

Check also the other synchronized tasks in a MultiMove application.

50386, Cartesian Soft Servo offset activation failed**Description**

The instruction CSSForceOffsetAct failed.

Consequences

Force offset was not activated.

Probable causes

CSSForceOffsetAct instruction is only allowed when Cartesian Soft Servo is active.

50382, Weave pattern error**Description**

Calculation of weave pattern has failed due to an internal error.

Continues on next page

Continued

Recommended actions

Activate Cartesian Soft Servo with the instruction CSSAct before using the instruction CSSForceOffsetAct .

50387, Cartesian Soft Servo close to unstable

Description

Cartesian Soft Servo is close to unstable.

Consequences

The robot is halted as a security measure.

Probable causes

The system damping is too low.

Recommended actions

The damping is calculated from a ratio of stiffness.

Change the value of 'Stiffness' or 'StiffnessNonSoftDir' in the CSSAct instruction. If that does not help increase the value of the system parameter 'Damping stability limit' or change the parameter 'Stiffness to damping ratio' in topic Motion and type CSS.

50388, Cartesian Soft Servo position supervision error

Description

The user defined position supervision in Cartesian Soft Servo mode triggered.

Consequences

The robot halts.

Probable causes

The position error is larger than the allowed range specified in the configuration.

Recommended actions

Increase the allowed position error in the configuration or modify the program.

50389, Cartesian Soft Servo singularity

Description

The robot is too close to singularity which effects the Cartesian Soft Servo behavior.

Consequences

The robot behavior will be different from specified.

Recommended actions

Modify the program to avoid the singularity.

50390, Cartesian Soft Servo speed supervision

Description

The user defined speed supervision in Cartesian Soft Servo mode triggered.

Consequences

The robot halts.

Probable causes

The speed error is larger than the allowed range specified in the configuration.

Recommended actions

Increase the allowed speed error in the configuration or modify the program.

50391, Cartesian Soft Servo movement not allowed

Description

Jogging or a programmed movement has been detected.

Consequences

The ordered movement is ignored.

Recommended actions

Movement during Cartesian Soft Servo is only allowed if the switch AllowMove has been used in the CSSAct instruction.

50392, SafeMove communication error

Description

Communication with the SafeMove controller on drive module *arg* has failed.

Consequences

Brake tests cannot be done.

Recommended actions

Check if the SafeMove hardware is connected.

50393, Force offset applied in non-soft direction

Description

The force-offset direction in CSSForceOffsetAct is not the same as the soft direction specified by CSSAct.

Consequences

The robot will not become easier to push in the soft direction. There can also be position deviations from the programmed path in the non-soft directions.

Recommended actions

Make sure the direction given in CSSForceOffsetAct is compatible with the direction given in CSSAct.

Continues on next page

50394, The Path for the Unit is cleared**Description**

The robot *arg* is semi coordinated to unit *arg* from another task and the path for the unit has been cleared.

This can happen after a modpos, SyncMoveOff, SyncMoveSuspend, ActUnit, DeactUnit, ClearPath or if the unit has no move instruction with a well-defined position before starting the semi coordinated movement.

The position of unit *arg* cannot be read from other tasks.

Consequences

Program run or restart will be interrupted.

Recommended actions

- 1 If the programmed position of the unit is moved by modpos when the robot is semi coordinated to the unit, then step the unit to the new position to define the path and move the program pointer in the robot program to be able to restart the program.
- 2 Make sure that the unit has a move instruction with a finepoint to a well-defined position and that all programs has a WaitSyncTask before and after the semi coordinated movement.
- 3 Make sure that the unit is not moved during the semi coordinated movement. Note that WaitSyncTask also is needed after the semi coordination, before SyncMoveOn and SyncMoveResume.

50396, Default FC force supervision error**Description**

The default force supervision has triggered because the programmed or measured external forces are larger than the safety limit for the robot type.

Consequences

The robot will stop.

Recommended actions

Modify the program to decrease the total external force acting on the robot.

50397, Path frame rotation speed error**Description**

The rotation speed of the path frame is too high when using FC Machining with ForceFrameRef set to FC_REFFRAME_PATH.

Consequences

The robot will stop.

Recommended actions

Reduce programmed speed, increase corner zones, or decrease the distance between the programmed path and the surface.

50400, Motion configuration error**Description**

The parameter 'Disconnect at Deactivate' for measurement channel was inconsistent for measurement link *arg*. All channels on the same link have to have the same setting for this parameter.

Recommended actions

Check the configuration file.

Use correct parameters and reset the system.

50401, Startup synchronization failed**Description**

The system relay '*arg*' is defined but no response was received during the startup (waited for *arg* minutes).

Recommended actions

Make sure that the 'Input signal' of the relay is configured and connected and startup all synchronized systems simultaneously.

50402, Correction is not ended in a finepoint**Description**

Task: *arg*.

The last move instruction with correction specified has to be a finepoint.

Program ref. *arg*.

Recommended actions

Change the zone parameter to fine.

50404, Additional axis movement during Wrist Interpolation**Description**

Task: *arg*.

Program ref. *arg*.

An additional axis is programmed to move during wrist interpolation.

Consequences

The task execution will stop.

Recommended actions

Make sure that no additional axis is programmed to move while doing wrist interpolation.

Continues on next page

Continued

50405, Coordinated movement during Wrist Interpolation

Description

Task: *arg*.

Program ref. *arg*.

Attempt to do wrist interpolation against a moving frame.

Consequences

The task execution will stop.

Recommended actions

Remove movement coordination while doing the wrist interpolation.

50406, Wrist Interpolation point not on circle plane

Description

Task: *arg*.

Program ref. *arg*.

The target *arg* is not on the circle plane. The deviation is *arg* mm.

p1 = starting point

p2 = circle point

p3 = end point.

Consequences

For a cutting process, the cut hole will not be circular.

Recommended actions

If a circular arc is intended, then change the corresponding target so that it is on the circle plane.

50407, Wrist axis locked

Description

Task: *arg*.

Program ref. *arg*.

Cannot do wrist interpolation using *arg* because axis *arg* is locked.

Consequences

The task execution will stop.

Recommended actions

Change to another wrist axis combination that does not involve the locked axis. Note that the robot must have at least two movable wrist axes to do wrist interpolation.

50408, Wrist joint limit

Description

Task: *arg*.

Continues on next page

Program ref. *arg*.

Cannot do wrist interpolation because robot axis *arg* will violate a joint limit.

Consequences

The task execution will stop.

Recommended actions

Choose another robot configuration or another wrist axis combination.

50409, Wrist Interpolation not possible

Description

Task: *arg*.

Program ref. *arg*.

The programmed wrist interpolation is not kinematically possible using *arg*.

Consequences

The task execution will stop.

Recommended actions

Choose another robot configuration or another wrist axis combination. Possible wrist axis combinations are: Wrist45, Wrist46, and Wrist56.

50410, Collinear targets in wrong order

Description

Task: *arg*.

Program ref. *arg*.

The programmed targets are collinear, but the end point is between the start point and the circle point.

Consequences

The task execution will stop.

Recommended actions

If a straight line is intended, then let the circle point and the end point swap places with each other.

50411, Maximum allowed programmed TCP load exceeded

Description

The currently defined TCP load for robot *arg* exceeds the maximum allowed load for the robot variant.

Consequences

The robot will stop.

Probable causes

The combination of the current tool load *arg*, payload *arg* and the additional arm loads

arg, *arg*

exceeds the maximum load allowed for the robot variant.

Recommended actions

Make sure that the total TCP load is inside the load diagram for the robot.

50412, Error in speed change tuning instruction

Description

The speed change tuning instruction resulted in an error.

Consequences

The robot will stop.

Probable causes

The speed change tuning instruction was not allowed, or the parameters given were invalid.

Recommended actions

Check the values for the parameter and tuning type, and make sure the correct force control option is installed and configured correctly.

50413, Bleeder resistor overload error

Description

In drive module *arg*, the bleeder resistor connected to the rectifier unit at drive unit position *arg* was overloaded.

Consequences

No operation will be possible until the bleeder resistor has cooled down. The system goes to Motors Off state.

Probable causes

- 1 The user program may contain too much deceleration of the manipulator's axes. This fault is more likely if the system contains additional axes.
- 2 The bleeder resistor has wrong resistance.
- 3 Short circuit in motor cable between phase to phase or phase to ground.

Recommended actions

- 1 Rewrite the user program to reduce the amount of high decelerations.
- 2 Disconnect the bleeder and check the cable and measure the bleeder resistance. The expected resistance should be approximately ohms.
- 3 Verify that the motor cables has no short circuits internally or to ground.

50414, Bleeder resistor overload

Description

In drive module *arg*, the bleeder resistor connected to the rectifier unit at drive unit position *arg* is close to overload.

Consequences

Operation will be possible but system is close to a stopping error.

Probable causes

- 1 The user program may contain too much deceleration of the manipulator's axes. This fault is more likely if the system contains additional axes.
- 2 The bleeder resistor has wrong resistance.
- 3 Short circuit in motor cable between phase to phase or phase to ground.

Recommended actions

- 1 Rewrite the user program to reduce the amount of high decelerations.
- 2 Disconnect the bleeder and check the cable and measure the bleeder resistance. The expected resistance should be approximately ohms.
- 3 Verify that the motor cables has no short circuits internally or to ground.

50415, Motor temperature error

Description

Motor temperature for joint *arg* is too high.

Consequences

It is not possible to continue until the motor has cooled down. The system goes to Motors Off state.

Probable causes

The user program may contain too much high acceleration and deceleration of the joint. Gravity torque or external forces for the joint can also be too high.

Recommended actions

Rewrite the user program to reduce the motor utilization.

If error occurs in spite of cold motor due to extra cooling or low ambient temperature, the sensitivity of the thermal supervision can be reduced. Decrease the system parameter 'Thermal Supervision Sensitivity Ratio' in topic Motion and type Arm in steps of 0.1.

WARNING! : With too low value the supervision is deactivated and the motor can be overheated and destroyed!

Continues on next page

50416, Motor temperature close to maximum

Description

The motor temperature for joint *arg* is close to maximum value.

Consequences

It is possible to continue but the margin to maximum allowed temperature is too low to sustain long term operation.

Probable causes

The user program may contain too much high acceleration and high deceleration of the joint. The gravity torque or external forces for the joint can also be too high.

Recommended actions

Rewrite the user program to reduce the motor utilization.

50417, Drive unit overload error

Description

The drive unit for joint *arg* has reached a too high temperature level. The joint is connected to drive module *arg* with the drive unit at unit position *arg* and node *arg*.

Consequences

No operation will be possible until the drive has cooled down. The system goes to Motors Off state.

Probable causes

- 1 The joint may be running with a too high torque for extended periods of time.
- 2 Short circuit in the manipulator using long motor cables.

Recommended actions

- 1 If possible, rewrite the user program to reduce the amount of high acceleration and high deceleration.
- 2 Reduce the static torque due to gravity or external forces.
- 3 Check for short circuit in the motor cable or in the motor.
- 4 Check for other hardware event logs.

50418, Drive unit overload

Description

The drive unit for joint *arg*, connected to drive module *arg* with the drive unit at unit position *arg* and node *arg* is approaching a too high temperature level.

Consequences

It is possible to continue but margin to max temperature is too low for long term operation.

Probable causes

- 1 The joint may be running with a too high torque for extended periods of time.
- 2 Short circuit in the manipulator using long motor cables.

Continues on next page

Recommended actions

- 1 If possible, rewrite the user program to reduce the amount of high acceleration and high deceleration.
- 2 Reduce the static torque due to gravity or external forces.
- 3 Check for short circuit in the motor cable or in the motor.
- 4 Check for other hardware event logs.

50419, Common base_frame error

Description

Task: *arg*.

The Base Frame is moved by another task than the robot and could not be solved, reason *arg*:

- 1 SingArea\Wrist not supported with MoveC.
- 2 The Base Frame must be moved by first synchronized motion_group.
- 3 Only one common Base Frame can be handled.
- 4 Absolute Accuracy not supported with MoveC.
- 5 The common Base Frame can only be solved in synchronized move.

Program ref. *arg*.

Recommended actions

- 1 Use SingArea\Off. The CirPathMode can also be used.
- 2 Check Controller and Motion configuration.
- 3 Use MoveL or remove Absolute Accuracy.
- 4 Use MoveAbsJ.

50420, IndCnv Mechanical Unit Error

Description

The mechanical unit *arg* is not correctly configured for IndCnv functionality.

Consequences

Program execution is stopped.

Probable causes

The mechanical unit *arg* consists of more than one single.

The single connected to *arg* is not of type 'FREE_ROT'.

The single connected to *arg* is not defined as an Indexing Move single.

Recommended actions

Make sure mechanical unit *arg* consists of only one single.

Make sure system parameter 'Mechanics' in topic Motion and type Single is of type 'FREE_ROT'.

Make sure system parameter 'Indexing Move' in topic Motion and type Single Type is 'Yes'.

50421, IndCnv Tracking Single Error**Description**

The single *arg* is not configured as an Indexing Move single

Consequences

Program execution is stopped.

Recommended actions

Make sure system parameter 'Single To Track' in topic Process and type Can Interface refers to a Single with 'Indexing Move' in topic Motion and type Single Type set to 'Yes'.

50422, IndCnv and Independent joint error**Description**

Independent joint instructions are not allowed when single *arg* is in indexing mode.

Consequences

Program execution is stopped.

Recommended actions

Execute the RAPID instruction IndCnvReset before using the axis as an independent joint.

50423, IndCnv Time before indexing move too low**Description**

The time between trig signal and start of indexing movement is configured too low.

Consequences

The program execution is stopped.

Recommended actions

Increase system parameter 'Time before indexing move' in topic Motion and type Single Type to at least *arg* (ms).
Remove or decrease robot acceleration limitations if possible.
Please consult the Conveyor Tracking application manual for further actions.

50425, Friction FFW parameter is not On**Description**

Tuning friction parameters requires 'Friction FFW On' to be set to 'Yes'.

Consequences

Friction tuning for joint *arg* will have no effect.

Recommended actions

Set system parameter 'Friction FFW On' to 'Yes' for joint *arg* in type *arg* and topic Motion.

50426, Out of interpolation objects**Description**

The maximum number of available interpolation objects has been reached. This can occur if the dynamic performance is set to a very low value for example by use of the AccSet or PathAccLim command.

Consequences

The program execution is stopped and the system goes to Motors Off state.

Recommended actions

Increase the number of objects by increasing the value of the 'Use Additional Interp. Object Batch' system parameter by 1, in the corresponding instance of type Motion Planner in topic Motion.

50427, Joint not synchronized after calibration**Description**

After fine calibration of joint *arg* which is using alternative calibration position, the joint has not been moved to normal synchronize position for updating the revolution counter.

Consequences

The system will unsynchronize the joint next time the system makes a restart or power up.

Recommended actions

Clear the revolution counter in normal position for clearing revolution counter.

50429, CSS parameter damping obsolete**Description**

The CSS parameters regarding damping is obsolete. The damping is now in all directions set by the stiffness to damping ratio. To change the behavior of the non soft directions, use the parameters 'Stiffness in non soft dir'.

Recommended actions

Change the damping parameters to 'Stiffness in non soft dir' according to description in the manual.

50430, Underrun in the axis computer**Description**

The axis computer in drive module *arg* has detected underrun of data from the main computer and therefore stopped the execution.

Continues on next page

Continued

Consequences

The system goes to SYS HALT.

Probable causes

- There is a communication error/glitch between the main computer and the axis computer.
- A previous error has put the system in a high CPU load state.
- High CPU load in the main computer, for example generated by too frequent I/O communication.

Recommended actions

- Check for other error logs.
- Check the Ethernet cabling and connector on both the main computer and the axis computer.
- Reduce load on the main computer.

50431, Predicted Collision

Description

Predicted a collision between objects 'arg' and 'arg'.

Consequences

The robots stop immediately.

Probable causes

RobotWare has predicted that one or more robots are about to collide.

Recommended actions

- Jog the robot in another direction if the problem occurred during jogging.
- Change the robot program to increase the clearance between the involved objects.
- Decrease the safety distance for the involved objects (in the Collision Avoidance configuration file).

If you are sure that the involved objects are not about to collide, then try the following:

- Check that the Collision Avoidance configuration for the involved objects is correct.
- Check that the base-frame definition of the involved robots are correct.
- Turn off Collision Avoidance.

50432, Identical Base Frames

Description

The mechanical units *arg* and *arg* have identical base frames.

Consequences

Since the base frames are identical, Collision Avoidance can only check for robot self-collisions. Hence, collision checks between robots and between robot and environment will not be done.

Continues on next page

Probable causes

The base frames are not properly defined.

Recommended actions

Define the base frames, for example using the base-frame calibration routine.

50433, Position changed to inside working area

Description

The joint *arg* is outside its normal working area when an Independent Reset instruction is executed.

Consequences

The position is moved to inside the normal working area.

Probable causes

The joint has been moved too far away in independent mode. The configured normal working area is too small.

Recommended actions

To avoid this event message - move the joint back to inside its normal working area before the instruction IndReset executed or PP to Main is done.

Increase the normal working area.

50434, Position changed to inside working area

Description

The joint *arg* is outside its normal working area when an Independent Reset instruction is executed with argument Old.

Consequences

The position is moved to inside the normal working area.

Probable causes

The joint has been moved too far away in independent mode before IndReset Old.

The configured normal working area is too small.

Recommended actions

To avoid this event message - move the joint back to inside its normal working area before the instruction IndReset Old executed or PP to Main is done.

Increase the normal working area.

50435, Inconsistent system parameter

Description

The joint *arg* has an inconsistent value in the system parameter 'arg' in instance *arg*.

Consequences

System cannot start up.

Probable causes

Two or more joints has different values on same system parameter.

Recommended actions

Set the same value/name on the parameter for all joints that are pointing to the same instance or hardware.

50436, Robot configuration error**Description**

It is not possible to reach the programmed position with given robot configuration.

Task: *arg*.

Program ref. *arg*.

Probable causes

The programmed position is such that the robot cannot reach the given robot configuration or must pass through a singular point to reach the position.

Recommended actions

Step through the program in manual mode and modify the faulty points. Note that it is possible to continue in manual mode as only first try is stopped. The movement can also be changed by use of SingArea\Wrist, ConfL\Off or be replaced by MoveJ.

50437, Follower axis is connected to wrong Motion Planner**Description**

The follower axis *arg* is connected to a motion planner with a lower number than its corresponding master axis *arg*.

Consequences

The performance of the Electronically Linked Motors will be decreased compared to the normal setup.

Recommended actions

Change the Motion configuration in such a way that the follower axis *arg* is in the same motion planner or in a motion planner with a higher number than the master axis *arg*.

50438, Motor off sequence has timed out**Description**

The mechanical unit *arg* has not been able to finish the motor off sequence during configured time.

Consequences

The brake sequence can be ended before the axes standing still.

Recommended actions

- 1 If the time to brake axis is longer than the default value of 5 seconds, increase the value by setting the system parameter 'Max Brake Time' in topic Motion and type Brake to a higher value.
- 2 Restart the controller.
- 3 Try again.

50439, Soft servo activation failure**Description**

The joint *arg* has not been able to set to soft servo mode. The reason for this is that the axis has reached its maximum torque level a short time before or during activation.

Consequences

The system makes an emergency stop and the soft activation command is canceled.

Recommended actions

Find the reason for the high torque.

- Check if any collision has occurred.
- Check load data.
- Reduce acceleration or speed to reduce speed.
- Check hardware.
- Move the program pointer and restart.

50440, Correction generator lost**Description**

Correction generator has been removed.

Probable causes

Instruction CorrDiscon or CorrClear during robot movement.

Recommended actions

Wait until robot reach finepoint or start movement without \Corr.

50441, Low voltage on battery inputs**Description**

The serial measurement board on drive module *arg*, link *arg* and board number *arg* indicates low voltage. If main power is switched off the revolution counters will be lost.

Battery voltage: *arg* V.

External voltage: *arg* V.

Probable causes

The battery is not connected or discharged. If external power supply is used, too low voltage is present.

Recommended actions

- Replace battery.

Continues on next page

Continued

- If external power supply is used - check cables and the power source.

50442, Robot axis configuration error

Description

It is not possible to reach the programmed position with given robot configuration.

Task: *arg*.

Program ref. *arg*.

Robot: *arg*.

Axis: *arg*.

Probable causes

The programmed position is such that at least one robot axis cannot move from the current position to the given robot configuration or must pass through a singular point to reach the position.

Recommended actions

Step through the program in manual mode and modify the faulty points. Note that it is possible to continue in manual mode as only first try is stopped. The movement can also be changed by use of SingArea\Wrist, ConfL\Off or be replaced by MoveJ.

50443, Lack of Internal Event Objects

Description

Too few internal event objects were allocated to execute the instruction.

Consequences

The movement of all mechanical units was halted immediately.

Probable causes

Not enough event objects were allocated.

Recommended actions

Allocate more event objects by increasing the system parameters 'Number of Internal Event Objects' in topic Motion and type Motion Planner and restart the controller.

50444, Manipulator supervision

Description

Loose arm detection triggered for axis *arg* on mechanical unit *arg*.

Consequences

The movement of mechanical unit *arg* is halted immediately. It then returns to a position on the path on which it was running. There, it will remain in Motors On state, awaiting a start request.

Probable causes

Triggering of the manipulator supervision may be caused by a detection of loose arm, collision, incorrect load definition or forces in external process.

Recommended actions

- 1 If any of the parallel arms has come loose reattach them if possible, then acknowledge the fault, and resume operation by pressing the Start button on the FlexPendant.
- 2 If possible, acknowledge the fault, and resume operation by pressing the Start button on the FlexPendant.
- 3 Make sure any loads are defined and identified correctly.
- 4 If the mechanical unit is exposed to forces from the external processes, use RAPID command or system parameters to raise the supervision level.

50445, Sync on/off not allowed while External Motion Interface is active

Description

Switching synchronized motion on or off while External Motion Interface is activated is not allowed.

Consequences

The program execution is stopped, and the system goes to Motors Off state.

Probable causes

SyncMoveOn or SyncMoveOff was executed while External Motion Interface was active.

Recommended actions

SyncMoveOn and SyncMoveOff are not allowed to be executed while External Motion Interface is active. Check the application that is utilizing the External Motion Interface functionality, and correct the RAPID program.

50446, External Motion Interface ramp time increased

Description

External Motion Interface ramp time was increased in order to avoid over-speed when ramping down correction *arg*.

New ramp time: *arg* seconds.

Consequences

The user defined ramp time was increased to avoid over-speed.

Recommended actions

Increase the maximum allowed correction speed to allow faster ramp-down, or increase the user defined ramp time.

Continues on next page

50447, Incorrect mechanical units for External Motion Interface**Description**

One or more specified mechanical units for correction *arg* are not allowed in External Motion Interface.

Consequences

The correction will not be activated.

Probable causes

An attempt was made to activate an External Motion Interface correction with mechanical units that are not active, or do not belong to the same motion task.

Recommended actions

Check the application that is utilizing the External Motion Interface functionality, and change the activation parameters to the correct mechanical unit(s).

Recommended actions

Avoid moving too close to the joint bounds, or decrease the maximum allowed correction speed to decrease safe stop distance.

50450, External Motion Interface activation error**Description**

The activation of External Motion Interface correction *arg* failed.

Consequences

The program execution is stopped, and the system goes to Motors Off state.

Probable causes

Communication with the source of External Motion Interface input, for example a sensor or other device, could not be set up correctly.

Recommended actions

Check for possible other error messages regarding sensor or communication errors.

50448, Error in External Motion Interface input**Description**

Illegal format for the External Motion Interface input for correction *arg*.

Consequences

The program execution is stopped, and the system goes to Motors Off state.

Probable causes

The format of the input written to External Motion Interface was illegal. Two possible reasons are:

- The quaternions that are used by External Motion Interface are not properly normalized.
- Other illegal numerical values used as input to External Motion Interface.

Recommended actions

Make sure that the External Motion Interface input data is correct, and restart the program.

50451, External Motion Interface deactivation error**Description**

The deactivation of External Motion Interface correction *arg* failed.

Consequences

The program execution is stopped, and the system goes to Motors Off state.

Probable causes

Communication with the source of External Motion Interface input, for example a sensor or other device, could not be deactivated correctly.

Recommended actions

Check for possible other error messages regarding sensor or communication errors.

50449, Mechanical unit close to joint bound**Description**

The movement created by the External Motion Interface correction *arg* is causing mechanical unit *arg* joint *arg* to move too close to its joint bound.

Consequences

The program execution is stopped, and the system goes to Motors Off state.

Probable causes

One or more axes is approaching its joint bound.

50452, External Motion Interface cyclic error**Description**

Cyclic execution of External Motion Interface correction *arg* failed.

Consequences

The program execution is stopped, and the system goes to Motors Off state.

Continues on next page

Continued

Probable causes

Communication with the External Motion Interface input source, for example a sensor or other device, has failed.

Recommended actions

Check for possible other error messages regarding sensor or communication errors.

50453, Move not allowed in External Motion Interface

Description

External Motion Interface correction *arg* is not setup to allow RAPID movement instructions or jogging.

Consequences

The program execution is stopped, and the system goes to Motors Off state.

Probable causes

The application utilizing the External Motion Interface functionality does not allow RAPID movement instructions or jogging.

Recommended actions

Make sure no other movements are ordered while External Motion Interface is active.

50454, External Motion Interface position supervision

Description

The position is outside the allowed range for External Motion Interface correction *arg*, mechanical unit *arg* joint *arg*.

Consequences

The program execution is stopped, and the system goes to Motors Off state.

Probable causes

The deviation of the position from the path or the latest finepoint exceeded the maximum allowed value.

Recommended actions

Check the application that is utilizing the External Motion Interface functionality to increase the maximum allowed position value, or modify the programmed positions to be closer to the goal position.

50455, External Motion Interface speed supervision

Description

The speed was outside the allowed range for External Motion Interface correction *arg*, mechanical unit *arg* joint *arg*.

Consequences

The program execution is stopped, and the system goes to Motors Off state.

Probable causes

The speed was outside the allowed range.

Recommended actions

Check the application that is utilizing the External Motion Interface functionality to increase the maximum allowed speed value.

50456, Close to singularity while External Motion Interface active

Description

The robot in External Motion Interface correction *arg* is too close to a singularity.

Consequences

The program execution is stopped, and the system goes to Motors Off state.

Probable causes

The robot is close to a singularity, or too small numerical tolerance have been specified in the system parameters.

Recommended actions

Avoid moving too close to the singularity.

50457, External Motion Interface configuration failed

Description

The system could not read the system parameters for External Motion Interface correction *arg*.

Consequences

The task execution will stop.

Probable causes

There are incorrect or missing parameters in the configuration for the correction.

Recommended actions

Check the system parameters for type External Motion Interface Data and topic Motion.

Continues on next page

50458, Programmed speed too high**Description**

The programmed speed is too high for External Motion Interface correction *arg*.

Consequences

The program execution is stopped, and the system goes to Motors Off state.

Probable causes

External Motion Interface correction is not allowed when the programmed speed is too high.

Recommended actions

Decrease the programmed path speed.

50459, External Motion Interface input out of bounds**Description**

The External Motion Interface input for correction *arg* was outside bounds for mechanical unit *arg* joint *arg*.

Consequences

The program execution is stopped, and the system goes to Motors Off state.

Probable causes

The specified External Motion Interface input was outside the joint bounds for a robot or additional axis.

Recommended actions

Make sure the input is inside the bounds, and restart the program.

50460, External Motion Interface deactivation not allowed**Description**

External Motion Interface correction *arg* cannot be deactivated while mechanical units are moving.

Consequences

The program execution is stopped, and the system goes to Motors Off state.

Probable causes

An attempt is made to deactivate a correction, while one or more mechanical units are moving.

Recommended actions

Make sure all movements and other External Motion Interface corrections have finished before deactivating.

50461, Too many continuous log signals**Description**

The maximum number of continuous log signals have been reached. No additional log signals can be defined.

Consequences

The required log signal will not be defined.

Probable causes

To avoid high CPU load the maximum number of continuous log signals is limited to *arg*. All log signals except binary I/O signals are categorized as continuous.

Recommended actions

Delete any unnecessary log signals.

50462, Cartesian speed too high**Description**

Too high speed has been detected for the wrist center point or the arm check point for robot *arg*.

Consequences

The system makes an emergency stop.

Probable causes

- External interference forces has caused the robot to move too fast.
- Check error log for other causes.

Recommended actions

Reduce speed of robot.

50463, Log server communication error**Description**

Sending logged signals over the network failed.
Internal status: *arg*.

Consequences

Logging is deactivated and all defined signals are removed.

Probable causes

Client was shut down without disconnecting properly, network errors, or too high CPU load on the robot controller.

Recommended actions

Check Ethernet connections.
Define fewer signals.

50464, A collision has occurred**Description**

Task: *arg*.

Continues on next page

Continued

A collision has occurred. This can be handled in a RAPID error handler. If it is not handled, the RAPID execution will stop.
arg.

Recommended actions

Check other messages occurring at the same time for the reason.

Recovery: *arg*.

50465, Tuning of robot stiffness parameters is recommended

Description

No tuned system parameters for 'Motion Process Mode' on robot *arg* found.

Recommended actions

Use the robot variant of the TuneMaster application to tune and set 'Motion Process Mode' parameters for *arg*.

50466, Measurement Channel Conflict

Description

Joint *arg* is using the same measurement channel *arg* as another joint. This is only allowed when they also share the same drive system.

Recommended actions

Check the configuration file.

Use correct parameters and reset the system.

50467, Brake Relay Conflict

Description

Mechanical unit *arg* shares brake relay with mechanical unit *arg*, but 'Activate at Start Up' and 'Deactivation Forbidden' is missing.

This configuration can cause unexpected movement of the axis at program start due to brakes being released while the axis is not being controlled.

Recommended actions

Check the configuration file.

Use correct parameters and reset the system.

50468, Cartesian speed limits changed

Description

Cartesian speed limits have been changed for robot *arg*. The current 'Global Speed Limit' is *arg* m/s and 'Arm Check Point Speed Limit' is *arg* m/s.

The previous 'Global Speed Limit' was *arg* m/s and 'Arm Check Point Speed Limit' was *arg* m/s. Note that every robot type has a maximum limit that cannot be exceeded even if an attempt is made to configure a higher value.

Recommended actions

Verify that these limits are correct.

50469, I/O controlled axis configuration failed

Description

Mechanical unit *arg* I/O signal *arg* missing.

Consequences

Mechanical unit *arg* can't be used.

Probable causes

The required I/O signal *arg* is not defined.

Recommended actions

The required I/O signal *arg* must be defined.

50470, I/O controlled axis not ready for activation

Description

The I/O signal *arg* is low.

Consequences

Mechanical unit *arg* can't be used.

Probable causes

The I/O signal *arg* must be high for activation.

Recommended actions

The I/O signal *arg* must be set.

50471, I/O controlled axis not ready

Description

The I/O signal *arg* is low.

Consequences

Mechanical unit *arg* can't be used.

Probable causes

The I/O signal *arg* must be high.

Recommended actions

The I/O signal *arg* must be set.

50472, Absolute accuracy data missing

Description

Absolute accuracy is activated but no data exists for robot *arg*.

Consequences

Robot positioning will not be absolute accurate.

Continues on next page

Recommended actions

Make sure that absacc.cfg is loaded into controller memory.
Verify that data exists in a backup.

50473, Ascii Log configuration failed**Description**

Ascii Log Setup file *arg* not found or incorrect.

Consequences

Ascii Log function can't be used.

Probable causes

The required Ascii Log Setup file *arg* is missing or incorrect.

Recommended actions

Verify the Setup file name and directory.

50474, Target in a singularity**Description**

The robot target is near singular because joint *arg* is too close to *arg* degrees.

Recommended actions

During program execution, use SingArea instruction or MoveAbsJ.

During jogging, use axis by axis.

50475, Target in a singularity**Description**

The robot target is near singular because the TCP is too close to the arm-angle reference direction.

Recommended actions

During program execution, use MoveAbsJ or use a different reference direction.

During jogging, use axis by axis or use a different reference direction.

50476, AxisCal error**Description**

Data moved from robot to controller memory. AxisCal data not valid in robot memory. AxisCal cleared in controller for mechanical unit *arg*.

Recommended actions

Load new AxisCal data if data available.

50477, Axis Calibration data missing**Description**

Mechanical unit *arg* is calibrated with axis calibration but system parameters are missing from controller.

Consequences

Cannot execute the axis calibration service routine.

Recommended actions

Make sure that axis calibration configuration is loaded into controller memory.

Verify that data exists in a backup.

50478, Could not deactivate lead-through**Description**

Could not deactivate lead-through mode because one or more joints were moving.

Consequences

The controller goes to Motors Off state.

Probable causes

One or more joints were being moved in lead-through mode when the deactivation command was sent. The controller will deactivate lead-through mode when the user jogs or starts a program.

Recommended actions

Make sure that the system is standing still when deactivating lead-through mode.

50479, Cannot jog joints in independent mode**Description**

An attempt was made to jog one or more joints in independent mode.

Consequences

Joints in independent mode cannot be jogged.

Recommended actions

Make sure that independent mode is not used when trying to jog. Use IndReset to reset joint or PP to Main to reset all joints.

50480, I/O controlled axis RefSync failed**Description**

Internal error during refsyntax or robot moving.

Consequences

I/O controlled axis feedback pos and pos ref are not synchronized.

Continues on next page

Continued

Recommended actions

- Wait until zero speed and check internal error.
- Make a new RefSync.

50481, I/O controlled axis not synchronized

Description

Refsync not finished when the I/O signal *arg* is changed.

Consequences

I/O controlled axis *arg* feedback pos and pos ref are not synchronized.

Recommended actions

Run IoCtrlAxis_RefSyncOn before change of *arg* signal or check internal error.

50482, Search speed not reached

Description

A collision search hit was detected on the servo gun before the full search speed was reached.

Consequences

The accuracy of the results may be unreliable.

Recommended actions

Check that there is enough time to accelerate and that nothing obstructs the servo gun.

50483, Movement in wrong direction

Description

Moving from current to target position when opening *arg* gave a movement in wrong direction.

Consequences

The opening sequence will start with a closing movement.

Probable causes

The motion force control has to move the mechanical unit back to the starting position it had when taking over from the position control, before handing back the control to the position control. In this case the starting position for the force movement is more closed than current position is and that will lead to closing movement before position control can take over.

The situation indicate that there was a collision with the plate during the closing movement, that the plate thickness is not correct, or that the calibration is not correct.

Recommended actions

- 1 Make sure that the proper configuration is made, for example plate thickness.
- 2 Make sure that the calibration is correct.

Continues on next page

50484, Stop-point too far away from circle

Description

Task: *arg*

Program ref. *arg*

The detected stop-point during execution of a SearchC instruction is too far away from the circle-arc. This can happen if a large zone is used in the preceding movement-instruction.

Consequences

It will not be possible to run the movement backwards.

Probable causes

A too large zone was used in the movement-instruction preceding the SearchC.

Recommended actions

Use a smaller zone in the movement-instruction preceding the SearchC.

50486, Load supervision

Description

A mismatch between the expected and actual joints torques for the mechanical unit *arg* has been detected during the last *arg* minutes.

Consequences

There is a risk of overloading the mechanical structure.

Probable causes

The load on the mechanical unit is bigger than expected.

Recommended actions

Make sure all loads are defined correctly.

50487, Motion configuration

Description

Update of system parameter *arg* for *arg* failed.

The changes will not take effect until the controller is restarted.

Recommended actions

- Restart the controller.

50488, Using old target definition

Description

The target for robot *arg* is using an old definition for cfx.

This is not compatible with the current version of RobotWare.

Recommended actions

Convert robtargets in the RAPID program to the new arm-angle definition (recommended) or use an older version of RobotWare.

50489, Trigg distance larger than movement length**Description**

A triggdata has been setup with a distance larger than the movement length.

Recommended actions

- 1 Check for programmed points too close to each other.
- 2 Check the Distance parameter in instructions like TriggInt, TriggEquip, TriggIO and other Trigg instructions.

50490, Measurement error detected**Description**

A measurement error was detected for joint *arg* while robot was in battery mode (power off).

Consequences

The joint is unsynchronized.

Probable causes

The joint may have moved quickly while in battery mode.

Recommended actions

- 1 Update the revolution counter for the joint.
- 2 Make sure that the robot is fixed while being transported so that quick movements are avoided.

50491, Dual-arm base frame error**Description**

The mechanical units *arg* and *arg* are a dual-arm system, but have different base frame data.

Consequences

Coordination between the two arms will not work. Collision prediction will not work.

Probable causes

The base frame data are different for the two units.

Recommended actions

Give both units the same base frame system parameters.

50492, Error during jogging**Description**

An attempt was made to jog in some mode other than axis by axis, while one or more revolution counters were not updated.

Recommended actions

- 1 Use axis by axis jogging.
- 2 Update revolution counters.

50493, LockAxis4 not supported**Description**

Could not execute the current move-instruction because LockAxis4 is active and this robot type does not support it.

Consequences

The robot will stop.

Probable causes

Using SingArea\LockAxis4 with a robot type that does not support it.

Recommended actions

Remove the instruction SingArea\LockAxis4, or change the switch parameter to \Wrist or \Off.

50494, Revolution counters missing**Description**

The revolution counter is missing for at least one joint.

Consequences

The robot is not calibrated but can be jogged manually. Automatic operation is not possible.

Probable causes

The revolution counter is lost due to a power down.

Recommended actions

Update the revolution counter with the appropriate calibration routine.

50495, Axis Calibration error**Description**

Calibration of robot failed.
Internal Error code: *arg*.

Consequences

The robot will not be calibrated.

Recommended actions

- 1 Restart Axis Calibration routine.
- 2 Run Axis Calibration routine in another position.
- 3 If problem still persists, restart the controller and repeat.

50496, Conveyor Tracking position error at pick**Description**

Actual TCP position for robot *arg* is too far away from the ordered position on conveyor *arg* due to ramping. Position error: *arg*

Consequences

The robot may miss the picking or placing.

Continues on next page

Continued

Probable causes

The ramping of correction is not finished when reaching pick position.

Recommended actions

- 1 Increase distance between pick and place positions to ensure that ramping is finished.
- 2 Reduce programmed speed.
- 3 Reduce ramping length. System parameter 'Start ramp' and/or 'Stop ramp' in topic Process and type Conveyor systems.
- 4 Increase max allowed position error at pick/place position. System parameter 'Max tracking error at pick pos'.

50497, Maximum number of axes in drive module reached

Description

Joint *arg* is configured so that the total number of axes in the drive module becomes larger than maximum allowed (14).

Recommended actions

Check the configuration file.

Use correct parameters and reset the system.

50499, Exceeded maximum allowed path correction

Description

The correction needed for *arg* to follow the actual path is larger than the allowed maximum correction. The current correction is *arg* mm while maximum allowed path correction is *arg* mm.

Consequences

Program execution is stopped.

Probable causes

Too large path correction, sensor fault or improper placement of the work object.

Recommended actions

If this behavior is expected and wanted, change the 'Maximum allowed path correction' parameter in topic Motion Planner and topic Motion.

50500, Functionality has Beta status

Description

The system has been configured with a non-default value for the system parameter 'dyn_ipol_type'. This functionality has currently beta status and shall only be used for testing and evaluation.

Continues on next page

Recommended actions

Unless you are doing tests in cooperation with ABB we recommend that you change the value back to the previous value.

50501, Short movements

Description

One or more consecutive move instructions resulted in movements close to zero length.

Task: *arg*.

Program ref. *arg*.

Consequences

Programming with multiple close to zero length movements in a robot program can lead to high CPU load which can make zones to be converted into finepoints (event message 50024). Very close programmed points can also lead to non-smooth robot motion.

Probable causes

Multiple move instructions with the same programmed position or subsequent move instructions with short distance between programmed positions.

Recommended actions

Increase the distance between the programmed positions.

Remove redundant intermediate programmed positions.

If the behavior of the robot and the system is ok, the sensitivity of this event message can be adjusted by using the system parameter 'Max allowed short segments' in topic Motion and type Motion Planner.

50502, Collision Avoidance load error

Description

Failed to load the configuration files for Collision Avoidance.

Consequences

No collision checks will be made.

Probable causes

Incorrect configuration files for Collision Avoidance. Check the internal event log for a more specific error description.

Recommended actions

Correct the configuration files.

50503, Collision Avoidance inactive during jogging**Description**

Collision Avoidance will not be active when using Responsive jogging.

Consequences

No collision checks will be made during jogging.

Recommended actions

Continue jogging but be aware of that no collision checks are made. If collision checks are desired during jogging, change to Standard jogging mode.

- 2 External forces moved the robot.
- 3 Mechanical holding brake needs maintenance.

Recommended actions

- 1 If the brake release button was used, ignore this error.
- 2 If a collision occurred, inspect the robot of damages.
- 3 Check that the payload is within specification.
- 4 Run the service routine Brake Check.
- 5 Adjust system parameter 'Brake Applied Movement Detection Factor' in topic Motion and type Arm.

50504, Joint limit reached**Description**

Position for *arg* joint *arg* is outside the working range.

Recommended actions

Change the programmed position so the axis moves into the working range.

50508, Conveyor board connection lost**Description**

The conveyor board for conveyor *arg* is disconnected or not correctly configured.

Recommended actions

Verify the physical connection to the board or the IP address in the configuration.
For jogging deactivate all conveyors units.

50505, Spot Gun configuration warning**Description**

The value set in distance for missing tip check is smaller than how far motor will move during max force squeeze. This could cause false errors of the missing tip check for joint *arg*.

Recommended actions

Increase the distance for missing tip check or reduce max gun force.

50509, License error**Description**

License *arg* for *arg* could not be found.

Consequences

Sensor type set to *arg*.

Recommended actions

Add license to enable functionality.

50506, Spot Gun missing tip error**Description**

The servo gun missing tip check has been triggered for joint *arg*.

Recommended actions

Change the tip.
Adjust the distance for missing tip check.

50510, Lead through load mismatch**Description**

A mismatch between the expected and actual arm torque sensors for the mechanical unit *arg* has been detected.

Recommended actions

Make sure all loads are defined correctly.

50507, Movement detected when brakes are applied**Description**

A movement was detected during the time the joint *arg* was held by mechanical holding brake.

Probable causes

- 1 Brake release button was used.

50511, Safety Controller violation prevented.**Description**

The robot has been stopped because it was about to violate the SafeMove region *arg*.

Consequences

The robot is stopped.

Recommended actions

Change the robot program or deactivate the SafeMove region *arg*.

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50512, Controller restarted

Description

Controller restarted due to different data in controller and robot memory.

Recommended actions

- If gearbox or motor has been serviced or exchanged, verify proper motion of the axis.
- If Axis Calibration data has been changed, make sure correct data was used.

50513, Activation or deactivation not allowed

Description

Activation or deactivation of mechanical unit *arg* is not allowed. This can only be done from Rapid.

Recommended actions

Perform activation/deactivation from Rapid or change the system parameter "Act/Deact Only from Rapid" for the mechanical unit to FALSE.

50517, Speed too low during calibration

Description

Error during calibration of axis *arg* for mechanical unit *arg*. Too low speed was detected during calibration movement.

Recommended actions

- If gearbox or motor has been serviced or exchanged, verify proper motion of the axis.
- If Axis Calibration data has been changed, make sure correct data was used.

50514, No calibration tool found

Description

Calibration of axis *arg* for mechanical unit *arg* failed. No calibration tool was detected.

Recommended actions

- Verify that all calibration tools are properly mounted.
- Verify that revolution counters are properly updated.
- If Axis Calibration data has been changed, make sure correct data was used.

50518, High speed detected after contact

Description

Error during calibration of axis *arg* for mechanical unit *arg*. High speed was detected after contact with calibration tool.

Probable causes

- 1 Calibration tool was damaged during contact and axis continued to move.
- 2 False contact was detected due to errors in gearbox or motor.
- 3 False contact was detected due to incorrect configuration parameters for axis calibration.

Recommended actions

- 1 If calibration tool was damaged, retry with undamaged tool.
- 2 If gearbox or motor has been serviced or exchanged, verify proper motion of the axis.
- 3 If Axis Calibration data has been changed, make sure correct data was used.

50515, Too many attempts during calibration

Description

Calibration of axis *arg* for mechanical unit *arg* failed. Maximum number of attempts was reached due to errors or contact not repeating.

Recommended actions

- If gearbox or motor has been serviced or exchanged, verify proper motion of the axis.
- Verify that the calibration tools are correctly mounted and not broken.
- Verify that revolution counters are properly updated.
- If Axis Calibration data has been changed, make sure correct data was used.

50519, Incorrect contact force

Description

Error during calibration of axis *arg* for mechanical unit *arg*. Could not apply correct force on calibration tool after contact.

Recommended actions

If Axis Calibration data has been changed, make sure correct data was used.

50516, Speed too high during calibration

Description

Error during calibration of axis *arg* for mechanical unit *arg*. Too high speed detected during calibration movement.

Continues on next page

50520, Incorrect contact force**Description**

Error during calibration of axis *arg* for mechanical unit *arg*.
Could not apply correct force on calibration tool after contact.

Recommended actions

If Axis Calibration data has been changed, make sure correct data was used.

50521, Calibration timed out**Description**

Error during calibration of axis *arg* for mechanical unit *arg*.
Calibration sequence took too long time to finish.

Recommended actions

If Axis Calibration data has been changed, make sure correct data was used.

50522, Unexpected collision detected**Description**

Error during calibration of axis *arg* for mechanical unit *arg*.
Unexpected collision was detected during verification.

Probable causes

- 1 Calibration tool was not removed.
- 2 False contact was detected due to errors in gearbox or motor.
- 3 False contact was detected due to incorrect configuration parameters for axis calibration.

Recommended actions

- 1 Remove calibration tool.
- 2 If gearbox or motor has been serviced or exchanged, verify proper motion of the axis.
- 3 If Axis Calibration data has been changed, make sure correct data was used.

50523, Calibration speed not reached**Description**

Error during calibration of axis *arg* for mechanical unit *arg*.
Calibration speed was not reached in time before expected contact with calibration tool.

Recommended actions

- If gearbox or motor has been serviced or exchanged, verify proper motion of the axis.
- If Axis Calibration data has been changed, make sure correct data was used.

50530, Cannot activate Mechanical Unit**Description**

The activation or deactivation of mechanical unit *arg* failed during Rapid synchronization.

Probable causes

A synchronized Rapid task has executed a move instruction at the same time as the activation or deactivation was ordered.

Recommended actions

When performing activation or deactivation of a mechanical unit during Rapid synchronization, the other synchronized Rapid tasks cannot execute move instructions at the same time. Make sure that no synchronized move instructions are executed until the activation is finished.

50531, SingArea\Wrist not supported**Description**

Could not execute the current move-instruction because SingArea\Wrist is active and this robot type does not support this feature.

Consequences

The robot will stop.

Probable causes

Using SingArea\Wrist with a robot type that does not support it.

Recommended actions

Remove the instruction SingArea\Wrist, or change the switch parameter to \Off.

50532, Jog direction time-out**Description**

Teach pendant, or other jogging client, was not able to deliver the jog direction to the Robot Controller in a timely manner.

Consequences

Robot motion is stopped.

Recommended actions

Retry jogging.

50533, Checksum error**Description**

Data in robot memory for mechanical unit *arg* has erroneous checksum.

Probable causes

New drive board in joint *arg*.

Continues on next page

Continued

Recommended actions

Clear robot memory and then transfer data from controller to robot memory.

50534, Robot memory data difference

Description

Data in robot memory is not same as in controller for mechanical unit *arg*.

Probable causes

Not the same data or serial number in robot and controller memory. Robot (drive board in joint *arg*) or controller exchanged or system parameters changed.

Recommended actions

Check status via the FlexPendant and check if correct system parameters (serial number) are loaded in controller. Check that serial number belongs to the robot connected to the controller. If not, replace configuration files or manually transfer data from robot to controller memory if controller has been exchanged. If the drive board in joint *arg* is replaced with board from another robot (serial numbers not the same), first clear the robot memory via the FlexPendant and then transfer data from controller to robot.

50535, Motion data missing

Description

Data in robot and controller memory missing for mechanical unit *arg*.

Probable causes

Configuration file missing. New drive board in joint *arg* together with new controller.

Recommended actions

- Load new configuration files.

50536, Transfer of data to robot memory failed

Description

Transfer of data from controller to robot memory not allowed or interrupted for mechanical unit *arg* due to disconnection.

Probable causes

Manipulator was disconnected before or during calibration or manual move of data to robot memory.

Recommended actions

Retry to calibrate or manually move data from controller to robot memory when manipulator is reconnected.

Continues on next page

50537, All robot data missing

Description

All data is missing in robot memory at drive-board in joint *arg*.

Probable causes

An error in robot memory or communication has occurred. The data has been cleared.

Recommended actions

If proper data exists in controller - transfer the data to robot memory. If still problem - check communication cable to the manipulator.

50538, Sensor data missing

Description

No serial number is defined for mechanical unit *arg* in robot memory.

Probable causes

The robot memory has been cleared or new drive board in joint *arg* has been installed.

Recommended actions

If proper data exists in controller - transfer the data to robot memory.

50539, Absolute Accuracy version is not supported

Description

Absolute Accuracy version *arg* is not supported for robot *arg*. If you have questions contact your local ABB service support center.

Consequences

Robot positioning will not be absolute accurate if you use a different version than the one used when the parameters were identified.

Recommended actions

- Switch Absolute Accuracy version to the correct version used when the parameters were identified.
- If it concerns new identification of parameters, switch to preferred Absolute Accuracy version .

50540, Low voltage on serial measurement board battery

Description

The serial measurement board connected to the drive unit at drive link position *arg* in controller cabinet *arg* indicates low battery voltage: *arg* V.

Consequences

If main power is switched off the revolution counters will be lost.

Probable causes

The battery is not connected or discharged.

Recommended actions

- Replace battery.

50541, Motion configuration error**Description**

The parameter 'Disconnect at Deactivate' for measurement channel was inconsistent for the drive unit at link position *arg* in cabinet *arg*. All channels on the same link have to have the same setting for this parameter.

Recommended actions

Check the configuration file.

Use correct parameters and reset the system.

50542, Power limit exceeded**Description**

The power used for drive module *arg* has exceeded the limit of the power supply.

Consequences

The program execution is stopped, and the system goes to Motors Off state.

Probable causes

Using an additional axis with high power demand.

Recommended actions

Lower the acceleration limits of the mechanical units in the program.

50543, Collision-Pair safety distance override too large**Description**

The safety distance override parameter for the collision-pair *arg* and *arg* is too large. The parameter is not allowed to be greater than the configuration parameter Coll-Pred Safety Distance under type Motion System. Override parameter is configured to *arg* mm, which is greater than *arg*.

Consequences

The Collision Avoidance configuration is not loaded.

Recommended actions

Either decrease the safety distance override parameter for the collision pair, or increase the value of the configuration

Coll-Pred Safety Distance.

50544, Enable or disable of drive units when not in finepoint**Description**

Enabling or disabling drive units when not in finepoint causes program execution to stop.

Consequences

All RAPID programs will stop, and drive units will be enabled or disabled according to the command. The Rapid program pointers need to be moved before the RAPID programs can be restarted.

Probable causes

There was an attempt to enable or disable drive units while motion planner *arg* was not in finepoint.

Recommended actions

Move the program pointers and restart.

50545, Jog or move while drive unit disabled**Description**

It is not possible to jog or move a mechanical unit when its drive unit is disabled.

Consequences

The mechanical unit will not move.

Probable causes

There was an attempt to jog or move a mechanical unit while its drive unit was disabled.

50546, Invalid drive unit detach signal**Description**

The configuration of the Drive Unit Detach Signal in Motion System is not a valid I/O signal name.

Consequences

The system will start as if the drive units are attached. Other elogs will be generated if the drive units are powered off.

Recommended actions

Choose a valid I/O signal name for the Drive Unit Detach Signal configuration.

Continues on next page

50547, Drive units detached

Description

All drive units are detached.

Consequences

All mechanical units have been removed. No movement is possible.

Probable causes

Manipulator is not purged.

Recommended actions

Wait until manipulator is fully purged. The system will then automatically restart.

50548, Collision Avoidance object too small

Description

The Collision Avoidance model *arg* is too small. The minimum dimension of the object is *arg* mm, which is smaller than the minimum allowed value *arg* mm.

Consequences

The Collision Avoidance configuration is not loaded and the functionality is not activated.

Probable causes

A too small geometric object has been added in the Collision Avoidance configuration in Robot Studio.

Recommended actions

Open the Collision Avoidance configurator in Robot Studio and either enlarge the problematic object, or remove it from the configuration. Download the updated configuration to the controller.

7 Number series: 7 xxxx

71001, Duplicate address

Description

The I/O configuration is invalid.

The same addresses have been given for I/O device *arg* and I/O device *arg*.

I/O devices connected to the same network must have unique addresses.

This I/O device has been rejected.

Recommended actions

- 1 Check that addresses are correct.
- 2 Check that the I/O devices are connected to the correct network.

Recommended actions

Correct the active filter time for the I/O signal.

71007, Logical values out of range

Description

The I/O configuration for I/O signal *arg* is invalid.

The logical minimum value must be less than the logical maximum value.

This I/O signal has been rejected.

Recommended actions

Correct the logical values for the I/O signal so that the minimum value becomes less than the maximum value.

71003, I/O device undefined

Description

The I/O configuration for I/O signal *arg* is invalid.

Consequences

This I/O signal has been rejected, and no functions depending on it will work.

Probable causes

The I/O device *arg* is unknown. All I/O signals must refer to an existing/defined I/O device.

Recommended actions

- 1 Make sure the I/O device is defined.
- 2 Make sure the I/O device name is correctly spelled.

71008, Physical values out of range

Description

The I/O configuration for I/O signal *arg* is invalid.

The physical minimum value must be less than the physical maximum value.

This I/O signal has been rejected.

Recommended actions

Correct the physical values for the I/O signal so that the minimum value becomes less than the maximum value.

71005, Invalid filter time

Description

The I/O configuration for I/O signal *arg* is invalid.

The passive filter time should either be 0 ms or in the range [*arg*, *arg*] ms.

This I/O signal has been rejected.

Recommended actions

Correct the passive filter time for the I/O signal.

71017, Cross connection without actor I/O signal

Description

The I/O configuration of cross connection *arg* is invalid.

The parameter Actor *arg* have been omitted.

Rules:

- 1 All cross connections must specify at least one actor signal, i.e. parameter Actor I/O signal 1 must always be specified.
- 2 For each operator specified an actor I/O signal must follow, e.g. if parameter Operator 2 is specified then parameter Actor 3 must also be specified.

Consequences

The cross connection has been rejected, and no functions depending on it will work.

Recommended actions

Correct the cross connection so the required actor I/O signal is specified.

71006, Invalid filter time

Description

The I/O configuration for I/O signal *arg* is invalid.

The active filter time should either be 0 ms or in the range [*arg*, *arg*] ms.

This I/O signal has been rejected.

Continues on next page

71019, Cross connection with undefined I/O signal

Description

The I/O configuration of cross connection *arg* is invalid.
The parameter Actor *arg* contains a reference to an undefined I/O signal *arg*.

Consequences

The cross connection has been rejected, and no functions depending on it will work.

Recommended actions

- 1 Make sure the I/O signal is defined.
- 2 Make sure the I/O signal name is correctly spelled.

71020, Cross connection without resultant I/O signal

Description

The I/O configuration of cross connection *arg* is invalid.
The parameter Resultant have been omitted.
All cross connections must specify a resultant I/O signal.

Consequences

The cross connection has been rejected, and no functions depending on it will work.

Recommended actions

Correct the cross connection so that the required resultant I/O signal are specified.

71021, Duplicate cross connection with same resultant I/O signals

Description

The I/O configuration of cross connection *arg* is invalid.
The cross connection has the same resultant I/O signal *arg* as cross connection *arg*.
Having more than one cross connection that result in the setting of the same signal may cause unpredictable behaviors, as you cannot control their order of evaluation.

Consequences

The cross connection has been rejected, and no functions depending on it will work.

Recommended actions

Make sure that the I/O signal is not specified as the resultant of several cross connections.

71037, Closed chain in cross connection

Description

The I/O configuration is invalid.
The I/O signal *arg* is part of a cross connection chain that is closed (i.e. forms a circular dependence that cannot be evaluated).
The complete cross connection configuration has been rejected.

Recommended actions

Correct the configuration for the cross connections where the I/O signal above is part.

71038, Cross connection max depth exceeded

Description

The I/O configuration is invalid.
The I/O signal *arg* is part of a cross connection chain that is too deep.
The maximum depth of a cross connection chain is *arg*.
The complete cross connection configuration has been rejected.

Recommended actions

Make the cross connection less deep.

71045, Invalid filter specification

Description

The I/O configuration for I/O signal *arg* is invalid.
No filter times can be specified for this type of I/O signal.
This I/O signal has been rejected.

Recommended actions

Set filter time to 0 or remove the statement.

71049, Analog I/O signal inverted

Description

The I/O configuration for I/O signal *arg* is invalid.
Analog I/O signals must not be inverted.
Only digital and group I/O signals can be inverted.
This I/O signal has been rejected.

Recommended actions

Remove the invert for the I/O signal (or change the signal type).

71050, Cross connection with non-digital actor I/O signal

Description

The I/O configuration of cross connection *arg* is invalid.
The parameter Actor *arg* refer to an I/O signal *arg* that is not digital.

Only digital I/O signals can be cross connected.

Consequences

The cross connection has been rejected, and no functions depending on it will work.

Recommended actions

Remove the non-digital I/O signal from the cross connection.

71052, Max number of cross connections exceeded

Description

The I/O configuration is invalid.

The maximum number of cross connections, *arg*, in the I/O system has been exceeded.

Consequences

Not all the cross connections have been accepted.

Recommended actions

Modify the configuration of the I/O system (by reducing the number of cross connections) so that the maximum limit is not exceeded.

71054, Invalid signal type

Description

The I/O configuration for I/O signal *arg* is invalid.

The specified signal type *arg* is invalid/unknown.

Valid signal types are:

- DI (Digital input).
- DO (Digital output).
- AI (Analog input).
- AO (Analog output).
- GI (Group input).
- GO (Group output).

This I/O signal has been rejected.

Recommended actions

Correct the signal type of the I/O signal.

71058, Lost communication with I/O device

Description

The previously working communication with I/O device *arg* with address *arg* on network *arg* has been lost.

Consequences

It is not possible to access the I/O device itself or I/O signals on the I/O device since it is currently not communicating with the controller.

Probable causes

The I/O device may have been disconnected from the system.

Recommended actions

- 1 Make sure that the network cable is connected to the controller.
- 2 Make sure the I/O device is correctly powered.
- 3 Make sure the cabling to the I/O device is correctly connected.

71076, Communication error from rtp1

Description

No response from the serial line.

Recommended actions

Check the device or connection.

71077, Communication error from rtp1

Description

Not possible to deliver the received message.

Recommended actions

Check the communication flow.

71078, Communication error from rtp1

Description

The response from the device has an invalid frame sequence.

Recommended actions

Check for noise on the serial line.

71080, Max number of device predefined types exceeded

Description

The I/O configuration is invalid.

The maximum number, *arg*, of device predefined types in the I/O system has been exceeded.

Recommended actions

Modify the configuration of the I/O system (by reducing the number of device predefined types) so that the maximum limit is not exceeded.

71081, Max number of physical I/O signals exceeded

Description

The I/O configuration is invalid.

The maximum number, *arg*, of physical I/O signals (bit-mappings) in the I/O system has been exceeded.

Continues on next page

Recommended actions

Modify the configuration of the I/O system (by reducing the number of physical I/O signals) so that the maximum limit is not exceeded.

71082, Max number of user I/O signals exceeded

Description

The I/O configuration is invalid.

The maximum number, *arg*, of user I/O signals in the I/O system has been exceeded.

Recommended actions

Modify the configuration of the I/O system (by reducing the number of I/O signals) so that the maximum limit is not exceeded.

71083, Max number of symbols exceeded

Description

The I/O configuration is invalid.

The maximum number, *arg*, of symbols in the I/O system has been exceeded.

The number of symbols is the sum of all named configuration instances:

- I/O Devices
- Device Trust Levels
- I/O Signals
- Commands
- Access Levels
- Signal Safe Levels
- Cross Connections

Recommended actions

Modify the configuration of the I/O system (by reducing the number of symbols) so that the maximum limit is not exceeded.

71084, Max number of subscribed I/O signals exceeded

Description

The I/O configuration is invalid.

The maximum number, *arg*, of subscribed I/O signals in the I/O system has been exceeded.

Recommended actions

Modify the configuration of the I/O system (by reducing the number of subscriptions) so that the maximum limit is not exceeded.

71085, Max number of I/O devices exceeded

Description

The I/O configuration is invalid.

The maximum number, *arg*, of I/O devices in the I/O system has been exceeded.

Recommended actions

Modify the configuration of the I/O system (by reducing the number of I/O devices) so that the maximum limit is not exceeded.

71098, NFS server lost

Description

The contact with the NFS server *arg* is lost.

Recommended actions

- 1 Verify that the NFS server is running.
- 2 Verify the network connection, check cabling and hardware equipment.
- 3 Verify the configuration of the NFS client on the controller.

71099, Trusted NFS server lost

Description

The contact with the trusted NFS server *arg* is lost.

Recommended actions

- 1 The NFS server.
- 2 The network connection.
- 3 The NFS client.

71101, Network undefined

Description

The I/O configuration for I/O device *arg* is invalid.

The network *arg* cannot be found in the system. An I/O device must refer to a defined network.

Installed industrial networks are:*arg arg arg*

Consequences

This I/O device has been rejected, and no functions depending on it will work.

Recommended actions

- 1 Make sure the network is defined.
- 2 Make sure the network name is correctly spelled.

71114, Invalid IP address

Description

The IP address *arg* is not valid.

Recommended actions

Check the Communication configuration.

71115, Invalid subnet mask**Description**

The subnet mask *arg* is not valid.

Recommended actions

Check the Communication configuration.

71116, Not allowed to deactivate I/O device**Description**

The I/O configuration of I/O device *arg* is invalid.

I/O devices with a Device Trust Level containing the parameter Deny Deactivate is not allowed to be deactivated.

Consequences

This I/O device has been rejected, and no functions depending on it will work.

Recommended actions

Correct the configuration of the I/O device by either activating it or changing the Device Trust Level.

71122, Incorrect IP address**Description**

The address *arg* in protocol *arg* is not a correct IP address.

Recommended actions

Correct the address.

71123, No transmission protocol**Description**

The transmission protocol *arg* given for application protocol *arg* could not be found.

Recommended actions

Change the transmission protocol.

71125, Mount permission denied**Description**

Permission was denied to mount the directory *arg* on the server *arg*.

Recommended actions

Change the User or Group ID.

71126, Directory not exported**Description**

Mounting directory *arg* as *arg* failed since it is not exported on the server computer *arg*.

Protocol: *arg*.

Recommended actions

Export the directory on the server computer.

71128, Ethernet not installed**Description**

The Ethernet Services option has to be installed when using remote mounted disk.

Recommended actions

Restart the controller and install the Ethernet Services option.

71129, Too many remote disks**Description**

The maximum number of remote mounted disks have been exceeded.

The maximum number is *arg*.

Recommended actions

Reduce the number of remote mounted disks.

71130, Too many remote servers**Description**

The maximum number of servers for remote mounted disks has been exceeded.

The maximum number is *arg*.

Recommended actions

1 Reduce the number of servers.

71131, Could not mount directory**Description**

Mounting directory *arg* on the computer *arg* failed.

Protocol: *arg*.

Recommended actions

Check the server setup.

71141, Default value for I/O signal out of range**Description**

The I/O configuration for I/O signal *arg* is invalid.

The default value is out of range.

This I/O signal has been rejected.

Continues on next page

Recommended actions

Change the default value for the I/O signal.

71156, IPC queue full

Description

The inter-process communication (IPC) queue *arg* was full, when sending to trap routine.

Recommended actions

Restart the controller.

71158, Address out of range

Description

The I/O configuration is invalid.

The address of I/O device *arg* is invalid (out of range).

This I/O device has been rejected.

Recommended actions

- 1 Change the address.
- 2 Check the address syntax.

71163, I/O signal on internal I/O device

Description

The I/O configuration is invalid.

The user-defined I/O signal *arg* must not be connected to the internal I/O device *arg*.

User defined I/O signals are not allowed to be connected to internal I/O devices.

This I/O signal has been rejected.

Recommended actions

Connect the I/O signal to another I/O device.

71164, Internal I/O signal in cross connection

Description

The I/O configuration of cross connection *arg* is invalid.

Actor *arg* (*arg*) is a user-defined I/O signal whereas the resultant I/O signal *arg* is an internal I/O signal.

It is not allowed to define cross connections where user-defined I/O signals affect internal I/O signals.

Consequences

The cross connection has been rejected, and no functions depending on it will work.

Recommended actions

Correct the cross connection so that there are no internal I/O signals in the resultant expression.

71165, FTP server went down

Description

The connection to a non-trusted FTP server has been lost.

IP address: *arg*.

Recommended actions

Check cable and FTP server settings.

71166, FTP server went down

Description

The connection to a trusted FTP server has been lost.

IP address: *arg*.

Recommended actions

Check cable and FTP server settings.

71167, Wrong transmission protocol

Description

No matching transmission protocol was found in the communication configuration.

Recommended actions

Change the transmission protocol.

71169, Ethernet not installed

Description

The option Ethernet Services with FTP is not installed on this system.

Recommended actions

Restart the controller and install the Ethernet Services with FTP option.

71182, I/O signal undefined

Description

The I/O configuration of cross connection *arg* is invalid.

The parameter Resultant contains a reference to an undefined I/O signal *arg*.

Consequences

The cross connection has been rejected, and no functions depending on it will work.

Recommended actions

Correct the cross connection so that the resultant I/O signal refers to an existing I/O signal.

71183, Cross connection with invalid operator**Description**

The I/O configuration of cross connection *arg* is invalid.
The parameter Operator *arg* contains an invalid/unknown operator *arg*.

Valid values for the logical operator are:

- AND
- OR

Consequences

The cross connection has been rejected, and no functions depending on it will work.

Recommended actions

Correct the operator.

71185, Duplicate name**Description**

The I/O configuration is invalid.
The identifier *arg* has already been used as the name of another configuration instance.

The following configuration instances must have unique names:

- I/O Devices
- Device Trust Levels
- I/O Signals
- Commands
- Access Levels
- Signal Safe Levels
- Cross Connections

Recommended actions

- 1 Rename one of the configuration instances in I/O configuration.
- 2 Restart the controller.

71193, Invalid physical I/O mapping**Description**

I/O mapping error on I/O device *arg*.

The I/O device uses an input size of *arg* bits, the controller can handle maximum *arg* bits.

The I/O device uses an output size of *arg* bits, the controller can handle maximum *arg* bits.

Recommended actions

Check configuration for the physical I/O device.

71196, Invalid encoding type**Description**

The I/O configuration for I/O signal *arg* is invalid.
The encoding type *arg* is not valid for signal type *arg*.

Valid encoding types are:

- UNSIGNED
- TWO_COMP

This I/O signal has been rejected.

Recommended actions

Correct the encoding type for the I/O signal.

71201, Unknown network**Description**

The I/O configuration is invalid.
The network *arg* cannot be found in the system.
Installed industrial networks are: *arg arg arg arg*.

Consequences

This network has been rejected, and no functions depending on it will work.

Recommended actions

- 1 Make sure the system has been configured with the desired network.
- 2 Make sure the network option at hand is installed.
- 3 Check the I/O configuration for network.

71205, Could not mount directory**Description**

Mounting device *arg* for user *arg* failed. IP address of remote computer running FTP server: *arg*.

Recommended actions

- 1 Check the FTP server setup.
- 2 Check the FTP client configuration.
- 3 Check communication hardware, cabling.

71241, Too many I/O devices on network**Description**

The I/O configuration for I/O device *arg* is invalid.
The number of I/O devices on network *arg* must not exceed *arg*.

This I/O device has been rejected.

Recommended actions

Reduce the number of defined I/O devices and restart the controller.

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71261, Transport layer failure

Description

The physical channel for transport layer *arg* is invalid.

Recommended actions

Verify that the physical channel is valid, see manual.

71262, Industrial network communication failure

Description

Communication with '*arg*' master failed on I/O device with mac id *arg*.

Recommended actions

- 1 Check the connection to the gateway.

71263, CAN communication failure

Description

CAN communication failed due to *arg*.

Code: *arg*.

71264, Conveyor tracking error

Description

Conveyor tracker '*arg*' reported error message: *arg*.

71273, I/O device configuration mismatch

Description

I/O device *arg* with address *arg* is configured in the I/O configuration, but it cannot be found in the network specific configuration.

Probable causes

- 1 The address of the I/O device in the I/O configuration is not the same as in the network specific configuration.
- 2 The I/O device has not been configured at all in the network specific configuration.

Recommended actions

- 1 Check I/O device configuration in the I/O configuration
- 2 Check network specific configuration.

71276, Communication established with I/O device

Description

Communication established with I/O device *arg* with address *arg* on network *arg*.

71278, Mount permission denied

Description

Permission was denied to mount device *arg* on the server *arg*.

Recommended actions

Check the username and password.

71288, Mount path is too large

Description

Mount path is too large. Mount path consists of FTP server mount point and server path.

- Max length: .
- Protocol used: .

Recommended actions

Change FTP server mount point or server path.

71289, Memory partition is too big

Description

The memory partition for communication purposes cannot be allocated. The requested partition *arg* kB. System partition will be used.

Recommended actions

Decrease commPartSize.

71290, Could not add FTP device

Description

Adding the FTP device *arg* to the operating system failed. Application protocol *arg*.

Recommended actions

Change the local path of the configuration of the FTP device.

71291, Invalid local path

Description

Local path of the FTP device *arg* is invalid.

Recommended actions

Local path must end with :

71293, Invalid input size

Description

On DeviceNet I/O device *arg* the connection input size does not match the I/O device.

Recommended actions

- 1 Change size in I/O configuration.
- 2 Check module.

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- 3 Use DN_Generic device template.

71294, Invalid output size

Description

On DeviceNet I/O device *arg* the connection output size does not match the I/O device.

Recommended actions

- 1 Change size in I/O configuration.
- 2 Check module.
- 3 Use DN_Generic device template.

71295, Invalid input size

Description

On DeviceNet I/O device *arg* the connection 2 input size does not match the I/O device.

Recommended actions

- 1 Change size in I/O configuration.
- 2 Check module.

71296, Invalid output size

Description

On DeviceNet I/O device *arg* the connection 2 output size does not match the I/O device.

Recommended actions

- 1 Change size in I/O configuration.
- 2 Check module.

71297, Invalid connection type

Description

The DeviceNet I/O device *arg* does not support *arg* connection.

Recommended actions

- 1 Change connection type in I/O configuration.
- 2 Use DN_Generic device template.

71298, Duplicated address

Description

The address *arg* for the DeviceNet master on network DeviceNet is occupied by the I/O device *arg* on the network.

Recommended actions

- 1 Change master address in I/O configuration.
- 2 Disconnect I/O device occupying the address from the network.
- 3 Restart the controller.

71299, No power on DeviceNet network

Description

The 24 V power supply from the DeviceNet power supply is missing.

Consequences

No communication on the DeviceNet network is possible.

Probable causes

The power supply unit, cabling, input voltage to the power supply or the output load may cause the power loss. See the manual and the circuit diagram.

Recommended actions

- 1 Check all cabling to the power supply unit.
- 2 Measure the output and input voltage levels.
- 3 Replace the faulty I/O device if required.

71300, DeviceNet network communication warning

Description

A minor number of communication errors occurred on the DeviceNet network.

Consequences

Normal operation will be maintained, even on the DeviceNet.

Probable causes

The fault may be caused by interference, power supply units and cables, or communication cables.

Recommended actions

- 1 Make sure any terminating resistors are correctly connected.
- 2 Make sure all communication cables and connectors are working correctly and of the recommended type.
- 3 Check network topology and cable length.
- 4 Make sure the DeviceNet Power Supply unit is working correctly. Replace any faulty unit.

71301, Bus off, DeviceNet network communication failure

Description

A major number of communication errors occurred on DeviceNet network.

Consequences

All communication on the DeviceNet Bus has stopped.

Probable causes

The fault may be caused by interference, power supply units and cables, or communication cables.

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Recommended actions

- 1 Make sure the DeviceNet power supply unit is working correctly. Replace any faulty I/O device.
- 2 Make sure any terminating resistors are correctly connected.
- 3 Make sure all communication cables and connectors are working correctly and of the recommended type.
- 4 Check network topology and cable length.
- 5 Restart the controller.

71302, No DeviceNet option has been installed

Description

A DeviceNet master/slave board has been fitted, but no DeviceNet option has been installed.

Consequences

No communication on the DeviceNet is possible. There may be consequential errors from configuring DeviceNet when no such option has been installed.

Probable causes

An attempt may have been made to add the DeviceNet functionality, without installing the option correctly.

Recommended actions

- 1 If the DeviceNet option is required: configure a new system with this option, and install the system.
- 2 If the DeviceNet option is not required: configure a new system without this option, and install the system.

71303, Invalid DeviceNet vendor id

Description

The vendor id read from DeviceNet I/O device *arg* doesn't match value in I/O device configuration.

- Configuration: .
- Actual: .

Consequences

It is not possible to access the I/O device or I/O signals on it.

Recommended actions

- 1 Change vendor id in I/O configuration.
- 2 Check that the type of I/O device is correct.

71304, Invalid DeviceNet device type

Description

The device type read from DeviceNet I/O device *arg* doesn't match value in device I/O configuration.

- Configuration:
- Actual:

Consequences

It is not possible to access the I/O device or I/O signals on it.

Recommended actions

- 1 Change device type in I/O configuration.
- 2 Check that the type of I/O device is correct.
- 3 Check for a duplicate DeviceNet address in the connected I/O units.

71305, Invalid DeviceNet product code

Description

The product code read from DeviceNet I/O device *arg* doesn't match value in I/O device configuration.

- Configuration:
- Actual:

Consequences

It is not possible to access the I/O device or I/O signals on it.

Recommended actions

- 1 Change product code in I/O configuration.
- 2 Check that the type of I/O device is correct.
- 3 Check for a duplicate DeviceNet address in the connected I/O units.

71306, DeviceNet unknown error

Description

An unknown error is reported from I/O device *arg* error code *arg*.

Recommended actions

- 1 Restart the controller.
- 2 Report the problem to ABB.

71307, DeviceNet generic connection 1

Description

On DeviceNet I/O device *arg* connection 1 configuration is generic.

Real values:

- Connection 1 type: .
- Connection 1 input size: .
- Connection 1 output size: .

Recommended actions

- 1 Update your current I/O device configuration.

71308, DeviceNet generic connection 2**Description**

On DeviceNet I/O device *arg* connection 2 configuration is generic.

Real values:

- Connection 2 type: .
- Connection 2 input size: .
- Connection 2 output size: .

Recommended actions

- 1 Update your current I/O device configuration.

71309, DeviceNet generic device identification**Description**

On DeviceNet I/O device *arg* identity configuration is generic.

Real values:

- Vendor Id: .
- Product code: .
- Device type: .

Recommended actions

- 1 Update your current I/O device configuration.

71310, DeviceNet I/O device connection error**Description**

DeviceNet I/O device *arg* is occupied by another master.

Recommended actions

- 1 Check I/O configuration.
- 2 Cycle power on I/O device.

71311, Unable to establish communication on the DeviceNet network**Description**

Unable to establish communication on the DeviceNet network because no I/O devices are physically connected.

Recommended actions

- 1 Check cables and connectors.
- 2 Connect I/O devices to network.
- 3 Restart the controller.
- 4 Remove I/O devices on the DeviceNet network from the I/O configuration.

71312, DeviceNet I/O device explicit connection not enabled**Description**

DeviceNet I/O device *arg* does not have the explicit message connection enabled.

Recommended actions

Change I/O configuration.

71313, Device command order number not unique**Description**

The I/O configuration is invalid.

The device command *<arg>* connected to the I/O device *<arg>* has the same order number *<arg>* as the device command *<arg>*.

The order number of device commands connected to the same I/O device must be unique.

This device command has been rejected.

Recommended actions

Modify the I/O configuration so that device commands on the same I/O device have unique order numbers.

71315, Max number of device commands exceeded**Description**

The I/O configuration is invalid.

The maximum number, *arg*, of device commands in the I/O system has been exceeded.

Recommended actions

Modify the configuration of the I/O system (by reducing the number of device commands) so that the maximum limit is not exceeded.

71317, I/O device reset**Description**

The I/O device *arg* on the network *arg* has been reset through the device command *arg*, to make sure that the device command values are activated.

This causes the I/O device to loose contact while it is restarted but it will regain contact.

Probable causes

A device command for reset has been defined for the I/O device in the configuration of the I/O system.

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71320, Max number of I/O access levels exceeded

Description

The I/O configuration is invalid.

The maximum number, *arg*, of I/O access levels in the I/O system has been exceeded.

Recommended actions

Modify the configuration of the I/O system (by reducing the number of I/O access levels) so that the maximum limit is not exceeded.

71321, Invalid I/O access level

Description

The I/O configuration is invalid.

The I/O signal *arg* has a reference to an invalid/undefined I/O access level *arg*.

All I/O signals must either omit the access level or refer to an existing access level.

This I/O signal has been rejected.

Recommended actions

Change I/O access level to one that exist or define a new I/O access level.

71323, Invalid bit values

Description

The I/O configuration for I/O signal *arg* is invalid.

The minimum bit value *arg* must not be less than *arg*.

The maximum bit value *arg* must not exceed *arg*.

The minimum bit value must be less than the maximum bit value.

This I/O signal has been rejected.

Recommended actions

- 1 Check that the I/O signal is configured with the correct encoding type.
- 2 Check that the min and max bit values are correct.

71324, Physical limitation values out of range

Description

The I/O configuration for I/O signal *arg* is invalid.

The physical limitation minimum value must be less than the physical limitation maximum value.

This I/O signal has been rejected.

Recommended actions

Correct the physical limitation values for the I/O signal so that the minimum value becomes less than the maximum value.

Continues on next page

71325, Invalid network configuration

Description

The I/O configuration for network *arg* is invalid.

User-defined (externally loaded) industrial networks must not be specified with the name Local.

This network has been rejected.

Recommended actions

Change the name of the network.

71326, Invalid device predefined type configuration

Description

The I/O configuration for device predefined type *arg* is invalid.

User-defined (externally loaded) device predefined types must not be specified for the Local network.

This device predefined type has been rejected.

Recommended actions

Change the device predefined type.

71328, Invalid name

Description

The I/O configuration is invalid.

The configuration instance *arg* does not comply with the rules of RAPID identifiers.

This configuration instance has been rejected.

Recommended actions

Correct the name of the configuration instance so that it complies with the following rules:

Rules of RAPID identifiers:

- 1 The length must not exceed 16 characters.
- 2 The first character must be a letter (a-z or A-Z).
- 3 Subsequent characters must be letters (a-z or A-Z), digits (0-9) or underscores (_).

71329, Invalid network connection

Description

The I/O configuration for network *arg* is invalid.

Invalid connection *arg* is selected for the network.

Valid connections are: *arg*.

Consequences

This network has been rejected, and no functions depending on it will work.

Recommended actions

Select a valid connection for the network.

71331, Invalid network**Description**

The I/O configuration for network *arg* is invalid.

The name of the network is not valid.

Installed valid networks are:*arg*.

Consequences

This network has been rejected, and no functions depending on it will work.

Recommended actions

Correct the name for the network.

71332, Invalid recovery time**Description**

The I/O configuration for the I/O device *arg* is invalid.

The value of the recovery time parameter *arg* is incorrect.

The recovery time (how often to try regaining contact with lost I/O devices) must not be less than *arg* milliseconds.

This I/O device has been rejected.

Recommended actions

Correct the recovery time for the I/O device.

71333, Invalid DeviceNet baud rate**Description**

The I/O configuration for DeviceNet network is invalid.

The value of the DeviceNet baud rate parameter is incorrect.

Valid DeviceNet baud rates are:

- 125
- 250
- 500

This network has been rejected.

Recommended actions

Correct the baud rate for the DeviceNet network.

71336, Device command without path**Description**

The I/O configuration is invalid.

No path is defined for the device command *<arg>*.

This device command has been rejected.

Recommended actions

Define a path for the device command.

71338, Invalid device command service identifier**Description**

The I/O configuration is invalid.

The service identifier *<arg>* is not valid for the device command *<arg>*.

Valid service identifiers are:

<arg>

This device command has been rejected.

Recommended actions

Correct the service identifier for the device command.

71339, Device command without reference to I/O device**Description**

The I/O configuration is invalid.

The device command *arg* has no reference to an I/O device.

The device command must have a reference to an existing I/O device.

Consequences

This device command has been rejected, and no functions depending on it will work.

Recommended actions

Define an I/O device reference for the device command.

71340, Device command with reference to non-existing I/O device**Description**

The I/O configuration is invalid.

The device command *arg* has a reference to an invalid/unknown I/O device *arg*.

The device command must have a reference to an existing I/O device.

Consequences

This device command has been rejected, and no functions depending on it will work.

Recommended actions

Correct the I/O device for the device command.

71344, Device map undefined**Description**

The I/O configuration for I/O signal *arg* is invalid.

Device map is undefined or empty.

A Device map must be specified for all physical I/O signals (i.e. signals connected to an I/O device).

This I/O signal has been rejected.

Recommended actions

Define a device map for the I/O signal.

Continues on next page

71346, Device map out of range

Description

The I/O configuration for I/O signal *arg* is invalid.
The device map *arg* is invalid since bit *arg* is out of range.
All bits in the device map must be in the range [0, *arg*].
This I/O signal has been rejected.

Recommended actions

Correct the device map.

71347, Device map with overlapping segments

Description

The I/O configuration for I/O signal *arg* is invalid.
The device map *arg* contains segments (e.g. bit *arg*) that overlap each other.
This I/O signal has been rejected.

Recommended actions

Correct the device map.

71348, Device map with unexpected character

Description

The I/O configuration for I/O signal *arg* is invalid.
Found unexpected end or character at position *arg* in the device map: *arg*.
This I/O signal has been rejected.

Recommended actions

Correct the device map so that it complies with the following syntax:

- {bit} = ([0-9]+)
- {range} = ([0-9]+[-][0-9]+)
- {segment} = ({bit} | {range})
- {device map} = ({segment}[,])*{segment}

Examples of valid device maps:

- "1"
- "0-7, 15-8"
- "1,4-3,7"

71349, Invalid signal size

Description

The I/O configuration for I/O signal *arg* is invalid.
There is a mismatch between the signal type and the size of the signal.
The signal size *arg* is given by the device map: *arg*.
This I/O signal has been rejected.

Recommended actions

Correct either the signal type or the device map so that the following rules are fulfilled:

- The size of digital I/O signals must be exactly one bit.
- The size of analog and group I/O signals must be between 1 and 32 bits.

71350, Invalid network

Description

The I/O configuration is invalid.
The device predefined type *arg* has an invalid/unknown type of network *arg*.
Installed valid industrial networks are: *arg arg arg*.

Consequences

This device predefined type has been rejected, and no functions depending on it will work.

Recommended actions

Correct the network for the device predefined type.

71351, Invalid connection 1 type

Description

The I/O configuration is invalid.
The unit type *arg* has an invalid/unknown type for connection 1 *arg*.
The type for connection 1 must be one of the following:

- POLLED
- STROBE
- COS
- CYCLIC
- COS_ACKSUP
- CYCLIC_ACKSUP

This unit type has been rejected.

Recommended actions

Correct the connection 1 type of the unit type.

71352, Invalid connection 2 type

Description

The I/O configuration is invalid.
The unit type *arg* has an invalid/unknown type for connection 2 *arg*.
The type for connection 2 must either be omitted or one of the following:

- POLLED
- STROBE
- COS

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- CYCLIC
- COS_ACKSUP
- CYCLIC_ACKSUP

This unit type has been rejected.

Recommended actions

Correct the connection 2 type of the unit type.

71354, I/O device without reference to network

Description

The I/O configuration is invalid.

No reference to a network is defined for the I/O device *arg*.

This I/O device has been rejected.

Recommended actions

Define a network reference for the I/O device.

71355, Invalid Device Trust Level

Description

The I/O configuration is invalid.

I/O device *arg* has an invalid/unknown Device Trust Level: *arg*.

Installed valid Device Trust Levels are:*arg*.

Consequences

This I/O device has been rejected, and no functions depending on it will work.

Recommended actions

Correct the Device Trust Level for the I/O device.

71356, Bus type mismatch

Description

The I/O configuration is invalid.

Device *arg* refers to a network and a unit type with different bus types.

This I/O device has been rejected.

Recommended actions

- 1 Check that the I/O device is connected to the correct network and that the bus type of that network is correct.
- 2 Check that the I/O device refers to the correct unit type and that the bus type of that unit type is correct.

71357, Duplicated I/O devices on network Local

Description

The I/O configuration for I/O device *arg* is invalid.

There is already another user-defined I/O device connected to the network Local.

Only one user-defined I/O device may be connected to the network Local.

This I/O device has been rejected.

Recommended actions

Correct the I/O configuration.

71361, Cross connection with non-digital resultant I/O signal

Description

The I/O configuration of cross connection *arg* is invalid.

The parameter Resultant refer to an I/O signal *arg*, that is not digital.

Only digital I/O signals can be cross connected.

Consequences

The cross connection has been rejected, and no functions depending on it will work.

Recommended actions

Remove the non-digital I/O signal from the cross connection.

71362, I/O signal mapped outside the I/O device data area

Description

Cannot change physical state of I/O signal *arg* to VALID.

The reason is that the I/O signal is mapped to bit(s) that lies outside the data area of the I/O device it is assigned to.

I/O signal assigned to I/O device *arg*.

I/O signal mapped to bit(s): *arg*.

Output data area size for the I/O device is *arg* bits.

Input data area size for the I/O device is *arg* bits.

Consequences

The physical state of this I/O signal remains NOT VALID.

Recommended actions

- 1 Check that the device mapping of the I/O signal is correct.
- 2 Check that the I/O signal is assigned to the correct I/O device.
- 3 Check the I/O configuration Connection Input/Output size on the I/O device.

71363, Internal slave configuration invalid

Description

The I/O device *arg* configured on the master address is not valid as an internal slave.

Recommended actions

- 1 Change the address on the I/O device.

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2 Use DN_Slave device template.

71364, User I/O queue overload

Description

The user I/O queue handling I/O signal changes has been overloaded.

Consequences

The system will go to status SYS STOP.

Probable causes

This is caused by too frequent signal changes or too large bursts of signal changes, generated by input I/O signals or cross connections between I/O signals.

Recommended actions

- 1 Check the cross connections. Cross connections are described in the manual for the system parameters.
- 2 Check the frequency of input I/O signals from any external equipment connected to the system. Make sure it is not abnormal, and change if required.
- 3 If an extremely heavy I/O load is normal and required, investigate whether programming delays in the RAPID application may solve the problem.

71365, Safety I/O queue overload

Description

The safety I/O queue handling safety I/O signals has been overloaded.

Consequences

The system will go to status SYS HALT.

Probable causes

This is caused by too frequent signal changes of safety I/O signals. Sometimes this may be due to erratic ground connection in I/O signals from external equipment.

Recommended actions

- 1 Repeated safety input I/O signals will cause the system to halt. See the error log for other faults that may cause the condition.
- 2 Check the grounding of each signal from any external equipment affecting the safety I/O signals.
- 3 Check the frequency of input I/O signals from any external equipment connected to the system. Make sure it is not abnormal, and change is required.

71366, Cross connection I/O queue overload

Description

The cross connection I/O queue handling I/O signals has been overloaded.

Consequences

The system will go to status SYS STOP.

Probable causes

This is caused by too frequent signal changes or too large bursts of signal changes, generated by I/O signals being actors in cross connections.

Recommended actions

- 1 Check the cross connections. Cross connections are described in the manual for the system parameters.
- 2 Check the frequency of I/O signals being actors in cross connections.
- 3 If an extremely heavy I/O load is normal and required, investigate whether programming delays in the RAPID application may solve the problem.

71367, No communication with I/O device

Description

During start-up, no communication was established with I/O device *arg* with address *arg* on the network *arg*.

Consequences

It is not possible to access the I/O device or I/O signals on it, since it is currently not communicating with the controller.

Probable causes

The I/O device is either not connected to the system, or it is connected, but has been assigned the wrong address.

Recommended actions

- 1 Make sure all I/O device addresses match the configuration.
- 2 Make sure all addresses are unique, and not used by more than one I/O device.
- 3 Change the address and/or connect the missing I/O device.
- 4 If you changed the address, the power supply to the I/O device must be cycled (switched OFF and then back ON), to make sure the address has been changed.

71379, Unknown communication physical channel connector

Description

The connector *arg* defined for the physical channel *arg* is unknown.

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Consequences

The physical channel will not be available for use.

Probable causes

- The connector defined in the physical channel configuration may be misspelled or refers to a connector not available for use.
- Connector configuration is missing.

Recommended actions

- 1 Make sure the connector defined in the physical channel configuration is referring to an available connector.
- 2 Make sure the option Multiple Serial Ports is installed if required by the used configuration.
- 3 Reinstall the system to make sure the system configuration files are OK.

71380, Communication connector driver is already in use
Description

The connector *arg* cannot use the driver *arg*. The driver is already in use by connector *arg*.

Consequences

The connector and the physical channel using the connector will not be available for use.

Probable causes

- The configuration files may have been faulty.
- A configuration file with improperly configured Physical Channels may have been loaded.

Recommended actions

- 1 Make sure physical connector configuration is valid.
- 2 Reinstall the system to make sure the system configuration files are OK.

71381, Communication connector is already in use
Description

The physical channel *arg* cannot use connector *arg*. The connector is already in use by physical channel *arg*.

Consequences

The connector and the physical channel using the connector will not be available for use.

Probable causes

Several physical channels may have been assigned to the same connector in the configuration.

Recommended actions

Make sure each connector is used by one physical channel only.

71382, DeviceNet watchdog time has expired
Description

The system has not received any reply from the DeviceNet I/O device, and the watchdog timer has timed out.

Consequences

The DeviceNet network is not running, and no communication on the DeviceNet network will be possible. The system goes to system failure state. More information about troubleshooting is available in the application manual for DeviceNet.

Probable causes

The I/O load on the DeviceNet network may be too high, for instance if a RAPID program is trying to set I/O signals at a rate that exceeds the bandwidth available on the DeviceNet network.

Recommended actions

Reduce the I/O load on the DeviceNet network.

71383, User defined I/O devices can't be connected to the network Local
Description

The I/O configuration for I/O device *arg* is invalid.

No user-defined I/O device may be connected to the network Local.

This I/O device has been rejected.

Recommended actions

Correct the I/O configuration.

71385, Request message resource exhausted
Description

Unable to handle more concurrent I/O requests.

Out of concurrent I/O request using delay, pulse, or timeout argument.

Consequences

I/O request cannot be fulfilled.

Probable causes

Too many I/O instructions with pulse or delay argument.

Too many process instructions with pulse, delay or timeout.

Recommended actions

- 1 Reduce the number of concurrent I/O instructions with pulse or delay argument.

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Continued

- 2 Reduce the number of concurrent process instructions that use pulse, delay or timeout argument.

71390, The DeviceNet network has recovered from bus off

Description

The DeviceNet network has recovered from bus off state.

71391, System Signal configuration

Description

There was an error during the configuration of the System I/O Signal *arg*.

Consequences

The system will go to system failure state.

Probable causes

All errors during configuration of System I/O Signals are considered fatal and the system will go to system failure state.

Recommended actions

- 1 Check the connection of the I/O device to which the System Signal is connected.
- 2 Check the configuration of the I/O device.

71392, Invalid output size

Description

On DeviceNet I/O device *arg* the connection output size *arg* does not match the I/O device. When using strobe connection the only valid output sizes are 1 or -1.

Recommended actions

- 1 Change size in configuration.
- 2 Check module.
- 3 Use DN_Generic device template.

71393, Error when allocating generic size

Description

Failed to allocate generic *arg* size (-1) on DeviceNet I/O device *arg*.

Probable causes

The DeviceNet I/O device *arg* cannot be configured with a generic *arg* size (-1).

Recommended actions

- 1 Update your current unit type configuration with new size.
- 2 Use DN_Generic device template.

71394, Invalid physical communication channel

Description

The communication channel *arg* is out of range.

Consequences

The communication channel *arg* is unavailable.

Probable causes

Adapter board DSQC 1003 not installed or the communication channel *arg* is out of range.

Recommended actions

- 1 Check the allowed minimum and maximum of connectors.
- 2 Check hardware required.

71395, No transport protocol

Description

The transport protocol *arg* for channel *arg* is missing.

Consequences

The transport instance *arg* is unavailable.

Probable causes

The option holding the transport protocol *arg* is not installed or the protocol name is faulty.

Recommended actions

- 1 Install missing option.
- 2 Change the transport protocol name.

71396, No transmission protocol

Description

The transport protocol *arg* is missing or the name of the transport protocol is faulty for *arg*.

Consequences

The application protocol instance *arg* is unavailable.

Probable causes

The option holding the transport is not installed or the application name is faulty.

Recommended actions

- 1 Install the option.
- 2 Change the name of the transport in the configuration.

71397, No application protocol

Description

The application protocol *arg* is missing or the name is faulty.

Consequences

The application instance *arg* is unavailable.

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Probable causes

The option holding the application protocol is not installed or the protocol name is faulty.

Recommended actions

- 1 Install the option.
- 2 Change the name of the application protocol.

71398, Communication error from bosv24**Description**

No response from the serial line.

Recommended actions

Check the device or connection.

71399, Communication error from bosv24**Description**

Not possible to deliver the received message.

Recommended actions

Check the communication flow.

71400, Communication error from bosv24**Description**

The response from the device has an invalid frame sequence.

Recommended actions

Check for noise on the serial line.

71401, No option exists for the *arg* Anybus module.**Description**

An *arg* Anybus module has been found, but no option has been installed.

Consequences

No communication on *arg* Anybus module is possible. There may be consequential errors from configuring when no such option has been installed.

Probable causes

An attempt may have been made to add the *arg* Anybus module functionality, without installing the option correctly.

Recommended actions

If the *arg* Anybus module option is required: configure a new system with this option, and install the system.

71402, Duplicate address on the *arg* network.**Description**

The *arg* network address is duplicated on the network.

Conflicting address *arg*.

Consequences

No communication on the *arg* network is possible.

Recommended actions

- 1 Change the address on the conflicting adapter (or physically disconnect the adapter) or change the address for the network.
- 2 Restart the controller.

71403, The interval time is invalid**Description**

For the DeviceNet device *arg* the connection *arg* interval time is invalid.

Probable causes

The interval time has a lower value than the production inhibit time.

Recommended actions

Change the connection *arg* interval time to be higher than the production inhibit time for the DeviceNet device *arg* in the I/O configuration.

71404, Invalid input/output size**Description**

The I/O device *arg* has an invalid value (zero) for the input or output size.

Recommended actions

Change the input/output size to a value greater value than zero.

71405, Duplicate device mapping**Description**

The I/O signal *arg* has overlapping bit(s) in the device map with the I/O signal *arg*.

Consequences

This I/O signal has been rejected, and no functions depending on it will work.

Recommended actions

Correct the device mapping for the overlapping I/O signals in the I/O configuration.

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71406, Communication established on DeviceNet network

Description

The DeviceNet network has established communication.

71407, Route interface not found

Description

The route interface *arg* for network *arg* is not found in the system.

Consequences

The route is not available. Messages to I/O devices connected to the network *arg* will not be forwarded.

Probable causes

The network *arg* not defined.

Recommended actions

Change the network identifier.

71408, Route port number out of range

Description

The given port number *arg* of route *arg* is outside its range.

Consequences

The route is not available. Messages to I/O devices connected to the network *arg* will not be forwarded.

Probable causes

The number *arg* is outside its range.

Recommended actions

Change port number.

71409, Not able to add a port to *arg*

Description

Not able to define port *arg* of route *arg* due to lack of resources.

Consequences

The route is not available. Messages to I/O devices connected to port *arg* are not forwarded.

Probable causes

The network *arg* doesn't support this many ports.

Recommended actions

When possible reduce the number of ports or report the problem to ABB.

71410, CIP route option not installed

Description

The CIP route option is not enabled since it was not selected at system creation.

Consequences

Any CIP route definitions will be omitted.

Probable causes

The CIP route option is not installed in the system.

Recommended actions

Create and install a system with the CIP route option.

71411, Out of route resources

Description

Not able to add anymore routes due to no more route resources in the system.

Consequences

Route *arg* will not be added to the system.

Probable causes

Too many routes have been defined. The system only allows *arg* routes.

Recommended actions

Reduce the number of routes.

71412, The DeviceNet network has regained the bus power

Description

The DeviceNet network has regained the 24 V bus power.

71414, Concurrent changes of signal value

Description

Concurrent changes of I/O signal *arg* value have been detected.

Consequences

A signal value change of I/O signal *arg* is aborted due to another value change of the same I/O signal.

Probable causes

The concurrent value change is due to an undesired signal change sequence in a program. Multiple changes of I/O signal *arg* might appear when a I/O signal is pulsed, e.g.

SetDO *arg*, 0;

PulseDO /High /PLength = 0.01, *arg*;

WaitTime 0.01;

SetDO *arg*, 1;

Continues on next page

The I/O signal *arg* will be 1 at the end, but at rare occasions there will not be any visible pulse. This type of sequence should be avoided.

Recommended actions

Verify that concurrent value changes are desired of I/O signal *arg*, otherwise modify the signal change sequence.

71428, DeviceNet I/O device configured

Description

A new I/O device has been found and configured on the DeviceNet network.

Device name: *arg*.

Device address: *arg*.

Input bytes / Output bytes: *arg*.

Vendor ID: *arg*.

Product code: *arg*

Recommended actions

- 1 Restart the controller to activate the I/O device configuration.
- 2 Edit or delete the configuration.

71443, Too many PROFINET internal devices

Description

There are too many PROFINET internal devices defined in the controller.

Consequences

PROFINET I/O device *arg* will not be configured. No communication with this I/O device will be possible.

Probable causes

PROFINET I/O device *arg* is defined as a PROFINET internal device while another PROFINET internal device has already been configured.

Recommended actions

Remove I/O device *arg* from the configuration.

71446, PROFINET configuration mismatch

Description

Configuration mismatch between the Anybus adapter and the connecting PROFINET controller in slot *arg*.

Consequences

The Anybus adapter will indicate a diagnostic error and no communication will be established between the Anybus adapter and the connecting PROFINET controller.

Probable causes

Mismatch of the data type/size in slot *arg* for the PROFINET controller configuration. The expected data type/size is *arg arg* bytes.

Recommended actions

Correct the data type/size in slot *arg* in the external configuration tool or change the data size in the I/O configuration.

NOTE:

In the PROFINET controller configuration input data shall be in slot 1 and output data in slot 2.

71449, Too many Anybus adapters configured

Description

Too many Anybus adapters configured. It is only allowed to have one Anybus adapter configured.

Consequences

The Anybus adapter *arg* has been rejected, and no functions depending on it will work.

Recommended actions

- 1 Remove an Anybus adapter in the configuration.
- 2 Restart the controller.

71450, EtherNet/IP Scanner/Adapter option not installed

Description

An EtherNet/IP network is configured, but the EtherNet/IP Scanner/Adapter option has not been installed.

Consequences

No communication on the EtherNet/IP is possible. There may be consequential errors from configuring EtherNet/IP when no such option has been installed.

Probable causes

An attempt may have been made to add the EtherNet/IP functionality, without installing the option correctly.

Recommended actions

- 1 If the EtherNet/IP option is required: configure a new system with this option, and install the system.
- 2 If the EtherNet/IP option is not required: configure a new system without this option, and install the system.

Continues on next page

71452, Too many EtherNet/IP networks are configured

Description

Too many EtherNet/IP networks are configured. It is only possible to have one network for the EtherNet/IP Scanner/Adapter option.

Recommended actions

- 1 Remove all except one of the EtherNet/IP networks from the configuration.
- 2 Restart the controller.

71453, Wrong identity for EtherNet/IP adapter

Description

The identity for the adapter *arg* in the I/O configuration is not correct.

The correct identity is:

Vendor ID *arg*.

Device Type *arg*.

Product Code *arg*.

Consequences

No contact will be established with this adapter.

Recommended actions

Correct the I/O configuration for the adapter with the identity information above.

71454, The *arg* address is missing

Description

No IP address is specified for the *arg* network.

Consequences

No communication on the *arg* network is possible.

Recommended actions

- 1 Specify a valid IP address in the network configuration.
- 2 Restart the controller.

71455, EtherNet/IP connection type unknown

Description

The I/O configuration is invalid.

The unit type *arg* has an invalid/unknown connection type *arg*.

The connection type must be one of the following:

- MULTICAST
- POINT2POINT

Consequences

This unit type has been rejected.

Recommended actions

- 1 Correct the connection type of the unit type.
- 2 Restart the controller.

71457, The EtherNet/IP gateway address is invalid

Description

It is not possible to have the gateway address same as the IP address.

Or the gateway address cannot be same as the default destination 0.0.0.0.

Consequences

The default controller gateway address *arg* will be used and not the specified gateway address *arg*.

Recommended actions

- 1 If no physical gateway is used, do not specify any gateway address in the configuration.
- 2 Restart the controller.

71458, Could not change the default gateway address

Description

If no destination address is specified in the Ethernet/IP configuration, the default controller gateway address will be changed. The destination address was not given and the specified gateway address *arg* was not valid and could not be used.

Consequences

No communication on the EtherNet/IP network is possible.

Recommended actions

- 1 Correct the gateway in the EtherNet/IP network configuration.
- 2 Restart the controller.

71459, Illegal address for EtherNet/IP

Description

The address *arg* for the EtherNet/IP network is illegal.

Consequences

No communication on the EtherNet/IP network is possible.

Recommended actions

- 1 Correct the address in the EtherNet/IP network configuration.
- 2 Restart the controller.

Continues on next page

71460, Not able to connect to EtherNet/IP adapter**Description**

The configured adapter *arg* with address *arg* does not physically exist on the EtherNet/IP network.

Consequences

It is not possible to access the adapter itself or I/O signals on the adapter since it is currently not communicating with the controller.

Probable causes

- The adapter does not exist physically.
- The adapter address is wrong.
- The adapter is malfunctioning.

Recommended actions

- 1 Check that the adapter physically exists on the EtherNet/IP network and that the address is correct.
- 2 If the address has been changed, restart the controller.

71461, Duplicated address on the EtherNet/IP network**Description**

The adapter *arg* and the EtherNet/IP scanner have been configured with the same address in the controller.

Consequences

It is not possible to access the adapter or I/O signals on it, since it is currently not communicating with the controller.

Recommended actions

- 1 Change the address for the adapter or the address for the EtherNet/IP controller in the I/O configuration. If changing the I/O device address and it have this address physically it must also be changed in the adapter.
- 2 Restart the controller.

71462, Illegal subnet mask for EtherNet/IP**Description**

The subnet mask *arg* for the EtherNet/IP network is illegal.

Consequences

No communication on the EtherNet/IP network is possible.

Recommended actions

- 1 Correct the subnet mask in the EtherNet/IP network configuration.
- 2 Restart the controller.

71463, Illegal address for EtherNet/IP network**Description**

The EtherNet/IP address *arg* is reserved.

Consequences

No communication on the EtherNet/IP network is possible.

Probable causes

The specified address is on a subnet reserved by another Ethernet port. Two Ethernet ports on the controller cannot be on the same subnet.

Example:

EtherNet/IP port: 192.168.125.x

Management port: 192.168.125.x

Note:

The subnets within the range 192.168.125.xxx - 192.168.130.xxx are predefined and cannot be used.

Recommended actions

- 1 Change the address to another subnet.
- 2 Restart the controller.

71464, Could not add a new gateway for EtherNet/IP**Description**

Could not add the gateway address *arg* with the destination address *arg* for EtherNet/IP.

Consequences

No communication on the EtherNet/IP network is possible.

Probable causes

- 1 The gateway address or the destination address are invalid.
- 2 No destination address have been specified.

Recommended actions

- 1 Correct the gateway address or the destination address in the EtherNet/IP network configuration.
- 2 Restart the controller.

71469, Max number of internal I/O signals exceeded**Description**

The I/O configuration is invalid.

The maximum number, *arg*, of internal I/O signals in the I/O system has been exceeded.

Recommended actions

Modify the configuration of the I/O system (by reducing the number of I/O signals specified in the additional option configuration) so that the maximum limit is not exceeded.

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71473, DeviceNet network scan result

Description

Address___Vendor_ID___Product_code___Device_name___
arg.

71476, DeviceNet firmware file not found

Description

The DeviceNet firmware file *arg* was not found or is not readable.

The board firmware may be out of date.

Recommended actions

Reinstall the system.

71477, Invalid connection size for EtherNet/IP adapter

Description

The adapter *arg* is configured with invalid input and/or output size.

Consequences

No communication with the adapter is possible.

Recommended actions

Correct the input size to *arg* and the output size to *arg* for the adapter in the I/O configuration.

71478, Invalid input or output assembly for EtherNet/IP adapter

Description

The adapter *arg* has invalid input and/or output assembly.

Consequences

No communication with the adapter is possible.

Recommended actions

Correct the input/output assembly for the adapter in the I/O configuration.

71479, Invalid configuration assembly for EtherNet/IP I/O device

Description

The adapter *arg* has invalid configuration assembly.

Consequences

No communication with the adapter is possible.

Recommended actions

Correct the configuration assembly for the adapter in the I/O configuration.

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71480, Adapter occupied by another scanner

Description

It is not possible to connect to the adapter *arg* because it already has an active connection.

Consequences

No communication with the adapter *arg* is possible as long as the adapter is occupied by another scanner.

Recommended actions

Release the connection from the other scanner to the adapter *arg* or change the address.

71481, PROFINET configuration file error

Description

The PROFINET configuration file *arg* could not be found or opened.

Consequences

The configuration file is needed to be able to use the I/O devices defined on the *arg* network.

Recommended actions

- 1 Make sure the file exists.
- 2 Make sure that the configuration file is placed in the HOME directory of your current system if filename without path is used.

71482, PROFINET network configuration changed

Description

I/O configuration for the network *arg* has been changed by an external configuration tool or a connecting controller.

The following values have been changed:

IP Address: *arg*.

Subnet mask: *arg*.

Gateway address: *arg*.

71483, PROFINET identification request received

Description

A PROFINET identification request has been received from an external configuration tool.

The MAC address on the *arg* network is *arg*.

71485, Illegal subnet mask

Description

The subnet mask *arg* for the *arg* network is illegal. The allowed subnet mask range is 255.255.255.xxx.

Consequences

The subnet mask on the *arg* network was not changed.

Recommended actions

- 1 Correct the subnet mask for the network.

71486, Illegal address for *arg* network**Description**

The IP address *arg* for the *arg* network is illegal.

Consequences

The *arg* network cannot be used.

Recommended actions

Correct the address for the *arg* network.

71487, Illegal IP address for *arg* network**Description**

The *arg* network address *arg* is reserved.

Consequences

No communication on the *arg* network is possible.

Probable causes

The specified address is on a subnet reserved by another Ethernet port. Two Ethernet ports on the controller cannot be on the same subnet.

Example:

arg port: 192.168.125.xxx

Management port: 192.168.125.xxx

Note:

The subnets within the range 192.168.125.xxx - 192.168.130.xxx are predefined and cannot be used.

Recommended actions

- 1 Change the address to another subnet.
- 2 Restart the controller.

71488, Illegal gateway address for *arg* network**Description**

The specified gateway address *arg* is not valid and cannot be used.

Consequences

The gateway address is not changed.

Probable causes

The specified gateway address might not be within the range of the *arg* network subnet mask *arg*.

Recommended actions

Correct the gateway address in the *arg* network configuration.

71489, PROFINET internal device configuration warning**Description**

A PROFINET controller has established a connection with the PROFINET internal device on the *arg* network. The connecting PROFINET controller and the internal PROFINET device slot configuration differs.

The internal PROFINET device is currently configured with the following modules:

Slot 1: DI *arg* bytes.

Slot 2: DO *arg* bytes.

Consequences

Not all I/O signals will be possible to use.

Recommended actions

- 1 Reconfigure the connecting PROFINET controller to match the internal PROFINET device.
- 2 Reconfigure the internal PROFINET device in the Robot controller to match the connecting PROFINET controller.

71490, PROFINET I/O device configuration warning**Description**

The I/O device *arg* on the *arg* network is configured in the PROFINET configuration file *arg* but not in the I/O configuration.

Recommended actions

Add the I/O device *arg* to the I/O configuration or remove the I/O device from the PROFINET configuration file.

71491, PROFINET I/O device configuration missing**Description**

The I/O device *arg* on the *arg* network is configured in the I/O configuration but not in the PROFINET configuration file *arg*.

Consequences

No communication with I/O device *arg* is possible.

Recommended actions

Add the I/O device *arg* to the PROFINET configuration file or remove the I/O device from the I/O configuration.

71492, PROFINET diagnostic data reported**Description**

The I/O device *arg* has reported diagnostic data on slot *arg*.

Continues on next page

71493, PROFINET I/O device auto configured

Description

A new I/O device has been found in the PROFINET configuration file. This I/O device has been auto configured in the controller with the following parameters:

Device name: *arg*.

Input bytes: *arg*.

Output bytes: *arg*.

Recommended actions

- 1 Edit or delete the configuration.
- 2 Restart the controller to activate the I/O device configuration.

71494, PROFINET option license is missing

Description

The option license needed to run the *arg* network on the controller was not detected.

Consequences

No communication on *arg* network is possible.

Probable causes

An attempt may have been made to add the PROFINET functionality, without installing the option correctly.

Recommended actions

- Configure a new system with the PROFINET option. Make sure there is a license. Install that system.
- If PROFINET is not required, configure a new system without this option, and install that system.

71495, PROFINET controller option license is missing

Description

The option license needed to run the *arg* network as a PROFINET controller on the controller was not detected. The I/O device *arg* is not defined as an internal PROFINET device.

Consequences

No communication with the I/O device *arg* is possible.

Probable causes

The installed option license for the *arg* network only supports one internal PROFINET device.

Recommended actions

Configure a new system with the PROFINET controller/device option or remove the I/O device *arg* from the I/O configuration.

71498, PROFINET network configuration changed

Description

I/O configuration for the network *arg* have been changed by an external configuration tool or a connecting controller.

The following values have been changed:

Station name: *arg*.

71499, I/O signals in cross connection has overlapping device map

Description

The I/O configuration of cross connection *arg* is invalid.

The resultant I/O signal *arg* has an overlapping device map with the inverted actor I/O signal *arg*.

Using I/O signals with overlapping device map in a cross connection can cause infinity signal setting loops.

Consequences

The cross connection has been rejected, and no functions depending on it will work.

Recommended actions

Correct the device map or define one of the I/O signals as simulated.

71500, EtherNet/IP connection failure

Description

Not able to connect to the adapter *arg*.
arg.

Consequences

No communication with the adapter is possible.

71501, PROFINET configuration file incompatible

Description

The PROFINET configuration file *arg* was not valid.

Consequences

No communication on *arg* network is possible.

Probable causes

The PROFINET configuration file may not have been created in IO Engineering tool.

Recommended actions

Generate a new PROFINET configuration file with IO Engineering tool.

71502, PROFINET configuration mismatch**Description**

The I/O device *arg* reported a different slot configuration compared with the configuration for this I/O device in the PROFINET configuration file *arg*.
First slot mismatch reported on slot *arg*.
arg slot mismatches found.

Consequences

Some I/O signals might not be possible to use.

Probable causes

The module type used in slot *arg* may be of wrong type or of a different version compared to the actual hardware on the I/O device.

Recommended actions

- 1 Update the PROFINET configuration file .
- 2 Check the I/O device hardware.

71503, PROFINET station name error**Description**

The Station Name on the PROFINET *arg* contains one or more illegal characters.
The character at position *arg* is not allowed.

Consequences

The PROFINET *arg* is not possible to use.

Recommended actions

Change the Station Name system parameter to an allowed string.

71504, File size exceeds max file size**Description**

Unable to copy file data to the controller. The file *arg* is too large.
File size: *arg*.
Max file size: *arg*.

Probable causes

The file size is larger than the allowed file size.

Recommended actions

Check the FTP client configuration and increase the system parameter MaxFileSize to be able to transfer the file to the controller.

71505, Device command syntax error**Description**

Could not send device command to I/O device *arg* because there is a syntax error in the command path string.
Device command name *arg*.
The syntax error: Missing comma.

Consequences

The device command was not sent.

Recommended actions

Correct the device command path string.

71506, Device command syntax error**Description**

Could not send device command to I/O device *arg* because there is a syntax error in the command path string.
Device command name *arg*.
The syntax error: Bad path size specified.

Consequences

The device command was not sent.

Recommended actions

Correct the device command path string.

71507, Device command syntax error**Description**

Could not send device command to I/O device *arg* because there is a syntax error in the command path string.
Device command name *arg*.
The syntax error: Incorrect path size.

Consequences

The device command was not sent.

Recommended actions

Correct the device command path string.

71508, Device command syntax error**Description**

Could not send device command to I/O device *arg* because there is a syntax error in the command path string.
Device command name *arg*.
The syntax error: Bad data type.

Consequences

The device command was not sent.

Recommended actions

Correct the device command path string.

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71509, Device command syntax error

Description

Could not send device command to I/O device *arg* because there is a syntax error in the command path string.

Device command name *arg*.

The syntax error: Missing space.

Consequences

The device command was not sent.

Recommended actions

Correct the device command path string.

71510, Device command syntax error

Description

Could not send device command to I/O device *arg* because there is a syntax error in the command path string.

Device command name *arg*.

The syntax error: Incorrect byte size.

Consequences

The device command was not sent.

Recommended actions

Correct the device command path string.

71511, Device command syntax error

Description

Could not send device command to I/O device *arg* because there is a syntax error in the command path string.

Device command name *arg*.

The syntax error: Incorrect data size.

Consequences

The device command was not sent.

Recommended actions

Correct the device command path string.

71512, Invalid service identifier in device command

Description

Could not send device command to I/O device *arg* because of invalid service identifier *arg*.

Valid service identifiers are:
arg.

Recommended actions

Correct the service identifier.

71513, Device command response timeout

Description

A timeout occurred when sending device command *arg* to the I/O device *arg*.

Consequences

The device command was not sent.

Recommended actions

- 1 Check the device command syntax.
- 2 Make sure that the network cable is connected to the controller.
- 3 Make sure the I/O device has is correctly powered.
- 4 Make sure the cabling to the I/O device is correctly connected.

71514, Device command connection error

Description

Could not send device command *arg* to the I/O device *arg* because no active connection was present.

Consequences

The device command was not sent.

Recommended actions

- 1 Check the device command syntax.
- 2 Make sure that the network cable is connected to the controller.
- 3 Make sure the I/O device has is correctly powered.
- 4 Make sure the cabling to the I/O device is correctly connected.

71515, Device command send error

Description

Could not send device command *arg* to the I/O device *arg*.
arg.

Consequences

The device command was not sent.

Recommended actions

- 1 Check the device command syntax.
- 2 Make sure that the network cable is connected to the controller.
- 3 Make sure the I/O device has is correctly powered.
- 4 Make sure the cabling to the I/O device is correctly connected.

71516, An EtherNet/IP adapter does not support Quick Connect**Description**

The adapter *arg* does not support Quick Connect.

Recommended actions

- 1 An EtherNet/IP Command is targeting the Quick Connect attribute for the Adapter. Change the EtherNet/IP Command.
- 2 Restart the controller.

71517, An attribute is changed for an EtherNet/IP adapter**Description**

The attribute *arg* is changed to "*arg*" for the adapter *arg*.

71519, Too many PROFINET Networks are configured**Description**

Too many PROFINET Controller/Device networks are configured. It is only possible to have one network for PROFINET Controller/Device.

Recommended actions

- 1 Remove all except one of the PROFINET Controller/Device networks from the configuration.
- 2 Restart the controller.

71520, Input data invalid**Description**

The I/O device *arg* indicates input data invalid from slot *arg*.

Consequences

The input data is discarded.

Probable causes

Internal error in the I/O device.

71521, Output data not processed**Description**

The I/O device *arg* indicates output data to slot *arg* cannot be processed.

Consequences

The output data is discarded by the I/O device.

Probable causes

Internal error in the I/O device.

71522, Ethernet port occupied by another client**Description**

The specified Ethernet port for EtherNet/IP network is occupied by another client.

Consequences

No communication on the EtherNet/IP network is possible.

Probable causes

A MultiMove system is installed and occupies the specified Ethernet port.

Recommended actions

Select another Ethernet port by changing the connector ID for the EtherNet/IP network.

71524, PROFINET I/O device unknown alarm**Description**

The I/O device *arg* has reported an unknown alarm in slot *arg*. Use I/O device specific documentation for explanation on the alarm code.

Alarm code: *arg*.

71525, PROFINET I/O device diagnostics**Description**

The I/O device *arg* has reported diagnostic data in slot *arg*. Use I/O device specific documentation for more explanation on the diagnostic data.
arg.

71526, PROFINET I/O device unknown alarm**Description**

The I/O device *arg* has reported an unknown alarm in slot *arg*. Use I/O device specific documentation for explanation on the alarm code.

Alarm code: *arg*.

71527, EtherNet/IP adapter state conflict**Description**

The current state of the adapter *arg* prevents communication from being established or the execution of a specific service. This is an adapter specific behavior documented by the vendor.

Consequences

No communication with the adapter *arg* is possible as long as the adapter is in this state.

Recommended actions

- 1 Verify the current state of the adapter .

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Continued

- 2 If the state is error, check the I/O configuration or hardware setup of the adapter and consult the vendor documentation. If the state is running, the I/O device was earlier temporarily busy during communication attempt but has now recovered, no further actions are necessary.

71528, EtherNet/IP general failure

Description

Not able to connect to the adapter *arg*.
arg.

Consequences

No communication with the adapter is possible.

71529, The destination address is missing

Description

The gateway address *arg* on network *arg* is defined, but no destination is defined.

Consequences

The gateway will not be used since the destination is missing.

Recommended actions

Specify a destination address to be used in conjunction with gateway address.

Or

Remove gateway address definition.

71530, The subnet mask is missing

Description

The subnet mask, on *arg* network, is missing. The *arg* network is on connector *arg*.

Consequences

The *arg* network will not operate. No communication on *arg* network is possible.

Probable causes

The subnet mask is missing.

Recommended actions

Add a subnet mask.

71531, Faulty destination address

Description

The given destination address *arg*, on *arg* network, is not allowed. Doesn't follow the IP name standard or it's on the same network as the scanner and the adapter.

Consequences

No destination is available.

Probable causes

- 1 The address given is not following IP address standard.
- 2 The address is equal to network address or gateway address.
- 3 The address is on the same network as network and gateway.
- 4 The address is equal to broadcast or network address.

Recommended actions

Provide a valid destination address.

71532, The gateway address is missing

Description

The destination address *arg* on *arg* is defined, but no gateway address is defined.

Consequences

The destination address will not be used since the gateway address is missing.

Recommended actions

Specify a gateway address to be used in conjunction with the destination address.

Or

Remove destination address definition.

71533, Invalid configuration size for EtherNet/IP adapter

Description

The adapter *arg* has an invalid configuration size. Maximum configuration size supported is *arg* bytes.

Consequences

No communication with the adapter is possible.

Recommended actions

Correct the configuration size for the adapter in the I/O configuration.

71534, Invalid output size for EtherNet/IP adapter

Description

The adapter *arg* has an invalid output size. Maximum output size supported is *arg* bytes.

Consequences

No communication with the adapter is possible.

Recommended actions

Correct the output size for the adapter in the I/O configuration.

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71535, Invalid input size for EtherNet/IP adapter**Description**

The adapter *arg* has an invalid input size. Maximum input size supported is *arg* bytes.

Consequences

No communication with the adapter is possible.

Recommended actions

Correct the input size for the adapter in the I/O configuration.

71536, Device command syntax error**Description**

Could not send device command to adapter *arg* because there is a syntax error in the command value string.

Device command name *arg*.

The syntax error: Can't decode *arg*.

Consequences

The device command was not sent.

Recommended actions

Correct the device command value string.

71537, Invalid configuration data for EtherNet/IP adapter**Description**

The adapter *arg* has an invalid configuration data. Can't decode *arg* at position *arg* in the configuration data.

Consequences

No communication with the adapter is possible.

Recommended actions

Correct the configuration data for the adapter in the I/O configuration.

71538, The EtherNet/IP network address must exist on PC**Description**

The given address *arg*, configured on the EtherNet/IP network, is not found on any network interface on PC.

Consequences

No communication on the EtherNet/IP network is possible.

Probable causes

The *arg* address is not configured on any PC network interface.

Recommended actions

Set the *arg* address on the network interface connected to the EtherNet/IP network on PC.

71539, Invalid Signal Safe Level**Description**

The I/O configuration is invalid.

I/O signal *arg* has an invalid/unknown Signal Safe Level: *arg*.

This I/O signal has been rejected.

Recommended actions

Correct the Signal Safe Level for the I/O signal.

71541, Network auto configuration, scan, successful**Description**

The network auto configuration, operation: scan, on network *arg* was successful.

Recommended actions

View the information in the Event log.

71542, Network auto configuration, scan, not successful**Description**

The network auto configuration, operation: scan, on network *arg* was not successful.

Recommended actions

View the errors in the Event log.

71543, Network auto configuration, scan EDS file, successful but with warnings**Description**

The network auto configuration, operation: scan EDS file(s), on network *arg* and file *arg* was successful but with warnings.

Consequences

The Template Device *arg* might not be complete.

Probable causes

Internal info:

arg

arg

Recommended actions

Verify the Template Device *arg*. Invalid parameters has to be manually corrected.

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71544, Network auto configuration, scan EDS file, not successful

Description

The network auto configuration, operation: scan EDS file(s), on network *arg* and file *arg* was not successful.

Consequences

No Template Device could be created from the file *arg*.

Probable causes

Internal info:

arg

arg

arg

Recommended actions

Create the device manually.

71545, Network auto configuration, device, successful

Description

The network auto configuration, operation: add I/O device(s), on network *arg* was successful.

View the information in the Event log.

Recommended actions

Restart the controller to activate the new I/O device(s).

71546, Network auto configuration, device, not successful

Description

The network auto configuration, operation: add I/O device(s), on network *arg* was not successful.

Recommended actions

View the errors in the Event log.

71547, Network auto configuration, device and signals, successful

Description

The network auto configuration, operation: add I/O device(s) and I/O signals, on network *arg* was successful.

View the information in the Event log.

Recommended actions

Restart the controller to activate the new I/O device(s) and I/O signals.

71548, Network auto configuration, device and signals, not successful

Description

The network auto configuration, operation: add I/O device(s) and I/O signals, on network *arg* was not successful.

Recommended actions

View the errors in the Event log.

71549, Overlapping I/O signals with different values on ActionAtSysRestart

Description

The I/O signal *arg* has overlapping bit(s) in the device map with the I/O signal *arg*.

The I/O signal *arg* is using Signal Safe Level *arg* and the I/O signal *arg* is using Signal Safe Level *arg*.

I/O signals with overlapping device mapping must have the same value on the Signal Safe Level parameter

ActionAtSysRestart.

Consequences

The I/O signal *arg* has been rejected, and no functions depending on it will work.

Recommended actions

Correct the Signal Safe Level definitions for the overlapping I/O signals in the I/O configuration.

71550, Overlapping I/O signals with differing default values

Description

The I/O signal *arg* has overlapping bit(s) in the device map with the I/O signal *arg*. The I/O signal *arg* is using the default value *arg* and the I/O signal *arg* is using the default value *arg*.

I/O signals with overlapping device mapping must have default values with equal values on overlapping bit(s).

Consequences

This I/O signal *arg* has been rejected, and no functions depending on it will work.

Recommended actions

Correct the default values for the overlapping I/O signals in the I/O configuration.

71551, Network auto configuration not supported

Description

Network auto configuration is not supported on network *arg*.

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71552, Max number of device trust levels exceeded**Description**

The I/O configuration is invalid.

The maximum number, *arg*, of device trust levels in the I/O system has been exceeded.

Recommended actions

Modify the configuration of the I/O system (by reducing the number of device trust levels) so that the maximum limit is not exceeded.

71553, Max number of device transfer data instances exceeded**Description**

The I/O configuration is invalid.

The maximum number, *arg*, of device-transfer-data instances in the I/O system has been exceeded.

Recommended actions

Modify the configuration of the I/O system (by reducing the number of device-transfer-data instances or transfer information in I/O signals) so that the maximum limit is not exceeded.

71554, Max number of signal safe levels exceeded**Description**

The I/O configuration is invalid.

The maximum number, *arg*, of signal safe levels in the I/O system has been exceeded.

Recommended actions

Modify the configuration of the I/O system (by reducing the number of signal safe levels) so that the maximum limit is not exceeded.

71555, Invalid configuration of TransferInputOffset and TransferOutputOffset**Description**

The signal *arg* has both TransferInputOffset and TransferOutputOffset set.

Consequences

The configuration has been rejected.

Recommended actions

Remove either TransferInputOffset or TransferOutputOffset.

71556, Signal cannot be transferred**Description**

The signal *arg* has the signal type *arg*.

Only signals with the signal type DI or GI can be transferred with TransferOutputOffset and only DO/GO can be transferred with TransferInputOffset.

Consequences

The configuration has been rejected.

Recommended actions

Change the signal type or transfer another signal.

71557, Signal transfer was defined but no internal device was found**Description**

The signal *arg* is being transferred but no internal device was found.

Recommended actions

Make sure the device is defined/configured before restarting the controller.

71558, Transfer signals overlap**Description**

The signal *arg* and the signal *arg* both have transfer signal definitions and overlap.

Consequences

The configuration has been rejected.

Recommended actions

Change the configuration so that the signals don't overlap.

71559, Transfer signal and cross-connection overlaps**Description**

The signal *arg* and the cross-connection *arg* overlaps.

Consequences

The configuration has been rejected.

Recommended actions

Make sure that no cross-connection and transfer signal overlap.

71560, Transfer signal and SYSOUT_SIG overlaps**Description**

The transfer signal *arg* and the SYSOUT_SIG *arg* overlaps.

Consequences

The configuration has been rejected.

Continues on next page

Continued

Recommended actions

Make sure that no SYSOUT_SIG and transfer signal overlap.

71561, Signal transfer has bitswapped devicemap

Description

The transfer signal *arg* has a bitswapped device map, which is not allowed.

Consequences

The configuration has been rejected.

Recommended actions

Correct the device map.

71562, Signal transfer has a split devicemap

Description

The transfer signal *arg* has a split device map, which is not allowed.

Consequences

The configuration has been rejected.

Recommended actions

Correct the device map.

71563, Signal on internal device with signal transfer definition

Description

The signal *arg* is on an internal device and cannot have a transfer definition on it.

Consequences

The configuration has been rejected.

Recommended actions

Correct the configuration.

71564, Signal on internal device with signal transfer definition

Description

The signal *arg* is being transferred to/from a network that is not PROFINET.

Consequences

The configuration has been rejected.

Recommended actions

Correct the configuration.

71565, Signal on internal device overlaps with transfer signal

Description

The signal *arg* and the signal *arg* on an internal device overlap.

Consequences

The configuration has been rejected.

Recommended actions

Correct the configuration.

71566, Signal has both transfer signal attributes

Description

The signal *arg* has both the TransferFromDevice and TransferToDevice attribute.

Consequences

The configuration has been rejected.

Recommended actions

Correct the configuration.

71567, Signal transfer without offset

Description

The signal *arg* is being transferred to/from a device but is missing the offset attribute.

Consequences

The configuration has been rejected.

Recommended actions

Correct the configuration.

71568, Signal transfer to/from undefined device

Description

The signal *arg* is being transferred to/from an undefined device *arg*.

Consequences

The configuration has been rejected.

Recommended actions

Correct the configuration.

71569, Signal has offset but no transfer attribute

Description

The signal *arg* has a transfer offset set but no TransferFromDevice/TransferToDevice attribute.

Consequences

The configuration has been rejected.

Continues on next page

Recommended actions

Correct the configuration.

71570, Signal has transfer defined with wrong offset
Description

The signal *arg* has a transfer defined but uses the wrong offset.

Consequences

The configuration has been rejected.

Recommended actions

Correct the configuration.

71571, Transfer signal I/O queue overload
Description

The I/O queue handling transfer signal changes has been overloaded.

Consequences

The system will go to status SYS STOP.

Probable causes

This is caused by too frequent signal changes or too large bursts of input bit changes, generated by inputs on I/O devices.

Recommended actions

- 1 Check the transfer definitions on I/O signals. Signal definitions are described in the manual for the system parameters.
- 2 Check the frequency of inputs from any external equipment connected to the system. Make sure it is not abnormal, and change if required.
- 3 If an extremely heavy I/O load is normal and required, investigate whether programming delays in the RAPID application may solve the problem.

71572, I/O device has entered error state
Description

System has indicated that the I/O device *arg* with address *arg* on the network *arg* is faulty.

Consequences

It is not possible to access the I/O device or I/O signals on it, since it is malfunctioning.

Probable causes

There are a number of potential causes for a device to start malfunctioning. Consult the corresponding application manual for possible causes.

Recommended actions

- 1 Consult the application manual for possible causes.
- 2 Check the hardware for potential errors.
- 3 Replace the device hardware, if applicable.

71573, PROFINET configuration mismatch
Description

The I/O device *arg* reported a different slot configuration than configured in the system.

Module in slot *arg* is of the wrong type.

The actual module identifier *0xarg* differs from the expected module identifier *0xarg*.

Consequences

Some I/O signals might not be possible to use.

Probable causes

The module type used in slot *arg* may be of the wrong type or of a different version compared to the actual hardware on the I/O device.

Recommended actions

- 1 Update the PROFINET configuration to match the hardware.
- 2 Check the I/O device.

71574, PROFINET module has diagnostic data available
Description

The I/O device *arg* reported an issue with the module in slot *arg*.

Consequences

Some I/O signals might not be possible to use.

Probable causes

- 1 One or several submodules in slot may be configured with the wrong type or may be of a different version compared to the actual hardware on the I/O device.
- 2 One or several submodules in slot may have diagnostic data available.

Recommended actions

- 1 Check the I/O device: If needed update the PROFINET configuration to match the actual hardware.
- 2 Look for further event log messages from the same slot.

71575, PROFINET configuration mismatch
Description

The I/O device *arg* reported a different slot configuration than configured in the system.

Continues on next page

Continued

There is no module present in slot *arg* however one is configured in the configuration.

Consequences

Some I/O signals might not be possible to use.

Probable causes

The module in slot *arg* is missing on the I/O device.

Recommended actions

- 1 Update the PROFINET configuration to match the hardware.
- 2 Check the I/O device.

71576, Submodule could not be taken over

Description

The submodule in subslot *arg* in slot *arg* on device *arg* could not be taken over.

Consequences

Some I/O signals might not be possible to use.

Probable causes

The submodule in subslot *arg* in slot *arg* on device *arg* cannot be accessed by the robot.

Recommended actions

- 1 Make sure that the device configuration does not conflict with an external controller configuration. E.g. This could be the case in a shared device setup.
- 2 Check if device supports this feature.

71577, Submodule has qualified information available

Description

The submodule in subslot *arg* in slot *arg* on device *arg* has qualified information available.

Consequences

Some I/O signals might not be possible to use.

Probable causes

The submodule in subslot *arg* in slot *arg* on device *arg* has generated qualified information.

Recommended actions

- 1 Check the device diagnostic data for additional diagnostic information.
- 2 Consult the device vendor for additional information.

71578, Submodule requires maintenance

Description

The submodule in subslot *arg* in slot *arg* on device *arg* has maintenance required information available.

Consequences

Some I/O signals might not be possible to use.

Probable causes

The submodule in subslot *arg* in slot *arg* on device *arg* requires maintenance.

Recommended actions

- 1 Check the device diagnostic data for additional diagnostic information.
- 2 Consult the device vendor for additional information.

71579, Submodule demands maintenance

Description

The submodule in subslot *arg* in slot *arg* on device *arg* has maintenance demanded information available.

Consequences

Some I/O signals might not be possible to use.

Probable causes

The submodule in subslot *arg* in slot *arg* on device *arg* demands maintenance.

Recommended actions

- 1 Check the device diagnostic data for additional diagnostic information.
- 2 Consult the device vendor for additional information.

71580, Submodule has diagnostic data available

Description

The submodule in subslot *arg* in slot *arg* in device *arg* has diagnostic data available.

Consequences

Some I/O signals might not be possible to use.

Probable causes

The submodule in subslot *arg* in slot *arg* in device *arg* has generated diagnostic data.

Recommended actions

- 1 Check the device diagnostic data for additional information.
- 2 Consult the device vendor for additional information.

Continues on next page

71581, Submodule is blocked by device**Description**

The submodule in subslot *arg* in slot *arg* on device *arg* has a pending AR.

Consequences

Some I/O signals might not be possible to use.

Probable causes

The submodule in subslot *arg* in slot *arg* on device *arg* is not accessible for controller.

Recommended actions

- 1 Power cycle the device to reestablish the connection.
- 2 Consult the device vendor for additional information.

71582, Access from Robot Controller to IO-Submodule is denied**Description**

The submodule in subslot *arg* in slot *arg* on device *arg* is locked by another I/O controller.

Consequences

Some I/O signals might not be possible to use.

Probable causes

The submodule in subslot *arg* in slot *arg* on device *arg* cannot be accessed.

Recommended actions

- 1 Check if submodule is defined as a shared device within a project of another controller.
- 2 Check diagnostic information of the I/O device for additional details.

71583, Submodule is locked by another IO controller**Description**

The submodule in subslot *arg* in slot *arg* on device *arg* is locked by another IO controller.

Consequences

Some I/O signals might not be possible to use.

Probable causes

The submodule in subslot *arg* in slot *arg* on device *arg* cannot be accessed.

Recommended actions

- 1 Check if submodule is defined as a shared device within a project of another controller.

- 2 Check diagnostic information of the I/O device for additional details.

71584, Submodule is locked by another IO supervisor**Description**

The submodule in subslot *arg* in slot *arg* on device *arg* is locked by another I/O supervisor.

Consequences

Some I/O signals might not be possible to use.

Probable causes

The submodule in subslot *arg* in slot *arg* on device *arg* cannot be accessed.

Recommended actions

- 1 Verify that device is not defined within an I/O Project of another controller.
- 2 Check diagnostic information of the I/O device for additional details.

71585, PROFINET submodule is of wrong type**Description**

The I/O device *arg* reported a different sub-slot configuration than configured in the system.

Sub-module *arg* in slot *arg* is of wrong type.

The actual sub-module identifier 0x*arg* differs from the expected sub-module identifier 0x*arg*.

Consequences

Some I/O signals might not be possible to use.

Recommended actions

- 1 Update the PROFINET configuration to match the hardware.
- 2 Check the I/O device.

71586, PROFINET submodule is missing**Description**

The submodule in subslot *arg* in slot *arg* on device *arg* is missing.

Consequences

Some I/O signals might not be possible to use.

Probable causes

The submodule in subslot *arg* in slot *arg* on device *arg* is missing.

Recommended actions

- 1 Update the PROFINET configuration to match the hardware.
- 2 Check the I/O device.

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71587, Device command syntax error

Description

Could not send device command to I/O device *arg* because there is a syntax error in the command path string.

Device command name *arg*.

The syntax error: Unsupported segment.

Consequences

The device command was not sent.

Recommended actions

Correct the device command path string.

71588, Device command syntax error

Description

Could not send device command to I/O device *arg* because there is a syntax error in the command path string.

Device command name *arg*.

The syntax error: Duplicated segment.

Consequences

The device command was not sent.

Recommended actions

Correct the device command path string.

71589, Fiber optics error

Description

Slot *arg* on device *arg* is signaling problems with the fiber optics, power budget.

Consequences

The device may not work properly due to transmission problems.

Recommended actions

Maintenance is needed of the device and or the fiber optics.

Check the fiber optic transmission chain. Replace the device and or the fiber optic cables if the error remains.

71590, Duplicate device name on network detected

Description

Device *arg* with serial number *arg* is involved in a name conflict on the network. The device name on network is *arg*.

Consequences

It will not be possible to use the device until the conflict is solved.

Recommended actions

Configure device with unique name on the network.

71591, Input signal update rate too high

Description

Device *arg* is producing input signal changes at too high rate.

Consequences

Possible loss of signal changes.

Recommended actions

Configure device to produce input changes at a lower rate by changing to a higher 'Input Request Packet Interval' value or change 'Connection Timeout Multiplier' to a higher value. If this is the internal device change the corresponding parameters at the Scanner.

71592, Transfer to/from an invalid internal slot.

Description

The signal *arg* has transfer to/from internal device *arg* that does not fulfill the requirements for the action.

Consequences

The configuration has been rejected.

Probable causes

Transfer to/from a safety slot, Transfer from a slot with input size 0 and Transfer to a slot with output size 0.

Recommended actions

Make sure that neither of the probable causes are true. When using RobotStudio, only internal devices that fulfill the requirements are shown.

71593, Firmware upgraded

Description

Device *arg* with serial number *arg* has been upgraded with new firmware.

71594, Firmware upgrade failed

Description

Device *arg* with serial number *arg* has failed during upgrade or check of firmware versions.

Consequences

Old versions of firmware are still in use at the device.

Probable causes

Loss of power or connectivity.

Recommended actions

Try again.

71595, Firmware upgrade available**Description**

Device *arg* with serial number *arg* has got a new firmware version available.

Consequences

Bugs are fixed or new functionality is added.

Recommended actions

Manually upgrade the device.

71596, No SFTP fingerprint configured**Description**

Mounting device on remote host *arg* was done without checking fingerprint.

Protocol: *arg*.

Using the default fingerprint configuration, no secure verification of remote host has been done.

Fingerprint received: *arg*.

Recommended actions

Recommended action is to double-check that the controller is connected to the expected remote host and then update the fingerprint in configuration.

71597, Invalid SFTP fingerprint configured**Description**

Security Alert!

Attempting to mount device on remote host *arg* failed. The fingerprint check failed.

Protocol: *arg*.

Configured fingerprint: *arg*.

Received fingerprint: *arg*.

Consequences

No mounting can be done until the fingerprint configured matches the one received.

Probable causes

- 1 The remote host that the controller is attempting to mount on may be pretending to be someone that it not.
- 2 The remote host may have changed public key.

Recommended actions

Double-check that the controller is attempting to mount on the expected remote host and then update the configuration.

71598, Could not mount device**Description**

Mounting device on remote host *arg* failed.

Protocol: *arg*.

Recommended actions

Check the configuration.

71599, Mount permission denied**Description**

Permission was denied to mount device on remote host *arg*.

Protocol: *arg*.

Recommended actions

Check the username and password.

71600, Authentication not supported by remote host**Description**

User and password authentication is currently required when mounting a device on a remote host using SFTP. Remote host: *arg*.

Protocol: *arg*.

Recommended actions

Configure the server to support password identification or replace it with one that does.

71601, Unable to identify remote server**Description**

SFTP fingerprint is configured to verify that the remote SFTP server is the expected one and to do so the server must support host key hash algorithm MD5 or SHA1. The used SFTP server at remote host *arg* does not support any of them.

Protocol: *arg*.

Recommended actions

Remove the usage of fingerprint in the configuration or replace the SFTP server.

71602, NFS version not supported**Description**

The NFS mounted disk *arg* in the controller supports the following NFS version/s:

Low version: *arg*

High version: *arg*.

The NFS server responds with the following message *arg*.

Recommended actions

Continues on next page

Continued

71603, NFS could not connect to server

Description

Could not connect to NFS server running on a computer with IP address *arg*. The NFS server responds with the following message *arg*.

Recommended actions

71604, No station name assigned to PROFINET

Description

There is no station name configured for the PROFINET *arg*. No communication with external devices or controllers will be possible.

Recommended actions

Configure a station name for the PROFINET *arg*.

71605, No IP-address set for PROFINET

Description

The IP-address for the PROFINET *arg* has not been set. No communication with external devices or controllers will be possible.

Recommended actions

Configure an IP-address for the PROFINET *arg*.

71606, Configuration for device is invalid

Description

The configuration for the device *arg* is invalid.

Consequences

The device has not been configured correctly. Communication with device might not be possible.

Probable causes

- 1 The configuration is incorrectly generated. Remake the configuration in the I/O engineering tool.
- 2 The GSD file for the device imported in the I/O engineering tool is invalid. Contact the device vendor for more information.

71607, Ethernet not installed

Description

The option SFTP Client is not installed on this system.

Recommended actions

Update the system and install the SFTP Client option.

71608, Mount path is too large

Description

Mount path is too large. Mount path consists of SFTP server mount point and server path.

- Max length: .
- Protocol used: .

Recommended actions

Change SFTP server mount point or server path.

71609, SFTP server went down

Description

The connection to a trusted SFTP server has been lost. IP address: *arg*.

Recommended actions

Check cable and SFTP server settings.

71610, SFTP server went down

Description

The connection to a non-trusted SFTP server has been lost. IP address: *arg*.

Recommended actions

Check cable and SFTP server settings.

71611, FTP could not list directory

Description

The FTP mounted device *arg* in the robot controller can not list files located on the FTP server with IP address *arg*.

Recommended actions

Verify that the FTP server is configured to use Unix directory listing style.

71613, PROFINET network DCP accepted

Description

arg with sub-option *arg* on *arg* was accepted.

71614, Lost communication with PLC master

Description

The communication between the PLC master and the controller slave is lost.

Consequences

The controller slave will wait until the PLC master reconnects.

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Probable causes

The PLC master may have restarted or the network communication failed.

Recommended actions

Make sure that the network cable is connected between the PCL master and the controller.

71615, Restored communication with PLC master**Description**

The communication between the PLC master and the controller slave is restored.

Consequences

The controller slave is ready to receive commands from the PLC.

71616, CC-Link IE FB Master/Device option not installed**Description**

A CC-Link IE FB Network is configured, but the CC-Link IE FB Device/Master option has not been installed.

Consequences

No communication on the CC-Link IE FB Network is possible. There may be consequential errors from configuring CC-Link when no such option has been installed.

Probable causes

An attempt may have been made to add the CC-Link FB functionality, without installing the option correctly.

Recommended actions

- 1 If the CC-Link IE FB Network is required: configure a new system with Device and or Master option, and install the system.
- 2 If the CC-Link IE FB Network is not required: configure a new system without this option, and install the system.

71617, CC-Link device has unsupported group value.**Description**

The CC-Link device *arg* has unsupported group value *arg*.

Consequences

No communication with *arg* is possible.

Recommended actions

- 1 Change the group value for device .
- 2 Restart the controller.

71618, Duplicate address on CC-Link device.**Description**

The CC-Link device *arg* has duplicate ip address with device *arg*.

Conflicting address *arg*

Consequences

No communication with *arg* is possible.

Recommended actions

- 1 Change the ip address on the conflicting device or change the ip address for .
- 2 Restart the controller.

71619, No IP-address set for CC-Link device**Description**

The IP-address for the CC-Link device *arg* has not been set. No communication with device will be possible.

Recommended actions

Configure an IP-address for the CC-Link device *arg*.

71620, No interface for destination found**Description**

There is no interface on the controller for destination *arg* of CC-Link device *arg*. No communication with device will be possible.

Recommended actions

- 1 Change the IP-address of .
- 2 Change the IP-address of controller.
- 3 Restart the controller.

71621, No interface for destination found**Description**

There is no interface on the controller with IP-address *arg* used by CC-Link Internal device *arg*. No communication with internal device will be possible.

Recommended actions

- 1 Change the IP-address of internal device to IP-address on intended interface.
- 2 Configure the IP-address on intended interface of the controller.
- 3 Restart the controller.

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71622, Conflicting interface for CC-Link master and device

Description

The IP-address *arg* used by CC-Link Internal device *arg* is also in use by CC-Link master. No communication with master on interface *arg* will be possible.

Recommended actions

- 1 Change the IP-address of internal device to IP-address on intended interface.
- 2 Configure the devices on to another interface.
- 3 Restart the controller.

71623, Password could not be decrypted

Description

The password supplied for the FTP/SFTP client or for the Integrated Vision camera *arg*, could not be decrypted.

Recommended actions

The encrypted password has to be applied to the controller from which it was originally generated from. From the configuration editor in RobotStudio or in the sio.cfg, remove the encrypted password and enter the password again and restart the controller. Or verify that the sio.cfg applies to the controller it was generated from.

71624, PROFINET interface port is invalid

Description

The interface port (*arg*) specified for PROFINET *arg* is invalid.

Recommended actions

Correct the configuration.

71650, Device Transfer Data loop detected

Description

Device *arg* is part of a Device Transfer Data loop. Loops are not allowed.

Recommended actions

Correct the configuration.

71651, Device Transfer Data long chain

Description

Device *arg* is part of a long chain of Device Transfer Data. More than *arg*.

Recommended actions

Correct the configuration.

71652, Invalid Device Transfer Data source area

Description

Device Transfer Data *arg* has incorrect value for the source area. Allowed values are 'Input' or 'Output'

Recommended actions

Correct the configuration.

71653, Device Transfer Data invalid network

Description

Device Transfer Data *arg*: Device *arg* is configured on network *arg*. Device Transfer Data is not supported for devices on network *arg*.

71654, Max number of Device Transfer Data instances exceeded

Description

The I/O configuration is invalid.

The maximum number, *arg*, of Device Transfer Data instances in the I/O system has been exceeded.

Recommended actions

Modify the configuration of the I/O system (by reducing the number of device-transfer-data instances) so that the maximum limit is not exceeded.

71655, Device Transfer Data name already exists

Description

The configuration of Device Transfer Data *arg* is invalid.

The name already exists.

Recommended actions

Correct the configuration.

71656, Device Transfer Data destination area overlaps with signal

Description

Device Transfer Data *arg* destination area overlaps with signal *arg*.

Consequences

Device Transfer Data *arg* will not be performed.

Recommended actions

Correct the configuration.

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72010, PROFINET process alarm reported**Description**

The I/O device *arg* has reported process alarm data in slot *arg*.

Process Alarm

A process alarm signals the occurrence of an event in the connected process, for instance upper limit value exceeded.

72011, PROFINET pull alarm data reported**Description**

The I/O device *arg* has reported pull alarm data in slot *arg*.

Pull Alarm

A slot signals the withdrawal of a submodule/module or change in configuration (reduction).

72012, PROFINET plug alarm data reported**Description**

The I/O device *arg* has reported plug alarm data in slot *arg*.

Plug Alarm

A slot signals the insertion of a submodule/module, a new need for parameterization, or a change in configuration (addition).

72013, PROFINET status alarm data reported**Description**

The I/O device *arg* has reported status alarm data in slot *arg*.

Status Alarm

A Status alarm signals a change in the state of a submodule, for instance run, stop or ready.

72014, PROFINET update alarm data reported**Description**

The I/O device *arg* has reported update alarm data in slot *arg*.

Update Alarm

An update alarm signals the change of a parameter in a submodule e.g. by a local operation or a remote access.

72015, PROFINET redundancy alarm data reported**Description**

The I/O device *arg* has reported redundancy alarm data in slot *arg*.

Redundancy Alarm

A redundancy alarm signals the fault of one IO controller to the remaining IO controller for redundant IO ARs.

72016, PROFINET supervisor alarm data reported**Description**

The I/O device *arg* has reported supervisor alarm data in slot *arg*.

Controlled by supervisor

A slot signals the logical withdrawal of a submodule by the IO supervisor. The actions shall be according to the Pull Alarm.

72017, PROFINET released alarm data reported**Description**

The I/O device *arg* has reported released alarm in slot *arg*.

Released Alarm

A slot signals the logical insertion of a submodule by the IO supervisor. The actions shall be according to the Plug Alarm.

72018, PROFINET wrong plug submodule alarm data reported**Description**

The I/O device *arg* has reported wrong plug submodule data in slot *arg*.

Plug Wrong Submodule Alarm

A slot signals the insertion of a wrong submodule/module or a change in configuration (addition).

72019, PROFINET return of submodule data reported**Description**

The I/O device *arg* has reported return of submodule in slot *arg*.

Return of Submodule Alarm

A slot signals that a submodule is ready to switch its IOCS/IOPS from "BAD" to "GOOD" again without new parameterization.

72020, PROFINET diagnosis disappears alarm data reported**Description**

The I/O device *arg* has reported a diagnosis disappears alarm for slot *arg*.

72021, PROFINET diagnosis appears alarm data reported**Description**

The I/O device *arg* has reported a diagnosis appears alarm for slot *arg*.

User Structure Identifier (USI + data): *arg*.

Continues on next page

Continued

72022, PROFINET MC communication mismatch alarm data reported

Description

The I/O device *arg* has reported MC communication mismatch alarm data in slot *arg*.

Multicast Communication Mismatch

A multicast consumer submodule signals that communication relationship to the associated multicast provider failed.

72023, PROFINET port data changed notification alarm data reported

Description

The I/O device *arg* has reported port data changed notification alarm in slot *arg*.

Port Data Change Notification Alarm

A port submodule signals that port data has been changed.

72024, PROFINET sync data changed alarm data reported

Description

The I/O device *arg* has reported sync data changed alarm in slot *arg*.

Sync Data Change Notification Alarm

An interface submodule signals that synchronization data has been changed.

72025, PROFINET isochronous mode problem alarm data reported

Description

The I/O device *arg* has reported isochronous mode problem alarm in slot *arg*.

Isochronous Mode Problem Notification Alarm

The application signals that problems with isochronously execution have been detected.

72026, PROFINET alarm unit reported unknown data

Description

The I/O device *arg* has reported unknown alarm in slot *arg*.
Alarm type is: 0x*arg*.

72050, Error reported by a CC-Link device

Description

CC-Link device *arg* reports that an internal error occurred.

Consequences

No communication with the device is possible.

Recommended actions

- 1 Check the CC-Link device.
- 2 Contact CC-Link device vendor.

72051, CC-Link error indication

Description

Error indication from CC-Link master

Error Code *arg*. IP-address *arg*. Argument *arg*.

72052, Duplicated CC-Link master detected on the network

Description

Another CC-Link master station with IP-address *arg* exists on the same network as robot controller.

Consequences

No communication on CC-Link is possible.

Recommended actions

- 1 Remove the other CC-Link master.
- 2 Restart the controller.

72053, Wrong number of occupied stations configured

Description

CC-Link device with IP-address *arg* reports "Wrong number of occupied stations".

The configured Output/Input Size (number of occupied stations) cannot be handled by the target CC-Link device.

Consequences

No communication with the device is possible.

Recommended actions

- 1 Configure the Output/Input Size for the CC-Link device.
- 2 Restart the controller.

72054, Duplicated CC-Link devices detected on the network

Description

CC-Link master reports that duplicate devices with the same IP-address has been detected on the network for IP-address *arg*.

Consequences

No communication with the device is possible.

Continues on next page

Recommended actions

- 1 Remove the offending CC-Link device.

72055, Duplicated CC-Link master detected on the network**Description**

CC-Link device with IP-address *arg* reports "Master station duplication".

Another CC-Link master station exists on the same network as robot controller.

Consequences

No communication on CC-Link is possible.

Recommended actions

- 1 Remove the other CC-Link master.
- 2 Restart the controller.

72056, Disconnect notification from a CC-Link device**Description**

CC-Link device *arg* reports disconnection.

Consequences

No communication with the device is possible.

Recommended actions

- 1 Check the CC-Link device.
- 2 Contact CC-Link device vendor.

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8 Number series: 9 xxxx

90500, Safety Controller Internal Failure

Description

An internal Failure has occurred in the safety controller.

Consequences

The safety controller will go into safe state. No operation will be possible until restart.

Recommended actions

- Check other error messages arriving at the same time for cause of the error.
- Check the safety controller configuration and installation.

The cause was *arg*.

Consequences

The safety controller will stop all robot movements.

Probable causes

- 1 The square sum of the measured positions exceeded the configured max.
- 2 The square sum of the measured positions was below the configured minimum value.
- 3 Too high acceleration was detected in the resolver input.

Recommended actions

- Check the cabling to the serial measurement board and resolvers.

90501, Safety Controller Reference Data Error

Description

The robot controller has stopped sending reference data to the safety controller for drive module *arg*.

Consequences

The safety controller will stop all robot movements.

Recommended actions

Restart the program. If the problem persists, restart the system.

90504, Safety Controller not synchronized

Description

The safety controller for drive module *arg* is not synchronized with supervised mechanical units.

Probable causes

- The robot has been moved while the power was off.
- An error has occurred in the communication with the serial measurement board (SMB).
- There is a mismatch between the calibration position parameters in the robot controller and the safety configuration.

Recommended actions

- Perform a new synchronization of the safety controller.

90502, Safety Controller SMB Communication Failure

Description

The safety controller for drive module *arg* failed to communicate with the serial measurement board (SMB).

Consequences

The safety controller will stop all robot movements.

Probable causes

- Errors in the configuration of external axes.
- Disturbances in the communication links between the SMB, the robot controller, and the safety controller.

Recommended actions

- Check the configuration of external axes.
- Check the cabling from the axis computer to the main computer for possible disturbances.

90505, Safety Controller Synchronization rejected

Description

The synchronization of Safety Controller drive module *arg* failed.

Consequences

The safety controller will remain in the unsynchronized state.

Probable causes

- One or more axes moved during synchronization.
- The synchronization was not performed within the timeout limit.

Recommended actions

Make sure that the speed during synchronization is within limits, and perform a new synchronization of the safety controller.

90503, Safety Controller Illegal Position Value

Description

An illegal position value from the serial measurement board was detected by the safety controller for drive module *arg* and axis *arg*.

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Continued

90506, Safety Controller Wrong Sync Position

Description

The axis *arg* position does not match its synchronization position, as defined in the safety configuration for the safety controller on drive module *arg*.

Consequences

Synchronization will not be performed, and the safety controller will go to the unsynchronized state.

Probable causes

- One or more axes are not in the correct synchronization position.
- The revolution counters or calibration values of the robot controller are not correct.

Recommended actions

- Check that the synchronization positions in the safety configuration are correct, and that all axes are in their synchronization position.
- Perform revolution counter update or calibration in the correct position, followed by a new synchronization of the safety controller.
- Check that the synchronization switch is working properly.

90507, Safety Controller Synchronized

Description

The safety controller for drive module *arg* is now synchronized to supervised mechanical units.

Consequences

Safety supervision can be used.

90508, Safety Controller Tool Change Incorrect

Description

Incorrect tool change, in the safety controller for drive module *arg*.

The cause was *arg*.

Consequences

The safety controller will stop all robot movements. Operation is not possible until a valid tool has been selected.

Probable causes

- 1 Invalid tool selection input.
- 2 Very high speed was detected during the tool change.

Recommended actions

Check that exactly one tool selection input is active.

90509, Safety Controller Brake Ramp supervision triggered

Description

Too slow deceleration was detected during a Category 1 stop, in the safety controller for drive module *arg*.

Consequences

The Category 1 stop is automatically changed to a Category 0 stop.

Recommended actions

Usually, no actions are necessary. If this happens frequently, check the Application manual for mechanical units' configuration. For external axes, change the parameter value for Brake ramp in the safety configuration.

90511, Safety Controller Servo-Lag Limit exceeded

Description

The safety controller for drive module *arg* has detected a too big difference between the ordered and actual position on axis *arg*.

Consequences

The safety controller will stop all robot movements.

Probable causes

- A collision has occurred.
- Incorrect load definition in the robot program.
- Incorrect configuration of external axes.
- A function has been activated that result in greater servo lag, such as soft servo or force control.
- Incorrect synchronization of the safety controller.
- Incorrect revolution counters in the robot controller.

Recommended actions

- If there was a collision, check the robot and perform a new synchronization if required.
- Make sure that the robot load is defined correctly.
- Check the Servo Lag settings in the safety configuration for the external axis.
- Check that Contact Application Tolerance is activated correctly.
- If needed, activate service mode to jog the robot. Check that the safety controller is synchronized correctly, and that the revolution counters in the robot controller are correct.

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90512, SC Contact Application Tolerance servo lag exceeded**Description**

The safety controller for drive module *arg* detected a too big difference between the ordered and actual position for axis *arg*, while inside Safety Area *arg*.

Consequences

The safety controller will stop all robot movements.

Probable causes

The robot has moved too far from the path, due to external forces or programmed compliance (soft servo or force control).

Recommended actions

- Decrease the compliance, or limit the external forces on the axis.
- Increase the Contact Application Tolerance position tolerance in the safety configuration.

90513, Tool Position supervision violation**Description**

Tool position supervision *arg* caused a violation of zone *arg* in drive module *arg*. Tool *arg* was active and geometry *arg* caused the violation.

Consequences

If configured with a stop action, the safety controller will stop all robot movements, and no operation will be allowed until the violation has ceased or manual mode has been selected.

Probable causes

The tool geometry entered a forbidden region.

Recommended actions

Switch to manual mode, and jog the robot out of the violation.

90514, Safety Controller Standstill violation**Description**

Standstill supervision *arg* in the safety controller for drive module *arg* is violated for axis *arg*.

Consequences

If configured with a stop action, the safety controller will stop all robot movements.

Probable causes

An attempt to move the robot has been done while Standstill supervision was active.

Recommended actions

- Make sure that no supervised axis is moving while Standstill supervision is active.
- Increase the Tolerance parameter for the axis, in the configuration for Standstill supervision.

90515, Safety Controller Tool Speed violation**Description**

Tool Speed supervision *arg* was violated in the safety controller for drive module *arg*.

The cause was *arg*.

Consequences

If configured with a stop action, the safety controller will stop all robot movements.

Probable causes

- 1 TCP speed too high.
- 2 Elbow speed too high.
- 3 Tool speed at point 1 too high.
- 4 Tool speed at point 2 too high.
- 5 Tool speed at point 3 too high.
- 6 Tool speed at point 4 too high.
- 7 Tool speed at point 5 too high.
- 8 Tool speed at point 6 too high.
- 9 Tool speed at point 7 too high.
- 10 Tool speed at point 8 too high.
- 11 Robot wrist speed too high.
- 12 TCP speed too low.

Recommended actions

Modify the program so that all speeds are inside the configured limits.

90516, Safety Controller Reduced Speed violation**Description**

The reduced speed limit was exceeded in the safety controller for drive module *arg*.

Consequences

The safety controller will stop all robot movements.

Probable causes

One or more mechanical units exceeded the reduced speed limit. The type of speed violation was *arg*.

- 1 TCP.
- 2 Elbow.
- 3 Wrist.
- 4 Axis .

Continues on next page

Recommended actions

- Check that the correct tool is selected in the safety controller, matching the tool definition used for jogging or program execution.
- Check that the configured manual mode speed in the safety controller matches the value in the robot controller configuration.
- If the robot is mounted on a track, set the robot controller configuration parameter 'Use checkpoint limitation in world' to Yes, in type Motion Planner, topic Motion.
- If a Cyclic Brake Check was not performed within the specified time interval, perform a new brake check.
- Lower the value of "Teach Mode Max Speed" parameter.

90517, Safety Controller Unsynchronized speed exceeded

Description

The unsynchronized mode speed limit was exceeded in the safety controller for drive module *arg*.

Consequences

The safety controller will stop all robot movements.

Probable causes

One or more mechanical units exceeded the unsynchronized mode speed limit.

Recommended actions

Jog all axes slowly to the synchronization position, and perform a synchronization of the safety controller.

90518, Safety Controller Emergency Stop triggered

Description

The Emergency Stop, *arg*, has been triggered in the safety controller.

Consequences

The safety controller will stop all robot movements.

Probable causes

An emergency stop request has been received by the safety controller.

Recommended actions

Deactivate the emergency stop and restart the program.

90519, Safety Controller Input/Output Mismatch

Description

Different inputs/outputs reported by the two channels in the safety controller for drive module *arg*. The mismatch type was *arg*.

Type 1: Input.

Type 2: Output.

Consequences

The safety controller will stop all robot movements. No full speed operation is possible until the mismatch has ceased.

Probable causes

- Error in the cabling to the safety controller.
- Dual channel mismatch in the safety supervision, due to limited numerical accuracy.

Recommended actions

- Check the safety controller cabling.
- Check if one or more axes, points, or volumes are close to a zone or range border.

90520, Safety Controller Result Mismatch

Description

Different supervision results reported for the two channels in the safety controller for drive module *arg*.

Consequences

The safety controller will stop all robot movements. No full speed operation is possible until the mismatch has ceased.

Probable causes

One or more axes, points, or volumes are close to a zone or range border.

Recommended actions

In manual mode, jog away from the zone or range border.

90521, Safety Controller Brake Test violation

Description

Movement detected during Brake test for drive module *arg*, axis *arg*.

Probable causes

The brake test failed or was interrupted.

Recommended actions

- Perform a new brake test. If the problem persists, replace the brake.

90523, Safety Controller Protective Stop triggered**Description**

The Protective Stop, *arg*, has been triggered in the safety controller.

Consequences

The safety controller will stop all robot movements.

Probable causes

A protective stop request has been received by the safety controller.

Recommended actions

Deactivate the protective stop and restart the program.

90524, Safety Controller configuration error**Description**

The Safety Controller failed to load the safety configuration file *arg*.

Consequences

The safety controller will stop all robot movements in automatic mode.

Probable causes

An invalid safety configuration has been loaded.

Recommended actions

Create and load a new safety configuration using the configurator.

90525, Operation in current mode not allowed by Safety Controller**Description**

The safety controller does not allow operation in the operating mode selected in drive module *arg*.

Consequences

The safety controller will stop all robot movements.

Probable causes

- Automatic operating mode was selected while commissioning mode was active.
- Automatic or Manual Full Speed operating mode was selected while the safety controller was unsynchronized.

Recommended actions

- Synchronize the safety controller if not synchronized.
- Alternatively. If in commissioning mode. Switch to manual mode to resume operation.

90526, Safety Controller Automatic Mode Warning**Description**

The active safety controller configuration has not been locked.

90527, Safety Controller difference in revolution counters**Description**

An error was detected in the position data for drive module *arg*.

Consequences

The safety controller will stop all robot movements.

Recommended actions

Perform a new synchronization of the safety controller.

90528, Safety Controller Tool Orientation violation**Description**

Tool Orientation supervision *arg* was violated in the safety controller for drive module *arg*. Tool *arg* was active.

Consequences

If configured with a stop action, the safety controller will stop all robot movements.

Probable causes

The orientation of the tool was outside the configured bounds while Tool Orientation supervision was active.

Recommended actions

Switch to manual mode, and jog the robot so that the tool orientation does not violate the configured bounds.

90529, Safety Controller axis Position violation**Description**

Axis position supervision *arg* in the safety controller for drive module *arg* was violated for axis *arg*.

Consequences

If configured with a stop action, the safety controller will stop all robot movements.

Probable causes

The position of one or more axes were outside the configured bounds while axis position supervision was active.

Recommended actions

Switch to manual mode, and jog the robot to a position inside configured bounds.

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90530, Safety Controller Axis Speed violation

Description

Axis Speed supervision *arg* in the safety controller for drive module *arg* was violated for axis *arg*. The cause was *arg*.

Consequences

If configured with a stop action, the safety controller will stop all robot movements.

Probable causes

- 1 Axis speed too high.
- 2 Axis speed too low.

Recommended actions

Modify the program, ensuring that all axis speeds are inside the configured limits.

90531, Cyclic Brake Check needs to be done

Description

Cyclic Brake Check (CBC) time limit expired in Safety Controller (SC) *arg* or last brake check failed.

Recommended actions

Perform a brake check.

90532, Max allowed speed during Cyclic Brake Check exceeded

Description

The maximum speed limit, 250 mm/s, during Cyclic Brake Check was exceeded in Safety Controller (SC) *arg*.

Probable causes

- The maximum allowed speed limit exceeded.

Recommended actions

- Perform a new brake check and run with a speed lower than 250 mm/s.

90533, Cyclic Brake Check will be required soon

Description

Cyclic Brake Check (CBC) required in *arg* hours.

Recommended actions

Perform a brake check before the time limit expires.

90534, Cyclic Brake Check interrupted or incorrect

Description

Safety Controller (SC) *arg* has detected that the last Cyclic Brake Check (CBC) was interrupted or incorrect.

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Recommended actions

- Check previous event messages.
- Perform a new brake check only if needed.

90535, Tool Position supervision violation, arm

Description

Tool position supervision *arg* caused a violation of zone *arg* in drive module *arg*. The violation was caused by geometry *arg* on the robot arm.

Consequences

If configured with a stop action, the safety controller will stop all robot movements, and no operation will be allowed until the violation has ceased or manual mode has been selected.

Recommended actions

Switch to manual mode, and jog the robot out of the violation.

90537, Missing Sync-request

Description

The synchronization switch is pressed without a synchronization request being sent to the Safety Controller.

Consequences

No synchronization will be done.

Recommended actions

Send a synchronization request to the Safety Controller before pressing the sync-switch.

90538, Safety Enable input not set

Description

The SafetyEnable input to the Safety Controller is not set.

Consequences

The system goes to status SYS HALT.

Probable causes

- Errors in the safe communication.
- Errors in the Safe IO configuration of the safety controller.

Recommended actions

- Check that the safe communication is working correctly.
- Check the Safe IO configuration of the safety controller.

90539, Drive module without safety supervision

Description

The safety configuration contains on or more drive modules with no mechanical units defined.

Consequences

No safety supervision will be done for the corresponding drive modules.

90540, Only manual mode allowed**Description**

The safety controller only allows operation in Manual mode, because of an error in the safety configuration or lock information.

Consequences

The safety controller will stop all robot movements.

Probable causes

- An error in the safety configuration or lock information has previously been reported. Until this has been corrected, operation is only allowed in Manual mode.
- Feedback from the motor contactors is not correct. See also error message 90669.

Recommended actions

- Switch to Manual mode to resume operation.
- Correct the error in the configuration or lock information.

90542, Unknown axis in safety configuration**Description**

The safety controller configuration for drive module *arg* contains one or more axes that are not present in the robot controller configuration.

Consequences

The safety controller will prevent all robot movements. Operation is not possible until the error has been corrected.

Probable causes

One or more axes have been removed from the robot controller configuration. Alternatively, one or more axes were temporarily disabled during an upgrade or restart of the system.

Recommended actions

Check the robot controller configuration. If one or more mechanical units were temporarily disabled during an upgrade, a new restart with all mechanical units enabled should be sufficient.

90543, Cyclic Brake Check needs to be done**Description**

Cyclic Brake Check (CBC) time limit expired in Safety Controller (SC) *arg* or last brake check failed.

Consequences

This is only a warning.

Recommended actions

Check if a Brake Check needs to be performed.

90544, Safety Controller Tool Force Supervision singularity**Description**

The force acting on the tool could not be calculated for Tool Force Supervision *arg* in the safety controller for drive module *arg*.

Consequences

If configured with a stop action, the safety controller will stop all robot movements, and no operation will be allowed until the violation has ceased or manual mode has been selected.

Probable causes

The robot is too close to a singularity.

Recommended actions

Switch to manual mode, and jog the robot away from the singularity.

90545, Safety Controller Tool Force violation**Description**

Tool Force Supervision *arg* was violated in the safety controller for drive module *arg*.

Consequences

If configured with a stop action, the safety controller will stop all robot movements, and no operation will be allowed until the violation has ceased or manual mode has been selected.

Probable causes

The force acting on the tool exceeded the configured maximum value.

Recommended actions

Switch to manual mode, and jog the robot out of the violation.

90546, Safety Controller Joint Torque violation**Description**

The configured joint torque limit for Tool Force Supervision *arg* in the safety controller for drive module *arg* was violated for axis *arg*.

Consequences

If configured with a stop action, the safety controller will stop all robot movements, and no operation will be allowed until the violation has ceased or manual mode has been selected.

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Continued

Probable causes

The external torque acting on the joint exceeded the configured maximum value.

Recommended actions

Switch to manual mode, and jog the robot out of the violation.

90547, Drive System Communication Failure

Description

The safety controller was unable to check the status of the drive system.

Consequences

The safety controller will stop all robot movements.

Probable causes

- Disturbances in the communication links between the drive system, the robot controller, and the safety controller.
- Internal failure in the drive system.

Recommended actions

- Check for error messages arriving at the same time for possible causes.
- Switch off power to the system and restart to see if the problem persists.

90548, Overspeed During Teach Mode

Description

Joint *arg* has exceeded the maximum speed for teach mode operation.

Consequences

The system goes to status SYS HALT.

Probable causes

The robot may have been moved manually while in state Motors Off. The error may also be caused by a maladjustment in the relation, commutation, between motor shaft and resolver on an additional axis, primarily during installation.

Recommended actions

- 1 Press the Enabling Device to attempt resuming operation.
- 2 Check other event log messages occurring at the same time to determine the actual cause.
- 3 Perform a re-commutation of the motor at hand. How to do this is specified in the Additional Axes Manual.

90549, Torque sensor check failure

Description

The torque sensor check for joint *arg* drive has exceeded the safety specified limit. The joint is connected to drive module *arg* in the drive unit at unit position *arg* and node *arg*.

Consequences

The safety system will prevent the robot from moving.

Probable causes

The monitoring channels do not match or torque sensor is faulty.

Recommended actions

Run the torque sensor calibration routine.

90550, Position sensor check failure

Description

The position sensor between motor and arm side for joint *arg* exceeded the safety specified limit. The joint is connected to drive module *arg* in the drive unit at unit position *arg* and node *arg*.

90551, Drive system lock information error

Description

The robot controller configuration does not match the drive system lock information stored in the Safety Controller.

Consequences

The safety controller will prevent all robot movements. Operation is not possible until the error has been corrected.

Probable causes

The robot controller configuration has been changed since the safety configuration was locked, for instance by adding or removing some mechanical units or joints.

Recommended actions

Update the robot controller configuration so that it matches the drive system lock information stored in the Safety Controller.

90552, Safe payload undefined

Description

The safe payload in the safety controller for drive module *arg* is undefined.

Consequences

The safety controller will prevent all robot movements in automatic mode.

Continues on next page

Probable causes

No safe payload has been selected, or the safety controller was unable to identify the payload.

Recommended actions

Switch to manual mode, and perform a new payload selection.

90553, Safe payload selection error**Description**

The safe payload identified by the safety controller for drive module *arg* does not match the selected payload.

Consequences

The safety controller will prevent all robot movements in automatic mode.

Probable causes

- The actual payload held by the robot differs from the selected payload.
- No RAPID GripLoad instruction was executed while the robot was inside the payload-change zone.

Recommended actions

Switch to manual mode, and perform a new payload selection.

90554, Safe payload selection not allowed**Description**

Payload selection in the safety controller for drive module *arg* was performed in the wrong mode.

Consequences

The safety controller will stop all robot movements in automatic mode. If the selected payload does not match the currently active payload, a new payload selection is required.

Probable causes

The RAPID instruction GripLoad was executed while the robot was outside the payload-change zone, or while the safety controller was unsynchronized.

Recommended actions

If needed, switch to manual mode and perform a new payload selection.

90555, Safe payload identification movement error**Description**

The identification movement for the safe payload in the safety controller for drive module *arg* was not performed correctly.

Consequences

The safety controller will prevent all robot movements in automatic mode.

Probable causes

The tool speed, direction, or orientation during the payload identification movement did not match the values in the safety configuration.

Recommended actions

Switch to manual mode, and perform a new payload selection.

90556, Safe payload changed**Description**

The safe payload selection was performed successfully in the safety controller for drive module *arg*. The new payload is *arg*.

Recommended actions

The safety controller will use the parameters of the selected payload in all relevant calculations.

90557, One or more brakes were released**Description**

Request by *arg* to release brakes has been acknowledged.

Recommended actions

- Activate the brakes by releasing the enabling device on the FlexPendant.
- Or, set activation signal to low.

90558, Brake release request await activation**Description**

Request to release brakes has been issued by/from *arg*.

Recommended actions

Acknowledge the request to release the brakes.

90559, Out of sequence brake release requested**Description**

Emergency stop circuit was closed when brake release was requested.

Recommended actions

Emergency stop must be active before requesting brake release.

90560, Safe Disable of Drive Unit not allowed**Description**

Not allowed to activate Safe Disable of Drive Unit for axis *arg* in drive module *arg*.

Continues on next page

Continued

Consequences

The safety controller will stop all movements of robots and external axes.

Probable causes

Safe Disable of Drive Unit was activated while the corresponding axis was moving, or Contact Application Tolerance (CAP) was active.

Recommended actions

- Before activating Safe Disable of Drive Unit, ensure that all axes controlled by the drive unit are standing still and that CAP is not active.
- Move the program pointer to clear the path, and restart the program.

90561, Safe Disable of Drive Unit failed

Description

Failed to activate Safe Disable of Drive Unit for one or more drive units in drive module *arg*.

Consequences

The safety controller will prevent movement of all robots and external axes.

Probable causes

- Disturbances in the communication links between the drive system, the robot controller, and the safety controller.
- Internal failure in the drive system.

Recommended actions

- Check for error messages arriving at the same time for possible causes.
- Switch off power to the system and restart to see if the problem persists.

90562, Incorrect safety node address

Description

The configured safety node address for the drive unit of joint *arg* in drive module *arg* does not match the value in the robot controller.

Consequences

The safety controller will prevent all robot movements.

Probable causes

- The robot controller configuration parameters for the joint have been changed.
- One or more drive units have been moved, added, or removed.

- Multiple joints in the robot controller configuration share the same joint Id number.

Recommended actions

Check for errors or changes in the robot controller or drive system, and restart.

90600, Invalid SiosCfg tag

Description

The SiosCfg tag on line *arg* is invalid.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90601, Version attribute not found

Description

The SiosCfg version attribute is missing on line *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Add the version attribute to the safety configuration file.

90602, Specified version is not supported

Description

The specified SiosCfg version in the safety configuration file on line *arg* is not supported.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration was not created for the current version of the system.

Recommended actions

Update the safety configuration to a version supported by the Safety Controller.

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90603, Unsupported XML tag in safety configuration file**Description**

XML tag *arg*, found on line *arg*, is unknown.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90604, Tag/Attribute is empty or contains invalid character(s)**Description**

Tag/attribute *arg*, found on line *arg*, is empty or contains invalid character(s).

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90605, Net name attribute is missing**Description**

The net name attribute on line *arg* is missing.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90606, Invalid net name**Description**

The net name *arg* is invalid. Valid names are *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90607, Net already exists**Description**

The net *arg*, specified on line *arg* has already been specified.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90608, Could not create network instance**Description**

Could not create network *arg* instance. It already exists.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90609, Device attribute is missing**Description**

Device *arg* attribute *arg* is missing on line *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90610, Device already exists**Description**

Device *arg* on line *arg* already exists.

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Continued

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90611, Device create failed

Description

Device *arg* failed. The device already exists.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90612, Device attribute insize is invalid

Description

Device *arg* attribute insize is empty or not a number.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90613, Device attribute outsize is invalid

Description

Device *arg* attribute outsize is empty or not a number.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90614, Could not attach device to net

Description

Attaching device *arg* to net *arg* failed because the device is already attached to net *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90615, Could not attach device to net

Description

Attaching device *arg* to net *arg* failed.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90616, Could not find device

Description

Could not find device *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90617, Device attribute is missing

Description

Device *arg* attribute *arg* is missing on line *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

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Recommended actions

Update the safety configuration.

90618, Device attribute is invalid**Description**

Device *arg* attribute *arg* is invalid on line *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90619, Device attribute is invalid**Description**

Device *arg* attribute *arg* is invalid.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90620, Could not create device module**Description**

Could not create device *arg* module.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90621, Signal width invalid in device mapping**Description**

Device *arg* signal *arg* width is invalid.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90622, Signal offset invalid in device mapping**Description**

Device *arg* signal *arg* offset is invalid.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90623, Signal direction invalid in device mapping**Description**

Device *arg* signal *arg* direction is invalid.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90624, Could not find signal**Description**

Could not attach signal *arg* to device *arg*. Signal is missing.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90625, Could not find device**Description**

Could not attach signal *arg* to device *arg*. Device is missing.

Continues on next page

Continued

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90626, Signal name is missing

Description

Signal *arg* name is missing on line *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90627, Signal attribute is missing

Description

Signal *arg* attribute *arg* is missing.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90628, Signal type is unknown

Description

Signal *arg* type *arg* is unknown on line *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90629, Signal attribute invalid in this context

Description

Signal *arg* attribute *arg* is only valid when mapping to a device. Line *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90630, Signal default value empty or out of range

Description

Signal *arg* default value is empty or out of range to the signal type.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90631, Signal type is invalid

Description

Signal *arg* type is invalid.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90632, Could not set signal value

Description

Could not set signal *arg* value.

Consequences

The system will stop all robot movements.

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Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90633, Signal create failed**Description**

Signal *arg* already exists.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90634, Signal configuration conflict**Description**

Signal *arg* configuration on line *arg* conflicts with previous declaration.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90635, Signal input already assigned**Description**

Signal *arg* is already assigned to receive input from device *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90636, Signal value has already been set**Description**

Signal *arg* input mapping failed. Signal value has already been set by *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90637, Signal mapped outside of device I/O area**Description**

Signal *arg* mapping to device *arg* failed. Device I/O size is *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90638, Signal overlaps other signal**Description**

Signal *arg* mapping to device *arg* failed. Bits already mapped.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90639, Signal type does not match value type**Description**

Signal *arg* type *arg* does not match value type *arg*.

Consequences

The system will stop all robot movements.

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Continued

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90640, FuncIO name is missing

Description

The name of FuncIO on line *arg* is missing.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90641, FuncIO attribute is missing

Description

FuncIO *arg* attribute *arg* is missing on line *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90642, Error parsing the safety configuration file

Description

FuncIO *arg* on line *arg* is already mapped to signal *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90643, FuncIO signal not found

Description

Mapping of FuncIO *arg* to device *arg* on line *arg* failed because the FuncIOMapping mapping has not been specified.

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Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90644, FuncIOMapping already exists

Description

Mapping of FuncIO *arg* to signal *arg* failed because a mapping has already been specified.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90646, FuncIOMapping attribute missing

Description

FuncIOMapping *arg* attribute *arg* is missing on line *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90648, FuncIOMapping signal does not exist

Description

FuncIOMapping *arg* to signal *arg* on line *arg* failed because the signal does not exist.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90649, FuncIOMapping failed**Description**

FuncIOMapping *arg* to signal *arg* on line *arg* failed because the mapping has already been assigned to signal *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90650, Unexpected bitwidth mismatch**Description**

Unexpected bitwidth *arg* when *arg* device *arg* from signal *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90651, Unexpected data size during import**Description**

The target buffer size when importing from device *arg* does not match device input area size.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90652, Unexpected data size during export**Description**

The data size when exporting to device *arg* does not match device output area size.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90653, The version of the sc_cfg file is not supported**Description**

The version of the sc_cfg file is not supported.

Consequences

The system will stop all robot movements.

Probable causes

Restore from an unsupported safety configuration.

Recommended actions

Update the safety configuration.

90655, Invalid value of the encoding attribute**Description**

Device *arg* signal *arg* map encoding is invalid.

Consequences

The system will stop all robot movements.

Probable causes

RobotStudio version is too old to handle the expected version.

Recommended actions

Update RobotStudio.

Update the safety configuration.

90656, Device Assembly attribute is missing**Description**

Device *arg* Assembly attribute *arg* is missing on line *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90657, Device Assembly attribute is invalid**Description**

Device *arg* Assembly attribute *arg* is invalid.

Continues on next page

Continued

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90658, IO configuration mismatch

Description

Mismatch between safety controller and robot controller IO configuration. Signal *arg* is missing in the safety controller IO configuration.

Consequences

The signals in the robot controller cannot be used to affect signals in the safety controller.

Probable causes

The safety configuration does not match the robot controller IO configuration.

Recommended actions

Update the configurations so that they match.

90659, Invalid signal direction for commissioning mode

Description

Signal %s is not an input. Commissioning mode is only valid for inputs.

Consequences

The system will stop all robot movements.

Probable causes

Commissioning mode has been set on an output signal.

Recommended actions

Update the safety configuration.

90660, FuncIO information missing

Description

Could not set signal value for FuncIO *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90661, FuncIO signal could not be set

Description

Could not set signal value for FuncIO *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90662, FuncIO signal not found

Description

Could not find signal for FuncIO *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90663, Unstable Operating Mode selector input

Description

Unstable input signals from the Operating Mode selector.

Consequences

The system will stop all robot movements.

Recommended actions

Switch back to previous operating mode and try again. If the problem persists, restart the system.

90664, FuncIOMappings dependency failed

Description

FuncIOMappings for FuncIO *arg* has dependency to FuncIO *arg*.

If the first FuncIO is needed then the second FuncIO must also be specified.

Consequences

The system will stop all robot movements.

Continues on next page

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90665, New safety configuration accepted**Description**

The safety configuration was successfully updated.

90666, Safety Controller configuration version not supported**Description**

The safety controller configuration version is not supported by the software in the safety controller.

Consequences

The system will stop all robot movements.

Probable causes

- 1 The safety controller configuration version is too new.
- 2 The safety controller software is too old.

Recommended actions

- 1 Downgrade the safety controller configuration version.
- 2 Upgrade the safety controller software.

90667, MC option does not match SC configuration file**Description**

The installed Robotware option(s) do(es) not match the contents of the safety controller configuration file.

Consequences

The system will stop all robot movements.

Probable causes

The MC option for the Operating Mode Selector type has been modified.

Recommended actions

Reset the safety controller to factory settings and create a new safety configuration.

90668, Emergency Stop Status input could not be tested**Description**

Emergency Stop Status input could not be tested because emergency stop circuit is broken.

Consequences

The system remains in the Emergency Stop status.

Probable causes

- 1 An emergency stop button has been pressed.
- 2 The cable to the safety controller is not connected.

Recommended actions

- 1 Reset the emergency stop button triggering the stop.
- 2 Attach the cable to the safety controller.

90669, Drive Enable Feedback is open**Description**

The Drive Enable Feedback input to the safety controller is open.

Consequences

The system will stop all robot movements in automatic mode.

Probable causes

- 1 The Drive Enable Feedback signal is open.
- 2 The cable to the safety controller is not connected.

Recommended actions

- 1 Make sure the Drive Enable Feedback signal is closed.
- 2 Attach the cable to the safety controller.

90670, Detachable TPU is allowed**Description**

Detachable TPU is allowed for *arg* seconds.
Emergency stop on the TPU will not work during this period.
The detached TPU must immediately be stored away.

90671, The TPU has been detached**Description**

The TPU has been detached. The emergency stop button on the TPU no longer functions.
The detached TPU must immediately be stored away.

90672, The TPU has been reattached**Description**

The TPU has been reattached to the robot controller.
The functionality of the emergency stop button must be verified by the operator.

90673, Request to detach the TPU was ignored**Description**

The request to detach the TPU was ignored as it is not possible at this point in time.

Continues on next page

Continued

Consequences

The system will stop all robot movements.

Probable causes

- 1 The operator has requested to detach the TPU within 5 seconds of the end of the previous detach period.
- 2 The operator has requested to detach the TPU while a detach request is already active.

Recommended actions

Do not issue TPU detach requests in the situations listed above.

90674, Detaching a TPU is not allowed because the emergency stop is activated

Description

Detaching a TPU is not allowed because the emergency stop on the TPU is activated.

Recommended actions

Release the emergency stop button on the TPU and try again.

90681, CL version attribute is missing

Description

The version attribute is missing in the CL configuration.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90682, CL version is invalid

Description

The safety configuration contains an unsupported version *arg* for the CL configuration on line *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90683, Invalid safety configuration item

Description

The safety configuration contains an invalid configuration item "*arg*" on line *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90684, Safety configuration item/Attribute is invalid

Description

Configuration item/attribute *arg*, found on line *arg*, is empty or contains invalid character(s).

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90685, More than one configuration item found

Description

Duplicate safety configuration item "*arg*" found on line *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90686, Safety configuration item missing

Description

Configuration item "*arg*" is missing in the safety configuration.

Consequences

The system will stop all robot movements.

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Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90687, Safety configuration item attribute missing**Description**

Configuration item "arg" missing on line "arg".

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90688, Too many configuration items specified**Description**

The Safety CL configuration contains too many "arg" items on line "arg".

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90689, Too few configuration items specified**Description**

The Safety CL configuration contains too few "arg" items on line "arg".

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90690, CL operator or operation already exists**Description**

The Safety CL configuration contains a duplicate item *arg* on line *arg*.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90691, Actuator/resultant name already used**Description**

Actuator/resultant name *arg* on line *arg* has already been specified.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90692, The specified signal does not exist**Description**

Signal "arg", specified on line *arg*, is not defined in the safety configuration.

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90693, Unknown signal type**Description**

The signal type "arg", specified on line *arg*, is unknown.

Consequences

The system will stop all robot movements.

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Continued

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90694, Signal types differ

Description

The operation signal type "arg" differs from the operator signal type "arg" on line "arg".

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90695, Operator name is unknown

Description

Unknown operator name "arg" is specified for operation "arg" on line "arg".

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90696, Actuator/Resultant numbers differ

Description

Operation "arg": The number of "arg" differs from its operator "arg" count on line "arg".

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90697, Operation actuator/resultant not found

Description

Operation actuator or resultant "arg" does not have a corresponding operator actuator/resultant on line "arg".

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90698, Operator type is unknown

Description

Unknown operator type "arg" is specified for operator "arg" on line "arg".

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90699, Configured operator signal type is not supported

Description

Specified actuator/resultant "arg" type of the operator "arg" is not supported. Line number "arg".

Consequences

The system will stop all robot movements.

Probable causes

The safety configuration has not been created using RobotStudio.

Recommended actions

Update the safety configuration.

90700, arg initialization error

Description

The Safety Network Controller *arg* failed to initialize.

Consequences

The system will stop all robot movements.

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Probable causes

Internal error.

Recommended actions

Check for other event messages. Restart the robot controller.

90701, *arg* stop failed**Description**

The Safety Network Controller *arg* was unable to stop.

Consequences

The system will stop all robot movements. Communication with the network is not possible.

Probable causes

Internal error.

Recommended actions

Check for other event messages. Restart the robot controller.

90702, *arg* start failed**Description**

The Safety Network Controller *arg* was unable to start.

Consequences

The system will stop all robot movements. Communication with the network is not possible.

Probable causes

Internal error.

Recommended actions

Check for other event messages. Restart the robot controller.

90703, *arg* read failed**Description**

The Safety Network Controller *arg* was unable to read data from the network.

Consequences

The system will stop all robot movements. Communication with the network is not possible.

Probable causes

Network partner is unavailable. Cabling error.

Recommended actions

Check cables. Check for other event messages. Restart the robot controller.

90704, *arg* write failed**Description**

The Safety Network Controller *arg* was unable to write data to the network.

Consequences

The system will stop all robot movements. Communication with the network is not possible.

Probable causes

Network partner is unavailable. Cabling error.

Recommended actions

Check cables. Check for other event messages. Restart the robot controller.

90705, *arg* sync failed**Description**

The Safety Network Controller *arg* was unable to sync between CPUs.

Consequences

The system will stop all robot movements.

Probable causes

Internal error.

Recommended actions

Check for other event messages. Restart the robot controller.

90707, *arg* initialization failed**Description**

The Safety Network Controller *arg* was unable to initialize communication with the robot controller.

Consequences

The system will stop all robot movements.

Probable causes

Internal error.

Recommended actions

Check for other event messages. Restart the robot controller.

90720, Device already configured**Description**

Network *arg*, device *arg* is already configured.

Consequences

The system will stop all robot movements.

Probable causes

User has used the same device name twice.

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Continued

Recommended actions

Remove or rename the extra device configuration.

90721, Module already configured

Description

Network *arg*, device *arg*, module *arg* is already configured on device *arg*.

Consequences

The system will stop all robot movements.

Probable causes

User has used the same module name twice.

Recommended actions

Remove or rename the extra module configuration.

90722, Device slot and subslot has already been configured

Description

Network *arg*, device *arg*, slot *arg*, subslot *arg* is already configured.

Consequences

The system will stop all robot movements.

Probable causes

User has used the same slot and subslot numbers for two different modules in the same device. A slot and subslot combination can only be occupied by one module per device.

Recommended actions

Assign the correct slot and subslot.

90723, F-Destination address already configured

Description

Network *arg*, device *arg* slot *arg* subslot *arg*: F-Destination address *arg* already configured.

Consequences

The system will stop all robot movements.

Probable causes

The F-Destination address must be unique on the entire PROFIsafe network. User has assigned the same F-Destination address to two different device, slot and subslot combinations.

Recommended actions

Assign the correct F-Destination addresses.

90724, Module F-Source address already used as F-Destination address

Description

Network *arg*, module *arg* F-Source address *arg* used as F-Destination address on module *arg*.

Consequences

The system will stop all robot movements.

Probable causes

User has assigned an F-Source address as the F-Destination address.

Recommended actions

Re-assign the erroneous module to have the correct F-Destination/F-Source address.

90725, Module F-Destination address already used as F-Source address

Description

Network *arg* module *arg* F-Destination address *arg* used as F-Source address on module *arg*.

Consequences

The system will stop all robot movements.

Probable causes

User has assigned an F-Destination address as the F-Source address.

Recommended actions

Re-assign the erroneous module to have the correct F-Destination/F-Source address.

90726, Device is not present in the safety configuration

Description

Network *arg*, device *arg* is not present in the safety configuration.

Consequences

The communication with the device will not function correctly.

Probable causes

The IO configuration and safety configuration are not consistent.

Recommended actions

Add the device to the safety configuration using the IO Engineering tool.

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90760, Safety data is missing from drive system.**Description**

Safety data is missing from drive system during initialization.

Consequences

The system will stop all robot movements.

Probable causes

- Disturbances in the communication links between the drive system, the robot controller, and the safety controller.
- Internal failure in the drive system.

Recommended actions

- Check for error messages arriving at the same time for possible causes.
- Switch off power to the system and restart to see if the problem persists.

90770, CIP Safety IP Address mismatch**Description**

The NodeId *arg.arg.arg* of the CIP Safety Adapter does not match the IP Address of the robot controller EtherNet/IP Industrial Network.

Consequences

Communication with the CIP Safety adapter will not be possible.

Probable causes

Configuration mismatch.

Recommended actions

Verify that the NodeID of the CIP Safety Adapter matches the IP address of the Industrial Network EtherNet/IP.

90771, CIP Safety Electronic key mismatch**Description**

An external CIP Safety Scanner is attempting to connect to the CIP Safety Adapter of this robot controller with an unsupported electronic key.

Consequences

Communication with the external CIP Safety Scanner will not be possible.

Probable causes

The external CIP Safety Scanner has an invalid value for parameter *arg*.

Recommended actions

Check the electronic key configuration of the external CIP Safety Scanner.

90772, CIP Safety memory reset**Description**

The Persistent memory of the CIP Safety Adapter has been reset to default.

Consequences

The output ownership of any previously established CIP Safety connections is no longer present in persistent memory.

Probable causes

User interaction.

Recommended actions

Reconnect Safety Scanner.

90773, CIP Safety forward open fail**Description**

The CIP Safety Adapter of this robot controller has rejected a safety forward open from an external CIP Safety Scanner.

Consequences

Communication with the external CIP Safety Scanner will not be possible.

Probable causes

The CIP Safety Scanner has an invalid value for parameter *arg*.

Recommended actions

Check the configuration of the *arg* parameter.

90774, CIP Safety forward close fail**Description**

The CIP Safety Adapter of this robot controller has rejected a safety forward close from an external CIP Safety Scanner.

Consequences

The Robot Controller is not able to properly clean the safety connection. The external CIP Safety Scanner may not be able to reestablish the connection.

Probable causes

The CIP Safety Adapter may be in a state where the closing of a safe connection is not allowed.

Recommended actions

Restart the robot controller.

90775, Selected RPI below recommended value**Description**

Selected RPI for *arg* is below recommended value of 20ms.

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Continued

Consequences

The jitter in the observed packet interval and the worst case packet interval has increased causing unstable communication.

Probable causes

RPI below the recommended value.

Recommended actions

Set the Timeout Multiplier of the connection to a value greater than 3.

90776, Configuration Signature Mismatch

Description

The Configuration Signature parameter received from an external CIP Safety Scanner in the Forward Open request does not match value in the CIP Safety Adapter of this robot controller. The signature is created in the ABB Safety Configuration Report and consist of ID, Date and Time.

Consequences

CIP Safety Communication with the external Scanner is not possible.

Probable causes

The external Safety Scanner has a signature configured but

- 1 it did not match the value in the ABB Safety Configuration Report of the CIP Safety Adapter or
- 2 the Adapter configured the signature to "Not Used".

Recommended actions

- 1 Verify that the external Scanner has all parts of the Configuration Signature (ID, date and time) according to the ABB Safety Configuration Report of the Adapter.
- 2 If you wish to disable the signature matching while opening a safety connection, then set the Configuration Signature parameter to "Not Used" in the Adapter and disable it in the external Scanner as well.

90777, CIP Safety Configuration Mismatch - Size Mismatch

Description

The configuration of EtherNet/IP Device *arg* (or its EtherNet/IP IO connections) in I/O System Configuration does not match the corresponding configuration in Visual SafeMove.

Consequences

- 1 CIP Safety Communication with may not work properly.
- 2 The CIP Safety Configuration Signature (SCID) generated in the ABB Safety Configuration Report is invalid.

Probable causes

The parameter *arg* in I/O System Configuration is set to *arg*. The corresponding parameter in Visual SafeMove is set to *arg*.

Recommended actions

- 1 Verify that the parameter has the same value in both: I/O System Configuration and in Visual SafeMove.
- 2 Verify that the device configured in I/O System Configuration has all its EtherNet/IP IO Connections attached as intended.

90778, CIP Safety Configuration Mismatch - Name Mismatch

Description

The EtherNet/IP Device *arg* defined in the I/O System Configuration does not exist in CIP Safety Scanner configuration in Visual SafeMove.

Consequences

- 1 CIP Safety Communication with will not be possible.
- 2 The CIP Safety Configuration Signature (SCID) generated in the ABB Safety Configuration Report is invalid.

Probable causes

The *arg* device does not exist in CIP Safety Scanner configuration in Visual SafeMove.

Recommended actions

- 1 Verify that the device is added in Visual SafeMove configuration.
- 2 Verify that the device has the same name in I/O System Configuration and in Visual SafeMove.

90779, CIP Safety Ownership Conflict

Description

An external CIP Safety Scanner tries to connect and write to the CIP Safety Adapter. However, another Scanner with different IP Address and/or Safety Network Number (SNN) already owns that connection of the CIP Safety Adapter. The IP Address and SNN of the current owner are written to Non Volatile Memory of the CIP Safety Adapter.

Consequences

- 1 An external CIP Safety Scanner will not be able to connect and read or write signals to the CIP Safety Adapter of the Robot Controller.

Probable causes

- 1 The IP Address and/or SNN of the external CIP Safety Scanner has changed.
- 2 The connection on this CIP Safety Adapter is already owned by another external CIP Safety Scanner.

Continues on next page

Recommended actions

- 1 Verify that the IP Address and SNN of the external CIP Safety Scanner is as intended.
- 2 Reset CIP Safety to clear the ownership from Non Volatile Memory of the CIP Safety Adapter.

90780, Two-channel fault in Safety Controller**Description**

Two-Channel fault for Safety Controller GPIO input *arg*.

Consequences

The robot will remain in protective stop until the two-channel fault is corrected.

Probable causes

- 1 Cable fault.
- 2 Signaling error.
- 3 Incorrect usage of input devices such as the enabling device.

Recommended actions

- 1 Check the cables to the Safety Controller.
- 2 Check the input devices for issues.
- 3 Ensure proper usage of the input devices such as the enabling device.

90781, Safe Local I/O GPIO input is unstable**Description**

arg SNC: GPIO input *arg* is unstable.

This is a warning only.

Probable causes

- 1 Cable fault.
- 2 Signaling error.

Recommended actions

- 1 Check cables to the Safety Controller.
- 2 Verify that the indicated signal to the Safety Controller is stable.

90790, *arg* setup failed**Description**

The *arg* was unable to setup properly.

Consequences

arg is not running.

Probable causes

No communication with the PROFIsafe host. Bad parameter values.

Recommended actions

Check parameters and connection to the PROFIsafe host. Try again.

90791, *arg* start failed**Description**

The *arg* was unable to start.

Consequences

arg is not running.

Probable causes

No communication with the PROFIsafe host. Bad parameter values.

Recommended actions

Check parameters and connection to the the PROFIsafe host. Try again.

90792, *arg* fail-safe activated**Description**

The *arg* has activated fail-safe values.

Probable causes

Lost communication with the PROFIsafe host.

Recommended actions

Check connection to the PROFIsafe host.

90793, *arg* Operator Acknowledge**Description**

The *arg* is in Operator Acknowledge state.

The PROFIsafe host is waiting for operator acknowledgement.

Consequences

arg is sending fail-safe values.

Probable causes

Communication with the the PROFIsafe host has been established.

Recommended actions

Activate the Operator Acknowledge signal for about 1 second.

90794, *arg* parameter mismatch**Description**

The *arg* F-Parameters do not match F-Parameters from the PROFIsafe host.

Probable causes

Incorrect parameters sent from the PROFIsafe host.

Continues on next page

Continued

Recommended actions

Check the configuration in the PROFIsafe host and restart communication.

90795, *arg* watchdog timeout

Description

The *arg* watchdog has timed out.

Probable causes

Lost communication with the PROFIsafe host.

Recommended actions

- 1 Check that the Ethernet cable is properly inserted.
- 2 Check that the PROFIsafe host is connected and running.

90796, *arg* CRC error

Description

The *arg* is in CRC error state.

Probable causes

Communication fault from the PROFIsafe host.

Recommended actions

Check connection to the PROFIsafe host and try again.

90797, *arg* fault

Description

The *arg* is in device fault state.

Probable causes

Communication fault from the PROFIsafe host. Internal errors.

Recommended actions

Check connection to the PROFIsafe host and try again.

90798, PROFIsafe host has received an Operator Acknowledgement (Op-Ack)

Description

The PROFIsafe operator acknowledgement (Op-Ack) has been issued.

If the PROFIsafe host was waiting for Op-Ack then communication has been resumed with process data values.

90800, Bad XML syntax in *arg* safety configuration file

Description

The system could not parse the contents of the safety configuration file.

Probable causes

The configurator has not been used for creating the configuration file. Internal error in the configurator.

Recommended actions

Make sure to use the configurator when creating the safety configuration file.

90801, CRC error in *arg* safety configuration file

Description

The CRC in the safety configuration file does not match the contents of the file.

Consequences

The safety configuration file is not loaded and the Safety Controller goes to Safe state.

Recommended actions

Update the safety configuration and restart the system.

90802, Lock Information Error

Description

The lock information in the safety configuration file *arg* does not match the lock information stored in the Safety Controller, cause *arg*.

Checksum safety configuration file: *arg*.

Checksum Safety Controller: *arg*.

Consequences

No full speed operation is possible.

Probable causes

- 1 The safety configuration file contains LockInfo, but has not been locked to the Safety Controller.
- 2 The Safety Controller is locked to another safety configuration-file.
- 3 The Safety Controller was locked to another robot controller (mismatch ControllerId).
- 4 The Safety Controller is locked to this safety configuration file, but the file does not contain LockInfo.

Recommended actions

- 1 Lock the file to the Safety Controller or remove LockInfo from the safety configuration file.
- 2 Unlock the safety configuration on the Safety Controller, or revert to the file corresponding to the checksum on the Safety Controller.
- 3 Unlock the safety configuration stored on the Safety Controller, or move the Safety Controller hardware back to the correct robot controller (if it has been moved).

Continues on next page

- 4 Add LockInfo to the safety configuration file, or perform Unlock on it to remove lock information from the Safety Controller.

90803, Unsupported hardware identifier in *arg* safety configuration file

Description

The safety configuration file was not created for this hardware setup.

Probable causes

File is incorrectly created or copied from a non-matching robot system.

Recommended actions

Recreate the safety configuration with the configurator.

90804, Communication lost with Safety Controller

Description

The main computer has lost contact with the Safety Controller.

Consequences

The robot controller goes to SYS FAIL. No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

This may be caused by faulty hardware.

Recommended actions

- 1 Make sure the Safety Controller board is properly mounted.
- 2 Restart the system and check if the error remains.

90805, Start of Safety Controller failed

Description

The main computer could not start the Safety Controller. See the event log for more details.

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

This may be caused by faulty hardware.

Recommended actions

- 1 Make sure the Safety Controller board is properly mounted.
- 2 Restart the system and check if the error remains.

90806, Safety Configuration Locked

Description

The Safety configuration was successfully locked by user *arg*.

Consequences

The robot can now be run in automatic mode without warnings. The safety configuration cannot be changed unless it is unlocked first.

90807, Safety Configuration Unlocked

Description

The safety configuration was successfully unlocked.

Consequences

The safety configuration can now be modified. Switching to automatic mode will generate a warning.

90808, Unsupported Robot Type

Description

The Safety Controller does not support the robot type.

Consequences

No operation will be possible.

Recommended actions

- 1 Remove the Safety Controller board and the Safety Controller option from the system.
- 2 Change to a robot type that is supported by the Safety Controller.

90809, Safety Controller set to default configuration

Description

The safety controller configuration failed validation checks.

Consequences

The safety controller is running with the default configuration.

Probable causes

User misconfiguration.

Recommended actions

- 1 Correct the safety controller configuration.

90810, Safety Controller hardware diagnostics failed

Description

The Safety Controller hardware diagnostics failed: *arg arg*.

Continues on next page

Continued

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

This may be caused by faulty hardware.

Recommended actions

- 1 Make sure the Safety Controller board is properly mounted.
- 2 Restart the system and check if the error remains.
- 3 If the error remains replace the Safety Controller board.

90811, CPU register self-test failed

Description

The CPU hardware diagnostics has detected an error: *arg*.

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

This may be caused by faulty hardware.

Recommended actions

- 1 Restart the system and check if the error remains.
- 2 If the error remains replace the Safety Controller board.

90812, GPIO register self-test failed

Description

The GPIO hardware diagnostics has detected an error on GPIO ID: *arg*.

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

This may be caused by faulty hardware.

Recommended actions

- 1 Restart the system and check if the error remains.
- 2 If the error remains replace the Safety Controller board.

90813, GPIO start-up circuit test failed

Description

The GPIO start-up circuit test failed on GPIO ID: *arg*.

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

This may be caused by faulty hardware.

Continues on next page

Recommended actions

- 1 Make sure that all cables to the safety controller are properly attached.
- 2 Restart the system and check if the error remains.
- 3 If the error remains replace the Safety Controller board.

90814, GPIO cyclic circuit test failed

Description

The GPIO cyclic circuit test failed on GPIO ID: *arg*.

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

This may be caused by faulty hardware.

Recommended actions

- 1 Make sure that all cables to the safety controller are properly attached.
- 2 Restart the system and check if the error remains.
- 3 If the error remains replace the Safety Controller board.

90815, Mode Selector input test failed

Description

The Mode Selector input test failed on GPIO ID: *arg*.

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

This may be caused by faulty hardware.

Recommended actions

- 1 Make sure that all cables to the safety controller are properly attached.
- 2 Restart the system and check if the error remains.
- 3 If the error remains replace the Safety Controller board.

90816, Invalid Mode Selector input

Description

The Mode Selector has an invalid number of set inputs: *arg*.

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

This may be caused by faulty hardware.

Recommended actions

- 1 Make sure that all cables to the safety controller are properly attached.
- 2 Restart the system and check if the error remains.
- 3 If the error remains replace the Safety Controller board.

90817, Invalid state of the Mode Selector**Description**

The Mode Selector input is in an invalid state GPIO ID: *arg*.

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

This may be caused by faulty hardware.

Recommended actions

- 1 Make sure that all cables to the safety controller are properly attached.
- 2 Restart the system and check if the error remains.
- 3 If the error remains replace the Safety Controller board.

90818, Temperature test failed**Description**

The temperature is outside specification: *arg*.

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

The ambient temperature is either too high or too low.

Recommended actions

- 1 Ensure that the system is operating in an approved environment.
- 2 Restart the system and check if the error remains.
- 3 If the error remains replace the Safety Controller board.

90819, Voltage test failed**Description**

The voltage is outside specification: *arg*.

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

This may be caused by faulty hardware.

Recommended actions

- 1 Make sure that all cables to the safety controller are properly attached.
- 2 Restart the system and check if the error remains.
- 3 If the error remains replace the Safety Controller board.

90820, Motor contactor test failed**Description**

The test of motor contactor 1 failed.

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

This may be caused by faulty hardware.

Recommended actions

- 1 Make sure that all cables to the safety controller are properly attached.
- 2 Restart the system and check if the error remains.
- 3 If the error remains replace the motor contactor.

90821, Motor contactor test failed**Description**

The test of motor contactor 2 failed.

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

This may be caused by faulty hardware.

Recommended actions

- 1 Make sure that all cables to the safety controller are properly attached.
- 2 Restart the system and check if the error remains.
- 3 If the error remains replace the motor contactor.

90822, Diagnostic has been disabled**Description**

Diagnostic tests in safety controller have been disabled.

Consequences

Safe digital inputs, outputs and voltages on the safety controller have not been tested.

Probable causes

The main computer software is run on a test rack with simulated drive system.

Continues on next page

Continued

Recommended actions

90823, Clock test failed

Description

The frequency of clock *arg* is outside of specification.

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

The measured clock frequency is either too high or too low.

Recommended actions

- 1 Ensure that the system is operating in an approved environment.
- 2 Restart the system and check if the error remains.
- 3 If the error remains replace the Safety Controller hardware.

90824, GPIO cyclic short circuit test failed

Description

The GPIO cyclic short circuit test failed on GPIO ID: *arg*.

Consequences

No operation will be possible until the fault has been corrected and the system have been restarted.

Probable causes

This may be caused by faulty cabling or hardware.

Recommended actions

- 1 Make sure that all cables are undamaged.
- 2 Make sure that all cables to the safety controller are properly attached.
- 3 Restart the system and check if the error remains.
- 4 If the error remains replace the Safety Controller board.

90830, Safety Controller persistent storage data is corrupt

Description

Data stored in persistent memory by Safety Controller was detected as corrupt/inconsistent. Data area will therefore be erased.

Consequences

See the application manual for SafeMove2 regarding persistent storage.

Probable causes

This can be caused by an uncontrolled shutdown or in rare cases faulty hardware.

Recommended actions

- 1 Restart the robot controller to see if the error remains.
- 2 If the error remains consider replacing the Safety Controller hardware.

90831, Safety Controller persistent data lost

Description

Data stored in persistent memory by Safety Controller was not stored during last shutdown.

Consequences

See the application manual for SafeMove2 regarding persistent storage.

Probable causes

This was caused by an uncontrolled shutdown or in rare cases faulty hardware.

Recommended actions

- 1 Restart the robot controller to see if the error remains.
- 2 If the error remains consider replacing the Safety Controller hardware.

90832, File *arg* not found

Description

The XML file *arg*, which is used by the safety controller, was not found.

Consequences

No operation will be possible until the fault has been corrected and the system has been restarted.

Probable causes

- 1 Restore of a backup from a system with a different configuration.
- 2 Disc corruption.

Recommended actions

- 1 Restore to a system with the correct configuration.
- 2 Reinstall system.

90833, Safety configuration version not supported

Description

Safety configuration file *arg* version *arg.arg.arg* not supported.

Consequences

No operation in automatic mode will be possible until the fault has been corrected.

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Probable causes

- 1 The safety configuration was created in a later version of RobotWare.
- 2 RobotWare has been downgraded.

Recommended actions

- 1 Restore a backup from current version of RobotWare.
- 2 Load a safety configuration created with current version of RobotWare.

90834, Safety configuration attribute missing or invalid**Description**

Safety configuration file *arg* element *arg*: Attribute *arg* invalid or missing on line *arg*.

Consequences

No operation will be possible until the fault has been corrected and the system has been restarted.

Recommended actions

Use RobotStudio to create a valid safety configuration for the system.

90835, Safety Controller performance warning**Description**

The work load on the safety controller is near its limit.

Consequences

If the work load is increased, the safety controller will stop the robot.

Probable causes

The safety configuration is too demanding for the system.

Recommended actions

Create and load a less demanding configuration with fewer and simpler zones.

90836, Safety Controller has entered safe state**Description**

The safety controller has entered the safe state.

Consequences

The system goes to status SYS HALT.

Probable causes

The cause of this is described in previous event log entries.

Recommended actions

Check and handle previous event messages and restart the robot controller.

90837, Safety Controller timed out waiting for main computer communication**Description**

The safety controller timed out waiting for main computer communication.

Consequences

The safety controller will enter the safe state. No operation will be possible until the system has been restarted.

Probable causes

- 1 Main computer is overloaded.
- 2 Internal error in the main computer.

Recommended actions

- 1 Check and handle previous event messages and restart the robot controller.
- 2 Reduce load on the main computer.

90851, Safety Configuration Error**Description**

The safety configuration file *arg* does not match the installed system options. The safety configuration file contains *arg* instances of *arg* when *arg* instances is allowed.

Consequences

The Safety Controller will not load the safety configuration and enters safe state.

Probable causes

The safety configuration file contains elements that are not supported by the installed system options.

Recommended actions

Remove the instance *arg* in the safety configuration and download it to the controller, or install the required option, *arg*.

90852, Empty Safety Configuration**Description**

The safety configuration is empty.

Consequences

No supervision of the robot will be performed.

Recommended actions

Use the configurator to add safety supervision.

90853, System failure during startup**Description**

The safety system orchestrator cannot start up properly because of a system failure.

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Continued

Consequences

The system goes to system failure state.

Probable causes

A critical failure in hardware, software or configuration.

Recommended actions

- 1 Check other event log messages for more information.
- 2 Do a 'Reset system' of the robot controller.

90854, Motor contactor status conflict

Description

Status conflict between run control order and actual Motor contactor state

Consequences

The system goes to status SYS HALT.

Probable causes

A failure of the Motor contactors or the supply to these.

Recommended actions

- 1 Check cables and connections.
- 2 Restart the controller.

90855, Missing required UAS grant

Description

The user *arg* does not have the required UAS grant (*arg*) for the requested operation.

Consequences

The operation is not performed.

Recommended actions

Log in as another user that has the required grant, or add the grant to the existing user.

90856, Acknowledge timeout

Description

The acknowledge signal, coming from a PLC, was not activated within the expected time during a remote change of operating mode to Automatic- or Manual full speed mode.

Consequences

Operating mode cannot be changed to Automatic- or Manual full speed mode. Manual operating mode remains.

Probable causes

- 1 Cable connection fault.
- 2 Acknowledge signal was not activated by the PLC.
- 3 Incorrect I/O configuration.

Recommended actions

- 1 Make sure that the acknowledge signal becomes activated when expected.
- 2 Check I/O configuration.

90857, Change of Operating Mode is not allowed

Description

Remote change of operating mode from a PLC is not allowed.

Consequences

Operating mode cannot be changed from the PLC.

Probable causes

- 1 Remote control activation signal not activated.
- 2 Incorrect I/O configuration.
- 3 Operating mode is locked by the user.

Recommended actions

- 1 Make sure that the remote control activation signal is activated.
- 2 Check I/O configuration.
- 3 Make sure that the operating mode is unlocked.

90858, Missing option for Remote Operating Mode

Description

The option that is required for remote change of operating mode from a PLC is not selected.

Consequences

Operating mode cannot be changed from the PLC.

Probable causes

Option "Auto acknowledge input" is not selected.

Recommended actions

- 1 Update Robot system with the "Auto acknowledge input" option selected.
- 2 Restart the robot controller.

90859, Operation only allowed in Manual mode

Description

The requested safety-related operation requires that the controller is in Manual mode.

Consequences

The operation is not performed.

Recommended actions

Change the controller to Manual mode.

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90860, Operation only allowed in Motors Off**Description**

The requested safety-related operation requires that the controller is in Motors Off.

Consequences

The operation is not performed.

Recommended actions

Change the controller state to Motors Off.

90861, Safety configuration is Locked**Description**

The requested safety-related operation could not be performed because the safety configuration is Locked.

Consequences

The operation is not performed.

Probable causes

- 1 The safety configuration is Locked.
- 2 The safety configuration appear to be Unlocked in TPU due to mismatch in lock information between CPUs.

Recommended actions

- 1 Unlock the current configuration (requires UAS grant LOCK_SAFETY_CONFIG).
- 2 Reset the safety controller to factory settings and restore the safety configuration.

90862, Safety Mode not allowed**Description**

The requested Safety mode is not allowed in the current controller state.

It is not allowed to change Safety mode when in Automatic mode.

It is not allowed to set Safety mode to Service Mode when in Automatic or ManualFullSpeed modes.

Consequences

The operation is not performed.

Recommended actions

Change the controller state to one of the allowed modes first.

90863, Emergency Stop open**Description**

An attempt was made to operate the robot when the Emergency stop circuit was open.

Consequences

The system remains in the Emergency stop state.

Recommended actions

Reset the emergency stop button triggering the stop and do a new attempt to go to Motors on.

90864, Protective Stop open**Description**

An attempt was made to operate the robot when the Protective stop circuit was open.

Consequences

The system remains in the Guard stop state.

Recommended actions

Locate the switch that caused the stop, reset it and do a new attempt to go to Motors on.

90865, Enabling device active in Auto mode**Description**

The system has detected that the Enabling device has been pressed in Automatic operating mode.

Consequences

The Enabling device is ignored in Automatic operating mode.

Recommended actions

Release the Enabling device.

90866, Not allowed Command**Description**

An attempt to go to Motors on in Manual mode when Safety supervision is active was rejected.

Consequences

The system goes to Guard stop state.

Recommended actions

Use the Enabling device.

90867, Safety Controller not ready**Description**

An attempt to go to Motors on was rejected by the Safety Controller.

Consequences

The system goes to Guard stop state.

Recommended actions

Check other elogs for more details.

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Continued

90868, Testrack with disabled SC

Description

This software runs on a Testrack with disabled Safety Controller.

Consequences

Safety supervision in Safety Controller is disabled

Recommended actions

Check other elogs for more details.

90869, Protected elements group was modified

Description

The checksum of the protected group, *arg*, was modified. New CRC is *arg*.

Consequences

Functionality of protected group has to be validated.

Recommended actions

Do a safety assessment for protected group *arg*.

90870, Element is protected and cannot be modified

Description

Element *arg*, with name/id *arg*, is protected and cannot be modified.

Consequences

Changes are rejected.

Recommended actions

Protected elements/groups can be unlocked/edited in Visual SafeMove.

90871, Unresolved signal reference in complex expression

Description

Signal *arg* is defined in a complex expression, but no matching signal definition is available.

Consequences

Changes are rejected.

Recommended actions

Make sure that the signal is not used in logic or other complex expressions like safety functions or configured stops.

90872, Safety configuration violates the validation rules of the safety controller

Description

Installation failed due to errors in the safety input parameters with internal status *arg*.

Consequences

New safety configuration is rejected

Recommended actions

- 1 Check internal event logs for additional details
- 2 Check safety configuration for errors

90873, Safety configuration violates the validation rules of the IO system

Description

Installation failed due to errors in the safety input parameters with internal status *arg*.

Consequences

New safety configuration is rejected

Recommended actions

- 1 Check internal event logs for additional details
- 2 Check safety configuration for errors
- 3 Verify the safe IO parameters. Safe networks, devices and/or signal configuration

90874, Safety configuration violates the validation rules of the drive module configuration

Description

Installation failed due to errors in the safety input parameters with internal status *arg*.

Consequences

New safety configuration is rejected

Recommended actions

- 1 Check internal event logs for additional details
- 2 Check safety configuration for errors
- 3 Verify the safety parameters of the drive module configuration

90875, Safety configuration violates validation rules of the XML schema

Description

Installation failed due to errors in the safety input parameters with internal status *arg*.

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Consequences

New safety configuration is rejected

Recommended actions

- 1 Check internal event logs for additional details
- 2 Check safety configuration for XML syntax errors
- 3 Make sure that the input file is consistent with the supported schema versions of the controller

90876, Installation of safety configuration failed during system installation
Description

Safety config file *arg* was not installed correctly due to *arg*.

Consequences

Changes were rejected.

Recommended actions

- 1 Check additional event logs for details.
- 2 Verify/update the faulty safety config installation files.
- 3 Reset the system and check if the error remains.

90890, Start of Safety Controller failed
Description

The main computer could not start the safety controller. See the event log for more details.

Consequences

No operation will be possible until the fault has been corrected and the system has been restarted.

Probable causes

This may be caused by faulty hardware or incompatible safety controller software version.

Recommended actions

- 1 Reinstall system.
- 2 Make sure the safety controller board is properly mounted.
- 3 Restart the system and check if the error remains.

90900, CIP Safety connection parameters mismatch
Description

The safety controller has detected a difference in the connection parameters checksum from what is previously known.

Consequences

No communication will be possible as long as the safety controller is locked. If the safety controller is unlocked the new changes will be accepted and set to last known upon the next restart.

Probable causes

Corruption or parameter change by user.

Recommended actions

- 1 Check for logs concerning configuration changes.
- 2 Unlock, restart, validate and lock the system again to accept new connection parameters.

91000, Drive unit STO/SBC error
Description

In cabinet *arg*, the drive unit at position *arg* has detected Safe Torque Off and/or Safe Brake Control error.

Consequences

No operation will be possible until the fault is corrected. The system goes to Motors Off state with zero torque.

Probable causes

Communication problem between drive units and the main computer/Safety controller.

91001, Resolver speed error
Description

For joint *arg*: A resolver speed error has been detected. The joint is connected to drive module *arg* in the drive unit at unit position *arg* and node *arg*.

Consequences

The joint will be unsynchronized.

Probable causes

- 1 Robot exceeds the allowed maximum joint speed limit.
- 2 Speed sensor is disconnected.
- 3 Speed sensor is malfunctioning.

Recommended actions

- Check cables and connections.
- Check that all connectors on the serial measurement board and drive unit are securely connected.
- If actions 1 and 2 do not solve the problem, then replace the faulty board.

91002, Resolver acceleration over limit
Description

For joint *arg*: Too high acceleration has been detected in the resolver. The joint is connected to drive module *arg* in the drive unit at unit position *arg* and node *arg*.

Consequences

The joint will be unsynchronized.

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Probable causes

- 1 Robot exceeds the allowed maximum joint acceleration limit.
- 2 Speed sensor is disconnected.
- 3 Speed sensor is malfunctioning.

Recommended actions

- Check cables and connections.
- Check that all connectors on the serial measurement board and drive unit are securely connected.
- If actions 1 and 2 do not solve the problem, then replace the faulty board.

91003, Resolver signal level is too high

Description

For joint *arg*: Too high signal level has been detected in the resolver. The joint is connected to drive module *arg* in the drive unit at unit position *arg* and node *arg*.

Consequences

The system will stop all robot movements.

Probable causes

- 1 Speed sensor is disconnected.
- 2 Serial measurement board is malfunctioning.

Recommended actions

- Check cables and connections.
- Check that all connectors on the serial measurement board and drive unit are securely connected.
- If actions 1 and 2 do not solve the problem, then replace the faulty board.

91004, Resolver signal level is too low

Description

For joint *arg*: Too low signal level has been detected in the resolver. The joint is connected to drive module *arg* in the drive unit at unit position *arg* and node *arg*.

Consequences

The system will stop all robot movements.

Probable causes

- 1 Speed sensor is disconnected.
- 2 Serial measurement board is malfunctioning.

Recommended actions

- Check cables and connections.
- Check that all connectors on the serial measurement board and drive unit are securely connected.
- If actions 1 and 2 do not solve the problem, then replace the faulty board.

91005, Resolver revolution counter mismatch

Description

For joint *arg*: A mismatch in the resolver revolution counters has been detected. The joint is connected to drive module *arg* in the drive unit at unit position *arg* and node *arg*.

Probable causes

- 1 Revolution counter from serial measurement board is faulty or has been updated.

Recommended actions

- Update the revolution counters on the FlexPendant.

91006, Axis lost measurement

Description

For joint *arg*: Lost measurement has been detected. The joint is connected to drive module *arg* in the drive unit at unit position *arg* and node *arg*.

Consequences

The system will stop all robot movements.

Probable causes

- 1 Serial measurement board or resolver cable is disconnected.
- 2 Serial measurement board is malfunctioning.

Recommended actions

- Check cables and connections.
- Check that all connectors on the serial measurement board and drive unit are securely connected.
- If actions 1 and 2 do not solve the problem, then replace the faulty board.

91007, Invalid axis configuration parameter

Description

For joint *arg*: An invalid axis configuration parameter has been detected. The joint is connected to drive module *arg* in the drive unit at unit position *arg* and node *arg*.

Consequences

The system goes to system failure state.

Probable causes

- 1 A serious error has occurred during safety software operation on the drive.

Recommended actions

- Restart the system.

Continues on next page

91010, Brake control test failed**Description**

In drive module *arg* in the drive unit at unit position *arg*: A brake control test has failed.

Consequences

The system goes to system failure state.

Probable causes

- 1 Brake control safety switches are not correctly connected or faulty.

Recommended actions

- Check cables and connections.
- Check that all connectors on the drive unit are securely connected.
- If actions 1 and 2 do not solve the problem, then replace the faulty board.

91011, DC cut off test failed**Description**

In drive module *arg* in the drive unit at unit position *arg*: DC cut off test failed.

Consequences

The system goes to system failure state.

Probable causes

- 1 DC cut off safety switches are not correctly connected or faulty.

Recommended actions

- Check cables and connections between drive unit and power unit.
- Check that all connectors on the drive unit are securely connected.
- Check that all connectors on the power unit are securely connected.
- If actions 1, 2 or 3 do not solve the problem, then replace the drive unit or power unit.

91013, Inconsistent brake control output and feedback**Description**

In drive module *arg* in the drive unit at unit position *arg*: Inconsistent brake control output and feedback has been detected.

Consequences

The system goes to system failure state.

Probable causes

- 1 Brake control safety switches are not correctly connected or faulty.

Recommended actions

- Check cables and connections.
- Check that all connectors on the drive unit are securely connected.
- If actions 1 and 2 do not solve the problem, then replace the faulty board.

91014, Inconsistent DC cut-off output and feedback**Description**

In drive module *arg* in the drive unit at unit position *arg*: Inconsistent DC cut-off output and feedback has been detected.

Consequences

The system goes to system failure state.

Probable causes

- 1 DC cut off safety switches are not correctly connected or faulty.

Recommended actions

- Check cables and connections.
- Check that all connectors on the drive unit are securely connected.
- If actions 1 and 2 do not solve the problem, then replace the faulty board.

91020, FSoE configuration data updated**Description**

In drive module *arg* in the drive unit at unit position *arg*: FSoE configuration data has been updated.

91021, Axis configuration data updated**Description**

In drive module *arg* in the drive unit at unit position *arg*: Axis configuration data updated.

91022, FSoE configuration data invalid**Description**

In drive module *arg* in the drive unit at unit position *arg*: FSoE configuration data invalid.

Probable causes

- 1 No FSoE configuration data is stored or FSoE configuration data is corrupted.

Continues on next page

Continued

Recommended actions

- The FSoE configuration data will be updated automatically.
No action is needed.

91023, Axis configuration data invalid

Description

In drive module *arg* in the drive unit at unit position *arg*: Axis configuration data invalid.

Probable causes

- 1 No axis configuration data is stored or axis configuration data is corrupted.

Recommended actions

- Perform a synchronization in the Safety Controller tab on the FlexPendant.

91024, Error when storing configuration data

Description

In drive module *arg* in the drive unit at unit position *arg*: An error has occurred when storing configuration data.

Consequences

The system will stop all robot movements.

Recommended actions

- Restart the system.
- Perform a synchronization in the Safety Controller tab on the FlexPendant.

91025, Incorrect drive safety software version

Description

In drive module *arg* in the drive unit at unit position *arg*: The safety software version is incorrect.

Consequences

The safety controller will stop all robot movements.

Recommended actions

- Install a new RobotWare package.

91030, SYS_ERR_HW_PU_SAFETY_TEMPERATURE_LOW_WARNING

Description

In drive module *arg* in the drive unit at unit position *arg*:
SYS_ERR_HW_PU_SAFETY_TEMPERATURE_LOW_WARNING.

91031, SYS_ERR_HW_PU_SAFETY_TEMPERATURE_HIGH_WARNING

Description

In drive module *arg* in the drive unit at unit position *arg*:
SYS_ERR_HW_PU_SAFETY_TEMPERATURE_HIGH_WARNING.

91032, Drive controller board temperature critically low

Description

In controller cabinet *arg*, in drive unit at drive link position *arg*:
The controller board temperature is below the minimum allowed temperature limit.

Consequences

The system goes to system failure state.

Probable causes

Ambient temperature is below the minimum temperature limit.

Recommended actions

- Raise the ambient temperature.

91033, Drive controller board temperature critically high

Description

In controller cabinet *arg*, in drive unit at drive link position *arg*:
The controller board temperature is above the maximum allowed temperature limit.

Consequences

The system goes to system failure state.

Probable causes

Ambient temperature is above the maximum temperature limit.

Recommended actions

- Lower the ambient temperature.

91034, Drive controller board temperature too low

Description

In controller cabinet *arg*, in drive unit at drive link position *arg*:
The controller board temperature is below the minimum allowed temperature limit.

Consequences

The system will stop all robot movements.

Probable causes

Ambient temperature is below the minimum temperature limit.

Continues on next page

Recommended actions

- Raise the ambient temperature.

91035, Drive controller board temperature too high
Description

In controller cabinet *arg*, in drive unit at drive link position *arg*:
The controller board temperature is above the maximum allowed temperature limit.

Consequences

The system will stop all robot movements.

Probable causes

Ambient temperature is above the maximum temperature limit.

Recommended actions

- Lower the ambient temperature.

91036, Drive controller board temperature reading error
Description

In controller cabinet *arg*, in drive unit at drive link position *arg*:
An internal controller board temperature error occurred.

Consequences

The system will stop all robot movements.

Probable causes

Internal error.

Recommended actions

Check for other event messages. Restart the robot controller.

91037, Drive controller board temperatures differ too much
Description

In controller cabinet *arg*, in drive unit at drive link position *arg*:
An internal controller board temperature error occurred.

Consequences

The system will stop all robot movements.

Probable causes

Internal error.

Recommended actions

Check for other event messages. Restart the robot controller.

91038, Internal self-test completed
Description

In controller cabinet *arg*, in drive unit at drive link position *arg*:
An internal self-test has been completed.

Recommended actions

No action is needed.

91039, Drive controller board temperatures differ
Description

In controller cabinet *arg*, in drive unit at drive link position *arg*:
An internal controller board temperature warning occurred.

Consequences

This is only a warning.

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9 Number series: 11 xxx

112700, Integrated Vision not installed

Description

The option Integrated Vision is not installed on this system.

Consequences

No communication with the camera is possible.

Probable causes

An attempt may have been made to use the Integrated Vision functionality without installing the option correctly.

Recommended actions

- 1) If the Integrated Vision option is required: configure a new system with this option, and install the system.
- 2) If the Integrated Vision option is not required: remove the use of Integrated Vision functionality, i.e. RAPID or configuration data.

112701, Communication failure with camera

Description

The robot controller failed to communicate with camera *arg*.

Consequences

Camera commands and results may be lost.

Probable causes

The reasons for this error can be:

- 1) The camera is not connected to the controller.
- 2) There is no power to the camera.

3) The camera's IP address is not valid.

4) The camera is not connected to the proper network interface.

Normally only the service port is supported.

Recommended actions

Recommended Actions

- 1) Check cabling between robot controller and camera.
- 2) Check that the LED power and link indicators on the camera are active.
- 3) Use RobotStudio to check that the IP address has been configured correctly.

112702, Camera job is not valid

Description

The camera *arg* is in running mode, but the loaded job is not a valid ABB job.

Consequences

All camera results will be lost.

Probable causes

An attempt may have been made to load a job that does not conform with the ABB definition of a job.

Recommended actions

1. Set the camera in program mode.
2. Load a valid ABB job into the camera or use Robot Studio to create a new job.

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10 Number series: 12 xxx

120001, Out of memory

Description

There is not enough memory in the configuration database for this operation.

Consequences

The configuration file will not be installed.

Recommended actions

- 1 When loading the configuration file, try with the option 'Delete existing parameters before loading'. This will delete all previous configuration settings for the domain.
- 2 Increase the size of the configuration database.

120002, Instance cannot be replaced

Description

Not allowed to replace instance in line *arg* of file *arg*.

Consequences

The instance already exists and is write protected. The configuration file will not be installed.

Probable causes

Recommended actions

You are not allowed to change the instance.

120003, Wrong cfg domain version

Description

The cfg domain version is wrong in file *arg*. This version of RobotWare is made for reading domain *arg* with version *arg*.

Consequences

The configuration file might not be installed correctly.

Probable causes

Recommended actions

- Migrate or edit the configuration file and update the version in the header of the file.

120004, Too long line

Description

Line *arg* in file *arg* contains *arg* characters, which is more than the allowed *arg*.

Consequences

The configuration file will not be installed.

Probable causes

Recommended actions

- Re-edit the configuration file and reduce the number of characters, e.g. by splitting the instance into several lines. End each line, except the last one, with a trailing backslash "\" to achieve this.

120005, Attribute value out of allowed range

Description

Attribute '*arg*' on line *arg* in file *arg* is out of the allowed range. The allowed range is *<arg>* - *<arg>*.

Consequences

The configuration file will not be installed.

Probable causes

Recommended actions

- Re-edit the configuration file and change the value on the attribute to fit inside the allowed range.

120006, Duplicate instance

Description

Instance in line *arg* in file *arg* is already installed.

Consequences

The configuration file will not be installed.

Probable causes

Recommended actions

- Re-edit the configuration file and change the instance name to add it to the file OR
- Use the "Replace" mode to overwrite the instance previously using the name. This may be selected when loading the configuration file using RobotStudio, and the procedure is detailed in the RobotStudio Manual.

120007, Unknown input

Description

The name or the value of attribute '*arg*' in line *arg* in file *arg* is not recognized.

Consequences

The configuration file will not be installed.

Probable causes

The configuration file contains invalid input.

Recommended actions

- Re-edit the configuration file.

Continues on next page

120008, Mandatory attribute is missing

Description

Missing mandatory attribute *arg* on line *arg* in file *arg*.

Consequences

The configuration file will not be installed.

Probable causes

Missing/mistyped mandatory attribute.

Recommended actions

- Re-edit the configuration file.

120009, Missing instance name

Description

Missing instance name on line *arg* in file *arg*.

Consequences

The configuration file will not be installed.

Probable causes

Recommended actions

- Re-edit the configuration file.

120010, Attribute value out of allowed range

Description

Configuration attribute *arg* on line *arg* in file *arg* is out of the allowed range. The maximum allowed length is *arg* characters.

Consequences

The configuration file will not be installed.

Probable causes

Recommended actions

- Re-edit the configuration file and change the value on the attribute to fit inside the allowed range.

120011, Illegal version string

Description

The version string in configuration file *arg* has illegal format.

Consequences

The configuration file will not be installed.

Probable causes

- The configuration file is made for a different system version/revision.
- The version string in the configuration file is mistyped/missing.
- The configuration file is corrupted.

Recommended actions

- Re-edit the configuration file and change the version string according to this layout:
"domain":CFG_1.0:"version":"revision":..

120012, Illegal domain name

Description

The domain name *arg* in configuration file *arg* is illegal.

Consequences

The configuration file will not be installed.

Probable causes

The domain name may be mistyped, or the domain is not installed in the system.

Recommended actions

- Re-edit the configuration file and change the domain name.

120013, Illegal type name

Description

The type name '*arg*' in configuration file *arg* cannot be found in domain *arg*.

Consequences

The configuration file will not be installed correctly.

Probable causes

The type name may be mistyped, or the type is not installed in the system.

Recommended actions

- Re-edit the configuration file and reload the cfg file.

120014, Configuration file error

Description

Errors occurred during loading of configuration data.

All configuration errors are placed in the event log, under 'Configuration'.

Consequences

The configuration file will not be installed.

Recommended actions

- Make sure that the syntax of the CFG file is correct.
- Make sure that the options are installed that matches types in the CFG file.
- Check for additional errors in the CFG event log.

Continues on next page

120015, Invalid parameter *arg***Description**

The *arg* '*arg*' is invalid.

Parameter '*arg*' is invalid here.

File: *arg*. Line: *arg*.

Consequences

The configuration file will not be installed correctly.

Probable causes

The parameter is not valid.

Recommended actions

- Re-edit the configuration file and reload the cfg file.

120016, Invalid parameter value *arg***Description**

Parameter '*arg*' has an invalid value: '*arg*'

Valid values: *arg*

arg

Consequences

The configuration file will not be installed correctly.

Probable causes

The value might be mistyped.

Recommended actions

- Re-edit the configuration file and reload the cfg file.

120017, Invalid Rapid Identifier**Description**

The value '*arg*' of parameter '*arg*' for configuration instance '*arg*' is invalid.

Consequences

The configuration file will not be installed.

Probable causes

The value might be mistyped.

Recommended actions

Correct the value of the parameter so that it complies with the following rules:

Rules of RAPID identifiers:

- The length must not exceed 16 characters.
- The first character must be a letter (a-z or A-Z).
- Subsequent characters must be letters (a-z or A-Z), digits (0-9) or underscores (_).

120018, Unknown attribute**Description**

The attribute name '*arg*' is not recognized.

Probable causes

The configuration file contains unknown input.

120019, Unknown type**Description**

The type name '*arg*' in configuration file *arg* cannot be found in domain *arg*.

Probable causes

The type name may be mistyped, or the type is not installed in the system.

120020, Debug service reset**Description**

The debug service '*arg*' for type '*arg*' had an invalid changed value and is reset to default value.

Consequences

The debug service is changed back to default setting.

Probable causes

An invalid update of the debug service in configuration.

Recommended actions

No action required.

120021, Unexpected debug service change**Description**

The debug service in domain '*arg*' for type '*arg*' and instance '*arg*' has changed but is not connected to a debug service handler.

Consequences

The debug service change made will not have any affect and the cfg instance will be deleted.

Probable causes

The error is likely caused by an unsupported value in a loaded cfg file.

Recommended actions

Correct the cfg file and load again.

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150330, RAPID error in module

Description

Task:*arg*

Module (line/column): *arg*

There is an error with symbol: *arg*

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12 Number series: 17 xxx

170001, Connected Services Agent started

Description

Agent for Connected Services has been started.

170002, Connected Services registered

Description

Robot controller is successfully registered at ABB Connected Services Center.

170003, Connected to ABB Connected Services Center

Description

Robot controller is successfully connected to ABB Connected Services Center.

170004, Connected Services reset by server

Description

arg order received via ABB Connected Services Center. Connected Services Agent will perform a reset. User will need to re-register by repeating the registration process.

170005, Connected Services Agent reset mode

Description

Connected Services Agent has been started in reset mode.

170006, Connected Services reset by user

Description

User has requested a reset of Connected Services on the controller. The reset shall be applied after a restart. If this controller has previously been registered in the ABB Connected Services Center, the registration process will need to be repeated.

170007, *arg* Module loaded

Description

arg: Module with version *arg* loaded.

170008, Command received by Connected Services

Description

arg command received from *arg*. Connected Services Agent will execute the command.

170009, *arg* Data Profile loaded

Description

arg: Data Profile version *arg* has been loaded.

170010, *arg* Module updated

Description

arg: Module version *arg* updated to *arg*.

170011, *arg* Data Profile updated

Description

arg: Data Profile version *arg* has been Updated to version *arg*.

170012, Connected Services Agent is disabled

Description

Connected Services Agent is disabled. Please change the configuration to enable Connected Services.

170013, Customer storage connector has reconnected

Description

The connector *arg* reconnected and sending data again.

170014, ABB Connected Services pending registration

Description

Please contact your local ABB representative for registering your robot within ABB Connected Services and start enjoying your FREE services during warranty period. Only encrypted robot performance data will be sent to ABB Connected Services for specific purposes stated in the ABB Connected Services General Terms and Conditions.

Continues on next page

170015, ABB Connected Services registered

Description

The shared use of data is activated. Please contact your local ABB representative for registering your robot within ABB Connected Services and start enjoying your FREE services during warranty period. You can change the connectivity settings at anytime.

170016, Connected to ABB Connected Services Cloud

Description

Robot controller is successfully connected to ABB Connected Services Cloud.

170017, Disconnected from ABB Connected Services Cloud

Description

Robot controller is disconnected from ABB Connected Services Cloud.

Probable causes

Possible connectivity issues with the server.

Recommended actions

- 1 Verify connectivity.
- 2 Contact ABB support for assistance.

170020, Connected Services route configuration invalid

Description

Connected Services Agent has failed to create route to destination *arg* with gateway *arg*.

170021, Connected Services name resolution error

Description

Connected Services Agent has failed to resolve hostname *arg*.

170023, Connected Services client certificate renewed

Description

Connected Services Agent has automatically renewed client certificate from ABB Connected Services Center.

170024, IP not valid for the connection type

Description

Please check if Gateway, DNS or proxy IPs are correct. IP received at Connected Services agent as : *arg* for the connection type *arg*.

170025, External firewall required for Public network configuration

Description

Please ensure you have installed an external firewall when using Connected Services on Public network. Then enable ConnectedServices on Public Network under Firewall Manager configuration.

170026, Connected Services gateway not plugged on ABB Connect port

Description

Please check Connected Services gateway is connected to the ABB Connect port and configuration is enabled.

170027, Connected Services gateway retry to establish connection

Description

Please check the Connected Services gateway state. Also verify the configuration is enabled with correct parameters.

170028, Connected Services unregistered from server

Description

The Robot controller is not any more trusted by the server. All authentications have been reset on the controller.

Recommended actions

- 1 A new registration is required.
- 2 Contact ABB support for assistance.

170029, Connected Services internal error

Description

Internal error in Connected Services agent.

Probable causes

There is an *arg* in Connected Services for *arg*.

Recommended actions

Contact ABB support for assistance.

Continues on next page

170030, Connected Services authentication error**Description**

Connection to the ABB Connected Services Center server has failed.

Consequences

No communication to the ABB Connected Services Center shall be possible.

Probable causes

Validation of the server certificate was unsuccessful. Details: *arg*.

Recommended actions

- 1 Check if this controller date and time is accurate.
- 2 Check if an intermediary between the controller and server is changing the certificate.
- 3 Contact ABB support for assistance.

170032, Connected Services no server connection**Description**

This controller is unable to reach ABB Connected Services center.

Consequences

Connected Services functionality is unavailable for this robot system.

Probable causes

Details: *arg*.

Recommended actions

- 1 Check above details for possible causes.
- 2 Check HTTPS connectivity for the robot system, also check Internet and proxy settings.

170033, Connected Services module start failed**Description**

arg: Failed to initialize.

Probable causes

Module is incompatible with Connected Services Agent or it has a fault.

Recommended actions

Contact ABB support for assistance.

170034, Connected Services registration error**Description**

Connected Services Agent has failed to register at ABB Connected Services Center.

Probable causes

- 1 Possible connectivity problem with the server.
- 2 Failed to create CSR request.
- 3 Certificate not found.
- 4 No sufficient authorization for certificate.
- 5 Controller ID does not exist.

Recommended actions

- 1 Try to repeat the registration process or restart the controller.
- 2 Contact ABB support for assistance.

170035, Connected Services start failed**Description**

Connected Services Agent has failed to start.

Probable causes

Configuration error or internal error.

Recommended actions

Contact ABB support for assistance.

170036, Connected Services authentication error**Description**

Connected Services Agent received *arg* error. Connected Services Agent will perform a reset. User will need to re-register by repeating the registration process.

Recommended actions

- 1 Register Connected Services Agent.
- 2 Contact ABB support for assistance.

170037, Connected Services certificate renewal error**Description**

Connected Services Agent has failed to automatically renew certificate from ABB Connected Services Center.

Probable causes

Possible connectivity problem with the server.

Recommended actions

- 1 Verify connectivity.
- 2 Repeat manually the registration process.
- 3 Try to unregister from the server.
- 4 Contact ABB support for assistance.

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Continued

170041, Customer storage connector failed to start

Description

Failed to start the customer storage connector "arg".

Probable causes

- 1 Connector is not properly setup.
- 2 Connectivity error preventing sending of data.

Recommended actions

- 1 Check if connectivity is present.
- 2 Contact ABB support for assistance.

170042, Unable to load Data Profile

Description

arg: Failed to load the Data profile from "arg".

Probable causes

Data profile is corrupt or missing.

Recommended actions

- 1 Check if the data profile is correct.
- 2 Contact ABB support for assistance.

170043, Internal error in Connected Services module

Description

arg: An internal error occurred.

Probable causes

Internal Error occurred in Connected Services module

Recommended actions

Contact ABB support for assistance.

170044, Unable to send data over customer storage connector

Description

Failed to send data over the customer storage connector arg.
Connector will keep on retrying in the background.

Probable causes

- 1 Connector is not properly setup.
- 2 Connectivity error preventing sending of data.

Recommended actions

- 1 Check if connectivity is present for URL .
- 2 Contact ABB support for assistance.

170045, Device Registered with ABB Connected Services Cloud

Description

Robot controller is successfully registered to ABB Connected Services Cloud.

170046, Device Registration failed with ABB Connected Services Cloud

Description

Failed to register device in ABB Connected Services Cloud.

Probable causes

- 1 Possible connectivity issues with the server.
- 2 Invalid controller serial number.

Recommended actions

- 1 Verify connectivity and restart the controller.
- 2 Contact ABB support for assistance.

170048, arg Module update failed

Description

arg: Module version arg failed to update to version arg.

170049, Enable ConnectedServices on Private Network

Description

Enable ConnectedServices on Private Network under Firewall Manager configuration.

170050, Controller Configuration Changed

Description

Controller configuration changed; Connected Services will reboot to apply the changes.

170051, Data collection is disabled

Description

Data collection has been disabled.

Recommended actions

Contact ABB support for assistance.

170052, ABB Connected Services command executed

Description

Connected Services Agent executed arg command successfully from arg.

Continues on next page

170053, ABB Connected Services command failed to execute**Description**

Connected Services Agent failed to execute *arg* command from *arg*. Status *arg*.

170054, ABB Connected Services error in sending data**Description**

Connected Services Agent received error while sending data from *arg*.

Recommended actions

- 1 Restart the controller.

- 2 Contact ABB support for assistance if problem persists.

170055, Connected Services blocked: Incorrect configuration**Description**

Incorrect configuration file used to configure Connected Services.

Recommended actions

- 1 Reset controller to default Connected Services configurations.
- 2 Load correct configuration.
- 3 Restart controller.
- 4 Contact ABB support for assistance if problem persists.

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