The heart of Robotics

# Trouble shooting manual (part 2 of 2), Event log messages

## Robot Controller

IRC5
M2004


ABB

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## IRC5

M2004

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# What is an event log?

## Overview

Robot systems are often operated without any personnel present. The logging function is a way to store information about past events for future reference in order to facilitate trouble shooting.

References:

- *How to read RAPID event log messages on page 7*
- *RAPID standard procedures*
- *RAPID standard concepts*

## Concepts

This section defines a number of concepts used when discussing logs, entries and their use.

### What is an event?

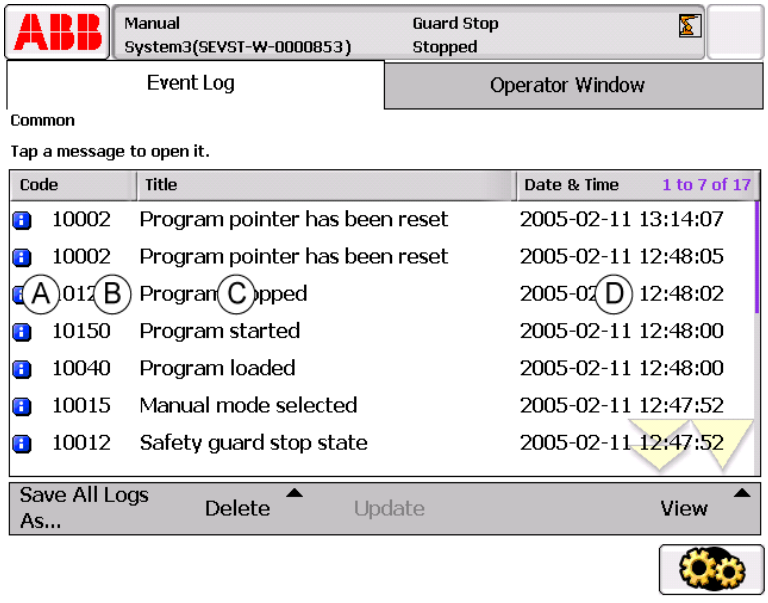
An event is a specific occurrance which generates an item in the log. For instance, if the manipulator collides with an obstacle, this will cause a message to be sent to the log. A message of the occurrance is displayed along with a time marker, etc.

### What is an event log message?

An event log message is the actual wording, describing what has happened, what consequences it will have on the system, etc.

## The log list

The illustrations shows a list of log entries as displayed on the FlexPendant.




xx0300000448

| | |
|---|---|
| A | The event type (error, warning, information) |
| B | The event code |

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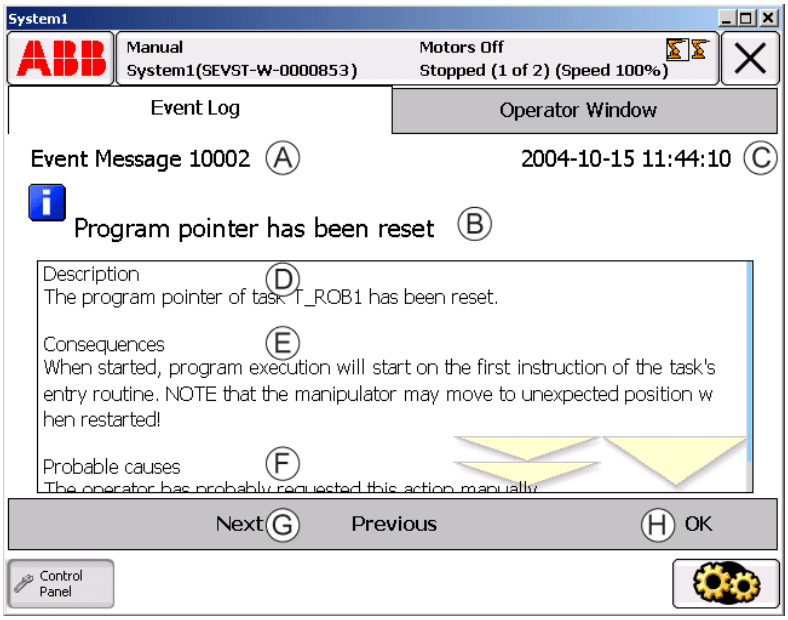
| | |
|---|---|
| C | The event title |
| D | The date and time of occurrence |

## How to read general event log messages

Tapping on a specific event displays the following on the FlexPendant:




en0300000454

| | |
|---|---|
| A | Event number. All error events are listed in accordance with this number. |
| B | Event title. This very briefly states what has happened. |
| C | Event time marker specifies exactly when the event occurred. |
| D | **Description**: A brief description of the event causing the message to be displayed. Intended to assist in understanding the causes and implications of the event. |
| E | **Consequences**: A brief description of any consequences inflicted on the system, transition to other operation mode, emergency stop, caused by the particular event causing the message to be displayed. Intended to assist in understanding the causes and implications of the event. |
| F | **Probable causes**: A list of probable causes, listed in order of probability. |
| G | **Recommended actions**: A list of the recommended correcting actions, based on the “Probable causes” specified above. These may range from “Replace the xx...” to“ Run test program xx...”, i.e. may be actions to isolate the problem as well as correcting it. |
| H | Acknowledge or OK button |

# How to read RAPID event log messages

## Overview

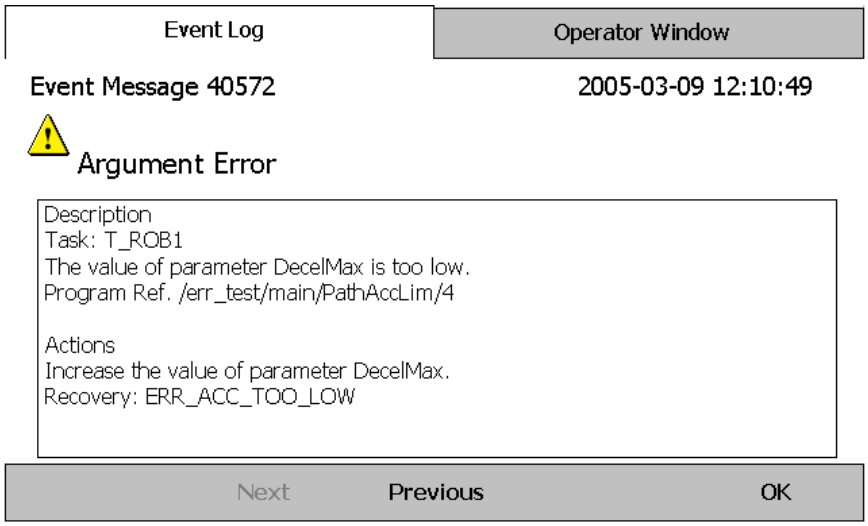
Many of the error event log messages exclusive to RAPID errors are written in a specific form to simplify understanding the messages.

References:

- *What is an event log? on page 5*
- *RAPID standard concepts*
- *RAPID standard procedures*

## How to read a typical RAPID event log message

An example of a typical RAPID error event log message is explained below:




en0500001456

| | |
|---|---|
| **Description** | See section *What is an event log? on page 5* |
| “Task: T_ROB1” | The task specified, is the task in which the error has been detected. In this example: “T_ROB1”. |
| “The signal...” | This is an explanatory text, without any specific format. |
| “Program Ref...” | The program reference “ module name” / “routine name” / “Instruction name” / “line number” for the instruction that created the error event. In this example: error_layout/main/SetDO/6. |
| **Consequences** | See section *What is an event log? on page 5* |
| “Text” | This is an explanatory text, without any specific format. |
| **Probable causes** | See section *What is an event log? on page 5* |
| “Text” | This is an explanatory text, without any specific format. |
| **Recommended actions** | See section *What is an event log? on page 5* |

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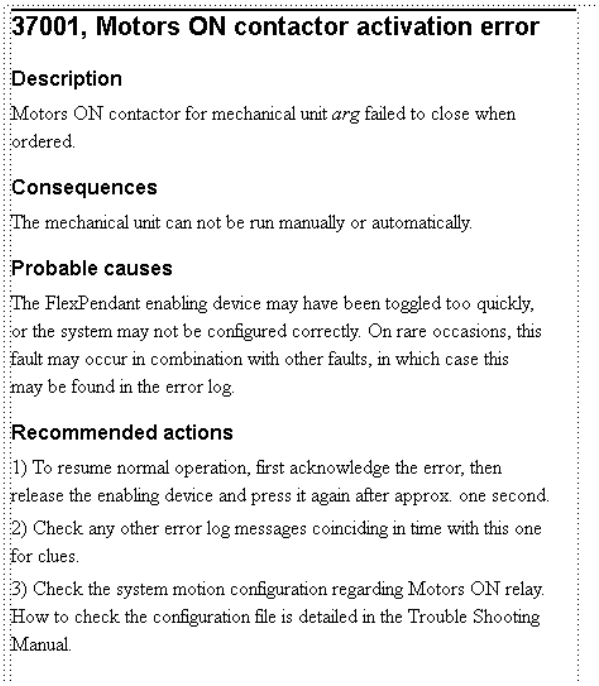
| | |
|---|---|
| “All signals...” | This is an explanatory text, without any specific format. |
| “Recovery: xx” | This is a predefined error recovery constant to be used when building error handlers in the RAPID program. In this example: ERR_ACC_TOO_LOW. How to build error handlers using error recovery constants is detailed in RAPID Reference Manual - RAPID Overview. |

## Understanding the concept “argument”

Many of the event log messages, as shown in *Trouble shooting manual, part 2 of 2, Event log messages* include the marker *arg*.

This is a variable which may have a number of significances, mainly depending on the context in which it appears.

In the example below, *arg* signifies the name of the mechanical unit to causing the error.



**37001, Motors ON contactor activation error**

**Description**

Motors ON contactor for mechanical unit *arg* failed to close when ordered.

**Consequences**

The mechanical unit can not be run manually or automatically.

**Probable causes**

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 any other error log messages coinciding in time with this one for clues.

3) Check the system motion configuration regarding Motors ON relay. How to check the configuration file is detailed in the Trouble Shooting Manual.

en0400001021

# 1 Event log messages

## 10002, Program pointer has been reset

### Description

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

### Consequences

When started, program execution will start on the first instruction of the task's entry routine. NOTE that the manipulator may move to unexpected position when restarted!

### Probable causes

The operator has probably requested this action manually.

## 10009, Work memory full

### Description

The task *arg* has no memory left for new RAPID instructions or data.

### Recommended actions

Save the program and then restart the system.

## 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.

## 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.

## 10012, Safety guard stop state

### Description

The system is in the Guard stop state. It enters this state either after switching from Automatic mode to Manual, or after the Motors ON circuit has been opened by an Emergency Stop, General Stop, Automatic Stop or Superior Stop.

### 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 device.
3. To resume operation, switch the system back to state Motors ON.

## 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.

3) To resume operation, switch the system back to state Motors ON by pressing this button on the Control Module.

## 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 RobotStudioOnline 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. Restart the system as detailed in the Operator's Manual.

## 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 Flex Pendant.

## 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 without any speed restraints.

### 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 without any speed restraints.

### 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.

## 10020, Execution error state

### Description

Execution of all tasks 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 RobotStudioOnline 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 neccesary, move Program Pointer to main before pressing start button.

## 10021, Execution error reset

### Description

The program execution has left a spontaneous error state.

### Recommended actions

## 10023, Hold to run timeout

### Description

The hold to run button on the programming unit must be pressed within timeout limit.

### Recommended actions

## 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

Commutate 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.

## 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, SMB memory is OK

### Description

During startup, the system has found that all data on the Serial Measurement Board (SMB) is OK.

#### Consequences

Operation is possible.

## 10039, SMB memory is not OK

#### Description

During startup, the system has found that data in the Serial Measurement Board (SMB) memory is not OK.

#### Consequences

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

#### Probable causes

There are differences between the data stored on the SMB and the data stored in the controller. This may be due to replacement of SMB, controller or both.

#### Recommended actions

1) Update the Serial Measurement Board data as detailed in Operator's Manual, IRC5.

## 10040, Program loaded

#### Description

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

## 10041, Program deleted

#### Description

A program or program module was deleted from task *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.

## 10043, Restart failed

#### Description

The task *arg* can't restart.

## 10044, Program Pointer updated

#### Description

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

#### Recommended actions

## 10045, System restarted

#### Description

An already installed system was restarted.

#### Recommended actions

## 10046, System restarted in cold mode

#### Description

First start after installation.

#### Recommended actions

## 10048, Background task did stop

#### Description

The task *arg* stopped without reason.

#### 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

Insert the routine in a system module or correct the program.

## 10052, Regain start

#### Description

A regain movement has started.

#### Recommended actions

## 10053, Regain ready

#### Description

The regain movement is ready.

#### Recommended actions

## 10054, Regain rejected

#### Description

Regain on path not possible, as one client has already ordered it.

#### Recommended actions

A new regain movement is ordered during an already started regain movement. Reduce the number of start orders from e.g system I/O

## 10055, Path process restarted

### Description

The path process has been restarted.

### Recommended actions

## 10060, Test of enable chain

### Description

The enable chain is always tested at startup. If the test failed an error message concerning enable will follow.

### Recommended actions

If enable chain test at startup failed the related error message will be "Enable chain timeout"

## 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 - Robot communication and I/O control.

### 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 control system is not able to communicate correctly with the FTP 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 - Robot communication and I/O control.

### 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 FTP server configuration.
2. Check all communication hardware, cables and such.
3. Check the FTP client configuration on the controller.

## 10080, An updated RAPID file is found

### Description

The SEMISTATIC task *arg* has an older version of a module installed than the source *arg*

### Recommended actions

Restart the system with a P-START to install the newer version.

## 10081, Background task *arg*

### Description

failed to load a newer version of a module. The source of the module is *arg*.

### Recommended actions

See previous messages for the cause or restart the system with a P-START to load the newer version.

## 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. The main task will also stop *arg*.

### Recommended actions

See previous messages for the cause.

## 10085, RAPID Task supervision

### Description

Task *arg* can't be stopped. The trustLevel is set to a safety level.

### Recommended actions

If the task should be possible to stop change the trustLevel or task type in the system parameters menu.

## 10086, Robot is purged OK

### Description

Purging pressure regained after a purge fault.

### Recommended actions

## 10087, Purge state: *arg*.

### Description

State changed.

### Recommended actions

## 10090, P-Start done

### Description

An ordered P-Start is done. All tasks are reset and all user programs are lost.

### Recommended actions

## 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 3.

### Recommended actions

## 10093, (Re)start not possible

### Description

(Re)start of task *arg* is not possible before a warm start is done.

### Recommended actions

The background task is configured with Trustlevel set to SysHalt

## 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 soft stop, and the program may not be restarted.

### Consequences

The system goes to the Motors OFF state and can not be started. The full meaning of this status is described in the Trouble shooting manual, IRC5.

**Probable causes**

The soft 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.

## 10106, Service Message

**Description**

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

**Recommended actions**

## 10107, Service Message

**Description**

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

**Recommended actions**

## 10108, Service Message

**Description**

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

**Recommended actions**

## 10109, Service Message

**Description**

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

**Recommended actions**

## 10110, Service Message

**Description**

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

**Recommended actions**

## 10111, Service Message

**Description**

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

**Recommended actions**

## 10112, Service Message

**Description**

The system date and time has changed.

This could cause problems with the SIS calender notification.

**Recommended actions**

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

## 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, Program stopped

**Description**

The task *arg* has stopped. The reason is that Cannot execute backward past beginning of instruction list.

**Recommended actions**

## 10128, Program stopped

**Description**

The task *arg* has stopped. The reason is that Cannot execute backward past this 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 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.

## 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.

## 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.

## 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.

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 routine is missing.

The main entry is corrupted.

**Recommended actions**

Load the module by hand or perform an I-start when 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. Perform an I-start.

## 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 do a warm start of 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**

## 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**

## 10216, Execution cancelled

**Description**

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

**Recommended actions**

## 10217, Execution cancelled

**Description**

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

**Recommended actions**

## 10218, Execution cancelled

**Description**

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

**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**

## 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**

## 10300, A P-Start is ordered

**Description**

The P-Start has been ordered from the system.

**Recommended actions**

## 10301, A P-Start is ordered

**Description**

The P-Start has been ordered manually or automatically during a configuration.

**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**

## 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.

## 10400, *arg* logged on

**Description**

User *arg* logged on using *arg*.

## 10401, *arg* logged off

**Description**

User *arg* using *arg* logged off.

## 10420, New unsafe robot path

**Description**

The robot path has been cleared after a modpos operation on 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 modposed robtarget 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.

## 11020, Backup error

**Description**

Error during the backup step Prepare. Unknown error.

**Recommended actions**

*arg*

## 11021, Backup error

**Description**

Error during the backup step Prepare. General error.

**Recommended actions**

*arg*

## 11022, Backup error

**Description**

Error during the backup step Prepare. The directory contains items that are to be created.

**Recommended actions**

*arg*

## 11023, Backup error

**Description**

Error during the backup step Prepare. The directory lacks at least one neccessary item.

**Recommended actions**

*arg*

## 11024, Backup error

**Description**

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

**Recommended actions**

*arg*

## 11025, Backup error

**Description**

Error during the backup step Prepare. Directory cannot be created.

**Recommended actions**

*arg*

## 11026, Backup error

**Description**

Error during the backup step Prepare. Error whilst writing the backup.

**Recommended actions**

*arg*

## 11027, Backup error

**Description**

Error during the backup step Prepare. Error reading configuration parameters.

**Recommended actions**

*arg*

## 11028, Backup error

**Description**

Error during the backup step Prepare. Error writing configuration parameters.

**Recommended actions**

*arg*

## 11029, Backup error

**Description**

Error during the backup step Prepare. The structure is too deep.

**Recommended actions**

*arg*

## 11030, Backup error

**Description**

Error during the backup step Prepare. No more objects.

**Recommended actions**

*arg*

## 11031, Backup error

**Description**

Error during the backup step Prepare. The directory lacks at least one neccessary item.

**Recommended actions**

*arg*

## 11032, Backup error

**Description**

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

**Recommended actions**

*arg*

## 11033, Backup error

**Description**

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

**Recommended actions**

*arg*

## 11034, Backup error

**Description**

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

**Recommended actions**

*arg*

## 11035, Backup error

**Description**

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

**Recommended actions**

*arg*

## 11036, Backup error

**Description**

Error during the backup step Prepare. Write error.

**Recommended actions**

*arg*

## 11037, Backup error

**Description**

Error during the backup step Prepare. At least one modname is too long.

**Recommended actions**

*arg*

## 11038, Backup error

**Description**

Error during the backup step Prepare. Unknown task.

**Recommended actions**

*arg*

## 11039, Backup error

**Description**

Error during the backup step Prepare. Storage media full.

**Recommended actions**

*arg*

## 11040, Backup error

**Description**

Error during the backup step Prepare. Item not possible to delete.

**Recommended actions**

*arg*

## 11120, Backup error

**Description**

Error during the backup step Configuration. Unknown error.

**Recommended actions**

## 11121, Backup error

**Description**

Error during the backup step Configuration. General error.

**Recommended actions**

## 11122, Backup error

**Description**

Error during the backup step Configuration. The directory contains items that are to be created.

**Recommended actions**

## 11123, Backup error

**Description**

Error during the backup step Configuration. The directory lacks at least one neccessary item.

**Recommended actions**

## 11124, Backup error

**Description**

Error during the backup step Configuration. The directory does not exist.

**Recommended actions**

## 11125, Backup error

**Description**

Error during the backup step Configuration. Directory cannot be created.

**Recommended actions**

## 11126, Backup error

**Description**

Error during the backup step Configuration. Error whilst writing the backup.

**Recommended actions**

## 11127, Backup error

**Description**

Error during the backup step Configuration. Error reading configuration parameters.

**Recommended actions**

## 11128, Backup error

**Description**

Error during the backup step Configuration. Error writing configuration parameters.

**Recommended actions**

## 11129, Backup error

**Description**

Error during the backup step Configuration. The structure is too deep.

**Recommended actions**

## 11130, Backup error

**Description**

Error during the backup step Configuration. No more objects.

**Recommended actions**

## 11131, Backup error

**Description**

Error during the backup step Configuration. The directory lacks at least one neccessary item.

**Recommended actions**

## 11132, Backup error

**Description**

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

**Recommended actions**

## 11133, Backup error

**Description**

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

**Recommended actions**

## 11134, Backup error

**Description**

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

**Recommended actions**

## 11135, Backup error

**Description**

Error during the backup step Configuration. Mismatch between current system and the backup.

**Recommended actions**

## 11136, Backup error

**Description**

Error during the backup step Configuration. Write error.

**Recommended actions**

## 11137, Backup error

**Description**

Error during the backup step Configuration. At least one modname is too long.

**Recommended actions**

## 11138, Backup error

**Description**

Error during the backup step Configuration. Unknown task.

**Recommended actions**

## 11139, Backup error

**Description**

Error during the backup step Configuration. Storage media full.

**Recommended actions**

## 11140, Backup error

**Description**

Error during the backup step Configuration. Item not possible to delete.

**Recommended actions**

## 11220, Backup error

**Description**

Error during the backup of Task. Unknown error.

**Recommended actions**

## 11221, Backup error

**Description**

Error during the backup of Task. General error.

**Recommended actions**

## 11222, Backup error

**Description**

Error during the backup of Task. The directory contains items that are to be created.

**Recommended actions**

## 11223, Backup error

**Description**

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

**Recommended actions**

## 11224, Backup error

**Description**

Error during the backup of Task. The directory does not exist.

**Recommended actions**

## 11225, Backup error

**Description**

Error during the backup of Task. Directory cannot be created.

**Recommended actions**

## 11226, Backup error

**Description**

Error during the backup of Task. Error whilst writing the backup.

**Recommended actions**

## 11227, Backup error

**Description**

Error during the backup of Task. Error reading configuration parameters.

**Recommended actions**

## 11228, Backup error

**Description**

Error during the backup of Task. Error writing configuration parameters.

**Recommended actions**

## 11229, Backup error

**Description**

Error during the backup of Task. The structure is too deep.

**Recommended actions**

## 11230, Backup error

**Description**

Error during the backup of Task. No more objects.

**Recommended actions**

## 11231, Backup error

**Description**

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

**Recommended actions**

## 11232, Backup error

**Description**

Error during the backup of Task. The system version doesn't match the backup.

**Recommended actions**

## 11233, Backup error

**Description**

Error during the backup of Task. Error restoring configuration parameters.

**Recommended actions**

## 11234, Backup error

**Description**

Error during the backup of Task. Error restoring configuration parameters.

**Recommended actions**

## 11235, Backup error

**Description**

Error during the backup of Task. Mismatch between current system and the backup.

**Recommended actions**

## 11236, Backup error

**Description**

Error during the backup of Task. Write error.

**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.

**Recommended actions**

## 11238, Backup error

**Description**

Error during the backup of Task. Unknown task.

**Recommended actions**

## 11239, Backup error

**Description**

Error during the backup of Task. Storage media full.

**Recommended actions**

## 11240, Backup error

**Description**

Error during the backup of Task. Item not possible to delete.

**Recommended actions**

## 12020, Restore error

**Description**

Error during the restore step Prepare. Unknown error.

**Recommended actions**

*arg*

## 12021, Restore error

**Description**

Error during the restore step Prepare. General error.

**Recommended actions**

*arg*

## 12022, Restore error

**Description**

Error during the restore step Prepare. The directory contains items that are to be created.

**Recommended actions**

*arg*

## 12023, Restore error

**Description**

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

**Recommended actions**

*arg*

## 12024, Restore error

**Description**

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

**Recommended actions**

*arg*

## 12025, Restore error

**Description**

Error during the restore step Prepare. Directory cannot be created.

**Recommended actions**

*arg*

## 12026, Restore error

**Description**

Error during the restore step Prepare. Error whilst writing the backup.

**Recommended actions**

*arg*

## 12027, Restore error

**Description**

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

**Recommended actions**

*arg*

## 12028, Restore error

**Description**

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

**Recommended actions**

*arg*

## 12029, Restore error

**Description**

Error during the restore step Prepare. The structure is too deep.

**Recommended actions**

*arg*

## 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 neccessary 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*

## 12034, 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*

## 12037, Restore error

**Description**

Error during the restore step Prepare. At least one modname is too long.

**Recommended actions**

*arg*

## 12038, Restore error

**Description**

Error during the restore step Prepare. Unknown task.

**Recommended actions**

*arg*

## 12039, Restore error

**Description**

Error during the restore step Prepare. Storage media full.

**Recommended actions**

*arg*

## 12040, Restore error

**Description**

Error during the restore step Prepare. Item not possible to delete.

**Recommended actions**

*arg*

## 12120, Restore error

**Description**

Error during the restore step Configuration. Unknown error.

**Recommended actions**

## 12121, Restore error

**Description**

Error during the restore step Configuration. General error.

**Recommended actions**

## 12122, Restore error

**Description**

Error during the restore step Configuration. The directory contains items that are to be created.

**Recommended actions**

## 12123, Restore error

**Description**

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

**Recommended actions**

## 12124, Restore error

**Description**

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

**Recommended actions**

## 12125, Restore error

**Description**

Error during the restore step Configuration. Directory cannot be created.

**Recommended actions**

## 12126, Restore error

**Description**

Error during the restore step Configuration. Error whilst writing the backup.

**Recommended actions**

## 12127, Restore error

**Description**

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

**Recommended actions**

## 12128, Restore error

**Description**

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

**Recommended actions**

## 12129, Restore error

**Description**

Error during the restore step Configuration. The structure is too deep.

**Recommended actions**

## 12130, Restore error

**Description**

Error during the restore step Configuration. No more objects.

**Recommended actions**

## 12131, Restore error

**Description**

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

**Recommended actions**

## 12132, Restore error

**Description**

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

**Recommended actions**

## 12133, Restore error

**Description**

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

**Recommended actions**

## 12134, Restore error

**Description**

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

**Recommended actions**

## 12135, Restore error

**Description**

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

**Recommended actions**

## 12136, Restore error

**Description**

Error during the restore step Configuration. Write error.

**Recommended actions**

## 12137, Restore error

**Description**

Error during the restore step Configuration. At least one modname is too long.

**Recommended actions**

## 12138, Restore error

**Description**

Error during the restore step Configuration. Unknown task.

**Recommended actions**

## 12139, Restore error

**Description**

Error during the restore step Configuration. Storage media full

**Recommended actions**

## 12140, Restore error

**Description**

Error during the restore step Configuration. Item not possible to delete.

**Recommended actions**

## 12220, Restore error

**Description**

Error during the restore of Task. Unknown error.

**Recommended actions**

## 12221, Restore error

**Description**

Error during the restore of Task. General error.

**Recommended actions**

## 12222, Restore error

**Description**

Error during the restore of Task. The directory contains items that are to be created.

**Recommended actions**

## 12223, Restore error

**Description**

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

**Recommended actions**

## 12224, Restore error

**Description**

Error during the restore of Task. The directory does not exist

**Recommended actions**

## 12225, Restore error

**Description**

Error during the restore of Task. Directory cannot be created

**Recommended actions**

## 12226, Restore error

**Description**

Error during the restore of Task. Error whilst writing the backup

**Recommended actions**

## 12227, Restore error

**Description**

Error during the restore of Task. Error reading configuration parameters

**Recommended actions**

## 12228, Restore error

**Description**

Error during the restore of Task. Error writing configuration parameters

**Recommended actions**

## 12229, Restore error

**Description**

Error during the restore of Task. The structure is too deep

**Recommended actions**

## 12230, Restore error

**Description**

Error during the restore of Task. No more objects

**Recommended actions**

## 12231, Restore error

**Description**

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

**Recommended actions**

## 12232, Restore error

**Description**

Error during the restore of Task. The system version doesn't match the backup.

**Recommended actions**

## 12233, Restore error

**Description**

Error during the restore of Task. Error restoring configuration parameters.

**Recommended actions**

## 12234, Restore error

**Description**

Error during the restore of Task. Error restoring configuration parameters.

**Recommended actions**

## 12235, Restore error

**Description**

Error during the restore of Task. Mismatch between current system and the backup.

**Recommended actions**

## 12236, Restore error

**Description**

Error during the restore of Task. Write error.

**Recommended actions**

## 12237, Restore error

**Description**

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

**Recommended actions**

## 12238, Restore error

**Description**

Error during the restore of Task. Unknown task.

**Recommended actions**

## 12239, Restore error

**Description**

Error during the restore of Task. Storage media full.

**Recommended actions**

## 12240, Restore error

**Description**

Error during the restore of Task. Item not possible to delete.

**Recommended actions**

## 12320, Restore error

**Description**

Error during the restore of User Task. Unknown error.

**Recommended actions**

## 12321, Restore error

**Description**

Error during the restore of User Task. General error.

**Recommended actions**

## 12322, Restore error

**Description**

Error during the restore of User Task. The directory contains items that are to be created.

**Recommended actions**

## 12323, Restore error

**Description**

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

**Recommended actions**

## 12324, Restore error

**Description**

Error during the restore of User Task. The directory does not exist

**Recommended actions**

## 12325, Restore error

**Description**

Error during the restore of User Task. Directory cannot be created

**Recommended actions**

## 12326, Restore error

**Description**

Error during the restore of User Task. Error whilst writing the backup

**Recommended actions**

## 12327, Restore error

**Description**

Error during the restore of User Task. Error reading configuration parameters

**Recommended actions**

## 12328, Restore error

**Description**

Error during the restore of User Task. Error writing configuration parameters

**Recommended actions**

## 12329, Restore error

**Description**

Error during the restore of User Task. The structure is too deep

**Recommended actions**

## 12330, Restore error

**Description**

Error during the restore of User Task. No more objects

**Recommended actions**

## 12331, Restore error

**Description**

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

**Recommended actions**

## 12332, Restore error

**Description**

Error during the restore of User Task. The system version doesn't match the backup.

**Recommended actions**

## 12333, Restore error

**Description**

Error during the restore of User Task. Error restoring configuration parameters.

**Recommended actions**

## 12334, Restore error

**Description**

Error during the restore of User Task. Error restoring configuration parameters.

**Recommended actions**

## 12335, Restore error

**Description**

Error during the restore of User Task. Mismatch between current system and the backup.

**Recommended actions**

## 12336, Restore error

**Description**

Error during the restore of User Task. Write error.

**Recommended actions**

## 12337, Restore error

**Description**

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

**Recommended actions**

## 12338, Restore error

**Description**

Error during the restore of User Task. Unknown task.

**Recommended actions**

## 12339, Restore error

**Description**

Error during the restore of User Task. Storage media full.

**Recommended actions**

## 12340, Restore error

**Description**

Error during the restore of User Task. Item not possible to delete.

**Recommended actions**

## 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 default gateway IP address *arg* is illegal/missing or the LAN IP address *arg* is illegal.

#### Consequences

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

#### Probable causes

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

#### Recommended actions

1) Make sure the gateway IP and LAN IP addresses are correct.

## 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.

## 20010, Emergency stop state

#### Description

The emergency stop circuit has previously been broken, and while broken, an attempt was made to operate the robot.

#### Consequences

The system remains in state "Waiting for Motors ON after emergency stop".

#### Probable causes

An attempt has been made to maneuvre a control, before switching the system back to status Motors ON.

#### Recommended actions

1) To resume operation, switch the system back to state Motors ON by pressing the Motors ON button on the Control Module.

## 20011, Emergency stop state.

#### Description

Emergency stop reset is required.

#### Recommended actions

First release the Em stop button

and then press the panel button.

## 20012, Sys failure state active

#### Description

Fatal non-recoverable system error.

Warm start is required.

#### Recommended actions

Turn the mains switch off and on

again if the soft restart command is

ignored or not possible to reach.

## 20025, Stop order timeout

#### Description

The stop order was carried out

as a forced guard stop when

no acknowledgement was received

within the expected time

#### Recommended actions

## 20030, Axis not commutated

#### Description

One or several internal drive unit

axes are not commutated.

**Recommended actions**

## 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 robot to the sync position
and update the revolution counters.

## 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.

## 20034, SMB memory is not OK

**Description**

This action is not allowed since data in the Serial Measurement Board (SMB) memory is not OK.

**Consequences**

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

**Probable causes**

There are differences between the data stored on the SMB and the data stored in the controller. This may be due to replacement of SMB, controller or both.

**Recommended actions**

1) Update the Serial Measurement Board data as detailed in Operator's Manual, IRC5.

## 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 RobotStudioOnline.
2) Check if the client who ought to be in control really is.

## 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.

## 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 is 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.

## 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.

## 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.

## 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.

## 20073, Not allowed command

### Description

The command is not allowed while changing to Motors OFF 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.

## 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 is Guard Stop state.

## 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.

## 20076, Not allowed command

### Description

The command is not allowed in System Failure state.

### Consequences

A non-recoverable system error has resulted, and a warm start is required.

#### Recommended actions

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

2) Perform a restart as detailed in the Operator's Manual, IRC5.

3) If restarting is not possible, switch the main power OFF and then back ON.

## 20080, Not allowed command

#### Description

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

#### 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 Levelmeter 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 Operator's Manual, IRC5.

## 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 Levelmeter calibration, depending on which equipment to be used.

## 20084, Not allowed command

#### Description

This command is not allowed since data in the Serial Measurement Board (SMB) 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 Serial Measurement Board data as detailed in Operator's Manual, IRC5.

## 20089, The call chain does not originate from main when switching to auto.

#### Description

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

#### Consequences

When coming to the end of the cycle, the next cycle will not start at main, but at the beginng of the routine set as "temporary main".

#### Probable causes

Someone has used "Move PP to routine" to debug the program.

#### Recommended actions

Move PP to main if not the intension is to have the call chain to start at routine set as "temporary main".

If the program allways shall start at the new routine, change System Parameter "Main entry" (Domain Controller, Type Task) to the new routine name.

## 20092, Not allowed command

#### Description

Not allowed in state

System IO Start Blocked.

#### Recommended actions

## 20093, At least one task is unchecked in the Active Task Menu

#### Description

One or more of the NORMAL tasks are unchecked in the Active Task Menu when requesting automatic operating mode.

**Recommended actions**

## 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.

## 20097, Not allowed to jog with LOCAL PERS Load

**Description**

The object *arg* is of type LOCAL PERS and is not posible to jog.

**Recommended actions**

Change Load.

## 20098, Not allowed to jog with LOCAL PERS Tool

**Description**

The object *arg* is of type LOCAL PERS and is not posible to jog.

**Recommended actions**

Change Tool.

## 20099, Not allowed to jog with LOCAL PERS Work Object

**Description**

The object *arg* is of type LOCAL PERS and is not posible to jog.

**Recommended actions**

Change Work Object.

## 20101, TP (program) in control.

**Description**

The teachpendant programming
window has focus and is in control
of the program server.

**Recommended actions**

Change to the production window
and perform the command again.

## 20111, TP (program) in control

**Description**

The teachpendant programming
window has focus and is in control
of the program server.

**Recommended actions**

Change to the production window
and perform the command again.

## 20120, System IO in control

**Description**

**Recommended actions**

## 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.

## 20130, Active Task Menu is restored

**Description**

During warm start, the "Active Task Menu" is restored in Auto mode.

**Consequences**

If one or several tasks was unchecked, they are now checked again after the warm start in Auto mode.

**Probable causes**

A warm start has been performed

**Recommended actions**

Goto manual mode.

2. Uncheck the not wanted tasks

3. Go back to Auto mode.

## 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.

The reason could be that the robot is outside of regain distance.

**Recommended actions**

## 20143, Start at main rejected

**Description**

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

**Recommended actions**

## 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 rejetced.

**Recommended actions**

## 20146, Manual interrupt rejected

**Description**

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

**Recommended actions**

## 20147, Load and start rejected

**Description**

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

**Recommended actions**

The name of the program file to be loaded (including mass memory unit) must be defined.

## 20148, Confirm rejected

**Description**

Emergency Stop reset confirm, via System IO, was rejected.

**Recommended actions**

## 20149, Error reset rejected

**Description**

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

**Recommended actions**

## 20153, Motors On and Start rejected

**Description**

Motors On and Start/Restart of program, via System IO, was rejected.
The reason could be that the robot is outside of regain distance.

**Recommended actions**

## 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.

## 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 doesn't exist.
System Input: *arg*
Signal Name: *arg*

**Recommended actions**

## 20159, No System Output signal

**Description**

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

**Recommended actions**

## 20161, Path not find

**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

## 20164, Reconfig failed

**Description**

There are still some unsaved system
module

**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. The full meaning of this status is described in the Trouble Shooting Manual, IRC5.

### Probable causes

A number of errors may cause this status transition.

### Recommended actions

1) Check other event log messages occuring 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. The full meaning of this status is described in the Trouble Shooting Manual, IRC5.

### Probable causes

A number of errors may cause this status transition.

### Recommended actions

1) Check other event log messages occuring 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 status SYS FAIL. The program and robot motion is stopped and the motors are switched OFF. The full meaning of this status is described in the Trouble Shooting Manual, IRC5.

### Probable causes

A number of errors may cause this status transition.

### Recommended actions

1) Check other event log messages occuring at the same time to determine the actual cause.
2) Fix the cause of the fault.
3) Perform a system restart as detailed in the Operator's Manual, IRC5.

## 20178, Wrong task name configured

### Description

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

### Consequences

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

### Recommended actions

Change the configuration and restart the system.

## 20179, Disk memory critically low

### Description

The amount of free storage capacity on the disk has reached a critical level. It is now less than 10 Mb. Execution of RAPID programs is stopped.

### Consequences

The disk memory is very close to be completely full. When this happens the system will not be able to function.

### Probable causes

Too much data on the disk

### Recommended actions

1) Save the files on some other disk connected to the network.
2) Erase data from disk.
3) After removing files from the drive, restart the program.

## 20181, System Reset rejected.

**Description**

System Reset via System IO
not allowed.

**Recommended actions**

## 20184, Incorrect argument for System Inputs

**Description**

An undefined Start Mode has been
declared for System IO.

**Recommended actions**

## 20185, Incorrect Name

**Description**

An undefined Name has been declared
in current runchn_bool configuration.

**Recommended actions**

## 20187, Diagnostics record file created

**Description**

Due to any of a number of faults, a system diagnostics file was created at *arg*. This file contains internal debug info and is intended for trouble shooting and debugging purposes.

**Consequences**

The system will react to the error causing the stop as specified in its own event log text.

**Probable causes**

A number of errors may cause this. Faults causing the system to go to status SYS FAIL will generally also create a diagnostics record file.

**Recommended actions**

If required, the file may be appended to an error report sent to your local ABB representative.

## 20188, System data is not valid

**Description**

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

**Consequences**

Any changes made in the system configuration or RAPID programs since *arg* will NOT be available after restart. Any such changes will have to be re-implemented.

**Recommended actions**

1) Check other event log messages occuring at the same time to determine the actual cause.

2) If acceptable, perform a B-restart to accept starting with the loaded last good system data.

3) Reinstall the system.

4) Check the available disk storage capacity. If required, erase data to increase free storage capacity.

## 20189, Robot data not valid

**Description**

Could not load the system independent
robot data from file *arg*.
The file exists but the content is not
valid. Internal code: *arg*

**Recommended actions**

Check other logged messages for needed
actions.
Make sure there is free memory
left on the device.

## 20192, Disk memory low

**Description**

The amount of free storage capacity on the disk is less than 25 MB. When reaching 10 MB, execution of RAPID programs will be stopped.

**Consequences**

The disk memory is close to being completely full. When this happens the system will not be able to function.

**Probable causes**

Too much data on the disk

**Recommended actions**

1) Save the files on some other disk connected to the network.

2) Erase data from disk.

## 20193, Robot data update warning

**Description**

Axis sync values and service information
data (SIS) was restored from backup.
The system independent robot data was
not saved during system shutdown. The
data was restored from latest backup.

**Recommended actions**

Make sure there is free memory left on
the device.
The backup battery may be drained. Check
the hardware log.

## 20194, System data backup could not be created

### Description

The system was restored successfully

but a backup of the current system data

could not be created.

### Recommended actions

Make sure there is free memory left on

the device *arg*.

## 20195, System data from last shutdown is lost

### Description

Normally, all system data is saved on shutdown. During the last shutdown saving data has failed. The system has been started using last good system data saved earlier at *arg*.

### Consequences

Any changes made in system configuration or RAPID programs since *arg* will NOT be available after restart. Any such changes will have to be re-implemented.

### Probable causes

The backup energy bank may have been been drained at the time of the shut down. The storage disk may be full.

### Recommended actions

1) Check other event log messages occuring at the same time to determine the actual cause.

2) If acceptable, perform a B-restart to accept starting with the loaded system data.

3) Reinstall the system.

4) Check the available disk storage capacity. If required, erase data to increase free storage capacity.

## 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

## 20197, System data from last shutdown can not be found

### Description

Normally, all system data is saved on shutdown. The file containing system persistent data can not be found. The system has been started using last good system data saved earlier at *arg*.

### Consequences

Any changes made in system configuration or RAPID programs since *arg* will NOT be available after restart. Any such changes will have to be re-implemented.

### Probable causes

The file containing the saved system data may have been manually moved or deleted.

### Recommended actions

1) Check the location and availability of the saved system data file.

2) If acceptable, perform a B-restart to accept starting with the loaded last good system data.

3) Reinstall the system.

## 20199, System SoftStop Rejected

### Description

The System Input SoftStop is not allowed

### Recommended actions

## 20201, Limit Switch open

### Description

The limit switch on the robot has opened.

### Consequences

The system goes to the Motors OFF status.

### Probable causes

The robot has been run outside the working range defined by the limit switches fitted to the robot.

### Recommended actions

1) Press the  "Override Limit" button on the Drive Module and manually jog the robot back into it's normal working range.

2) Resume operation.

## 20202, Emergency Stop open

### Description

The emergency stop circuit has previously been broken, and while broken, an attempt was made to operate the robot.

### Consequences

The system remains in the Emergency Stop status.

### Probable causes

An attempt has been made to maneuvre a control, e.g. the enabling device.

### Recommended actions

1) To resume operation, first reset the emergency stop button triggering the stop.

2) Then switch the system back to state Motors ON by pressing the Motors ON button on the Control Module.

## 20203, Enabling Device open

### Description

Only one of the two Enabling Device chains was opened.

### Consequences

The system goes to status SYS HALT.

### Probable causes

The FlexPendant Enabling Device may be faulty or incorrectly connected. The FlexPendant and its Enabling Device is described in the Trouble Shooting Manual, IRC5.

### Recommended actions

1) Check the FlexPendant cable and its connection.

2) If required, replace the faulty FlexPendant or its cable.

## 20204, Operation Key open

### Description

### Recommended actions

## 20205, Auto Stop open

### Description

The Automatic Mode Safeguarded Stop circuit has been broken.

### Consequences

The system goes to the Auto Stop status.

### Probable causes

One or more of the switch connected in series with the Automatic Mode Safeguarded Stop circuit have been opened, which may be causes by a large number of faults. This is only possible while in the Auto operational mode. The Automatic Mode Safeguarded Stop circuit is described in the Trouble Shooting Manual.

### Recommended actions

1) Locate the switch, reset it and restart the system.

2) Check cables and connections.

## 20206, General Stop open

### Description

The General  Mode Safeguarded Stop circuit has been broken.

### Consequences

The system goes to the General Stop status.

### Probable causes

One or more of the switch connected in series with the General  Mode Safeguarded Stop circuit have been opened, which may be causes by a large number of faults. This is possible in any operational mode.  The General Mode Safeguarded Stop circuit is described in the Trouble Shooting Manual.

### Recommended actions

1) Locate the switch, reset it and restart the system.

2) Check cables and connections.

## 20208, Chain switches open

### Description

A safety chain, other than Auto Stop and General Stop, has been broken.

### Consequences

The system goes to the Guard Stop status.

### Probable causes

One or more of the switch connected in series with the RUN Chain Top circuit have been opened, which may be causes by a large number of faults. The RUN Chain Top is described in the Trouble Shooting Manual and Circuit Diagram.

### Recommended actions

1) Locate the switch, reset it and restart the system.

2) Check cables and connections.

## 20209, External Contactor open

### Description

An external contactor has been opened.

### Consequences

The system goes from the Motors OFF status to SYS HALT when attempting to start.

### Probable causes

The RUN chain of external equipment has been broken, which may be caused by the external contactor auxiliary contacts or, if used, any PLC, controlling it. The external contactor supplies power to a piece of external equipment, equivalently to how the RUN contactor supplies a robot. This fault may occur when attempting to go to the Motors ON mode only. The RUN chain is described in the Trouble Shooting Manual and Circuit Diagram.

### Recommended actions

1) Locate the switch, reset it and restart the system.

2) Check cables and connections.

3) Check the external contactor auxiliary contacts.

4) If used, check any PLC equipment controlling the external contactor.

## 20211, Two channel fault, ENABLE chain

### Description

A switch in only one of the two ENABLE chains was briefly affected, opening the chain and then reclosing it, without the other chain being affected.

### Consequences

The system goes to status SYS HALT.

### Probable causes

There may be a loose signal connection on either the axis computer or the panel board. The ENABLE chain is described in the Trouble Shooting Manual and Circuit Diagram.

### Recommended actions

1) Check cables and connections.

2) Make sure all signal connectors on the axis computer board and panel board are securely connected.

3) If there is no loose connection, replace the faulty board.

## 20212, Two channel fault, RUN CHAIN

### Description

Only one of the two RUN chains was closed.

### Consequences

The system goes to status SYS HALT.

### Probable causes

Any of the switches connected to the RUN chain may be faulty or not correctly connected, causing only one channel to close. The RUN chain is described in the Trouble Shooting Manual, IRC5.

### Recommended actions

1) Check cables and connections.

2) Check other event log messages occuring at the same time to determine which switch caused the fault.

3) Make sure all switches are working correctly.

4) To assist in returning the chains to a defined status, first pressing, then resetting the Emergency Stop

5) If there is no loose connection, replace the faulty switch.

## 20213, Two channel fault

### Description

A brief status change in any of the RUN or ENABLE chains has been detected.

### Consequences

The system goes to status SYS HALT.

### Probable causes

This may be caused by a number of faults. The ENABLE and RUN chains are described in the Trouble Shooting Manual, IRC5.

### Recommended actions

1) Check cables and connections.

2) Check other event log messages occuring at the same time to determine the cause of the fault.

3) To assist in returning the chains to a defined status, first pressing, then resetting the Emergency Stop may work.

## 20214, Limit Switch open, DRV1

### Description

The limit switch on the robot has opened.

### Consequences

The system goes to the Motors OFF status.

### Probable causes

The robot has been run outside the working range defined by the limit switches fitted to the robot.

### Recommended actions

1) Press the "Override Limit" button on the Drive Module and manually jog the robot back into it's normal working range.

2) Resume operation.

## 20215, Superior Stop open

### Description

The Superior Mode Safeguarded Stop circuit has been opened.

### Consequences

The system goes to the Superior Stop status.

### Probable causes

One or more of the switch connected in series with the Superior Mode Safeguarded Stop circuit have been opened, which may be causes by a large number of faults. This is possible in any operational mode. The Superior Mode Safeguarded Stop circuit is described in the Trouble Shooting Manual.

### Recommended actions

1) Locate the switch, reset it and restart the system.

## 20216, Enabling device active in Auto mode

### Description

The system has detected that the Enabling device has been pressed for more than 3 seconds in Automatic operating mode.

### Consequences

The system goes to status Guard Stop.

### Recommended actions

1. Release the Enabling device

2. Switch to Manual mode

## 20217, Limit Switch open, DRV2

### Description

The limit switch on the robot has opened.

### Consequences

The system goes to the Motors OFF status.

### Probable causes

The robot has been run outside the working range defined by the limit switches fitted to the robot.

### Recommended actions

1) Press the "Override Limit" button on the Drive Module and manually jog the robot back into it's normal working range.

2) Resume operation.

## 20218, Limit Switch open, DRV3

### Description

The limit switch on the robot has opened.

### Consequences

The system goes to the Motors OFF status.

### Probable causes

The robot has been run outside the working range defined by the limit switches fitted to the robot.

### Recommended actions

1) Press the "Override Limit" button on the Drive Module and manually jog the robot back into it's normal working range.

2) Resume operation.

## 20219, Limit Switch open, DRV4

### Description

The limit switch on the robot has opened.

### Consequences

The system goes to the Motors OFF status.

### Probable causes

The robot has been run outside the working range defined by the limit switches fitted to the robot.

### Recommended actions

1) Press the "Override Limit" button on the Drive Module and manually jog the robot back into it's normal working range.

2) Resume operation.

## 20220, Superior stop conflict

### Description

Only one of the two Superior Mode Safeguarded Stop chains was opened.

### Consequences

The system goes to status SYS HALT.

### Probable causes

Any of the switches connected to the Superior Stop chain may be faulty or not correctly connected, causing only one channel to close. The Superior Stop chain is described in the Trouble Shooting Manual, IRC5.

### Recommended actions

1) Check cables and connections.

2) Check other event log messages occuring at the same time to determine which switch caused the fault.

3) Make sure all switches are working correctly.

4) If there is no loose connection, replace the faulty switch.

## 20221, Run chain conflict

### Description

Status conflict

for Run chain.

### Recommended actions

Please check the Run chain cables.

## 20222, Limit switch conflict

### Description

Only one of the two Limit switch chains was opened.

### Consequences

The system goes to status SYS HALT.

### Probable causes

Any of the switches connected to the Limit switch chain may be faulty or not correctly connected, causing only one channel to close. The Limit switch chain is described in the Trouble Shooting Manual, IRC5.

### Recommended actions

1) Check cables and connections.

2) Check other event log messages occuring at the same time to determine which switch caused the fault.

3) Make sure all switches are working correctly.

4) If there is no loose connection, replace the faulty switch.

## 20223, Emergency Stop conflict

### Description

Only one of the two Emergency Stop chains was opened.

### Consequences

The system goes to status SYS HALT.

### Probable causes

Any of the switches connected to the Emergency Stop chain may be faulty or not correctly connected, causing only one channel to close. The Emergency Stop chain is described in the Trouble Shooting Manual, IRC5.

### Recommended actions

1) Check cables and connections.

2) Check other event log messages occuring at the same time to determine which switch caused the fault.

3) Make sure all switches are working correctly.

4) If there is no loose connection, replace the faulty switch.

## 20224, Enabling Device conflict

### Description

Only one of the two Enabling Device chains was opened.

### Consequences

The system goes to status SYS HALT.

#### Probable causes

The FlexPendant Enabling Device may be faulty or incorrectly connected. The FlexPendant and its Enabling Device is described in the Trouble Shooting Manual, IRC5.

#### Recommended actions

1) Check the FlexPendant cable and its connection.

2) If required, replace the faulty FlexPendant or its cable.

## 20225, Auto Stop conflict

#### Description

Only one of the two Automatic Mode Safeguarded Stop chains was opened.

#### Consequences

The system goes to status SYS HALT.

#### Probable causes

Any of the switches connected to the Auto Stop chain may be faulty or not correctly connected, causing only one channel to close. The Auto Stop chain is described in the Trouble Shooting Manual, IRC5.

#### Recommended actions

1) Check cables and connections.

2) Check other event log messages occuring at the same time to determine which switch caused the fault.

3) Make sure all switches are working correctly.

4) If there is no loose connection, replace the faulty switch.

## 20226, General Stop conflict

#### Description

Only one of the two General Mode Safeguarded Stop chains was opened.

#### Consequences

The system goes to status SYS HALT.

#### Probable causes

Any of the switches connected to the General Stop chain may be faulty or not correctly connected, causing only one channel to close. The General Stop chain is described in the Trouble Shooting Manual, IRC5.

#### Recommended actions

1) Check cables and connections.

2) Check other event log messages occuring at the same time to determine which switch caused the fault.

3) Make sure all switches are working correctly.

4) If there is no loose connection, replace the faulty switch.

## 20227, Motor Contactor conflict, DRV1

#### Description

Only one of the two Motor Contactors for drive system 1 has acknowledged the activation order.

#### Consequences

The system goes to status SYS HALT.

#### Probable causes

A failure of the motor contactor auxiliary contacts or the supply to these.

#### Recommended actions

1) Check cables and connections.

2) Check the function of the auxiliary contacts.

## 20231, Delayed Emergency Stop due to circuit imbalance

#### Description

The system has detected an imbalance in the two parallel Emergency Stop circuits.

#### Consequences

The system goes to status Emergency Stop after approximately 1 sec.

#### Probable causes

The contact pair in any of the Emergency Stop buttons are not working correctly.

#### Recommended actions

1. Isolate the Emergency Stop button causing the conflict.
2. Check the contact pair.
3. Make sure all connections are tight.
4. Replace the button if required.

## 20232, Delayed Auto Stop due to circuit imbalance

#### Description

The system has detected an imbalance in the two parallel Auto Stop circuits.

#### Consequences

The system goes to status Guard Stop after approximately 1 sec.

#### Probable causes

The contact pair in any of the safety devices connected to the Auto Stop circuit are not working correctly.

#### Recommended actions

1. Isolate the safety device causing the conflict.
2. Make sure the device used is a two-channel device.
3. Check the contact pair.
4. Make sure all connections are tight.
5. Replace the device if required.

## 20233, Delayed General Stop due to circuit imbalance

### Description

The system has detected an imbalance in the two parallel General Stop circuits.

### Consequences

The system goes to status Guard Stop after approximately 1 sec.

### Probable causes

The contact pair in any of the safety devices connected to the General Stop circuit are not working correctly.

### Recommended actions

1. Isolate the safety device causing the conflict.
2. Make sure the device used is a two-channel device.
3. Check the contact pair.
4. Make sure all connections are tight.
5. Replace the device if required.

## 20234, Immediate Emergency Stop

### Description

The Emergency Stop circuits have been broken.

### Consequences

The system goes directly to status Emergency Stop.

### Probable causes

One or more of the red emergency stop buttons have been activated.

### Recommended actions

1) Isolate the Emergency Stop button that was opened.
2) Reset the button.

## 20235, Immediate Auto Stop

### Description

The Auto Stop circuits have been broken.

### Consequences

The system goes directly to status Guard Stop.

### Probable causes

One or more of the safety device switches in the Auto Stop circuit have been opened

### Recommended actions

1) Isolate the safety device that was opened
2) Reset the device switch.

## 20236, Immediate General Stop

### Description

The General Stop circuits have been broken.

### Consequences

The system goes directly to status Guard Stop.

### Probable causes

One or more of the safety device switches in the General Stop circuit have been opened

### Recommended actions

1) Isolate the safety device that was opened
2) Reset the device switch.

## 20237, Immediate Superior Stop

### Description

The Superior Stop circuits have been broken.

### Consequences

The system goes directly to status Guard Stop..

### Probable causes

One or more of the safety device switches in the Superior Stop circuit have been opened

### Recommended actions

1) Isolate the safety device that was opened
2) Reset the device switch.

## 20238, Delayed Superior Stop due to circuit imbalance

### Description

The system has detected an imbalance in the two parallel Superior Stop circuits.

### Consequences

The system goes to status Guard Stop after approximately 1 sec.

### Probable causes

The contact pair in any of the safety devices connected to the Superior Stop circuit are not working correctly.

### Recommended actions

1. Isolate the safety device causing the conflict.
2. Make sure the device used is a two-channel device.
3. Check the contact pair.
4. Make sure all connections are tight.
5. Replace the device if required.

## 20240, Conflict between ENABLE signals

### Description

A switch in only one of the two ENABLE chains was affected, without the other chain being affected.

### Consequences

The system goes to status SYS HALT.

### Probable causes

There may be a loose signal connection on either the contactor board or the panel board. The ENABLE chain is described in the Trouble Shooting Manual and Circuit Diagram.

### Recommended actions

1) Check cables and connections.

2) Make sure all signal connectors on the contactor board and panel board are securely connected.

3) If there is no loose connection, replace the faulty board.

## 20241, Operating mode conflict

### Description

There is a conflict between the operating mode selected on the operating mode selector on the controller cabinet front and the actual operating mode as detected by the axis computer.

### Consequences

The system goes to status SYS HALT.

### Probable causes

There may be a hardware fault in the operating mode selector, its cabling or panel board. There may also be a software fault.

### Recommended actions

1. Press Motors ON or the enabling device to restart.
2. Check the operating mode selector function.
3. Check its cabling and panel board.
4. Make sure all connections are tight.
5. Replace the faulty unit.

## 20245, Run Control status conflict, DRV2

### Description

Status conflict between Run Control and Motor Contactors for drive system 2.

### 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) Do a Warm start.

## 20246, Run Control status conflict, DRV3

### Description

Status conflict between Run Control and Motor Contactors for drive system 3.

### 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) Do a Warm start.

## 20247, Run Control status conflict, DRV4

### Description

Status conflict between Run Control and Motor Contactors for drive system 4.

### 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) Do a Warm start.

## 20248, Motor Contactor conflict, DRV2

### Description

Only one of the two Motor Contactors for drive system 2 has acknowledged the activation order.

### Consequences

The system goes to status SYS HALT.

### Probable causes

A failure of the motor contactor auxiliary contacts or the supply to these.

### Recommended actions

1) Check cables and connections.

2) Check the function of the auxiliary contacts.

## 20249, Motor Contactor conflict, DRV3

### Description

Only one of the two Motor Contactors for drive system 3 has acknowledged the activation order.

### Consequences

The system goes to status SYS HALT.

### Probable causes

A failure of the motor contactor auxiliary contacts or the supply to these.

### Recommended actions

1) Check cables and connections.

2) Check the function of the auxiliary contacts.

## 20250, Motor Contactor conflict, DRV4

### Description

Only one of the two Motor Contactors for drive system 4 has acknowledged the activation order.

### Consequences

The system goes to status SYS HALT.

### Probable causes

A failure of the motor contactor auxiliary contacts or the supply to these.

### Recommended actions

1) Check cables and connections.

2) Check the function of the auxiliary contacts.

## 20252, Motor temperature high, DRV1

### Description

Over temperature in Manipulator Motor. Make sure to let the Motor cool down before ordering Motors On again.

### Recommended actions

Wait until the overheated Motor has cooled down before ordering Motors On again.

## 20253, External device temperature high, DRV1

### Description

Over temperature in External Device. Make sure to let the External Device cool down before ordering Motors On again.

### Recommended actions

Wait until the overheated Motor has cooled down before ordering Motors On again.

## 20254, Motor temperature high, DRV2

### Description

Over temperature in Manipulator Motor. Make sure to let the Motor cool down before ordering Motors On again.

### Recommended actions

Wait until the overheated Motor has cooled down before ordering Motors On again.

## 20255, External device temperature high, DRV2

### Description

Over temperature in External Device. Make sure to let the External Device cool down before ordering Motors On again.

### Recommended actions

Wait until the overheated Motor has cooled down before ordering Motors On again.

## 20256, Motor temperature high, DRV3

### Description

Over temperature in Manipulator Motor. Make sure to let the Motor cool down before ordering Motors On again.

### Recommended actions

Wait until the overheated Motor has cooled down before ordering Motors On again.

## 20257, External device temperature high, DRV3

### Description

Over temperature in External Device. Make sure to let the External Device cool down before ordering Motors On again.

### Recommended actions

Wait until the overheated Motor has cooled down before ordering Motors On again.

## 20258, Motor temperature high, DRV4

### Description

Over temperature in Manipulator Motor. Make sure to let the Motor cool down before ordering Motors On again.

### Recommended actions

Wait until the overheated Motor has cooled down before ordering Motors On again.

## 20259, External device temperature high, DRV4

### Description

Over temperature in External Device. Make sure to let the External Device cool down before ordering Motors On again.

### Recommended actions

Wait until the overheated Motor has cooled down before ordering Motors On again.

## 20260, Run Control status conflict, DRV1

### Description

Status conflict between Run Control and Motor Contactors for drive system 1.

### 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) Do a Warm start.

## 20270, Access error

**Description**

Panel Module access error.

**Recommended actions**

Examine your I/O configuration files.

## 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.

## 20281, IO configuration error

**Description**

*argarg* with signal name *arg* has wrong signal type. Found *arg* expected *arg*.

**Recommended actions**

Change your configuration and restart the system.

## 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 an 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 an 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*

**Recommended actions**

## 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, System Input is Restricted

### Description

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

### Consequences

The action called for by system input *arg* will not take place, and the operation will NOT be affected.

### 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.

## 20294, The requested action *arg* can not be fulfilled since the IO unit is disabled.

### Description

The requested action can not 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 is set to category safety and can not 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* has category Safety and can not be used as System Output.

### Recommended actions

Choose another signal or set to another category.

## 20307, Motor cooling fan malfunction, axis 1

### Description

The axis 1 motor cooling fan on the robot connected to Drive Module *arg* does not work correctly.

### Consequences

The system goes to status SYS HALT, the program and robot motion is stopped and the motors are switched OFF. The system may be restarted, but after 3 minutes it will go back to status SYS HALT if the fault is not remedied. The full meaning of this status is described in the Trouble Shooting Manual, IRC5.

### Probable causes

-The fan power cabling may be damaged or not connected correctly to motor or contactor unit.

-The fan or the Drive Module Power Supply may be faulty.

### Recommended actions

1) Make sure the fan cable is correctly connected

2) Make sure the fan is free to rotate and that the air flow is not obstructed.

3) Make sure the Drive Module Power Supply output and input voltages are within specified limits as detailed in the Trouble shooting manual. Replace any faulty unit.

## 20308, Motor cooling fan malfunction, axis 2

### Description

The axis 2 motor cooling fan on the robot connected to Drive Module *arg* does not work correctly.

### Consequences

The system goes to status SYS HALT, the program and robot motion is stopped and the motors are switched OFF. The system may be restarted, but after 3 minutes it will go back to status SYS HALT if the fault is not remedied. The full meaning of this status is described in the Trouble Shooting Manual, IRC5.

### Probable causes

-The fan power cabling may be damaged or not connected correctly to motor or contactor unit.

-The fan or the Drive Module Power Supply may be faulty.

### Recommended actions

1) Make sure the fan cable is correctly connected

2) Make sure the fan is free to rotate and that the air flow is not obstructed.

3) Make sure the Drive Module Power Supply output and input voltages are within specified limits as detailed in the Trouble shooting manual. Replace any faulty unit.

## 20309, Motor cooling fan malfunction, axis 3

### Description

The axis 3 motor cooling fan on the robot connected to Drive Module *arg* does not work correctly.

### Consequences

The system goes to status SYS HALT, the program and robot motion is stopped and the motors are switched OFF. The system may be restarted, but after 3 minutes it will go back to status SYS HALT if the fault is not remedied. The full meaning of this status is described in the Trouble Shooting Manual, IRC5.

### Probable causes

-The fan power cabling may be damaged or not connected correctly to motor or contactor unit.

-The fan or the Drive Module Power Supply may be faulty.

### Recommended actions

1) Make sure the fan cable is correctly connected

2) Make sure the fan is free to rotate and that the air flow is not obstructed.

3) Make sure the Drive Module Power Supply output and input voltages are within specified limits as detailed in the Trouble shooting manual. Replace any faulty unit.

## 20311, Enable 1 open

### Description

The ENABLE 1 circuit monitoring the Panel Board has been opened.

### Consequences

The system goes to status SYS HALT.

### Probable causes

There may be an internal fault in the Panel Board or the internal supervision has detected a fault.

### Recommended actions

1) Check all connections to the panel board

2) If faulty, replace the panel board.

## 20312, Enable 2 open

### Description

The ENABLE 2 circuit monitoring the Axis Computer has been opened.

### Consequences

The system goes to status SYS HALT.

### Probable causes

There may be an internal fault in the Axis Computer.

### Recommended actions

1) Check all connections to the axis computer.

2) If faulty, replace the axis computer.

## 20313, Enable1 supervision fault

### Description

The ENABLE1 circuit has been broken. This circuit monitors the function of the panel board and the main computer.

### Consequences

The system goes to status SYS HALT.

### Probable causes

A fault, probably a software fault, has been detected by any of the units supervised by the ENABLE1 circuit.

### Recommended actions

1) Attempt restarting by pressing the Motors ON button. If restarting is IMPOSSIBLE it indicates a hardware fault in either Panel board, Axis computer or Contactor board. If restarting is POSSIBLE, it indicates a software fault. In such case, contact your local ABB representative.

2) Determine which unit is faulty by checking its indication LEDs. The LEDs are described in the Trouble Shooting Manual. Replace the faulty unit.

## 20314, Enable2 supervision fault

### Description

The ENABLE2 circuit to drive module 1 has been broken. This circuit monitors e.g. the function of the panel board and the axis computer.

### Consequences

The system goes to status SYS HALT.

#### Probable causes

A fault, probably a software fault, has been detected by any of the units supervised by the ENABLE2 circuit.

#### Recommended actions

1) Attempt restarting by pressing the Motors ON button. If restarting is IMPOSSIBLE it indicates a hardware fault in either Panel board, Axis computer or Contactor board. If restarting is POSSIBLE, it indicates a software fault. In such case, contact your local ABB representative.

2) Determine which unit is faulty by checking its indication LEDs. The LEDs are described in the Trouble Shooting Manual. Replace the faulty unit.

## 20315, Enable2 Supervision fault

#### Description

The ENABLE2 circuit to drive module 2 has been broken. This circuit monitors e.g. the function of the panel board and the axis computer.

#### Consequences

The system goes to status SYS HALT.

#### Probable causes

A fault, probably a software fault, has been detected by any of the units supervised by the ENABLE2 circuit.

#### Recommended actions

1) Attempt restarting by pressing the Motors ON button. If restarting is IMPOSSIBLE it indicates a hardware fault in either Panel board, Axis computer or Contactor board. If restarting is POSSIBLE, it indicates a software fault. In such case, contact your local ABB representative.

2) Determine which unit is faulty by checking its indication LEDs. The LEDs are described in the Trouble Shooting Manual. Replace the faulty unit.

## 20316, Enable2 Supervision fault

#### Description

The ENABLE2 circuit to drive module 3 has been broken. This circuit monitors e.g. the function of the panel board and the axis computer.

#### Consequences

The system goes to status SYS HALT.

#### Probable causes

A fault, probably a software fault, has been detected by any of the units supervised by the ENABLE2 circuit.

#### Recommended actions

1) Attempt restarting by pressing the Motors ON button. If restarting is IMPOSSIBLE it indicates a hardware fault in either Panel board, Axis computer or Contactor board. If restarting is POSSIBLE, it indicates a software fault. In such case, contact your local ABB representative.

2) Determine which unit is faulty by checking its indication LEDs. The LEDs are described in the Trouble Shooting Manual. Replace the faulty unit.

## 20317, Enable2 Supervision fault

#### Description

The ENABLE2 circuit to drive module 4 has been broken. This circuit monitors e.g. the function of the panel board and the axis computer.

#### Consequences

The system goes to status SYS HALT.

#### Probable causes

A fault, probably a software fault, has been detected by any of the units supervised by the ENABLE2 circuit.

#### Recommended actions

1) Attempt restarting by pressing the Motors ON button. If restarting is IMPOSSIBLE it indicates a hardware fault in either Panel board, Axis computer or Contactor board. If restarting is POSSIBLE, it indicates a software fault. In such case, contact your local ABB representative.

2) Determine which unit is faulty by checking its indication LEDs. The LEDs are described in the Trouble Shooting Manual. Replace the faulty unit.

## 20350, Not a valid task name

#### Description

The task name *arg* can not 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 system.

## 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:

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* can not be found in the list of configured mechanichal 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 behaviour 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.

#### 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

Change the configuration to include a task controlling mechanical units.

Restart the controller.

## 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.

#### Recommended actions

Change the configuration and restart the system.

## 20361, Only shared modules in the shared task

#### Description

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

#### Recommended actions

Change the configuration and restart the system.

## 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 system.

## 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 system.

## 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 performe 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 are no RAPID motion task connected with the mechanical unit group *arg*.

### Consequences

It will not be possible to use the mechanical units that belongs 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 are connected to the mechanicl unit group.
2. Change an existing non motion task to a motion task.
3. Remove the mechanical unit group.
4. Check for misspelled names.

## 20369, Confusing configuration of system parameters of type System Misc in domain Controller.

### Description

There is a mixture of old and new structure of type System Misc.

### Consequences

It is possible that not the correct parameters are configured.

### Probable causes

Configuration of old and new structure has been loaded into the system.

### Recommended actions

1. Check that the correct parameters are configured.
2.Update the parameters in System Misc with correct values.
3. Save the controller domain and replace the old config file.

## 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 system

## 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.

## 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.

## 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**

## 20501, ES panel open

**Description**

**Recommended actions**

## 20502, ES pendant open

**Description**

**Recommended actions**

## 20503, ES ext.cat.0 open

**Description**

**Recommended actions**

## 20504, Purge relay open

**Description**

Status active
when system not purged OK:
1. Pressure too low.
2. Pressure too high.
3. High flow on.

**Recommended actions**

1. Check other error messages for primary fault reason.
2. If no other error messages, check purge unit and air supply, and search for leaks in the purge system.

## 20505, Delayed stop open

**Description**

**Recommended actions**

## 20506, Test Stop open

**Description**

**Recommended actions**

## 20511, Soft-start relay open

**Description**

The Soft-start relay (KM3) should be closed when the motor relays (KM1/KM2) are closed.

**Recommended actions**

Check relay KM3.

## 20521, Test Stop conflict

**Description**

Status conflict
for the Test Stop chain.

**Recommended actions**

Please check the two channel safety guard that caused the status conflict.

## 20522, Purge relay conflict

**Description**

Status conflict
for the purge relay.

**Recommended actions**

Please check the two channel safety guard that caused the status conflict.

## 20523, HwMotorOn relay conflict

**Description**

Status conflict
for the HW motor on relay.

**Recommended actions**

Please check the two channel safety guard that caused the status conflict.

## 20524, SwMotorOn relay conflict

**Description**

Status conflict
for the SW motor on relay.

**Recommended actions**

Please check the two channel safety guard that caused the status conflict.

## 20525, ES panel conflict

**Description**

Status conflict
for the Emergency Stop panel chain.

**Recommended actions**

Please check the two channel safety guard that caused the status conflict.

## 20526, ES pendant conflict

**Description**

Status conflict
for the Emergency Stop pendant chain.

**Recommended actions**

Please check the two channel safety
guard that caused the status conflict.

## 20527, ES ext.cat.0 conflict

**Description**

Status conflict
for the Emergency Stop ext.cat.0 chain.

**Recommended actions**

Please check the two channel safety
guard that caused the status conflict.

## 20528, Safety Switch conflict

**Description**

Status conflict
for the paint safety switch.

**Recommended actions**

Please check the two channel safety
guard that caused the status conflict.

## 20529, Cabin Interlock conflict

**Description**

Status conflict
for the cabin interlock circuit.

**Recommended actions**

Please check the two channel safety
guard that caused the status conflict.

## 20530, ES relay conflict

**Description**

Status conflict
for the Emergency Stop relay feedback.

**Recommended actions**

Please check the two channel safety
guard that caused the status conflict.

## 20531, Delayed Stop conflict

**Description**

Status conflict
for the delayed stop circuit.

**Recommended actions**

Please check the two channel safety
guard that caused the status conflict.

## 20532, Run chain cur. conflict

**Description**

Status conflict
for the run chain current balance
monitoring.

**Recommended actions**

Please check the two channel safety
guard that caused the status conflict.

## 20533, ES chain cur. conflict

**Description**

Status conflict
for the Emergency Stop current balance.
monitoring.

**Recommended actions**

Please check the two channel safety
guard that caused the status conflict.

## 20551, Run Chain circuit fault

**Description**

Status active
when Current Balance Monitoring on run
chain detects fault.

**Recommended actions**

Check run chain.

## 20552, ES circuit fault

**Description**

Status active
when Current Balance Monitoring on
emergency stop chain detects fault.

**Recommended actions**

Check emergency stop.

## 20553, AEXB board not OK

**Description**

Status active
when serial communication towards AEXB
is down.

**Recommended actions**

1. Check cables towards AEXB board.

2. Replace AEXB board.
3. Replace ACCB board.

## 20554, Collision sensor active

**Description**

Status active
when digital collision sensor on ACCB is
active.

**Recommended actions**

Check the collision sensors connected to
ACCB.

## 20555, ACA SW module not OK

**Description**

Status active
when ACA software module is not OK, or
communication with AMA is down.

**Recommended actions**

1. Check that the ACA SW is running.
2. Check the communication towards AMA.
3. Check that the AMA SW is running.

## 20556, Enable 2 AXC 1 open

**Description**

Status active when
enable from Axis Computer 1 open.

**Recommended actions**

1. Check other error messages for
primary fault reason.
2. If no other error messages,
please check line voltage for
one phase missing.

## 20557, Enable 2 AXC 2 open

**Description**

Status active when
enable from Axis Computer 2 open.

**Recommended actions**

1. Check other error messages for
primary fault reason.
2. If no other error messages,
please check line voltage for
one phase missing.

## 20558, Manipulator fault

**Description**

Status active
when power to manipulator is lost, or
manipulator's enable chain conditions
is not OK.

**Recommended actions**

1. Check the power to the manipulator.
2. Check that the enable chain on MCOB
is OK.

## 20559, Collision sensor active

**Description**

Status active
when digital collision sensor on MCOB is
active.

**Recommended actions**

Check the collision sensors connected to
MCOB.

## 20560, Axis limit on MCOB

**Description**

Status active
when limit sensor on MCOB is active.

**Recommended actions**

Check the limit sensors connected to
MCOB.

## 20561, AMA SW not OK

**Description**

Status active
when AMA software has opened the enable
chain on MCOB.

**Recommended actions**

Check the AMA SW.

## 20562, Reset ES fault

**Description**

Status active
when Reset Emergency Stop input is
blocked for more than 3 seconds.

**Recommended actions**

Check the connection of external reset
of Emergency Stop.

## 20571, Safety Switch open

### Description

Paint System Safety Switch has opened
the Cabin Interlock chain.

### Recommended actions

Check manual switch for disconnecting
of the paint control system.

## 20572, Cabin Interlock open

### Description

Cabin Interlock Signal has opened the
Cabin Interlock chain.

### Recommended actions

Check cabin ventilation and other cabin
safety functions.

## 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 reformated.

### 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.

## 31810, DeviceNet master/slave board is missing

### Description

The DeviceNet master/slave board does not work.

### Consequences

No communication on the Devicenet 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.

## 31811, Second DeviceNet master/slave board is missing

### Description

Dual option is configured but only one DeviceNet master/slave board is installed.

### Consequences

Only one DeviceNet bus is available.

### Probable causes

The Second DeviceNet master/slave board is either malfunctioning or missing.

### Recommended actions

1. Make sure a Second DeviceNet master/slave board is installed.
2. Replace the Second board if faulty.

## 31910, Profibus-DP master/slave board is missing

### Description

The Profibus-DP master/slave board does not work.

### Consequences

No communication on the Profibus is possible.

### Probable causes

The Profibus-DP master/slave board is either malfunctioning or missing.

### Recommended actions

1. Make sure a Profibus-DP master/slave 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-DP master/slave 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 system 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-DP master/slave board failure

### Description

The Profibus-DP master/slave board did not start up correctly.

### Consequences

No communication on the Profibus is possible.

### Probable causes

The Profibus-DP master/slave board hardware may be malfunctioning.

### Recommended actions

1. Restart the system.
2. Replace the Profibus-DP master/slave board if faulty.

## 31913, Profibus-DP master/slave board internal error

### Description

The Profibus-DP master/slave board reported internal error *arg*.

### Consequences

No communication on the Profibus is possible.

### Probable causes

The Profibus-DP master/slave board hardware may be malfunctioning.

### Recommended actions

1. Restart the system.
2. Replace the Profibus-DP master/slave board if faulty.

## 31914, Profibus startup error

### Description

- Profibus master bus error Error code *arg*. Check cabling, terminators and modules then restart.

### Recommended actions

## 31915, Profibus bus error

### Description

- Profibus master bus error Error code *arg*. Check cabling, terminators and modules.

### Recommended actions

## 31916, Profibus bus OK

### Description

- Profibus regained contact on the master bus.

### Recommended actions

## 31917, Profibus-DP master/slave board exception

### Description

A fatal error has occured on the Profibus-DP master/slave board. Arg1 channel in task *arg*. Parameters *arg*

### Consequences

No communication on the Profibus is possible.

### Probable causes

The Profibus-DP master/slave board hardware may be malfunctioning.

### Recommended actions

1. Restart the system.
2. Replace the Profibus-DP master/slave board if faulty.

## 32500, Robot Communication Card is missing

### Description

The system cannot contact the Robot Communication Card FPGA.

### Consequences

No communication with the Panel board is possible. The system goes to status SYS FAIL.

### Probable causes

The Robot Communication Card is either malfunctioning or missing.

### Recommended actions

1. Make sure a Robot Communication Card is installed.
2. Replace the board if faulty.

## 32501, Incorrect RCC firmware

### Description

The FPGAR11-Firmware on the RCC (DSQC602) is of an incompatible version. Current version: *arg.arg* Requested version: *arg.arg*

### Recommended actions

1. Replace the DSQC602 board
2. Restart the system

## 32502, Can't find file

### Description

The system cannot find the file: [*arg*]

### Recommended actions

Reinstall the system

## 32503, Requested info not in file

### Description

The system cannot find information about what software to download to HardWare ID="*arg*", Version="*arg*", Revision="*arg*" in file [*arg*].

### Consequences

xx

### Probable causes

The file has either been damaged, or the actual hardware version of the unit is not supported.

### Recommended actions

1. Reinstall the system
2. Replace the unit to a version which is supported by this SW-release.

## 32530, No panel board communication

### Description

There is no serial communication between the panel board and the robot communication card.

### Consequences

The system goes to status SYS FAIL.

### Probable causes

Probably hardware fault in cable between panel board and robot communication card. The panel board, or it's power supply, may also be faulty.

### Recommended actions

1) Restart the system to resume operation.

2) Make sure the cable between robot communication card and panel unit is working and correctly connected.

3) Check the panel unit power supply.

4) Replace the panel board if faulty.

## 32550, Firmware reflash started

### Description

A required update of the *arg* firmware has started. File used: [*arg*].

### Recommended actions

Wait for the reflash to complete

## 32551, Firmware reflash completed

### Description

The update of *arg* firmware has sucessfully completed.

### Recommended actions

## 32552, Firmware reflash failed

### Description

The update of *arg* firmware failed.

Internal errorcode:*arg*

### Recommended actions

1. Check other errormessages for detailed explanation
2. Restart the system
3. Reinstall the system
4. Replace the *arg*

## 32553, Firmware file is corrupt

### Description

The firmware file [*arg*] is corrupt. Internal errorcode:*arg*

### Recommended actions

Reinstall the system

## 32554, Firmware file not found

### Description

The firmware file [*arg*] is not found.

### Recommended actions

Reinstall the system

## 32570, Firmware reflash started

### Description

A required update of the *arg* firmware has started. Replacing old firmware version: [*arg*].

### Recommended actions

Wait for the reflash to complete

## 32571, Firmware reflash completed

### Description

The update of *arg* firmware has sucessfully completed. New version: [*arg*]. Internal code:[*arg*]

### Recommended actions

## 32572, Firmware reflash failed

### Description

The update of *arg* firmware failed.

Current version:*arg*. Internal errorcode:*arg*

### Recommended actions

1. Check other errormessages for detailed explanation.
2. Reinstall the system.

## 32573, Unable to download firmware file

### Description

The firmware file [*arg*] is not found. Internal errorcode:*arg*.

**Recommended actions**

Reinstall the system

## 32574, Corrupt axis computer hardware

**Description**

The [*arg*] flash memory has a corrupt content. Internal errorcode:*arg*

**Recommended actions**

1. Check other errormessages for detailed explanation
2. Restart the system
3. If failure occour again, replace the board

## 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 system

## 32580, Firmware reflash started

**Description**

A required update of the *arg* firmware has started. Internal code: [*arg*].
File: [*arg*].

**Recommended actions**

Wait for the reflash to complete

## 32581, Firmware reflash completed

**Description**

The update of *arg* firmware has sucessfully completed. Internal code:[*arg*]

**Recommended actions**

No action required

## 32582, Firmware reflash failed

**Description**

The update of *arg* firmware failed.
Internal errorcode:*arg*

**Recommended actions**

1. Check other errormessages for detailed explanation.
2. Reinstall the system.

## 32583, Firmware file corrupt

**Description**

The update of *arg* firmware failed.
The firmware file [*arg*] is corrupt.
Internal errorcode:*arg*.

**Recommended actions**

Reinstall the system

## 32584, Firmware file not found

**Description**

The update of *arg* firmware failed.
The firmware file [*arg*] is not found.
Internal errorcode:*arg*.

**Recommended actions**

Reinstall the system

## 32585, Found no contactor board

**Description**

System failed to detect one or more contactor boards

**Recommended actions**

1. Check system for missing contactor boards
2. Check ethernet cables between the axis computers and the contactor boards
3. Restart the system

## 32590, Firmware reflash started

**Description**

A required update of the *arg* firmware in drive module *arg* has started.
File: [*arg*].

**Recommended actions**

Wait for the reflash to complete, this will take approximately 3.5 minutes.

## 32591, Firmware reflash completed

**Description**

The update of *arg* firmware in drive module *arg* has sucessfully completed.

**Recommended actions**

No action required

## 32592, Firmware reflash failed

**Description**

The update of *arg* firmware in drive module *arg* has failed.

#### Recommended actions

1. Check other errormessages for detailed explanation.
2. Reinstall the system.

## 32593, Firmware file corrupt

#### Description

The update of *arg* firmware in drive module *arg* has failed.

The firmware file [*arg*] is corrupt.

#### Recommended actions

Reinstall the system

## 32594, Firmware file not found

#### Description

The update of *arg* firmware in drive module *arg* has failed.

The firmware file [*arg*] is not found.

#### Recommended actions

Reinstall the system

## 32601, Interbus master/slave board is missing

#### Description

The Interbus master/slave board does not work.

#### Consequences

No communication on the Interbus is possible.

#### Probable causes

The Interbus master/slave board is either malfunctioning or missing.

#### Recommended actions

1) Make sure a Interbus master/slave board is installed.

2) Replace the board if faulty.

## 32651, Serial port hardware is not accessible

#### Description

The system has tried to address the serial port *arg*, and failed.

#### Consequences

The optional serial port hardware can not be accessed. The connector and the physical channel using the connector will not be available for use.

#### Probable causes

The serial port hardware is missing or malfunctioning.

#### Recommended actions

1) Make sure the required serial port hardware has been correctly installed and is not faulty.

2) Replace the serial port hardware.

## 33504, Revolution counter update failure

#### Description

Update of the revolution counter for joint *arg* failed.

#### Consequences

Joint not synchronised

#### Probable causes

1. Joint missing or not active
2. Measurment system error

#### Recommended actions

1. Check if joint active
2. Check configuration files
3. Check measurement system

## 37001, Motors ON contactor activation error

#### Description

Motors ON contactor *arg* in drive module *arg* failed to close when ordered.

#### Consequences

The mechanical unit can not be run manually or automatically.

#### Probable causes

1) The runchain 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 the runchain cable between the panel board and the contactor interface board.

3) Check cabling between the contactor interface board and the contactor.

4) Check any other error log messages coinciding in time with this one for clues.

5) Check the system motion configuration regarding Motors ON relay. How to check the configuration file is detailed in the Trouble Shooting Manual.

## 37043, Overload on Panel Board signals

#### Description

The AC_ON or SPEED signals draw too much current.

#### Consequences

The Panel Board shuts down the signals, causing the system to go to either status SYS FAIL (for AC_ON) or status SYS HALT (for SPEED).

#### 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 AC_ON and SPEED circuits

2) Check the Panel Board 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, Overload on Panel Board signals

#### Description

The 24 V PANEL supply draws too much current.

#### Consequences

The Panel Board shuts down the signal, 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 24V PANEL circuit.

2) Check Panel Board cabling, and replace any faulty unit if required.

## 37049, Activation contactor activation error

#### Description

The activation relay for mechanical unit *arg* failed to close.

#### Consequences

The mechanical unit can not 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. How to check the configuration file is detailed in the Trouble Shooting Manual.

## 37050, Overtemperature in main computer

#### Description

The temperature in the main computer unit or the main computer processor is too high.

#### Consequences

The system goes to status SYS HALT.

#### Probable causes

The unit may be overloaded, its fans may be malfunctioning or the air flow may be restricted.

#### Recommended actions

1) Make sure the fans are operating.

2) Check that air flow to the unit fans is not restricted.

## 37053, Low CMOS battery voltage level

#### Description

The CMOS battery on the computer board is empty.

#### Consequences

On restart, the system will use an erroneous setup or no restart will be possible.

#### Probable causes

Faulty battery.

#### Recommended actions

1. Replace the CMOS battery

## 37054, aulty Computer Unit fan

#### Description

The fans in the Computer Unit spin too slowly.

### Consequences

No system consequence. The Computer Unit temperature will rise.

### Probable causes

Faulty fan, cabling or power supply. See the Circuit Diagram!

### Recommended actions

1) Check the cabling to the Computer Unit fan.

2) Check the fan.

3) Check the fan power supply.

4) Replace the faulty component if required.

## 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.

## 37059, POWER Supply error

### Description

The Control Module Power Supply reports an error.

### Probable causes

The incoming AC voltage is out of range.

### Recommended actions

1) Restart the system.

2) Check incoming AC voltage.

3) Check the Computer Module Power Supply, and replace any faulty unit if required.

## 37062, Computer Module power supply warning

### Description

The *arg* V voltage of the Computer Module power supply is *arg* V, which is out of the allowed range.

### Consequences

-

### Probable causes

The power supply unit, cabling, input voltage to the power supply or the output load may cause the faulty voltage level. See the Trouble Shooting Manual and 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 unit if required.

## 37067, Faulty Computer Unit Power Supply fan

### Description

The fan in the Computer Unit Power Supply spins too slowly.

### Consequences

No system consequence. The Computer Unit Power Unit temperature will rise.

### Probable causes

This may be caused by a faulty fan, cabling or power supply. See the Circuit Diagram!

### Recommended actions

1. Check the cabling to the Computer Unit Power Supply fan.

2. Check the fan.

3. Check the fan power supply.

4. Replace the faulty component if required.

## 37068, Faulty Battery Unit connector

### Description

The backup battery connector is faulty.

### Consequences

No system consequence.

### Recommended actions

1. Make sure the connector is fully inserted.

2. Check the connector and cables for faulty connection.

3. Replace the battery unit if required.

## 37069, Faulty backup Power Supply

### Description

The backup energy bank in the Control Module supplying the backup voltage is faulty.

### Consequences

After switching the power off, a B type restart must be performed. No system data changes will be saved at power off.

### Probable causes

This may be caused by a faulty backup energy bank, cabling or charger.

### Recommended actions

Do not turn the main power off until battery has been charged, or the system may perform a cold start!

1) Check the backup energy bank cabling and connectors.

2) Check the backup energy bank.

3) Check the power supply.

4) Replace the faulty unit if required.

## 37070, Overtemp in Control Module Power Supply

### Description

The temperature in the control module power supply is too high.

### Consequences

The system is shut down immediately.

### Probable causes

This may be caused by poor cooling, too high a load on the power supply or by a faulty power supply.

### Recommended actions

1) Check the cooling fan.

2) Check the output power.

3) Replace any faulty unit if required.

## 37071, Low backup battery voltage level

### Description

The voltage in the computer unit backup battery unit is too low to be functional.

### Consequences

No system consequence. No backup will be made at power loss.

### Probable causes

This may be caused by a faulty battery unit, cabling or charger.

### Recommended actions

Do not turn the main power off until battery has been charged, or the system may perform a cold start!

1. Check the battery unit cabling and connectors.
2. Check the battery unit.
3. Check the power supply.
4. Replace the faulty unit if required.

## 37072, Backup battery has expired

### Description

The backup battery has reached the end of its life, as calculated by the system.

### Consequences

No system consequence. No backup will be made at power loss.

### Probable causes

Faulty battery.

### Recommended actions

1. Replace the backup battery unit.

## 37073, Backup battery status

### Description

The backup battery has a remaning capacity of at least *arg* number of parameter saves.

### Consequences

-

### Probable causes

-

### Recommended actions

Charge the battery by leaving the system switched on for more than 24 hours.

## 37074, Purge pressure too low

### Description

Purge system number: *arg*

### Recommended actions

Check the purge air supply and search for leaks in:

1. The purge unit.
2. The flexible hose conduit.
3. The manipulator itself.

## 37075, Purge pressure too high

### Description

Purge system number: *arg*

### Recommended actions

Check the purge unit and the air supply.

## 37076, Unexpected low purge flow

### Description

Purge system number: *arg*

### Recommended actions

Check the purge unit and the air supply. Search for leaks in the purge system.

## 37077, Unexpected high purge flow

### Description

Purge system number: *arg*

### Recommended actions

Check the purge unit and the air supply.

## 37078, Purge timers differ

### Description

Unacceptable divergence between software and firmware count down timers.

#### Recommended actions

Change AEXB board.

## 37079, Purge timer restarted

#### Description

Purge hardware has restarted the count down timer.

#### Recommended actions

1. Check other error messages for primary fault reason.
2. If no other error messages, the system will try to purge once again.

## 37080, Signal on purge system 2

#### Description

Sensor number: *arg* overriden.

#### Recommended actions

Check the dummy plug for purge system

2. No sensor signals shall be connected if dummy plug is inserted.

## 37081, Purge timers differ

#### Description

Unacceptable divergence between firmware and hardware count down timers.

#### Recommended actions

Change AEXB board.

## 37084, Purge init timer fault

#### Description

More or less than one selector are set for the init timer on the configuration connector at AEXB. Default time (300s) is used.

#### Recommended actions

Check the init timer selectors on the configuration connector at AEXB board.

## 37085, Low purge flow expected

#### Description

Purge system number: *arg*

#### Recommended actions

Check the purge unit and the air supply.

## 37086, High purge flow expected

#### Description

Purge system number: *arg*

#### Recommended actions

Check the purge unit and the air supply. Search for leaks in the purge system.

## 37090, Temp. too high, sensor *arg*

#### Description

System overheat detected. Sensors 1-7: motor 1-7, sensor 8: Serial measurement board. Run chain has been opened.

#### Recommended actions

## 37092, Drivesystem fuse burned

#### Description

Status active when fuse on drive system is burned.

#### Recommended actions

1. Check fuse.
2. Check for other electrical fault.

## 37093, ES circuit - supply fault

#### Description

Status active when 24V supply on emergency stop chain is low or missing.

#### Recommended actions

Check 24V supply.

## 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.

## 37097, Brake short circuit fault

#### Description

The supervision of brakes on MCOB has detected a short circuit on axis *arg* and turned ON all brakes.

#### Recommended actions

1. Check for short circuit on brakes.

## 37098, Brake open circuit fault

#### Description

The supervision of brakes on MCOB has detected an open circuit on axis *arg* and turned ON all brakes.

#### Recommended actions

1. Check for open circuit on brakes.

## 37099, Temp. too high, sensor *arg*

### Description

System overheat detected on motors, SMU or process equipment. Run chain has been opened.

### Recommended actions

Sensors 1-8: Robot motors 1-8

Sensor 9: Serial measurement unit (SMU)

Sensors 10-14: Process 1-5

Please refer to current robot config. for more details.

## 37100, I/O node flash disk error

### Description

Flash name: *arg*

Flash disk function: *arg*

Error description: *arg*

### Recommended actions

Report error.

## 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. How to check the configuration files is detailed in the Trouble Shooting Manual.

## 37102, Power supply warning, faulty 24V COOL level

### Description

The 24V COOL output of the Control Module Power Supply is out of range.

### Consequences

No system consequence.

### Probable causes

The Control Module Power Supply unit cabling or the output load may cause the faulty voltage level. The power supplies are shown in the Trouble Shooting Manual and the Circuit Diagram!

### Recommended actions

1) Check all cabling to the Control Module Power Supply unit.

2) Check the output voltage level, and replace any faulty unit if required.

## 37103, Power supply warning, faulty 24V SYS level

### Description

The 24V SYS output of the Control Module Power Supply is out of range.

### Consequences

No system consequence.

### Probable causes

The Control Module Power Supply unit, cabling or the output load may cause the faulty voltage level. The power supplies are shown in the Trouble Shooting Manual and the Circuit Diagram!

### Recommended actions

1) Check all cabling to the Control Module Power Supply unit.

2) Check the output voltage level, and replace any faulty unit if required.

## 37104, There is no backup voltage available!

### Description

The backup energy bank maintaining the backup voltage is not functional.

### Consequences

After switching the power off, a B type restart must be performed. No system data changes will be saved at power off.

### Probable causes

This may be caused by a faulty backup energy bank, cabling or charger.

### Recommended actions

Before working on the system, perform a controlled shutdown to ensure all system data is correctly saved.

1) Check the cables and connectors of the backup energy bank.

2) Check the backup energy bank.

3) Check the power supply.

4) Replace the faulty unit if required.

## 37105, Regained communication: Power Supply and Computer Unit

### Description

The main computer has regained communication with the Control Module Power Supply.

## 37106, Low backup energy bank voltage level

### Description

The voltage in the computer unit backup energy bank is too low to be functional.

### Consequences

No system consequence. No system data changes will be saved at power off.

### Probable causes

This may be caused by a faulty backup energy bank, cabling or charger.

### Recommended actions

Before working on the system, perform a controlled shutdown to ensure all system data is correctly saved.

1) Check the cables and connectors of the backup energy bank.

2) Check the backup energy bank.

3) Check the power supply.

4) Replace the faulty unit if required.

## 37107, Faulty backup energy bank

### Description

The backup energy bank in the Control Module maintaining the backup voltage is not functional.

### Consequences

If switching the power off, a B type restart must be performed. No backup will be made at power off.

### Probable causes

This may be caused by a faulty backup energy bank, cabling or charger.

### Recommended actions

Before working on the system, perform a controlled shutdown to ensure all system data is correctly saved.

1) Check the backup energy bank cable and connector.

2) Check the backup energy bank.

3) Replace the faulty unit if required.

## 37108, Lost communication: Power Supply and Computer Unit

### Description

The main computer has lost communication with the Control Module Power Supply.

### Consequences

The main computer cannot retrieve status info or switch the power supply off. No system data changes will be saved at power off.

### Probable causes

The USB cable from the main computer to the Control Module Power Supply may be faulty or disconnected, or the power supply may be faulty.

### Recommended actions

Before working on the system, perform a controlled shutdown to ensure all system data is correctly saved.

1) Check the cabling and connectors to the Control Module Power Supply.

2) Check the power supply unit, and replace any faulty unit if required.

## 38100, Configuration failure

### Description

Drive Module has detected configuration failure at measurement link.

Drive module: *arg*

Measurement link: *arg*

Board node: *arg*

### Recommended actions

- Check configuration for measurement link.
- Check configuration for measurement board.
- Check configuration for measurement nodes.

## 38101, Transmission failure between axis computer and SMB

### Description

A transmission failure has been detected between the axis computer and the serial measurement board on measurement link *arg* in Drive Module arg 1.

### Consequences

The system goes to status SYS FAIL 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 external 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 status SYS HALT 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 system.

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, Transmission timeout between axis computer and SMB

### Description

The communication has been lost between the axis computer and the serial measurement board on measurement link *arg* in Drive Module arg 1.

### Consequences

The system goes to status SYS HALT 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 external 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.

## 38104, Overspeed During Teach Mode

### Description

One or more axes of the robot 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 misadjustment in the relation, commutation, between motor shaft and resolver on an external axis, primarily during installation.

### Recommended actions

1) Press the Enabling Device to attempt resuming operation.

2) Check other event log messages occuring 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.

## 38105, Data not found.

### Description

Configuration data for measurement board not found.

System will use default data.

Drive module: *arg*

Measurement link: *arg*

Board node: *arg*

### Recommended actions

Check configuration.

## 38200, Battery backup lost

### Description

Battery backup on Serial Measurement Board lost since last power down or restart.

Battery normally disconnected at delivery.

Drive module: *arg*

Measurement link: *arg*

Measurement board: *arg*

### Recommended actions

- Ignore error and connect battery at first installation.
- For rechargable battery: After 18 hours recharging with power on, check battery voltage during power off.
- Check battery connection to Serial Measurement Board.
- Replace battery.

## 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

## 38205, SMB Linearity Error

### Description

Linearity error for X-Y signal difference at Serial Measurement Board.
System may still operate with warning.
System will not function with error.
Drive module: *arg*
Measurement link: *arg*
Measurement board: *arg*

### Recommended actions

- Replace Serial Measurement Board.

## 38206, SMB Linearity X Error

### Description

Linearity error for X signal on Serial Measurement Board.
Drive module: *arg*
Measurement link: *arg*
Measurement board: *arg*

### Recommended actions

- Replace Serial Measurement Board.

## 38207, SMB Linearity Y Error

### Description

Linearity error for Y signal at Serial Measurement Board.
Drive module: *arg*
Measurement link: *arg*
Measurement board: *arg*

### Recommended actions

- Replace Serial Measurement Board.

## 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.

## 38210, Transmission fault.

### Description

Serial Measurement Board SMS communication failed.
Status: *arg*
Drive module: *arg*
Measurement link: *arg*
Measurement board: *arg*
Board node: *arg*

### Recommended actions

- Restart system.
- Check cable and connectors for SMB communication.
- Replace the Serial Measurement Board.

## 38211, 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.

## 38212, Data not found.

**Description**

Configuration data for Serial Measurement Board not found. System will use default data.

Drive module: *arg*

Measurement link: *arg*

Measurement board: *arg*

**Recommended actions**

- Check configuration.

## 38213, Battery charge low.

**Description**

Less than 2 months until battery on Serial Measurement Board is discharged. Counting from first time this message was displayed.

Drive module: *arg*

Measurement link: *arg*

Measurement board: *arg*

**Recommended actions**

- 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 flag failure.

**Description**

Reset of battery flag not possible.

Drive module: *arg*

Measurement link: *arg*

Measurement board: *arg*

**Recommended actions**

- Replace serial measurement board.

## 38230, PMC card not connected correctly

**Description**

The PMC card that is configured in the motion configuration is not connected or is not working correctly.

**Consequences**

The application that needs this PMC card can not be ran.

**Probable causes**

The PMC card is not connected or the card is broken.

**Recommended actions**

Please check the PMC card that is attached to the Axis Computer in the drive module *arg*.

## 38231, PMC card can not be started

**Description**

The PMC card that is configured in the motion configuration is not set up correctly and can not be started.

**Consequences**

The application that uses this PMC card can not be ran.

**Probable causes**

The error is problably a error in the motion configuration.

**Recommended actions**

Please check the limits for channels for this card in the motion configuration.

## 38232, PMC max channels reached

**Description**

The PMC card that is configured in the motion configuration is not set up correctly and can not be started.

**Consequences**

The application that uses this PMC card can not be ran.

**Probable causes**

The error is problably a error in the motion configuration.

**Recommended actions**

Please check the limits for channels for this card in the motion configuration.

## 38233, Broken cable to pmc card

**Description**

The cable connected to the pmc card attached to the axis computer in drive module *arg* is problably broken or has a bad connection

### Consequences

The system will go to SYS HALT and the application that uses this card can not

be ran until cable is replaced or repaired.

### Probable causes

The cable or the connectors is damaged or not attached correctly.

### Recommended actions

Check cable and connectors. Replace if damaged,

## 39401, Torque Current Reference Error

### Description

The torque-current reference is increasing too quickly for joint *arg*, connected to drive module *arg*.

### Consequences

-

### Probable causes

The resolver feedback may be poor or the speed loop gain may be badly adjusted.

### Recommended actions

1) Check the resolver cable and the resolver grounding for this joint. If this joint is an external axis, then check that the motor data in the configuration file is correct. How to check the configuration file is detailed in the Trouble Shooting Manual.

2) Reduce the gain of the speed loop.

## 39402, Motor Angle Reference Error

### Description

The motor angle reference is increasing too quickly for joint *arg*, connected to drive module *arg*.

### Consequences

-

### Probable causes

The resolver feedback may be poor or the speed loop gain may be badly adjusted.

### Recommended actions

1) Check the resolver cable and the resolver grounding for this joint. If this joint is an external axis, then check that the motor data in the configuration file is correct. How to check the configuration file is detailed in the Trouble Shooting Manual.

2) Reduce the gain of the speed loop.

## 39403, Torque Loop Undercurrent

### Description

The torque-current controller detected too low current for joint *arg*, connected to drive module *arg*.

### Consequences

-

### Probable causes

The motor data in the configuration files may be wrong or the DC bus voltage may be too low.

### Recommended actions

1) Check that the motor data in the configuration file is correct for this joint. How to check the configuration file is detailed in the Trouble Shooting Manual.

2) Check that no DC bus errors are present in the event log.

3) Check that the incoming mains voltage is within the specification.

4) Check that the motor cables are not damaged or badly connected.

## 39404, Torque Loop Overcurrent

### Description

The field-current controller detected too high current for joint *arg*, connected to drive module *arg*.

### Consequences

-

### Probable causes

The motor data in the configuration files may be wrong.

### Recommended actions

1) Check that the motor data in the configuration file is correct for this joint. How to check the configuration file is detailed in the Trouble Shooting Manual.

2) Check that no DC bus errors are present in the event log.

3) Check that the incoming mains voltage is within the specification.

4) Check that the motor cables are not damaged or badly connected.

## 39405, Maximum PWM Reached in Torque Controller

### Description

The torque-current control loop has been saturated for joint *arg*, connected to drive module *arg*.

### Consequences

-

### Probable causes

The mains voltage may be too low or the motor windings or motor cables may be broken.

### Recommended actions

1) Check that no DC bus errors are present in the event log.

2) Check that the incoming mains voltage is within specified limits.

3) Check the motor cables and motor windings for open circuits.

## 39406, Field Loop overcurrent

### Description

The field-current control loop has produced too high current for joint *arg*, connected to drive module *arg*.

### Consequences

-

### Probable causes

The motor data in the configuration files may be wrong.

### Recommended actions

1) Check that no DC bus errors are present in the event log.

2) Check that the incoming mains is within specified limits.

3) Check the motor cables and motor windings.

## 39407, Drive Unit has the wrong type code

### Description

The type code for drive unit *arg* in drive module *arg* is different from the one specified in the configuration file. Installed drive 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 drive unit was recently replaced, a drive 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. How to check the configuration file is detailed in the Trouble Shooting Manual.

3) If the drive unit was recently replaced, make sure a unit of the correct type code is used.

## 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 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 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. How to check the configuration file is detailed in the Trouble Shooting Manual.

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. How to check the configuration file is detailed in the Trouble Shooting Manual.

3) If the capacitor unit was recently replaced, make sure a unit of the correct type code is used.

## 39410, Drive Unit communication warning

### Description

Many communication errors are being detected between the axis computer and drive unit number *arg* in drive module *arg*. (error rate per time unit)

### Consequences

-

### Probable causes

External noise may interfere with the communication signals.

### Recommended actions

1) Check the communication link cable between the axis computer and the main drive unit is correctly connected.

2) Check that the module is properly grounded.

3) Check for external electromagnetic noise sources close to the drive module.

## 39411, Too Many communication errors

### Description

Four or more consequtive communication packets have been lost between the axis computer and drive unit *arg* in drive module *arg*.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

There may be a break in the communication link cable between the axis computer and the main drive unit, the drive module may be incorrectly grounded or excessive noise may interfere with the communication signals.

### Recommended actions

1) Check the communication link cable between the axis computer and the main drive unit is correctly connected.

2) Check that the module is properly grounded.

3) Check for external electromagnetic noise sources close to the drive module.

## 39412, Too Many Missed Reference Updates

### Description

Too many missed communication packets have been detected for joint *arg*, in drive module *arg*.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

There may be a break in the communication link cable between the axis computer and the main drive unit, the drive module may be incorrectly grounded or excessive noise may interfere with the communication signals.

### Recommended actions

1) Check the communication link cable between the axis computer and the main drive unit is correctly connected.

2) Check that the module is properly grounded.

3) Check for external electromagnetic noise sources close to the drive module..

## 39413, Drive Software Not Synchronised

### Description

The axis computer software  in drive module *arg* has become unsynchronised with the drive software for joint *arg*. This is an unstable software state.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

There may be glitches in the system timing.

### Recommended actions

1) Restart the controller.

2) If the problem persists, contact your local ABB representative..

## 39414, Unknown Capacitor Type Code

### Description

The type code for the capacitor unit *arg* in drive module *arg* is not recognised by the system.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The wrong type of capacitor unit may have been fitted or the capacitor version used is not supported by the software.

### Recommended actions

1) Check the type of capacitor unit fitted. Replace if it is the wrong type.

2) If the problem persists, contact your local ABB representative.

## 39415, Communication with the Drive Unit Lost

### Description

Communication with drive unit number *arg* in drive module *arg* has been lost.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

There may be a break in the communication link cable between the axis computer and the main drive unit, the drive module may be incorrectly grounded or excessive noise may interfere with the communication signals.

### Recommended actions

1) Check the communication link cable between the axis computer and the main drive unit is correctly connected.

2) Check that the module is properly grounded.

3) Check for external electromagnetic noise sources close to the drive module..

## 39416, Drive Unit Not Responding

### Description

The main drive unit in drive module *arg* is not responding.

#### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

#### Probable causes

There may be a break in the communication link cable between the axis computer and the main drive unit, or there may be a lock-up in the software.

#### Recommended actions

1) Check the communication link cable between the axis computer and the main drive unit is correctly connected.

2) Restart the controller.

3) If the problem persists, contact your local ABB representative.

## 39417, Cannot find Drive Software Version File

#### Description

The system cannot locate a valid drive version file on the disk.

The file may have been erased my mistake. Without this file it is not possible to check if the drive units software needs updating.

#### Recommended actions

Contact your local ABB representative.

## 39418, Unknown Drive Unit type code

#### Description

The type code for the drive unit *arg* in drive module *arg* is not recognised by the system. Installed drive 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 connection to the drive unit may be bad or the hardware may be faulty.

#### Recommended actions

1) Make sure the cable connections on the drive unit are correct.

2) Make sure the drive unit is one supported by this controller.

3) If the drive unit was recently replaced, make sure a unit of the correct type code is used.

## 39419, Unknown Rectifier type code

#### Description

The type code for the rectifier unit *arg* in drive module *arg* is not recognised by the system. 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 status SYS HALT.

#### Probable causes

The connection to the drive unit may be bad or the hardware may be faulty.

#### Recommended actions

1) Make sure the cable connections on the rectifier unit unit are correct.

2) Make sure the rectifier unit is one supported by this controller.

3) If the rectifier unit was recently replaced, make sure a unit of the correct type code is used.

## 39420, Drive Unit built in test failure

#### Description

Drive unit number *arg* in drive module *arg* has detected an internal hardware failure.

#### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

#### Probable causes

The test software is not working correctly, or the actual hardware is faulty.

#### Recommended actions

1) Perform a shutdown and then restart the system.

2) If the problem persists, isolate the faulty drive unit and replace it.

## 39421, Drive Unit configuration test failure

#### Description

Drive unit number *arg* in drive module *arg* has detected an internal error.

#### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

#### Probable causes

The connection to the drive unit may be bad or incorrect hardware may have been fitted.

#### Recommended actions

1) Perform a shutdown and then restart the system.

2) If the problem persists, isolate the faulty drive unit and replace it.

## 39422, Drive Unit watchdog timeout

#### Description

The time limit for watchdog timer for drive unit number *arg* in drive module *arg* has expired.

#### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The connection to the drive unit may be bad or incorrect hardware may have been fitted. It may also be caused by an internal error in the drive unit.

### Recommended actions

1) Perform a shutdown and then restart the system.

2) If the problem persists, isolate the faulty drive unit and replace it.

## 39423, Drive Unit Internal Warning

### Description

Internal measurement warning for drive unit number *arg* in drive module *arg*.

supervision code = *arg*

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

There may be problems with the control cable, the DC link connection (bus bar or cable) or internal hardware.

### Recommended actions

1) Check the control cables and DC link connection (bus bar or cable) are correctly inserted for this unit.

2) Restart the system.

## 39424, Drive Unit internal error

### Description

Internal measurement warning for drive unit number *arg* in drive module *arg*.

Supervision Code = *arg*

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The connection to the drive unit may be bad or incorrect hardware may have been fitted. It may also be caused by faulty control cable, DC link connection (bus bar or cable) or internal hardware.

### Recommended actions

1) Make sure the control cables and DC link connection (bus bar or cable) are correctly connected for this unit.

2) Perform a shutdown and then restart the system.

3) If the problem persists, isolate the faulty unit and replace it.

## 39425, Drive Unit measurement failure

### Description

A current measurement circuit in drive unit number *arg*, drive module *arg*, attached to joint *arg* has failed.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

This may be caused by a faulty or lacking DC link connection between the rectifier and drive units.

### Recommended actions

1) Make sure the DC link connection (bus bar or cable) is correctly connected between the rectifier and drive unit.

2) Check the indication LEDs on the rectifier and drive units. The significance of the LEDs is described in the Trouble Shooting Manual.

## 39426, Rectifier internal failure

### Description

The rectifier on communication link *arg* attached to drive module *arg*has detected an internal failure.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

This may be caused by a faulty or lacking signal connection between the rectifier and drive units.

### Recommended actions

1) Make sure the signal cable is correctly connected between the rectifier and drive unit.

2) Check the indication LEDs on the rectifier and drive units. The significance of the LEDs is described in the Trouble Shooting Manual.

## 39427, Rectifier communication missing

### Description

The communication with the rectifier on drive comm link *arg*, drive module *arg* has been lost.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

This may be caused by a faulty or lacking signal connection between the rectifier and drive units.

### Recommended actions

1) Make sure the signal cable is correctly connected between the rectifier and drive unit.

2) Perform a shutdown and then restart the system.

3) If the problem persists, isolate the faulty unit and replace it.

## 39428, Rectifier startup error

### Description

The rectifier on drive comm link *arg*, drive module *arg* has detected a startup error.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

This may be caused by an internal error in the rectifier unit.

### Recommended actions

1) Make sure the signal cable is correctly connected between the rectifier and drive unit.

2) Perform a shutdown and then restart the system.

3) If the problem persists, isolate the faulty rectifier unit and replace it.

## 39431, Update of Drive Unit Software in Progress

### Description

The drive unit software in drive module *arg* is being updated.

Please wait for the upgrade to be completed. This will take approximately 3.5 minutes.

NOTE: Please do not turn off the power or restart the controller until the download is complete.

### Recommended actions

Please wait...

## 39432, Incompatible boot version in drive unit

### Description

The boot version in drive module *arg* is version *arg*, which is not allowed. The latest allowed boot version is *arg*.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The boot version is not compatible with the hardware version.

### Recommended actions

1) Replace the drive unit with one using a boot version equal to or greater than the latest allowed one.

## 39434, Drive Unit Start Failure

### Description

The drive unit in drive module *arg* failed to start. drive boot status = *arg*. drive dsp1 status = *arg*

### Consequences

The robot can not be operated.

### Probable causes

A number of errors may cause this.

### Recommended actions

1) Switch the main power off to the module and then switch it back on. Note that a normal restart will NOT suffice!

2) If the problem persists, replace the drive unit.

## 39435, Cannont find external axis drive unit

### Description

The system cannot detect an external axis drive for joint *arg* in drive module *arg*.

### Consequences

System goes to SYS_FAIL.

### Probable causes

This can be due to:

1) Having en external axis configured but not having a drive unit in the drive module.

2) Having an external drive unit but not connecting the cable to the X*arg* connector position on the main drive unit.

3) Damaged cable between the external axis drive and the main drvie unit.

### Recommended actions

1) Check the drive module contains enough external axis drives.

2) Check that the configuration key does not define more external drive units then are connected in the drive module

3) Check the cable between the external axis drive unit and to the main drive unit is correctly inserted in the right connector position.

4) If the cable exists and is correctly inserted, then it may be damaged and should be replaced.

## 39440, Open circuit in bleeder resistor circuit

### Description

The bleeder resistor connected to the rectifier on drive link *arg*, drive module *arg*, is an open circuit.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

This may be caused by a faulty bleeder resistor cable or bleeder resistor.

### Recommended actions

1) Make sure the bleeder resistor cable is correctly connected to the rectifier unit.

2) Make sure the cable and resistor is working correctly by measuring their resistance respectively. Disconnect before measuring.

3) Replace any faulty component.

## 39441, Short circuit in bleeder resistor circuit

### Description

The bleeder resistor connected to the rectifier on drive link *arg*, drive module *arg*, is a short circuit.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

This may be caused by a faulty bleeder resistor cable or bleeder resistor.

### Recommended actions

1) Make sure the bleeder resistor cable is correctly connected to the rectifier unit.

2) Make sure the cable and resistor is working correctly by measuring their resistance respectively. Disconnect before measuring.

3) Replace any faulty component.

## 39442, Bleeder Resistance Too Low

### Description

The bleeder resistance is too low for the rectifier on drive comm link *arg*, drive module *arg*.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The bleeders may have the wrong resistance value or one of the bleeders may have failed, causing a short circuit.

### Recommended actions

1) Check the bleeder resistors to see that they are the correct resistance value for this drive module configuration.

2) Check that none of the resistors have failed. How to check the configuration file is detailed in the Trouble Shooting Manual.

## 39443, Bleeder Resistor Overload Warning

### Description

The power consumed by the bleeder resistors is approaching overload for the rectifier on drive communication link *arg*, drive module *arg*.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The user program may contain too much hard braking of the manipulators, which is more likely if the system contains external axes.

### Recommended actions

1) Rewrite the user program to reduce the amount of hard braking.

## 39444, Bleeder resistor overload error

### Description

The bleeder resistors have been overloaded for the rectifier on drive communication link *arg*, drive module *arg*.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The user program may contain too much hard braking or too high a payload of the manipulators. This is more likely if the system contains external axes.

### Recommended actions

1) Rewrite the user program to reduce the amount of hard braking.

## 39450, Faulty Fan Unit Power Supply

### Description

The power supply for the fan unit in drive module *arg* is not within its allowed voltage limits.

### Consequences

-

### Probable causes

The main fan power supply unit may be faulty or the supply to this power supply unit may not be within its allowed voltage limits.

### Recommended actions

1) Check the fan cable is correctly inserted.

2) Check that all fans are working. 3) Check the input voltage to the main fan power supply unit. Replace any faulty unit.

## 39451, Fan Unit Malfunction

### Description

The fan unit in drive module *arg* has malfunctioned.

### Consequences

-

### Probable causes

The fan unit may be faulty, a loss of power supply or the fan power cable may not be connected correctly.

### Recommended actions

1) Make sure the fan cable is correctly connected.

2) Make sure all fans are working and that air flow is not obstructed.

3) Measure the output voltage from the drive unit supplying the fan. Replace any faulty unit.

## 39452, Axis Computer Cooling Fan Malfunction

### Description

The cooling fan above the axis computer in drive module *arg* has malfunctioned.

This can occur if the fan has failed or if the cable between the fan and the contactor board is not inserted correctly.

### Recommended actions

Check that the fan cable is correctly inserted. If this does not help and the fan is not turning then replace the fan.

## 39453, Transformer Cooling Fan Malfunction

### Description

The cooling fan for the transformer supplying drive module *arg* has malfunctioned.

### Recommended actions

Check to see that the transformer fan cable is correctly inserted in the contactor board.

If the cable is ok and the fan has stopped then replace the fan unit.

## 39460, DC Link Voltage Too Low

### Description

The DC link voltage is too low for the rectifier on drive communication link *arg*, drive module *arg*.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The DC link bus bar may be incorrectly connected or the three-phase mains power may be interrupted while the robot is in the Motors ON state. The mains contactor may also have been opened whilst the robot is in Motors ON state (breaking the safety chain). The incoming main power supply may also be too low.

### Recommended actions

1) Make sure the DC link bus bar is correctly connected.

2) Make sure the mains supply has not been interrupted.

3) Make sure the safety chain has not been broken.

4) Make sure the Drive Module Power Supply output voltage is within acceptable limits as specified in the Product Manual.

## 39461, DC Link Voltage Too High

### Description

The DC link voltage is too high for the rectifier on drive communication link *arg*, drive module *arg*.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The user program may contain too much hard braking of the manipulators, which is more likely if the system contains external axes. The brake resistors may also be faulty.

### Recommended actions

1) Check the bleeder resistors to see that they are the correct resistance value for this drive module configuration.

2) Check that none of the resistors have failed.

3) If possible, rewrite the user program to reduce the amount of hard braking.

## 39462, DC Link Voltage at Critical

### Description

The DC link voltage is critically high for the rectifier on drive communication link *arg*, drive module *arg*.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The user program may contain too much hard braking of the manipulators, which is more likely if the system contains external axes. The brake resistors may also be faulty.

### Recommended actions

1) Check the bleeder resistors to see that they are the correct resistance value for this drive module configuration.

2) Check that none of the resistors have failed.

3) Rewrite the user program to reduce the amount of hard braking.

## 39463, Motor Phase Short Circuit Warning

### Description

A brief short circuit was detected in the motor/motor cable for the motor attached to joint *arg* in drive module *arg*.

### Consequences

-

### Probable causes

This may be due to dust or metal fragments contaminating the contacts or motor windings.

### Recommended actions

No action is required if the problem does not persist.

## 39464, Short circuit in Motor phase circuit

### Description

The motor or motor cable for joint *arg* in drive module *arg*, drive unit number *arg*, is a short circuit.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

This may be caused by a faulty motor or motor cable. It may also be caused by contamination in the contactors for the cables or a failure of the motor windings.

### Recommended actions

1) Make sure the motor cable is correctly connected to the drive unit.

2) Check the cable and motor by measuring their resistance respectively. Disconnect before measuring.

3) Replace any faulty component.

## 39465, Motor current warning

### Description

The motor current is higher than the allowed for joint *arg* in drive module *arg*, drive unit number *arg*.

### Consequences

-

### Probable causes

The motor load may be too high or the motor may have stalled (maybe due to a collision).

### Recommended actions

1) Check that the robot has not collided with anything.

2) If possible, reduce the speed of the user program.

3) If the axis is an external axis, check that the motor load is not too high for the drive unit.

## 39466, Motor Current Overload

### Description

The motor current is too high for joint *arg* in drive module *arg*, drive unit number *arg*.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The motor load may be too high or the motor may have stalled (maybe due to a collision).

### Recommended actions

1) Check that the robot has not collided.

2) If possible, reduce the speed of the user program.

3) If the axis is an external axis, check that the motor load is not too high for the drive unit.

## 39467, Drive Unit Temperature Warning

### Description

The temperature has risen above the warning level in drive unit number *arg*, drive module *arg*, which is the lowest abnormal level of three.

### Consequences

-

### Probable causes

The ambient temperature may be too high, the cooling fans may have failed or the user program may consume more current than the drive system can supply.

### Recommended actions

1) Check that the fans are running and that the air flow is not obstructed.

2) Check that the ambient temperature does not exceed the cabinet rating.

3) If the system contains external axes then check that motors are not too large for the drive units.

4) If possible, rewrite the user program to reduce the amount of hard acceleration.

## 39468, Drive Unit Temperature Alarm

### Description

The temperature has risen above the alarm level in drive unit number *arg*, drive module *arg*, which is the second abnormal level of three.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The ambient temperature may be too high, the cooling fans may have failed or the user program may consume more current than the drive system can supply.

### Recommended actions

1) Check that the fans are running and that the air flow is not obstructed.

2) Check that the ambient temperature does not exceed the cabinet rating.

3) If the system contains external axes then check that motors are not too large for the drive units.

4) If possible, rewrite the user program to reduce the amount of hard acceleration.

## 39469, Drive Unit Temperature Critical

### Description

The temperature has risen above the critical level in drive unit number *arg*, drive module *arg*, which is the top abnormal level of three.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The ambient temperature may be too high, the cooling fans may have failed or the user program may consume more current than the drive system can supply.

#### Recommended actions

1) Check that the fans are running and that the air flow is not obstructed.

2) Check that the ambient temperature does not exceed the cabinet rating.

3) If the system contains external axes then check that motors are not too large for the drive units.

4) If possible, rewrite the user program to reduce the amount of hard acceleration.

## 39470, Power Semiconductor Warning

#### Description

The power seminconductor is approaching overload for joint *arg*, in drive unit number *arg*, drive module *arg* .

#### Consequences

-

#### Probable causes

The motor load may be too high, the motor may have stalled (maybe due to a collision), the motor load may be too high or there may not be enough cooling.

#### Recommended actions

1) Check that the robot has not collided.

2) Check that the fans are running and that the air flow is not obstructed.

3) Check that the ambient temperature does not exceed the cabinet rating.

4) If the system contains external axes then check that motors are not too large for the drive units.

5) If possible, rewrite the user program to reduce the amount of hard acceleration.

## 39471, Power Semiconductor Overload Error

#### Description

The power seminconductor has been overloaded for joint *arg*, in drive unit number *arg*, drive module *arg* .

#### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

#### Probable causes

The motor load may be too high, the motor may have stalled (maybe due to a collision), the motor load may be too high or there may not be enough cooling.

#### Recommended actions

1) Check that the robot has not collided.

2) Check that the fans are running and that the air flow is not obstructed.

3) Check that the ambient temperature does not exceed the cabinet rating.

4) If the system contains external axes then check that motors are not too large for the drive units.

5) If possible, rewrite the user program to reduce the amount of hard acceleration.

## 39472, Incoming mains phase missing

#### Description

The rectifier connected to communication link *arg* in drive module *arg* detects a power loss in one phase.

#### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

#### Probable causes

This may be caused by an actual mains power loss, some malfunction in the Motors ON contactors or its cabling or in another part of the three phase chain inside the cabinet. 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) Make sure the mains switch is closed and that there is mains voltage present. No volts means the problem is in mains cable connector or the factory power supply.

2) If the voltage is OK, disconnect the input mains cable and measure the resistance of all three phases across all the components in the 3 phase supply chain. Start from the K43 contactor and work backwards towards the mins switch. The K42 and K43 contactors can be closed manually to perform the test. Refer to the electrical drawings for the cabinet.

3) Check the indication LEDs on the rectifier unit. The significance of these is described in the Tropuble Shooting Manual.

4) If the voltage is OK, check any other error log messages coinciding in time with this one for clues.

## 39473, All incoming mains phases missing

#### Description

The rectifier connected to communication link *arg* in drive module *arg* detects a power loss in one or more phases.

#### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

#### Probable causes

This may be caused by an actual mains power loss, some malfunction in the Motors ON contactors or its cabling or in another part of the three phase chain inside the cabinet. 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) Make sure the mains switch is closed and that there is mains voltage present. No volts means the problem is in mains cable connector or the factory power supply.

2) If the voltage is OK, disconnect the input mains cable and measure the resistance of all three phases across all the components in the 3 phase supply chain. Start from the K43 contactor and work backwards towards the mins switch. The K42 and K43 contactors can be closed manually to perform the test. Refer to the electrical drawings for the cabinet.

3) Check the indication LEDs on the rectifier unit. The significance of these is described in the Tropuble Shooting Manual.

4) If the voltage is OK, check any other error log messages coinciding in time with this one for clues.

## 39474, Rectifier Current Warning

### Description

The rectifier connected to drive communication link *arg* in drive module *arg* is approaching overload.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The total motor current may be greater than that which the rectifier can supply.

### Recommended actions

1) If possible, rewrite the user program to reduce the amount of hard acceleration.

## 39475, Rectifier Current Error

### Description

The rectifier connected to drive communication link *arg* in drive module *arg* has reached overload.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The total motor current may be greater than that which the rectifier can supply.

### Recommended actions

1) If possible, rewrite the user program to reduce the amount of hard acceleration.

## 39476, Rectifier Temperature Warning

### Description

The temperature in the rectifier unit connected to drive communication link *arg* in drive module *arg* is approaching a too high a level.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The cooling fans may be faulty or the air flow may be obstructed. The ambient temperature may be too high or the system may be running with a too high load for extended periods.

### Recommended actions

1) Check that the fans are running and that the air flow is not obstructed.

2) Check that the ambient temperature does not exceed the cabinet rating.

3) If the system contains external axes then check that motors are not too large for the drive units.

4) If possible, rewrite the user program to reduce the amount of hard acceleration.

## 39477, Rectifier Temperature Error

### Description

The temperature in the rectifier unit connected to drive communication link *arg* in drive module *arg* has reached a too high a level.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The cooling fans may be faulty or the air flow may be obstructed. The ambient temperature may be too high or the system may be running with a too high load for extended periods.

### Recommended actions

1) Check that the fans are running and that the air flow is not obstructed.

2) Check that the ambient temperature does not exceed the cabinet rating.

3) If the system contains external axes then check that motors are not too large for the drive units.

4) If possible, rewrite the user program to reduce the amount of hard acceleration.

## 39478, Internal Motor PTC Temperature Error

### Description

The temperature in one or more robot motors connected to drive module *arg* is has reached a too high a 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 robot.

### Recommended actions

1) Check that the robot has not collided.

2) Check that the ambient temperature does not excced the robot rating.

3) Allow the robot 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.

## 39479, External Motor PTC Temperature Error

### Description

One or more external axis motors connected to drive module *arg* is has reached a too high a 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 robot.

### Recommended actions

1) Check that the external 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.

## 39482, Mains Voltage Too High

### Description

The mains voltage detected in drive module *arg* is too high.

### Consequences

The robot can not be operated.

### Probable causes

The mains transformer may be incorrectly wired or the external supply voltage may be too high.

### Recommended actions

1) Measure the incoming mains voltage at the main contactor in the drive module. Make sure it is within the range specified for this module.

2) Check the wiring of the mains transformer as detailed in the robot Product Manual.

## 39483, DC Link Short Circuit

### Description

A short circuit has been detected on the DC link of drive module *arg*.

### Consequences

The robot can not be operated.

### Probable causes

The DC bus bar may be badly connected or its contact surfaces may be contaminated causing a short circuit.

### Recommended actions

1) Check that all DC link bus bars have been correctly connected.

2) Check that all contacts are free from contamination.

## 39484, Run chain open in motor on state

### Description

Run chain *arg* is open when system is in motor on state. The problem occurred in drive system *arg*.

### Consequences

System goes to SYS_HALT.

### Probable causes

1) The cable between the panel board and the contactor interface board is unpluged or damaged.

2) The contactor for this run chain in the drive module may be stuck due to mecanical problem in contactor itself.

3) The help contactor on the contactor can suffer from bad galvanic behavour or faulty cable to contactor interface board.

### Recommended actions

1) Check the cable between the panel board and the contactor interface board.

2) If the contactor is stuck in one position, replace the contactor.

3) Check cable from the help contactor to the contactor interface board.

## 39485, Run chain close in motor off state

### Description

Run chain *arg* is open when system is in motor on state. The problem occurred in drive system *arg*.

### Consequences

System goes to SYS_HALT.

### Probable causes

1) The contactor for this run chain placed in the drive module has been pulled down manuanlly

2) The contactor has been welded in close position.

### Recommended actions

1) If the contactor is not released and stayes in pulled position, shut down the system and replace the contactor

2) If the contactor has been pulled down manually, take this message as a warning only.

## 39500, Logic Voltage to Drive Unit Warning

### Description

The 24V supply from the Drive Module Power Supply to the main drive unit in drive module *arg* is out of range.

### Consequences

-

### Probable causes

The 24V supply from the Drive Module Power Supply may be out of range.

### Recommended actions

1) Make sure the power cable from the Drive Module Power Supply to the main drive unit is connected correctly.

2) Check if the power supply unit LED is red. The full meaning of all LED indications are described in the Trouble Shooting Manual, IRC5.

## 39501, Logic Voltage to Drive Unit Error

### Description

The 24V supply to the main drive unit in drive module *arg* is out of range.

### Consequences

No operation will be possible until after correcting the fault. The system goes to status SYS HALT.

### Probable causes

The 24V supply from the power supply unit may be out of range.

### Recommended actions

1) Make sure the power cable from the power supply unit to the main drive unit is connected correctly.

2) Check if the power supply unit LED is red. The full meaning of all LED indications are described in the Trouble Shooting Manual, IRC5.

## 39502, Logic Voltage to Rectifier Error

### Description

The 24V to the rectifier in drive module *arg* is out of range.

### Consequences

-

### Probable causes

The cable between the drive unit and the rectifier may be badly connected, or the power supply voltage to the drive unit may be out of range.

### Recommended actions

1) Check that the power cable between the power supply unit and the rectifier unit has been connected correctly.

2) Check the 24 V voltage in the power cable to the drive unit..

## 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 external 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 external 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 in the Product Manual, IRC5.

## 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 status SYS FAIL.

#### 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 in turned on for the Drive Module and restart the system.

2) Check that the connector from the power supply unit is correctly connected to the axis computer.

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.

## 39521, Drive Module Communication Warning

#### Description

There are a large number of communication errors being detected on the ethernet link to drive module *arg*.

This can be due to external noise sources interfering with the cable.

#### Recommended actions

Check that there are no electromagnetic interference sources running near the  cable or the drive or computer modules.

## 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 status SYS FAIL. 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 the main power switch on Drive Module *arg* has been switched ON.

2) Make sure the cable between Control Module and Drive Module is not damaged and that both connectors are correctly connected.

3) Make sure the cable is connected to the correct AXC connector on the Main Computer Unit Robot Communication Card or EtherNet Board (if the MultiMove option has been installed).

4) Restart the system.

5) Make sure the Power Supply Unit in Drive Module *arg* is working correctly.

## 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 system.

## 39524, Drive Module Command timeout

#### Description

Drive Module *arg* does not respond to command *arg*. The system has stopped the program for safety reasons.

#### Recommended actions

1. Check that drive module is powered on.

2. Check the cable between the main computer and axis computer.

3. Restart the system.

## 39530, Communication with Contactor Interface Board Lost

#### Description

Communication has been lost between axis computer and contactor interface board in drive module *arg*.

#### Consequences

System goes to status SYS FAIL.

#### Probable causes

This may be due to faulty communication cable between axis computer and contactor interface board or it's connectors. It may also be due to severe interference or if the contactor interface board has lost it's power supply.

#### Recommended actions

1) Make sure the cable between the axis computer and the contactor interface board is intact and correctly connected.

2) Make sure the Drive Module Power Supply is supplying the contactor interface board correctly.

3) Make sure no extreme levels of electromagnetic interference are emitted close to the robot cabling.

4) To recover from this error state, the fault must be fixed and a restart is required.

## 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 contactor interface board 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.

## 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 which 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 (\).

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.

## 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 *argarg* 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 *argarg* 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* (internal error code *arg*).

#### Recommended actions

An error occurred when the persistent variable was to be inserted into the shared database. Probably the database is full.

1) Increase the value for the System Parameter: AveragePers.

## 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 '/', 'DIV' or 'MOD' operator.

### Recommended actions

Allowed operand type for the "/", "DIV" or "MOD" operators is "num".

1) Check the operand types.

## 40028, Type error

### Description

Illegal type *arg* for right operand of '/', 'DIV' or 'MOD' operator.

### Recommended actions

Allowed operand type for the "/", "DIV" or "MOD" operators is "num".

1) Check the operand types.

## 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.

#### Recommended actions

Allowed operand types for the "*" operator are "num", "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.

## 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* )

### 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 or
semi-value type

### Recommended actions

The type, of the data to be assigned a value, must be a value or semi-value type. Data of 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.

## 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 which 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.

## 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.

## 40103, Type error

**Description**

Persistent
*argarg* 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

**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 the 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.

## 40119, Reference error

**Description**

Cannot use the semi-value type *arg* for record components

**Recommended actions**

## 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).

## 40121, Reference error

**Description**

Cannot use semi-value type for arrays

**Recommended actions**

## 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 writeable.

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 and that it is writeable.

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.

## 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**

**Recommended actions**

Make the value smaller

## 40141, String too long

**Description**

The string *arg* is too long.

**Recommended actions**

Make the string shorter.

## 40142, TxId is out of range

**Description**

The Text identifier *arg* is out of range.

**Recommended actions**

## 40143, Aggregate is out of range

**Description**

The aggregate *arg* is out of range.

**Recommended actions**

Make the aggregate smaller

## 40144, Integer out of range

**Description**

The integer *arg* is out of range.

**Recommended actions**

Make the integer smaller.

## 40145, Parser stack is full

**Description**

The parser stack is full *arg*.

**Recommended actions**

Make smaller modules

## 40146, Not enough heap space.

**Description**

There is not enough heap space to fulfil the action *arg*

**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.

## 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 and that it is writeable.
Do not use () around the argument.

## 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 and that it is writeable.
Do not use () around the argument.

## 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.

## 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.

## 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.

## 40160, Task *arg* : Errors in RAPID program.

**Description**

There are errors in the RAPID program.

**Recommended actions**

Check for RAPID errors 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.

## 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.

## 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.

## 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.

## 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.

## 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.

## 40172, Reference error

**Description**

Task *arg*:
Reference to unknown module *arg*.

**Recommended actions**

No module (or other object) with the specified name is visible from this program position. Check the program for incorrect module reference or if the module is missing.

## 40173, Reference error

**Description**

Task *arg*:
Reference to object *arg* that is not a module.

**Recommended actions**

The specified name identifies an object other than a module.
Check the program for incorrect module reference.

## 40174, Reference error

**Description**

Task *arg*:
Reference to module *arg* is ambiguous.

**Recommended actions**

At least one other object sharing the same name as the referred module is visible from this program position. Make sure that all object names fulfill the naming rules regarding uniqueness.

## 40175, Reference error

**Description**

Task *arg*:

Reference to procedure *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.

## 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 specific trap routine more than once.

## 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.

## 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.

## 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.

## 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.

## 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.

## 40197, Execution error

**Description**

Task *arg* : Function does not return any value

**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.

## 40198, Value error

**Description**

Task *arg* : Illegal orientation value

*arg*

**Recommended actions**

Attempt to use illegal orientation (quaternion) value

## 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.

## 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.

## 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.

## 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.

## 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.

## 40205, Value error

### Description

Task *arg*: Rapid String *arg* too long

### Recommended actions

String value exceeds the maximum allowed length. Rewrite the program to use strings of less length.

## 40206, Interrupt queue full

### Description

Execution of task *arg* has stopped. Too many interrupts has occurred while executing a trap routine.

### Consequences

The system goes to blocked state and can not be restarted before moving the program pointer to an arbitrary position.

### Probable causes

Too many interrupts has occured while executing a trap routine.

### Recommended actions

1) Minimize execution time in the trap routine.

2) Disable/enable interrupts while executing a trap routine using the Isleep or Iwatch 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.

## 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 context already consumed

### Description

An error event in task *arg* has occurred. The context of the RAPID instruction that has generated this event is however already consumed. No error handeling 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**

-

## 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.

## 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 raise error *arg*

### Recommended actions

An error was raised by a RAISE instruction but was not handled by any ERROR clause.

## 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.

## 40231, Too high CPU load

### Description

The main computer CPU load is too high due to program execution.

### Consequences

The main computer is overloaded, possibly causing problems with motion performance.

The responsiveness of the FlexPendant and external applications, like RobotStudio-Online, may also be impaired.

### Probable causes

The program executed may contain a large number of robot positions being spaced too closely.

It may also contain too many logical instructions without enough time delay separating them.

### Recommended actions

If possible, reduce the number of robot positions. Another possibility is to reduce the TCP speed.

If possible, add time delays or other types of waiting instructions between the logical instructions.

## 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.

## 40242, Type error

### Description

Task *arg* : Data is not an array

### Recommended actions

The 'DatObj' parameter of the 'Dim' function must be an array.

## 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.

## 40244, Value error

### Description

Task *arg* : Object *arg* is of non-value type

### Recommended actions

Use expression or data object of value or semivalue 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.

## 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* can not 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* )

**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.

## 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 undo-processing was executing routine *arg* when it was aborted.

### Recommended actions

If the processing of UNDO takes too long, try to remove time-consuming instructions such as TPWrite 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.

### 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. The syntax errors are logged in a separate 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* : Not enough heap space

### Recommended actions

There is not enough free memory left.

## 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*

### Recommended actions

The module *arg* could not be loaded because the program memory is full.

Recovery: *arg*

## 40329, Module installation failure

### Description

Task *arg* is trying to install a module from file *arg*, but failing.

### Consequences

The module in the file may not be accessed.

### Probable causes

The file may be of an unknown format.

### Recommended actions

1) Make sure the file is the correct format.

## 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 can not be found.
- The robot can not move the workobject by itself.

### Recommended actions

Check the mechanical unit component of the workobject.

## 40502, Digital Input Break

### Description

Task: *arg*

A digital input interrupted the execution.

Program Ref. *arg*

### Recommended actions

Recovery: *arg*

## 40504, Parameter error

### Description

Task: *arg*

*arg*

*arg*

*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*

Can not 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.

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 semivalue.

## 40517, Search Error

### Description

Task: *arg*

No search hit or more than 1 search hit during stepwise forward execution.

The number of hits during search was *arg*. The search instruction is ready and the next instruction can be executed.

Program Ref. *arg*

### Consequences

No position has been returned from the search instruction.

### Recommended actions

## 40518, Type Error

### Description

Task: *arg*

Expected type differs from read type in *arg*.
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*

## 40521, Parameter Error

**Description**

Task: *arg*
Can not open *arg* . There is only a device specified.
Program Ref. *arg*

**Recommended actions**

Specify a file or a directory.

## 40522, Limit Error

**Description**

Stop watch overflow.

**Recommended actions**

Recovery: *arg*

## 40523, Mechanical Unit Conflict

**Description**

Not possible to deactivate mechanical unit *arg*due to the configuration.

**Recommended actions**

Check the 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*

## 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*
Can not open *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.

**Recommended actions**

- Check the path or filename.
- 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 serial channel is not open.
ProgramRef. *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.

**Recommended actions**

- Check the path or filename.
- If the I/O device reference is already in use, close it or use another.

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.

**Recommended actions**

- Check the path or filename.
- If the I/O device reference is already in use, close it or use another.

Recovery: *arg*

## 40530, Parameter Error

**Description**

Task: *arg*

The number of characters, parameter *arg* in WriteBin, you want to write to the serial channel 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 serial channel is not open, or you are trying to use the instruction on a file.

Program Ref. *arg*

**Recommended actions**

- Open the serial channel.
- Check that the instruction is used on a serial channel.

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.

ProgramRef. *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.

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 can not 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*

## 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 remove 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 and execute permission for the directory under which the file you want to copy is located.

Recovery: *arg*

## 40549, System Access Error

### Description

Task: *arg*

Unknown mechanical unit *arg*.

Program Ref. *arg*

## 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*

## 40557, I/O Error

### Description

Task: *arg*

Configuration error for I/O signal.

Program Ref. *arg*

### Recommended actions

Check the IO signal configuration or alias definition.

## 40558, I/O Error

### Description

Task: *arg*

Unable to read the I/O signal *arg* in unit *arg*.

Program Ref. *arg*

## 40559, I/O Error

### Description

Task: *arg*

Unable to write to the I/O signal *arg* in unit *arg*.

Program Ref. *arg*

### Recommended actions

## 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 can not 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.

Program Ref. *arg*

### Recommended actions

Check the value of the arguments.

## 40566, Parameter Error

### Description

Task: *arg*

Both arguments must be > 0 and <= 100.

Program Ref. *arg*

### Recommended actions

Check the value of the arguments.

## 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*

This parameter identification can not be done in this robot type.

Program Ref. *arg*

## 40578, ParId 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, ParId 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, ParId Error

### Description

Task: *arg*

Faulty state for LoadIdInit.

Program Ref. *arg*

### Recommended actions

Check the whole ParId sequence.

## 40581, ParId Error

### Description

Task: *arg*

Faulty state for ParIdMoveSeq.

Program Ref. *arg*

### Recommended actions

Check the whole ParId sequence.

## 40582, ParId Error

### Description

Task: *arg*

Faulty state for LoadIdInit.

Program Ref. *arg*

### Recommended actions

Check the whole ParId sequence.

## 40583, ParId Error

### Description

Task: *arg*

Backward execution not allowed.

Program Ref. *arg*

## 40584, ParId Error

### Description

Task: *arg*

ParIdMoveSeq / Parameter NextMove:

Faulty array size.

Program Ref. *arg*

### Recommended actions

Check the size of the array.

## 40585, ParId Error

### Description

Task: *arg*

Missed argument WObj in LoadId for PayLoad with roomfix TCP.

Program Ref. *arg*

### Recommended actions

Add argument WObj.

## 40586, ParId 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, ParId error

### Description

Task: *arg*

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 movetype.

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**

No type of program stop is allowed during load identification.

**Recommended actions**

Start the identification procedure from the beginning again.

## 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 parameter 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.

## 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.

## 40608, Argument Error

### Description

Task: *arg*

Orientation definition error 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.

## 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*

### Recommended actions

Possible to set one position fix IO such as digital, group of digitals or analog output signal during the robot movement.

## 40613, Argument Error

### Description

Task: *arg*

Optional argument *arg* can only be combined with output signal argument *arg*.

Program Ref. *arg*

### Recommended actions

Check and change the arguments.

## 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.

## 40617, Argument Error

### Description

Task *arg* :

Argument SetValue, ScaleValue or CheckValue is outside allowed limits.

Program Ref. *arg*

### Recommended actions

Used analog in/out signals can only be set/checked within *arg* to *arg* according configuration in the system parameters.

Recovery: *arg*

## 40620, Argument Error

### Description

Argument *arg* have too large negative value.

### 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 0.25 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 0.05 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.

## 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*

### Recommended actions

All signals (except AliasIO signals) must be defined in the system parameters and can not be defined in the RAPID program.

## 40636, Sensor Error

### Description

Task: *arg*

No measurement from sensor.

Program Ref. *arg*

### Recommended actions

Requested data is not available.

Recovery: *arg*

## 40637, Sensor Error

### Description

Task: *arg*

Not ready yet.

Program Ref. *arg*

**Recommended actions**

Requested function is not ready yet.

Recovery: *arg*

## 40638, Sensor Error

**Description**

Task: *arg*

General error.

Program Ref. *arg*

**Recommended actions**

General error has occurred which is not specifically connected to the requested action. Read the block "Error log" if the function is available.

Recovery: *arg*

## 40639, Sensor Error

**Description**

Task: *arg*

Sensor busy, try later.

Program Ref. *arg*

**Recommended actions**

The sensor is busy with an other function.

Recovery: *arg*

## 40640, Sensor Error

**Description**

Task: *arg*

Unknown command.

Program Ref. *arg*

**Recommended actions**

The function requested from the sensor is unknown.

Recovery: *arg*

## 40641, Sensor Error

**Description**

Task: *arg*

Illegal variable or block number.

Program Ref. *arg*

**Recommended actions**

Requested variable or block is not defined in the sensor.

Recovery: *arg*

## 40642, Sensor Error

**Description**

Task: *arg*

External alarm.

Program Ref. *arg*

**Recommended actions**

Alarm from external equipment.

Recovery: *arg*

## 40643, Sensor Error

**Description**

Task: *arg*

Camera alarm.

Program Ref. *arg*

**Recommended actions**

Some error has been detected in the camera. Run Camcheck to test if the

camera is OK.

Recovery: *arg*

## 40644, Sensor Error

**Description**

Task: *arg*

Temperature alarm.

Program Ref. *arg*

**Recommended actions**

The camera is overheated it needs more cooling air or water.

Recovery: *arg*

## 40645, Sensor Error

**Description**

Task: *arg*

Value out of range.

Program Ref. *arg*

**Recommended actions**

The value of the data sent to the sensor is out of range.

Recovery: *arg*

## 40646, Sensor Error

**Description**

Task: *arg*

Camera check failed.

Program Ref. *arg*

### Recommended actions

The CAMCHECK function failed. The camera is broken. Send it for repair.

Recovery: *arg*

## 40647, Sensor Error

### Description

Task: *arg*

Communication time out.

Program Ref. *arg*

### Recommended actions

Increase the time out time and check the connections to the sensor.

Recovery: *arg*

## 40648, Search Error

### Description

Task: *arg*

Not possible to do StorePath while searching on basic path level.

Program Ref. *arg*

### Recommended actions

If using program with robot movements in TRAP, then such interrupt must be

deactivated during any search.

E.g. ISleep - SearchL - IWatch

## 40649, Path Limitation

### Description

Task: *arg*

*arg* is already done. 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 keeps 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 can not be defined with a robtarget for robot axes.

Use the optional parameter for numeric input of the position.

## 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 Is Not Active

### Description

Task: *arg*

The axis is not active or it is not defined.

Program Ref. *arg*

### Recommended actions

The mechanical unit has to be activated and the axis has to be defined, before this instruction is executed and before a robtarget is saved.

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 high at the start of searching.

Program Ref. *arg*

#### 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.

## 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*

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 signal given in parameter *arg* is not write protected for user access from Flex Pendant or RAPID.

Program Ref. *arg*

#### Recommended actions

Change the access mode to system type for the signal in the I/O configuration.

## 40675, Execution Error

#### Description

Not allowed to change 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.

## 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.

**Recommended actions**

Remove some other module and try again.

## 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**

*arg*

The program module couldn't be unloaded.

**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*

## 40705, Syntax Error

**Description**

Task: *arg*

Syntax error

*arg*

**Recommended actions**

More syntax errors will follow this.

## 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 Unit Name Invalid

**Description**

Task: *arg*

The unit name *arg* does not exist.

Program Ref. *arg*

**Recommended actions**

- Check if the unit name is misspelled.

- Check if the unit is defined.

Recovery: *arg*

## 40708, I/O Unit Is Not Enabled

### Description

Task: *arg*

I/O unit *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 Unit Is Not Disabled

### Description

Task: *arg*

I/O unit *arg* was not disabled.

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).

## 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 must be defined in the IO configuration, while the signal in argument ToSignal must be declared in the RAPID program and not defined in the IO configuration.

Program Ref. *arg*

### Recommended actions

Check the IO configuration and the RAPID program.

## 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 orienta-

tion), that needs to be modified with modpos.

## 40720, Alias IO Installation

### Description

The system could not refresh all IO signals as RAPID symbols.

### Consequences

No IO signals can be used in a RAPID program.

### Probable causes

- Incorrect IO configuration
- Incorrect task configuration

### Recommended actions

Restart the controller.

## 40721, IO Installation

### Description

Task *arg*:

The system could not refresh all IO signals as RAPID symbols.

### Consequences

No IO signals can be used in a RAPID program.

### Probable causes

- Incorrect IO 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 mechanichal units can be used in a RAPID program.

**Probable causes**

- Incorrect motion 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*

## 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.

## 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.

## 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 cold start.

## 40735, Argument Error

**Description**

The axis is not defined.

**Recommended actions**

The axis has to be defined, before this instruction is executed.

## 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.

## 40738, I/O Error

**Description**

Unable to access the I/O signal *arg* on unit *arg* .

Impossible to restart.

**Probable causes**

The connection with the I/O module is broken.

**Recommended actions**

Reestablish the connection with the I/O unit. 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.

## 40740, Execution Error

**Description**

The PERS variable specified in the instruction TriggStopProc can not be

updated, because it does not exist any more.

**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.

## 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*

**Recommended actions**

Check the argument.

## 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 stoppoint.

Use a zone instead.

## 40747, Access Error

**Description**

Task: *arg*

Can not 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*

**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**

Because of power fail in executed Load or StartLoad ... WaitLoad instruction, the RAPID program memory is inconsistent.

*** TO REPAIR DO P-START ***

*arg*

**Recommended actions**

Important to do P-start, 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.

## 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*

## 40758, I/O Error

**Description**

Unable to access the I/O signal *arg* unit *arg* .

**Probable causes**

The connection with the I/O module is broken.

**Recommended actions**

Reestablish the connection with the I/O unit.

## 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* can not be executed while the system is in a stop state.

Program Ref. *arg*

## 40764, Switch Argument Error

**Description**

Task: *arg*

The instruction *arg* must be used with one switch argument.

Program Ref. *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*

**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*

**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*

**Recommended actions**

Check the RAPID program.

## 40768, Symbol Access Error

### Description

Task: *arg*

No system symbol *arg* is accessable in the system.

Program Ref. *arg*

### Recommended actions

Recovery: *arg*

## 40769, Symbol Read Access Error

### Description

Task: *arg*

The symbol *arg* is not a readable object.

Program Ref. *arg*

### Recommended actions

Recovery: *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.

## 40771, Symbol Access Error

### Description

Task: *arg*

The symbol *arg* is not accessable in this scope.

Program Ref. *arg*

### Recommended actions

Recovery: *arg*

## 40772, I\O Error

### Description

Task: *arg*

The *arg* instruction has lost contact with the conveyor.

Program Ref. *arg*

## 40773, Instruction Interrupted

### Description

Task: *arg*

The instruction *arg* was interrupted, reason unknown.

Program Ref. *arg*

## 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 serial channel is not opened for writing.

Program Ref. *arg*

**Recommended actions**

Check how the file or serial channel was opened..

## 40783, Mode Error

**Description**

Task: *arg*

File or serial channel is not opened in a character-based mode.

Program Ref. *arg*

**Recommended actions**

Check how the file or serial channel was opened.

## 40784, Mode Error

**Description**

Task: *arg*

File or serial channel is not opened in a binary mode.

Program Ref. *arg*

**Recommended actions**

Check how the file or serial channel was opened.

## 40785, Mode Error

**Description**

Task: *arg*

File or serial channel is not opened for reading.

Program Ref. *arg*

**Recommended actions**

Check how the file or serial channel 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*

**Recommended actions**

Recovery: *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 is 200 characters for the full system file path.

**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.

Recovery: *arg*

## 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*

## 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, cold start 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, cold start 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. Cold start the system and try again.

## 40796, Overload Error

### Description

Task: *arg*

The system is overloaded so the actual order can not 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

## 40797, I/O Error

### Description

Unable to access the I/O signal *arg* on unit *arg*.

### Probable causes

The connection with the I/O module is broken.

### Recommended actions

Reestablish the connection with the I/O unit.

## 40798, System Access Error

### Description

*arg*

## 40799, Execution Error

### Description

Task: *arg*

The time between TestSignDefine and TestSignRead is too short.

Program Ref. *arg*

#### Recommended actions

Put a WaitTime (0.1s) after TestSignDefine.

### 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*

Can not 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!

### 40803, Error msg 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.

### 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.

### 40805, Motion Error

#### Description

Task: *arg*

Error from MocGenInstr.

Ref to former message for reason.

Program Ref. *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*

#### Recommended actions

To be able to rename or copy:

Change the file name or remove the existing file.

Recovery: *arg*

### 40812, Execution Error

#### Description

Task: *arg*

Not allowed to run this program in non_motion_execution_mode.

#### Recommended actions

Change mode.

### 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.

## 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*

## 41000, Item source exists

#### Description

Item source *arg* already exists. Two item sources may not have the same name.

## 41001, Not a valid name

#### Description

Choose *arg* or *arg*

## 41002, Buffer size exceeded

#### Description

Fatal internal error for item source *arg*. Try warm start or cold start. Please report this error.

## 41003, Item source not defined

#### Description

The item source object has not been defined.

## 41004, Itmsrc internal error

#### Description

Internal error for item source *arg*.

Error type: *arg*.

## 41005, Flush item source first

#### Description

Item source *arg* must be flushed before it is used.

## 41006, Ack item target first

#### Description

Item target must be acknowledged before executing the GetItmTgt(s) instruction again.

Error occured for item source *arg*.

## 41007, Item target buffer full

#### Description

Item target buffer full for item source *arg* .

## 41008, Conveyor I/O init error

#### Description

Error in the initialization of the I/O signal for item source *arg*, for conveyor

*arg*. I/O signal name *arg*.

## 41009, Conveyor does not exist

#### Description

Error for item source *arg*. The conveyor *arg* does not exist.

## 41010, No conveyor name given

#### Description

Error for item source *arg*. No conveyor name specified.

## 41011, Conveyor limits error

#### Description

Error for item source *arg*, conveyor *arg*. The limits are incorrectly specified.

## 41012, Conveyor data are defined late

#### Description

Error for item source *arg*, conveyor *arg*. The ItmSrcCnvDat instruction must be called before the ItmSrcFlush instruction.

## 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*

Can not 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.

Program Ref. *arg*

### Recommended actions

Retry after setting motors on.

Recovery: *arg*

## 41201, Servo Tool Close Error.

### Description

Task: *arg*

Not possible to close servo gun in motors off state.

Program Ref. *arg*

### Recommended actions

Retry after setting motors on.

Recovery: *arg*

## 41202, Servo Tool Calibration Error.

### Description

Task: *arg*

Not possible to calibrate servo gun in motors off state.

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 calib.

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*

**Recommended actions**

Retry after checking values.

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.

## 41401, I/O Error

**Description**

Unable to access the I/O signal.

Signal and unit unknown.

**Probable causes**

The connection with the I/O module is broken.

**Recommended actions**

Reestablish the connection with the I/O unit.

## 41402, Value Error

**Description**

Task: *arg*

Illegal value of argument for parameter Axis or Strength.

Program Ref. *arg*

**Recommended actions**

Check and change the value.

## 41403, Value Error

**Description**

Task: *arg*

Illegal value of argument for parameter Speed Priority Type.

Program Ref. *arg*

## 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 TuneValue 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*

## 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.

**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.

## 41416, Parameter Error

**Description**

Task: *arg*

The symbol *arg* is not a module.

Program Ref. *arg*

**Recommended actions**

Check and change the RAPID program.

## 41417, System Access Error

**Description**

Task: *arg*

Can not convert date.

Program Ref. *arg*

**Recommended actions**

Warm start and retry.

## 41419, Parameter Error

**Description**

Task: *arg*

*arg* must be num, bool or string.

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*

Incorrect path in argument *arg*.

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 unit unknown.

### Consequences

Impossible to restart.

### Probable causes

The connection with the I/O module is broken.

### Recommended actions

Reestablish the connection with the I/O unit. 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*

## 41429, Axis Error

### Description

Task: *arg*

The single axis is not init correctly.

The sensor process is not init correctly.

Program Ref. *arg*

## 41430, Argument Error

### Description

Task: *arg*

Orientation definition error in *arg* .

Program Ref. *arg*

### Recommended actions

Check orientation.

All used orientations must be normalized i.e. the sum of the quaternion elements squares must equal 1.

## 41431, System Access Error

### Description

Task: *arg*

Unknown LOGSRV instance.

Program Ref. *arg*

### Recommended actions

Warm start and retry.

## 41432, System Access Error

### Description

Task: *arg*

Can not set test signals.

Program Ref. *arg*

### Recommended actions

Warm start and retry.

## 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*

## 41434, Parameter Error

### Description

Task: *arg*

Argument Axis is out of range.

Program Ref. *arg*

### Recommended actions

Check and change the value of the argument axis.

Recovery: *arg*

## 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*

Can not reset all test signals.

Program Ref. *arg*

**Recommended actions**

Warm start 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.

## 41439, Undefined Load

**Description**

Task: *arg*

WARNING!

Argument *arg* has undefined load centre of gravity.

Program Ref. *arg*

**Consequences**

IMPORTANT TO DEFINE CORRECT LOAD to avoid mechanical damage of the robot.

**Recommended actions**

Define the actual centre of gravity for the tool load or the grip load before program movement or jogging (cog.x, cog.y and cog.z can not be 0 mm at the same time).

## 41440, Argument Is Missing

**Description**

Task: *arg*

A switch parameter 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.

## 41441, Load Error

**Description**

Task: *arg*

Module loaded with path *arg* is active and therefore can not be erased.

Program Ref. *arg*

**Probable causes**

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.

## 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.

## 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*

Undefined if robot holds the tool or the work object.

Program Ref. *arg*

### 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.

## 41449, Value Error

### Description

Task: *arg*

Illegal value 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 instrucion 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 canceled 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 execution of instruction TriggL, TriggC, TriggJ, CapL or CapC.

## 41455, System Access Error

#### Description

Task: *arg*

Operative system get time failed.

Program Ref. *arg*

#### Recommended actions

Warm start and retry.

## 41456, Argument Error

#### Description

Task: *arg*

Argument *arg* not within range.

Program Ref. *arg*

#### Recommended actions

Value 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 '\X', '\Y' or '\Z'.

## 41458, 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.

## 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 or \ASCII has to be defined.

## 41464, Index To 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 disable unit *arg*.

Program Ref. *arg*

**Recommended actions**

Recovery: *arg*

## 41472, Instruction Error

**Description**

Task: *arg*

There is no client e.g. a Flex Pendant taking care of instruction.

Program Ref. *arg*

**Recommended actions**

Recovery: *arg*

## 41473, System Access Error

**Description**

It was not possible to send data using SCWrite to external computer.

Failed to send variable *arg*

## 41474, Value Error

**Description**

Task: *arg*

Illegal value in argument *arg*.

Program Ref. *arg*

**Recommended actions**

Check the value. *arg* must be a positive integer.

## 41475, Wrong size of tasklist

**Description**

Task: *arg*

The tasklist 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 tasklist.

## 41476, Non-consistent task list

**Description**

Task: *arg*

*arg* in the tasklist 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 sys.cfg) or remove it from the tasklist.

## 41477, TimeOut

**Description**

Task: *arg*

The time set in argument *arg* in instruction WaitSyncTask has expired.

Program Ref. *arg*

**Recommended actions**

Recovery: *arg*

## 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.

## 41489, Value error

**Description**

Task: *arg*

The robot axis *arg* is not moveable and therefore must not be supervised.

Program Ref. *arg*

**Recommended actions**

Change the value of axis *arg* 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*.

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.

#### Recommended actions

Move PP to start the program again.

## 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.

#### Recommended actions

Move PP to start the program again.

## 41497, Move PP Error

#### Description

Task: *arg*

Not allowed to move PP when waiting in instruction WaitSyncTask.

Program Ref. *arg*

#### Consequences

Restart of current instruction is blocked.

#### Recommended actions

Move PP again to suitable position in this program task.

In same cases, the PP must also be moved to suitable position in other cooperated program task(s).

Then try to restart the program.

## 41498, No Defined UserFrame In Mechanical Unit *arg*!

#### Description

The workobject *arg* contains a coordinated mechanical unit which has no defined userframe.

#### 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, Independant Mode

#### Description

Task: *arg*

System is in independant 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*

#### Recommended actions

Change the value.

## 41502, Illegal Domain

#### Description

Task: *arg*

COMMON_ERR domain can not be used.

Program Ref. *arg*

**Recommended actions**

Choose another Elog Domain.

## 41503, Illegal Error Type

**Description**

Task: *arg*

Error type TYPE_ALL can not 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.

## 41507, Task Reads Other Mechanical Unit

**Description**

Task: *arg*

Task reads another Mechanical Unit than the one stated in the instruction.

Program Ref. *arg*

**Recommended actions**

Change Mechanical Unit in the instruction.

## 41508, LoadId Error

**Description**

Task: *arg*

Load Identification is not available for this robot type.

Program Ref. *arg*

## 41509, LoadId Error

**Description**

Task: *arg*

Not valid load identification position.

Program Ref. *arg*

**Recommended actions**

Change the position for the robot.

## 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.

## 41511, LoadId Error

**Description**

Task: *arg*

Not allowed to identify load0.

Program Ref. *arg*

**Recommended actions**

Use another load for identification.

## 41512, Internal Error

**Description**

Task: *arg*

Measurement axes > 2 at the same time.

Program Ref. *arg*

## 41513, LoadId Error

**Description**

Task: *arg*

Selection of PayLoad out of limits.

Program Ref. *arg*

**Recommended actions**

Select a PayLoad in the system.

## 41514, LoadId Error

### Description

Task: *arg*

Wobj0 can not be active for roomfix TCP.

Program Ref. *arg*

### Recommended actions

Select another Work Object.

## 41515, LoadId Error

### Description

Task: *arg*

Selection of method out of limits.

Program Ref. *arg*

### Recommended actions

Select one of the identification methods given.

## 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.

## 41517, LoadId Error

### Description

Task: *arg*

PP at beginning of Load Identification.

Program ready for new Start.

Program Ref. *arg*

### Probable causes

Check former elog message for reason.

## 41518, LoadId Error

### Description

Task: *arg*

Selection of MechUnit out of limits.

Program Ref. *arg*

### Recommended actions

Select one of the Mechanical Units displayed.

## 41519, LoadId Error

### Description

Task: *arg*

Mass must be > 0 kg.

Program Ref. *arg*

### Recommended actions

Specify the mass to something greater than 0.

## 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 (can not be used with ErrRaise).

## 41521, Task Status Error

### Description

Task: *arg*

None of the tasks in the tasklist 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 tasklist 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 can not 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

## 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.

## 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.

## 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 tasklists in the different tasks.

Program Ref. *arg*

#### Recommended actions

- Add current task to the TaskList.
- Check that the tasklists in the different tasks are similar.

## 41532, Mismatch of task list

#### Description

Task: *arg*

The task list, *arg*, does not match with the task lists in the other tasks.

Or, a task name is used multiple times in the task list.

Program Ref. *arg*

#### Probable causes

It can depend on different content in the lists or different names of the task lists.

#### Recommended actions

Change the content or the name of the task lists.

PP must be moved to main in all tasks before you can continue.

## 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 tasklists that are non global can cause this error.

**Recommended actions**

Change SyncID and check the tasklists.

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**

Use of tasklists that are non global can cause this error.

**Recommended actions**

Remove the SyncMoveOn instruction. Every SyncMoveOn must be followed by a SyncMoveOff instruction.

Check your tasklists.

PP must be moved to main in all tasks before you can continue.

## 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.

## 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 can not be synchronized.

Program Ref. *arg*

**Recommended actions**

Change the TaskList or the configuration.

## 41539, Speed Too High

**Description**

Task: *arg*

Speed is over 100 mm/s. This is too fast when Stiff Stop (switch \Stop) is used.

Program Ref. *arg*

**Recommended actions**

Change the speed.

## 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*

**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 has been defined, but is no longer available in the system.

Program Ref. *arg*

#### Probable causes

The instruction GripLoad 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.

## 41544, Obsolete Instruction

#### Description

Task: *arg*

The procedure *arg* is obsolete and will not have the expected behaviour. PFIOResto will do nothing at all.

PFDOVal and PFGOVal will act as the functions DOutput and GOutput respectively

*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

## 41547, Argument Error

#### Description

Task:*arg*

The \Corr switch can not be used without the option Path Offset.

Program Ref. *arg*

#### Recommended actions

Remove the argument or install the option.

## 41548, Module Error

#### Description

Task: *arg*

The module you are trying to erase, *arg*, is active and thus can not be removed.

Program Ref. *arg*

#### Recommended actions

Check that the module you want to erase is not active.

## 41549, Unexpected SyncMoveOn

#### Description

Task: *arg*

Wrong path level. It is not possible to use SyncMoveOn and SyncMoveOff on StorePath level.

Program Ref. *arg*

#### Recommended actions

Check the RAPID program.

## 41550, PathRecorder Start/Stop Error

#### Description

Task: *arg*

Unable to execute *arg*.

#### Recommended actions

Ensure that a backward motion has not been initiated with PathRecMoveBwd

without being terminated with PathRecMoveFwd.

## 41551, PathRecorder Move Error

#### Description

Task: *arg*

Unable to execute *arg*. The given identifier can not be reached.

#### Recommended actions

Ensure that the PathRecorder has been started.

Ensure that the program pointer not is being moved manually.

Ensure that the limit of *arg* recorded move instructions is not exceeded.

## 41552, PathRecorder Path Level Error

#### Description

Task: *arg*

Can not execute *arg* on current path level.

#### Recommended actions

- Switch to trap-level.

- Execute StorePath to switch path level.

## 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.

## 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.

## 41555, No Contact With Unit

### Description

Task: *arg*

There is no contact with the unit *arg*.

Program Ref. *arg*

### Probable causes

The unit may have been disabled (IODisable "UNIT1", 1;)

No power to the unit.

### Recommended actions

Recovery: *arg*

## 41556, No Contact With Unit

### Description

Task: *arg*

There is no contact with unit.

Program Ref. *arg*

### Probable causes

The unit may have been disabled (IODisable "UNIT1", 1;)

No power to the unit.

### Recommended actions

Recovery: *arg*

## 41557, Mec. Unit not stopped

### Description

Task: *arg*

Not allowed to change run mode, if not all motion program 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 emergensy stop, if there has been one.
2. Check former error messages for reason.

## 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

Recovery: ERR_TPFK_NOTEXT

## 41562, Risk for faulty circular movement

### Description

Task: *arg*

Risk for faulty circular movement because of:

1) An asychron process error has occured 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, beceause there is a risk that the robot might perform an unexpected movement.

### Probable causes

One of following:

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 porgram.

## 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.

*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 or StartMove with the option parameter \AllMotionTasks are not allowed to run from a motion program 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 can have 23 bits or less 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 bus

### Description

Task: *arg*

The bus name *arg* doesn't exist.

Program Ref.*arg*

### Probable causes

The unit name is misspelled or not defined.

### Recommended actions

Recovery: *arg*

## 41569, Socket error

### Description

Task: *arg*

The socket is already connected and can not be used to listen for incoming connections.

Program Ref. *arg*

#### Recommended actions

Use another socket to listen for incoming connections.

## 41570, Socket error

#### Description

Task: *arg*

The socket can not accept incoming connection requests since it is not set to listen state.

Program Ref. *arg*

#### Recommended actions

Set socket to listen for incoming connections before trying to accept.

## 41571, Socket error

#### Description

Task: *arg*

The address is already in use and can not be used by this socket.

Program Ref. *arg*

#### Recommended actions

Move programpointer to Main and restart program.

## 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.

## 41573, Socket error

#### Description

Task: *arg*

No more sockets can be created. The maximum number of concurrent sockets is eight.

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 an 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 the LAN address of the controller or the service port address, 192.168.125.1.

Program Ref. *arg*

#### Recommended actions

Specify the LAN address or the service port address.

## 41576, Socket error

#### Description

Task: *arg*

The specified port is invalid.

Program Ref. *arg*

#### Recommended actions

It is recommended that a port number in the range 1025-4999 is used.

## 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*

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.

## 41579, Socket error

### Description

Task: *arg*

The connection was refused by the remote host.

Program Ref. *arg*

### Recommended actions

Use error handler to retry connection.

Recovery: *arg*

## 41580, Socket error

### Description

Task: *arg*

The socket is already connected and can not be connected again.

Program Ref. *arg*

### Recommended actions

Close the socket and recreate before connecting or use an error handler to use the established connection.

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 occured when sending data.

Check the event log for other messages for the possible cause.

Program Ref. *arg*

### Recommended actions

Move the programpointer to Main and restart the program.

## 41588, Socket error

### Description

Task: *arg*

The socket has not been connected.

Program Ref. *arg*

### Recommended actions

Use instruction SocketConnect before sending data through socket.

## 41589, Socket error

### Description

Task: *arg*

The connection has been closed by the remote host.

Program Ref. *arg*

### Recommended actions

Use error handler to establish connection before retry sending.

Recovery: *arg*

## 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 programpointer to Main and restart program.

## 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 programpointer to Main and restart program.

## 41593, Socket error

### Description

Task: *arg*

The data received is to long to be stored in a string. The maximum length of data that can be stored in a string is 80 characters.

Program Ref. *arg*

### Recommended actions

Use an 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*

### Recommended actions

Use SocketConnect to connect socket before trying to receive.

## 41595, Socket error

### Description

Task: *arg*

The connection has been closed by the remote host.

Program Ref. *arg*

### Recommended actions

Use error handler to reestablish connection before retrying to receive.

Recovery: *arg*

## 41596, Socket error

### Description

Task: *arg*

Unexpected error binding socket.

Program Ref. *arg*

### Recommended actions

Move programpointer to Main and restart program.

## 41597, Socket error

### Description

Task: *arg*

The socket has already been bound to an address and can not be bound again.

Program Ref. *arg*

### Recommended actions

Close socket and recreate before trying to bind socket to a new address.

## 41598, Socket error

### Description

Task: *arg*

Unexpexted error trying to listen for connections.

Program Ref. *arg*

### Recommended actions

Move programpointer to Main and restart program.

## 41599, Socket error

### Description

Task: *arg*

The socket had not been bound to an address.

Program Ref. *arg*

### Recommended actions

Use SocketBind to specify which address to listen for incoming connections.

## 41600, Socket error

### Description

Task: *arg*

The specified client socket is already in use. The client socket must not be created before calling SocketAccept.

Program Ref. *arg*

### Recommended actions

Close the client socket before using it in the call to SocketAccept.

## 41601, Socket error

### Description

Task: *arg*

Unexpected error accepting connection.

Program Ref. *arg*

### Recommended actions

Move programpointer to Main and restart program.

## 41602, Socket error

### Description

Task: *arg*

Unexpected error receiving data.

Program Ref. *arg*

### Recommended actions

Move programpointer to Main and restart program.

## 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.

## 41610, UIMsgBox - No message text

### Description

Task: *arg*

The instruction UIMsgBox has no message text in the argument MsgLine1.

Program Ref. *arg*

### Consequences

The operator don't get any information.

### Recommended actions

Add some text in the argument MsgLine1.

Recovery:*arg*

## 41611, UIMsgBox - No user or program action defined

### Description

Task: *arg*

The instruction UIMsgBox or function UIMessageBox has no user or program action defined.

None of the option arguments \Buttons, \BtnArray,\MaxTime, \DIBreak or

\DOBreak are used.

Program Ref. *arg*

### Consequences

The RAPID program will be excuted for ever.

### Recommended actions

Use one or several of the arguments \Buttons, \BtnArray, \MaxTime, \DIBreak or \DObreak.

Recovery: *arg*

## 41612, MinValue greater than MaxValue

### Description

Task: *arg*

In function UINumEntry or IUNumTune, 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 UINumEntry or UINumTune, 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 UINumEntry, the argument \InitValue is not an interger value as

specified in argument \AsInteger.

Program Ref. *arg*

### Consequences

The program execution can not 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

Decrase 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 buttondata

### Description

Task: *arg*

The argument Buttons of type buttondata has not allowed value.

Only allowed to use the predefined data of type buttondata.

Program Ref. *arg*

### Probable causes

Buttondata must be:

- an iteger
- 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.

### 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.

## 50021, Joint position error

#### Description

Actual position of joint *arg* is too far away from the ordered position.

#### Recommended actions

Check trim parameters, external forces or hardware.

## 50022, Too low DC-link voltage

#### Description

The drive units cannot detect the dc link voltage, or the voltage is too low.

This can occur if the DC link bus bar is not correctly inserted or if the mains contactors do not close properly.

#### Recommended actions

Check the DC bus bar is correctly inserted between the drive unit and the rectifier.

Check that the motors on contactors are closed and that there is voltage on the side connected to the rectifier.

## 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.

*arg*

#### Recommended actions

- Reduce the number of instructions between consecutive move instructions.

- Reduce speed, use wider spaced points, use /CONC option.

- Increase ipol_prefetch_time.

## 50025, Restart interrupted

#### Description

Current position is too far from path.

#### Recommended actions

Make a new restart with regain.

## 50026, Close to singularity

#### Description

Robot too close to singularity.

#### Recommended actions

Modify path away from the singularity or change to joint interpolation.

## 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 in wrong direction

#### Description

Position for *arg* joint *arg* is out of working range.

#### Recommended actions

Use the joystick to move the joint in opposite direction.

## 50029, Robot outside its limits

#### Description

The robot *arg* has reached the configuration limit for the parallelogram transmission.

#### Recommended actions

Use the joystick to move the involved joint into the working range again.

## 50030, Robot outside its limits

#### Description

Jogging was made in wrong direction when parallelogram was out of working range for robot *arg*.

#### 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.

## 50032, Command not allowed

#### Description

An attempt was made to calibrate while in MOTORS ON state.

#### Recommended actions

Change to MOTORS OFF.

## 50033, Command not allowed

### Description

An attempt was made to commutate the motors in MOTORS ON state.

### Recommended actions

Change to MOTORS OFF.

## 50035, Command not allowed

### Description

An attempt was made to synchronize in MOTORS ON state.

### Recommended actions

Change to MOTORS OFF.

## 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.

## 50041, Robot in a singularity

### Description

The robot is too close to a singularity.

### Recommended actions

During program execution, use SingArea instruction or joint interpolation.

During jogging, use axis by axis.

## 50042, Could not create path

### Description

### Recommended actions

Increase the distance between close points and/or decrease speed and/or change acceleration value.

## 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 configuration parameters.
- Insert intermediate points on large movements.

## 50052, Joint speed too high

### Description

The speed of joint *arg* is too high relative the ordered speed.

### Recommended actions

- Check the tune parameters, external forces on the joint and hardware.
- Reduce programmed speed.

## 50053, Too large revolution counter difference

### Description

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.

## 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 coord. 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.

## 50060, Incorrect tool

### Description

The definition of stationary tool is not valid.

### Recommended actions

Check the tool and object data.

## 50063, Circle uncertain

### Description

The points are misplaced for robot *arg*, reason *arg*:

1 End point too close to start.

2 Circle point too close to start.

3 Circle point too close to end.

4 Uncertain reorientation.

### Recommended actions

Verify the points in the circle.

## 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 via the Motion Unit key, then 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 unit via Motion Unit key, then 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.

## 50082, Deceleration limit

### Description

Calculation of joint deceleration time exceeds internal limits for this motion.

You cannot proceed without removing the cause(s) of this error.

### Recommended actions

Increase path resolution (sys param or by PathResol for critical movements).

Reduce speed, use fine point, increase AccSet, increase Queue time, avoid singularity (SingArea\Wrist), inc. dynamic resol.

## 50083, Speed lowered by system.

### Description

The speed has been lowered by the system due to dynamic limitations.

### Recommended actions

Decrease speed and/or do not use close positions at high speed and/or increase acceleration (if below 100%).

## 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.

### Recommended actions

Move the program pointer to clear the path and start a new movement.

## 50089, Weaving changed

### Description

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.

### 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 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 axis computer.

### Recommended actions

Check motion configuration parameters.

Check 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.

## 50095, Cannot access joint.

### Description

Cannot access external joint.

### Recommended actions

Check configuration and activation of external Joints.

## 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.

## 50100, Manipulator configuration

### Description

There are more configurations or numerical errors in motion domain.

### Recommended actions

Correct previous ones and try again.

## 50101, Manipulator configuration

### Description

'*arg*' is not free for the param.

'*arg*' in type '*arg*' named '*arg*'.

### Recommended actions

Use another one. For internal names, see moc_chk.log.

## 50102, Manipulator configuration

### Description

'*arg*' used in the parameter '*arg*' in type '*arg*' named '*arg*' is not defined.

### Recommended actions

Use another one that is defined or define the used one. For internal names, see moc_chk.log.

## 50103, Manipulator configuration

### Description

The orientation defined by quaternions including '*arg*' in the type '*arg*' named

'*arg*' is not normalized.(SQRSUM =1)

### Recommended actions

Check the quaternions and/or recalculate them. For internal names, see moc_chk.log.

## 50104, Manipulator configuration

### Description

The parameter '*arg*' in type '*arg*' named '*arg*' is not '*arg*'.

### Recommended actions

Check the value. For internal names, see moc_chk.log.

## 50128, Manipulator configuration

### Description

Terminating the topic check for manipulator due to earlier errors.

### Recommended actions

Correct the reported errors and run topic check again.

## 50132, Commutation failed

### Description

Commutation failed for joint *arg*.

### Recommended actions

- Make a new commutation.
- Restart the system.

## 50133, Test signal error.

### Description

No test signals are available for robot *arg*.

### Recommended actions

Verify that correct test signals are defined.

## 50134, Corr. vector warning

### 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.

## 50137, No finepoint

### Description

Continous mode without any finepoint in the program.

### Recommended actions

Change at least one corner zone in the program to a fine point.

## 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.

## 50141, Jog or Speed error

### Description

One of the following problems occured:

-Jogging error

-High speed error

-Robot too close to singularity

### Recommended actions

-Jog with incremental movement

-Reduce the programmed speed

## 50142, Manipulator configuration

### Description

Configuration of the manipulator failed.

*arg*

*arg*

### Recommended actions

Check the parameter values under System parameters:Manipulator. If mismatch between int/ext parameters i.e. wrong MOC.cfg loaded - cold start the system with correct parameters.

## 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*.

### Recommended actions

Use SingArea_Wrist, ConfL_Off, modify position or insert intermediary point.

## 50144, Displ 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.

## 50146, Restart limitation

### Description

Corner path executed as a stop point. Power fail restart not possible near the stop point.

### Recommended actions

Use finepoint in the Move-instr before RestoPath, ActUnit, Wait or Stop-instr to make power fail restart possible.

## 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

The given instruction, or command, was not allowed since the robot program was executing in a hold state. (*argargarg*)

### Recommended actions

Modify program or stop program execution before issuing command.

## 50154, Command not allowed

### Description

SingArea\Wrist mode interpolation is not supported for the *arg* robot.

### Recommended actions

Replace SINGAREA\WRIST instruction with SINGAREA\OFF.

## 50155, Power fail restart failed

### Description

Not possible to restart the Move-instruction before RestoPath, ActUnit, Wait or Stop-instruction.

### Recommended actions

Remove MOTION WARNING 50146 Restart limitation, by changing the Move-instruction to finepoint. Move the program pointer and start a new movement.

## 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.

## 50157, Corr. vector warning

### 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 motion and process configuration files.

## 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 motion and 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.

## 50161, Singularity area

### Description

Robot *arg* is close to a singularity. Work area with kinematic limitations.

### Recommended actions

During jogging, use axis by axis. During program execution, use MoveAbsJ.

## 50162, Internal position error

### Description

Error caused by internal numerical limitation.

### Recommended actions

- Reset independent joint.
- Reduce work area if extended.
- Remove or separate close points.

## 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 AUTO.

## 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, Warning: new sync

### Description

Warning: a 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.

## 50171, Speed too low

**Description**

Numerical problem when interpolation of long segments with low speed and heavy external axes or when interpolation close to singularity.

**Recommended actions**

Split segments with long interpolation time (path_resolution * 4 minutes) or change to joint interpolation or move position away from singularity.

## 50172, MoveJ not allowed

**Description**

MoveJ not allowed with work object coordinated with external position mechanical unit.

**Recommended actions**

Change interpolation mode or work object.

## 50173, Fine point necessary

**Description**

Use fine point when changing tool or work object coordination when work object is coordinated with external position mechanical unit.

**Recommended actions**

Create a fine point and then change the tool.

## 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 occuring 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 Auto, 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 fine point 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.

## 50178, Non optimal movement

**Description**

Required torque too high. Manual adjustment of acceleration or speed is needed.

**Recommended actions**

Reduce acceleration (AccSet 50 100) in this movement, restore it afterwards (AccSet 100 100). Optimize performance by search for max acceleration 50-99. Alternatively, reduce speed.

## 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.

## 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, Corr. vector warning

### Description

Sensor correction vector calculations failed due to previous error.

### Recommended actions

## 50185, Corr. vector warning

### Description

Sensor correction vector calculations failed due to previous error.

### Recommended actions

## 50186, Missing function

### Description

Not possible to run robot *arg* with coordinated base frame. Function not installed in this system.

### Recommended actions

Install the option Multiple Axis Positioner.

## 50187, Missing function

### Description

Not possible to coordinate user frame with robot *arg* Function not installed in this system.

### Recommended actions

Install the option Multiple Axis Positioner.

## 50188, Non optimal movement

### Description

Required torque too high. Manual adjustment of weave frequency or amplitude is needed.

### Recommended actions

Reduce weave frequency or weave amplitude in this movement. Alternatively, reduce speed.

## 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 of Manipulator, Types: 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.

## 50191, Too many TCP speed's

### Description

The number of TCP speed's in one segment is too large. Maximum number of TCP speed's is *arg*.

### Recommended actions

Check if one segment has too many TCP speed's set or if a sequence of segments have increasing DipLag.

## 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 Uncal ctrl 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, 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 occurance to ABB.
- Make a new calibration.

## 50200, Torque error

### Description

Torque calculation error due to high speed.

### 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...

## 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 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 status Motors ON, awaiting a start request.

### Probable causes

Triggering of the motion supervision may be caused by a collision, incorrect load definition or forces in external process.

### Recommended actions

1) If possible, 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.

## 50205, Data logger error:

### Description

*arg*

### Recommended actions

Solution:

*arg*

## 50206, Probe warning

### Description

Probe buffer is full.

### Recommended actions

## 50207, Add intermediate point

### Description

Intermediate point not coordinated to external pos mechanical unit is necessary when changing conveyor.

### Recommended actions

Create an intermediate point then change the conveyor.

## 50208, Missing function

### Description

Friction compensation can not be activated for joint *arg*.

### Recommended actions

Install the option Advanced Shape Tuning.

## 50209, Kinematic limitation

### Description

No acceptable solution found. Residual: %ld deg in orientation, %ld mm in x,

%ld mm in y, %ld mm in z.

### Recommended actions

Insert an intermediary point. Check singularity. Increase position and orient. 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.

## 50212, Missing option

### Description

General kinematics can not be used without the option 'GKIN'.

### Recommended actions

Install the option 'GKIN'.

## 50214, Work area config failed

### Description

Possibly the defined work area is larger than max allowed area for robot *arg*.

### Recommended actions

Adjust the work area parameters in 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

Previous motion path was not finished before new motion was sent.

### 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 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 max dist or min dist limits. Object Dropped.

### Recommended actions

Check limits or reduce conveyor speed.

## 50222, Mismatch type - MechUnit

### Description

Mismatch between selected manipulator type and selected mechanical unit.

### Recommended actions

Make sure that selected manipulator 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, Old boot safe area lost

### Description

Error in boot safe memory area.

- Area 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 main computer.
- Restart controller.

## 50227, Test signal error

### Description

Invalid channel number *arg*.

### Recommended actions

Allowed channel numbers are 1 - 12 for test signals and 1 - 6 for data log signals.

## 50228, Test signal error

### Description

Unknown test signal number *arg*.

### Recommended actions

Make sure that a valid test signal number is defined.

## 50229, Test signal error

### Description

Unknown mechanical unit *arg*.

### Recommended actions

Check spelling or configuration.

## 50230, Test signal error

### Description

Invalid axis number *arg* for mechanical unit *arg*.

### Recommended actions

Check mechanical unit and axis number.

## 50231, Test signal error

### Description

Mechanical unit *arg* not active.

### Recommended actions

Activate mechanical unit before defining test signals.

## 50234, Overflow during logging

### Description

An overflow occured when logging test signals or data log signals.

### Recommended actions

- Define fewer signals.
- Reduce load on main computer.
- Reduce network load.

## 50235, No interrupts received

### Description

No interrupts received from the robot communication card within timeout.

### Consequences

The system goes to status SYS FAIL.

### Probable causes

The robot communication card may be faulty.

### Recommended actions

1) Restart the system to resume operation.

2) Replace the robot communication card if faulty.

3) Check any other error log messages coinciding in time with this one for clues.

## 50236, Reference underrun

### Description

Reference underrun in Main computer interrupt routine for Axis computer connected to connector board *arg*.

### Recommended actions

- Reduce load on main computer.
- Restart controller.
- Replace Axis computer board.

## 50237, Reference task error

### Description

Reference task queue full (Slot id = *arg*)

### Recommended actions

- Reduce load on main computer.
- Restart controller.
- Replace Axis computer board(s).

## 50239, Optimal Em. Stop change

### Description

Optimal Emergency Stop changed to Electrical brake mode because of acceleration limitation.

### Recommended actions

Limit acceleration in the program.

## 50240, Optimal Em. Stop change

### Description

Optimal Emergency Stop changed to Electrical 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_calib to uncalib.

## 50242, Unsync due to CFG data

#### Description

- Mismatch between controller and cfg data for joint *arg* (calibration offset or calibration position), or
- Valid flags for calibration offset or commutation offset not true in cfg.

#### Recommended actions

Update measurement system:

- Update revolution counter.
- Recalibrate joint.
- Change cfg data.

## 50243, No acceleration limit

#### Description

Acceleration limitation is not implemented for robot *arg*.

## 50244, AbsAcc calibration failed

#### Description

Could not perform an AbsAcc calibration.

#### Recommended actions

- Restart controller.
- Check that the harddrive isn't full.
- Install more memory.

## 50245, Command not allowed

#### Description

Cannot set non motion execution mode when in MOTORS ON state.

#### Recommended actions

Change to MOTORS OFF.

## 50246, Linked motor error

#### Description

Large position offset between follower axis and master axis.

#### Recommended actions

Start linked motor service program. Jogg 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, Internal Servo Tool error

#### Description

Internal error for tool *arg* in state *arg*

*arg*

*arg*

*arg*

#### Recommended actions

Contact ABB.

## 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 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 calib forces in sys par.

2) Check force vs torque calibration in system parameters.

3) Check max 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 sync 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 program. Reset jog mode.

## 50255, Missing function

### Description

Linked motors can't be used without installing appropriate option.

### Recommended actions

Install the option 'Electronically linked motors'.

## 50256, Sync pos warning

### 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 warning

### 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 dist .

## 50259, Sensor max dist 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 dist.

## 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: *argargarg*...

### 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: *argargarg*...

### 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 warning

### Description

The duty factor for gear box at *arg* is too high.

### Recommended actions

Reduce the speed or increase the wait time.

## 50264, Saved parameters used

### Description

Valid calibration data was found after system update and will be used unless a calib.cfg file is added with RobInstall or in syspar directory.

**Recommended actions**

If calibration data from file should be used, add a calib.cfg file with RobInstall or in syspar directory and make a new installation of system.

## 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

## 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

## 50270, Pre position ignored

**Description**

Pre position was ignored during calibration of Servo Tool *arg*. The pre position *arg* mm is out of range or is larger than current pos.

**Recommended actions**

- Skip pre position.
- Adjust pre position.

## 50271, Poor event accuracy

**Description**

The system is presently configured with time event supervision, and now an event could not be accurately activated.

**Recommended actions**

Decrease the programmed speed or increase the distance between the programmed positions. Turn off this check by changing the system parameters.

## 50272, Manipulator configuration

**Description**

Failed to read *arg* data for *arg* , from the configuration file.

**Recommended actions**

Check the configuration file - cold start the system with correct parameters.

Check both configuration data for the current instance and any instances below (children).

## 50273, Manipulator configuration

**Description**

Incorrect configuration parameter *arg* for *arg*. The configuration parameter could for instance be an unknown type or a numerical value that is out of range.

**Recommended actions**

Check the configuration file - cold start the system with correct parameters.

## 50274, Manipulator 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 - cold start the system with correct parameters.

## 50275, Manipulator configuration

**Description**

Failed to read next *arg* name, previous name is *arg*. The previous instance is ok, but the next instance cannot be read.

**Recommended actions**

Check the configuration file - cold start the system with correct parameters.

## 50276, Manipulator 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 - cold start the system with correct parameters.

## 50277, Manipulator configuration

### Description

Number of joints (*arg*) in dynamic group override. Allowed number is *arg*.

### Recommended actions

Check the configuration file - cold start the system with correct parameters.

## 50278, Manipulator configuration

### Description

Failed to configure servo gun (*arg*).

### Recommended actions

Check the servo gun data in the configuration file. Cold start the system with correct parameters.

## 50279, Manipulator configuration

### Description

Servo tool change requires option Servo Tool Change.

Without this option, installation of this mechanical unit is not allowed.

### Recommended actions

Check the configuration file - cold start the system with correct parameters.

## 50280, System configuration

### Description

Mechanical Unit *arg* is defined in more than one Rapid program.

### Recommended actions

Check the configuration file - cold start the system with correct parameters.

## 50281, Another process failed

### Description

Task: *arg*

This is a failure caused by another process.

When using a multirobot controller system this failure occurs when a process fails and stops the motion planner. When this happens all other processes bound to the same motion planner are also stopped.

*arg*

### Recommended actions

Check other messages from same time for 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 SYS.cfg.

## 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, Chain of coordinated frames

### Description

It is not allowed to have a chain of coordinated frames.

You have at least three units, where one unit is following another unit, which is following the third unit.

### Recommended actions

Rearrange the units so that all units, which perform coordinated movements, are following the same unit.

## 50287, Unit not stopped

### Description

The robot *arg* is semi coordinated to Unit *arg* and the Unit must stand still when the Robot is moving in the user_frame.

#### Recommended actions

Use WaitSyncTask for the involved programs and check that the Unit is stopped in a fine point before the WaitSyncTask.

## 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 PP 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.

## 50291, Deactivation not allowed

#### Description

Deactivation of mechanical unit *arg* is not allowed when task is in synchronized motion mode.

#### Probable causes

Instruction DeactUnit is used in a synchronized part of the program.

#### Recommended actions

- Make sure no DeactUnit instruction is used in a synchronized part of the program.
- Move the program pointer to main.

## 50292, Activation not allowed

#### Description

Activation of mechanical unit *arg* is not allowed when task is in synchronized motion mode.

#### Probable causes

Instruction ActUnit is used in a synchronized part of the program.

#### Recommended actions

- Make sure no ActUnit instruction is used in a synchronized part of the program.
- Move the program pointer to main.

## 50293, Configuration error

#### Description

The configuration file is erroneous concerning SMB memory storage.

#### Probable causes

Wrong parameter set up in configuration file. Wrong type of SMB-board.

#### Recommended actions

- Make sure that parameter memory_index is defined.
- Use SMB-board with memory functionality.

## 50294, Transmission error of data

#### Description

Transmission of data between cabinet and SMB-memory has failed.

#### Probable causes

Cable, or transmission electronics failed. Electrical interference high.

#### Recommended actions

- Restart try once more.
- Check cables.
- Check SMB-board.
- Check drive module.

## 50295, Manipulator data missing

#### Description

Data in SMB- and cabinet memory missing for mechanical unit *arg*.

#### Probable causes

Configuration file missing. New SMB-board together with new cabinet.

#### Recommended actions

- Load new configuration files.

## 50296, SMB memory data difference

#### Description

Data in SMB memory is not same as in cabinet for mechanical unit *arg*.

#### Probable causes

Not the same data or serial number in SMB memory and cabinet. Manipulator (SMB module) or cabinet exchanged or configuration parameters changed.

#### Recommended actions

Check status via FlexPendant and check if right configuration data (serial number) loaded in cabinet. Check that serial number belongs to the manipulator connected to the cabinet. If not, replace configuration files or manually transfer data from SMB memory to cabinet if cabinet has been exchanged.

If Serial Measurement Board replaced with board from another manipulator (serial numbers not the same), clear first SMB memory via FlexPendant and then transfer data from cabinet to SMB.

## 50297, Memory updated in SMB

#### Description

Data for mechanical unit *arg* is moved from cabinet to SMB-memory.

#### Probable causes

#### Recommended actions

## 50298, Memory updated in cabinet

#### Description

Data for mechanical unit *arg* is moved from SMB-memory to cabinet.

#### Probable causes

#### Recommended actions

## 50299, Speed control warning

#### Description

Speed for Unit *arg* is reduced due to limiting Unit *arg*.

Task: *arg* Intruction 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, SMB memory not used

#### Description

SMB-memory is not used for this mechanical unit.

#### Probable causes

External axes can't and should not use the SMB-memory.

#### Recommended actions

## 50301, All SMB data missing

#### Description

All data is missing in SMB-memory at board *arg*, link *arg*, drive module *arg*.

#### Probable causes

An error in SMB-memory or communication has occurd. The data has been cleared.

#### Recommended actions

If proper data exists in cabinet - transfer the data to SMB-memory. If still problem - check communication cable to SMB-board. Replace SMB-board.

## 50302, Sensor data missing

#### Description

No serial number is defined for mechanical unit *arg* in SMB-memory.

#### Probable causes

The SMB-memory has been cleared or new SMB-board has been installed.

#### Recommended actions

If proper data exists in cabinet - transfer the data to SMB-memory.

## 50303, Cabinet data missing

#### Description

No serial number is defined for mechanical unit *arg* in cabinet.

#### Probable causes

The cabinet memory has been cleared or new cabinet has been installed..

#### Recommended actions

If proper data exists in SMB-memory - transfer the data to cabinet memory.

## 50304, Transfer of data not allowed

#### Description

The SMB-memory for mechanical unit *arg* has another serial number, than used in the cabinet.

#### Probable causes

A SMB-board from another robot has been installed in the used robot.

#### Recommended actions

Clear first the data in SMB-memory via calibration/SMB-memory/ advanced/. Then repeat the transfer command once again.

## 50305, Old SMB board used

#### Description

Old SMB board used without data memory.

#### Probable causes

#### Recommended actions

Replace board with a new with data memory or set parameter "Use old SMB" in configuration MOTION/ROBOT.

## 50306, Load identification error

### Description

Cannot perfom 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

Condition for finepoint not fulfilled within *arg* seconds.

### Recommended actions

Check tuning of external axes, In Position Conditions (In Position Range, Zero Speed) and check if disturbance of resolver cables.

## 50309, AbsAcc error

### Description

Data moved from SMB-memory to cabinet. AbsAcc data not valid in SMB-memory. AbsAcc cleared in cabinet for mechanical unit *arg*.

### Recommended actions

Load new AbsAcc 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 SYS.cfg.

## 50312, Mechanical Unit already active in other task

### Description

Cannot activate Mechanical Unit *arg*, since it is already active in another Rapid task.

## 50313, Independet move reset failed

### Description

Independent reset movement failed for *arg*, a synchronized movement (MoveL/MoveJ) of the servo tool occured during the the independent reset movement.

### Recommended actions

Make sure the synchronized speed of the servo tool is zero during execution of independent reset movements.

## 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.

## 50315, Corner path failure

### Description

Task: *arg*

Interpolation and process stopped before the corner path due to some of the following reasons:

- Time delay.
- Closely programmed points.
- System requires high CPU-load.

*arg*

### Recommended actions

- Reduce the number of instructions between consecutive move instructions.
- Reduce speed, use wider spaced points, use /CONC option.
- Increase ipol_prefetch_time.

Recovery: *arg*

## 50316, Absolute accuracy not activated

### Description

Absolute accuracy function not activated.

### Consequences

Robot positioning will not be absolute accurate.

#### Recommended actions

Make sure absacc.cfg is loaded into controller memory and switch AbsAcc on. Verfiy status in jogging window.

## 50317, Not allowed to disconnect Drive Module

#### Description

Drive Module *arg* should not be disconnected since the system is not in the state Motors OFF.

#### Consequences

The system will go to the state Motors OFF before disconnecting the Drive Module.

#### Recommended actions

Make sure that the system is in Motors OFF state before disconnecting the Drive Module.

## 50318, Not allowed to reconnect Drive Module

#### Description

Drive Module *arg* should not be reconnected since the system is not in the state Motors OFF.

#### Consequences

The system will go to the state Motors OFF before reconnecting the Drive Module.

#### Recommended actions

Make sure that the system is in Motors OFF state before reconnecting the Drive Module.

## 50319, Cannot activate Mechanical Unit

#### Description

The Mechanical Unit *arg* cannot be activated since it is connected to Drive Module *arg* which is disconnected.

#### Recommended actions

Reconnect Drive Module before activating the Mechanical Unit.

## 50320, Drive Module Disconnected

#### Description

Drive Module *arg* is disconnected.

#### Consequences

All Mechanical Units connected to the Drive Module are deactivated.

## 50321, Drive Module Reconnected

#### Description

Drive Module *arg* reconnected after being disconnected.

#### Consequences

All Mechanical Units that are connected to the Drive Module and that were active before the Drive Module was disconnected are activated again.

## 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 SYS.cfg.

## 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.

#### Recommended actions

Only use the FCAct instruction when the force control system is calibrated and we are in position control.

## 50326, Failed to deactivate force control

#### Description

Failed to return to position control.

**Probable causes**

Can not 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

**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.

## 50331, Parameter error in FCRefForce

**Description**

Error in parameter Amp in instruction FCRefForce.

**Recommended actions**

Change the parameter Amp in instruction FCRefForce to a value larger than zero.

## 50332, Parameter error in FCRefTorque

**Description**

Error in parameter Amp in instruction FCRefTorque.

**Recommended actions**

Change the parameter Amp in instruction FCRefTorque to a value larger than zero.

## 50333, Parameter error in FCRefLine or FCRefCircle

**Description**

Error in parameter Distance in instruction FCRefLine or parameter Radius in FCRefCircle.

**Recommended actions**

Change the parameter Distance in instruction FCRefLine or the parameter Radius in FCRefCircle.

## 50334, Parameter error in FCRefLine

**Description**

Not allowed parameter value used in function FCRefLine.

**Probable causes**

Error in parameter values of function FCRefLine.

**Recommended actions**

Modify the parameter values in function FCRefLine.

## 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.

## 50336, Parameter error in FCGetProcessData

**Description**

Failed to retrieve process information.

**Probable causes**

Using the optional parameter DataAtTrigTime in instruction FCGetProcessData. If no trig has occured this error is reported.

**Recommended actions**

Remove the optional parameter.

## 50337, Force sensor not setup

**Description**

Error in the force sensor parameters.

**Recommended actions**

Check the force sensor configuration parameters.

## 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.

## 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 parameter Cone in either FCCondOrient or FCSupvOrient.

**Recommended actions**

Change the parameter Cone 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 force, speed or position supervision has trigged.

**Consequences**

The robot will stop.

**Recommended actions**

Modify the supervision or the program.

## 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.

## 50347, Progam pointer moved in Force Control mode

**Description**

Program pointer has been moved in Force Control mode.

**Consequences**

Robot is stopped and the mode is changed from Force Control mode to normal mode.

If Force Contol mode is desired the program pointer must be moved to the FCAct instruction.

## 61001, xx

## Description

## Recommended actions

## 71001, Duplicated address

**Description**

The I/O configuration is invalid.

The same addresses have been given for unit <*arg*> and unit <*arg*>.

Units connected to the same bus must have unique addresses.

This unit has been rejected.

#### Recommended actions

1.Check that addresses are correct.

2.Check that the units are connected to the correct bus.

## 71002, Unit type undefined

#### Description

The I/O configuration for unit *arg* is invalid.

#### Consequences

This unit type has been rejected, and no functions depending on this unit type will work.

#### Probable causes

The unit type named *arg* is unknown. All units must refer to an existing, defined unit type.

#### Recommended actions

1) Make sure the unit type is defined.

2) Make sure the unit type is correctly spelt.

## 71003, Unit undefined

#### Description

The I/O configuration for signal *arg* is invalid.

#### Consequences

This signal has been rejected, and no functions depending on it will work.

#### Probable causes

The unit *arg* is unknown. All signals must refer to an existing/defined unit.

#### Recommended actions

1) Make sure the unit is defined.

2) Make sure the unit name is correctly spelt.

## 71005, Invalid filter time

#### Description

The I/O configuration for signal <*arg*> is invalid.

The passive filter time should either be 0 ms or in the range [*arg*, *arg*] ms.

This signal has been rejected.

#### Recommended actions

1. Correct the passive filter time for the signal.

## 71006, Invalid filter time

#### Description

The I/O configuration for signal <*arg*> is invalid.

The active filter time should either be 0 ms or in the range [*arg*, *arg*] ms.

This signal has been rejected.

#### Recommended actions

1. Correct the active filter time for the signal.

## 71007, Logical values out of range

#### Description

The I/O configuration for signal <*arg*> is invalid.

The logical minimum value must be less than the logical maximum value.

This signal has been rejected.

#### Recommended actions

1. Correct the logical values for the signal so that the minimum value becomes less than the maximum value.

## 71008, Physical values out of range

#### Description

The I/O configuration for signal <*arg*> is invalid.

The physical minimum value must be less than the physical maximum value.

This signal has been rejected.

#### Recommended actions

1. Correct the physical values for the signal so that the minimum value becomes less than the maximum value.

## 71017, Cross-connection without actor signal

#### Description

The I/O configuration is invalid.

The parameter <Actor signal *arg*> of one of the cross-connections have been omitted.

Rules:

1. All cross-connections must specify at least one actor signal, i.e. parameter <Actor signal 1> must always be specified.

2. For each operator specified an actor signal must follow, e.g. if parameter <Operator 2> is specified then parameter <Actor 3> must also be specified.

This cross-connection has been rejected.

#### Recommended actions

1. Correct the cross-connection so the required actor signals are specified.

## 71019, Signal undefined

#### Description

The I/O configuration of a cross-connection is invalid.

#### Consequences

The cross connection has been rejected, and no functions depending on it will work.

#### Probable causes

The parameter <Actor signal *arg*> of one of the cross-connections contains a reference to an undefined signal named *arg*.

#### Recommended actions

1) Make sure the signal is defined.

2) Make sure the signal name is correctly spelt.

## 71020, Cross-connection without resultant signal

#### Description

The I/O configuration is invalid.

The parameter <Resultant signal> of one of the cross-connections have been omitted.

All cross-connections must specify a resultant signal.

This cross-connection has been rejected.

#### Recommended actions

1. Correct the cross-connection so that there are one result signal per cross-connection.

## 71021, Duplicated cross-connection resultants

#### Description

The I/O configuration is invalid.

Multiple cross-connections have the same resultant signal <*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.

The complete cross-connection configuration has been rejected.

#### Recommended actions

1. Make sure that the 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 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

1. Correct the configuration for the cross-connections where the signal above is part.

## 71038, Cross-connection max depth exceeded

#### Description

The I/O configuration is invalid.

The 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

1. Make the cross connection less deep.

## 71045, Invalid filter specification

#### Description

The I/O configuration for signal <*arg*> is invalid.

No filter times can be specified for this type of signal.

This signal has been rejected.

#### Recommended actions

1. Set filter time to 0 or remove the statement.

## 71049, Analog signal inverted

#### Description

The I/O configuration for signal <*arg*> is invalid.

Analog signals must not be inverted.

Only digital and group signals can be inverted.

This signal has been rejected.

#### Recommended actions

1. Remove the invert for the signal (or change the signal type).

## 71050, Cross-connection with non digital actor signal

#### Description

The I/O configuration is invalid.

The parameter <Actor signal *arg*> of one of the cross-connections refer to a signal named <*arg*>, that is not digital.

Only digital signals can be cross-connected.

This cross-connection has been rejected.

#### Recommended actions

1. Remove the non-digital 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.

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 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 signal has been rejected.

#### Recommended actions

1. Correct the signal type of the signal.

### 71056, Power fail restore full

#### Description

Signal <*arg*> could not be setup for power failure restore.

The table for power fail is full.

#### Recommended actions

1. Remove some other signals from the restore list.

### 71058, Lost communication with I/O unit

#### Description

The previously working communication with unit *arg* on bus *arg* has been lost.

#### Consequences

It is not possible to access the unit itself or signals on the unit since it is currently not communicating with the controller. The system will go to state SYS FAIL, if the unit has been assigned trustlevel 0 in the configuration.

#### Probable causes

The unit may have been disconnected from the system.

#### Recommended actions

1) Make sure the unit has been correctly installed.

2) Make sure the cabling to the unit is correctly connected.

### 71061, Communication failure on I/O bus

#### Description

A communication failure on bus *arg* has been detected.

#### Recommended actions

1. Check other messages for fieldbus specific error.

2. If no units are configured to bus, configure units or remove bus configuration.

### 71072, Cannot read stored signal value

#### Description

Cannot read the stored signal value for signal <*arg*> as it is not stored.

#### Recommended actions

1. Change the configuration of the signal by setting the store attribute.

### 71076, Communication error from rtp1

#### Description

No response from the serial line.

#### Recommended actions

1. Check the device or connection.

### 71077, Communication error from rtp1

#### Description

Not possible to deliver the received message.

#### Recommended actions

1. Check the communication flow.

### 71078, Communication error from rtp1

#### Description

The response from the device has a invalid frame sequence.

#### Recommended actions

1. Check for noise on the serial line

### 71080, Max number of unit types exceeded

#### Description

The I/O configuration is invalid.

The maximum number <*arg*> of unit types in the I/O system has been exceeded.

#### Recommended actions

Modify the configuration of the I/O system (by reducing the number of unit types) so that the maximum limit is not exceeded.

### 71081, Max number of physical signals exceeded

#### Description

The I/O configuration is invalid.

The maximum number <*arg*> of physical signals (bit-mappings) in the I/O system has been exceeded.

#### Recommended actions

Modify the configuration of the I/O system (by reducing the number of physical signals) so that the maximum limit is not exceeded.

### 71082, Max number of signals exceeded

#### Description

The I/O configuration is invalid.

The maximum number <*arg*> of user-defined signals (including panel signals) in the I/O system has been exceeded.

#### Recommended actions

Modify the configuration of the I/O system (by reducing the number of 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:

- Buses
- Unit types
- Units
- Signals
- Command types
- Access levels
- Trust levels

#### 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 signals exceeded

#### Description

The I/O configuration is invalid.

The maximum number <*arg*> of subcribed signals in the I/O system has been exceeded.

#### Recommended actions

Modify the configuration of the I/O system (by reducing the number of subscribtions) so that the maximum limit is not exceeded.

## 71085, Max number of units exceeded

#### Description

The I/O configuration is invalid.

The maximum number <*arg*> of units in the I/O system has been exceeded.

#### Recommended actions

Modify the configuration of the I/O system (by reducing the number of units) so that the maximum limit is not exceeded.

## 71097, Input signal stored

#### Description

The I/O configuration for signal <*arg*> is invalid.

Input signals must not be stored.

Only output signals can be stored.

This signal has been rejected.

#### Recommended actions

1. Remove the store for the signal (or change the signal type).

## 71098, NFS server lost

#### Description

The contact with the NFS server <*arg*> is lost.

#### Recommended actions

1. The NFS server.
2. The network connection.
3. The controller configuration.

## 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 controller configuration.

## 71100, Max number of buses exceeded

#### Description

The I/O configuration is invalid.

The maximum number <*arg*> of buses in the I/O system has been exceeded.

#### Recommended actions

Modify the configuration of the I/O system (by reducing the number of buses) so that the maximum limit is not exceeded.

## 71101, Bus undefined

#### Description

The I/O configuration for unit *arg* is invalid.

#### Consequences

This unit has been rejected, and no functions depending on it will work.

#### Probable causes

The bus named *arg* is unknown. All units must refer to a defined bus.

#### Recommended actions

1) Make sure the bus is defined.

2) Make sure the bus name is correctly spelt.

## 71108, Interbus unit failure

#### Description

Unit *arg* at address *arg* reported peripheral fault. Interbus specific error code: *arg*.

#### Consequences

The unit can not be contacted by the control system. Parts of the Interbus network will not be accessible, depending on the network topology and the nature of the fault.

#### Probable causes

A number of errors may cause this. Further information may be found in the standard Interbus documentation.

#### Recommended actions

1) Make sure the unit at the above address is functioning correctly.

2) Check the Interbus specific error code as specified in the Interbus Manuals: Firmware Service and Error Messages.

## 71109, Interbus bus failure

#### Description

The control system has lost communication with the Interbus network. There is no error message from any Interbus board.

#### Consequences

Parts of the Interbus network will not be accessible, depending on the network topology and the nature of the fault.

#### Probable causes

A number of errors may cause this. Further information may be found in the standard Interbus documentation.

#### Recommended actions

1) Make sure the Customer Power Supply unit, supplying the Interbus network with power, is working correctly. Replace any faulty unit.

2) Make sure any fuses 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 system.

## 71110, Interbus bus failure

#### Description

The control system has lost communication with the unit at address *arg.arg*. Interbus specific error code: *arg*.

#### Consequences

Parts of the Interbus network will not be accessible, depending on the network topology and the nature of the fault.

#### Probable causes

A number of errors may cause this. Further information may be found in the standard Interbus documentation.

#### Recommended actions

1) Make sure the unit at the above address is functioning correctly.

2) Check the Interbus specific error code as specified in the Interbus Manuals: Firmware Service and Error Messages.

## 71111, ID code mismatch

#### Description

The ID code *arg* read from Interbus unit *arg* doesn't match the expected value *arg* from the unit type configuration.

#### Consequences

The unit has not been configured, and can not be used by the system.

#### Probable causes

Wrong ID code value may have been introduced to the system parameter configuration file. The Interbus network may have been configured with a unit with the wrong ID code.

#### Recommended actions

1) Check the ID code of the unit's unit type in the system parameter configuration file. How to check the configuration file is detailed in the Trouble Shooting Manual.

2) Replace the unit with a unit of the correct ID code in the Interbus configuration as specified in the supplier's documentation.

3) Specify a generic unit type in the system parameter configuration file: ibsGeneric and ibsSlave.

## 71114, Invalid IP address

#### Description

The IP address <*arg*> is not valid.

#### Recommended actions

1. Check the communication configuration.

## 71115, Invalid subnet mask

#### Description

The subnet mask <*arg*> is not valid.

#### Recommended actions

1. Check the communication configuration.

## 71116, Disabled unit with trustlevel 0

#### Description

The I/O configuration of unit <*arg*> is invalid.

Units with trustlevel 0 (Required) is not allowed to be disabled.

This unit has been rejected.

#### Recommended actions

1. Correct the configuration of the unit by either enabling it or changing the trustlevel.

## 71122, Incorrect IP address

#### Description

The address <*arg*> in protocol <*arg*> is not a correct IP address.

#### Recommended actions

1. Correct the address.

## 71123, No transmission protocol

### Description

The transmission protocol <*arg*> given for application protocol <*arg*> could not be found.

### Recommended actions

1. Change the transmission protocol.

## 71125, Mount Permission denied

### Description

Permission was denied to mount the directory <*arg*> on the server <*arg*>.

### Recommended actions

1. 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

1. 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

1. Reboot 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

1. Reduce the number of remote mounted disks.

## 71130, Too many remote servers

### Description

The maximum number of servers for remote mounted disks have 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

1. Check the server setup.

## 71139, Access error from IO

### Description

Cannot read or write signal <*arg*> due to communication down.

### Recommended actions

1. Check 'No contact with I/O unit' report for reason.

## 71141, Default signal value out of range

### Description

The I/O configuration for signal <*arg*> is invalid.

The default value is out of range.

This signal has been rejected.

### Recommended actions

1.Change the default value for the signal.

## 71145, Interbus bus has been deactivated

### Description

The Interbus bus has switched to a none running mode.

### Recommended actions

1) Restart the system

2) Check that correct Interbus boot project is selected.

## 71147, No response from the Interbus network

### Description

Access to the Interbus network is denied.

### Recommended actions

1) Check the Interbus board

2) Check the internal Interbus configuration

3) Reduce the cycle time on the slave unit.

## 71148, No access to the Interbus network

### Description

Access to the Interbus service interface is denied during *arg*, error code is 0x*arg*.

### Recommended actions

1) Check the internal Interbus configuration

2) The Interbus may be faulty. Replace any faulty unit if required.

## 71156, IPC queue full

### Description

The interprocess communication (IPC) queue <*arg*> was full, when sending to trap routine.

### Recommended actions

1. Restart the system

## 71158, Address out of range

### Description

The I/O configuration is invalid.

The address of unit <*arg*> is invalid (out of range).

This unit has been rejected.

### Recommended actions

1. Change the address
2. Check the address syntax

## 71163, Signal on internal unit

### Description

The I/O configuration is invalid.

The user-defined signal <*arg*> must not be connected to the internal unit named <*arg*>

User defined signals are not allowed to be connected to internal units.

This signal has been rejected.

### Recommended actions

1. Connect the signal to another unit.

## 71164, Internal signal in cross-connection

### Description

The I/O configuration contains an invalid cross-connection.

The actor *arg* signal <*arg*> is an user-defined signal whereas the resultant signal <*arg*> is an internal signal.

It is not allowed to set up cross-connections where user-defined signals affects internal signals.

### Recommended actions

Correct the cross-connection so that there are no internal 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

1. 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

1. Check cable and FTP server settings.

## 71167, Wrong transmission protocol

### Description

No matching transmission protocol was found in the configuration.

### Recommended actions

1. Change the transmission protocol.

## 71169, Ethernet not installed

### Description

The option Ethernet Services with FTP is not installed on this system.

### Recommended actions

1. Reboot and install the Ethernet Services with FTP option.

## 71182, Signal undefined

### Description

The I/O configuration is invalid.

The parameter <Resultant signal> of one of the cross-connections contains a reference to an undefined signal named <*arg*>.

This cross-connection has been rejected.

### Recommended actions

1. Correct the cross-connection so that the resultant signal refers to an existing signal.

## 71183, Cross-connection with invalid operator

### Description

The I/O configuration is invalid.

The parameter <Operator *arg*> of one of the cross-connections contains an invalid/unknown operator: <*arg*>.

Valid values for the logical operator are:

- AND
- OR

This cross-connection has been rejected.

### Recommended actions

1. Correct the operator.

## 71185, Duplicated 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:

- Access level
- Bus
- Unit type
- Unit
- Signal
- Command type

This configuration instance has been rejected.

#### Recommended actions

1. Rename one of the configuration instances in the I/O-configuration file.
2. Restart the system.

## 71193, Invalid physical IO mapping

#### Description

IO Mapping error on unit <*arg*>.

#### Recommended actions

1. Check configuration for physical signal mapping

## 71196, Invalid encoding type

#### Description

The I/O configuration for signal <*arg*> is invalid.

The encoding type <*arg*> is not valid for signal type <*arg*>.

Valid encoding types are:

- UNSIGNED
- TWO_COMP

This signal has been rejected.

#### Recommended actions

1. Correct the encoding type for the signal.

## 71201, Unknown bus

#### Description

The I/O configuration is invalid.

#### Consequences

This bus has been rejected, and no functions depending on it will work.

#### Probable causes

The bus named *arg* cannot be found in the system.

#### Recommended actions

1) Make sure the system has been configured with the desired bus.

2) Make sure the bus option at hand is installed.

3) Check the bus configuration. How to check the configuration file is detailed in the Trouble Shooting Manual.

## 71205, Could not mount directory

#### Description

Mounting directory <*arg*> on the computer <*arg*> failed.

Protocol: <*arg*>.

#### Recommended actions

1. Check the FTP server setup
2. Check the FTP client configuration
3. Check communication hardware, cabling

## 71220, No Profibus option has been installed

#### Description

A Profibus-DP master/slave board has been fitted, but no Profibus option has been installed.

#### Consequences

No communication on the Profibus is possible. There may be consequential errors from configuring Profibus when no such option has been installed.

#### Probable causes

An attempt may have been made to add the Profibus functionality, without installing the option correctly.

#### Recommended actions

1. If the Profibus option is required: configure a new system WITH this option, and install the system.
2. If the Profibus option is NOT required: configure a new system WITHOUT this option, and install the system.

## 71221, Profibus firmware file not found

#### Description

The Profibus <*arg*> firmware file not found or not readable.

The board firmware may be out of date.

#### Recommended actions

1. Reinstall the system

## 71222, Profibus file not found

#### Description

The binary Profibus configuration was not found.

- File: <*arg*>
- Path: <*arg*>

#### Recommended actions

1. Make sure the file exists.
2. Change the path in the I/O-configuration.

## 71223, Profibus file parse error

#### Description

The binary Profibus configuration file is corrupt. (Internal error: *arg*)

- File: <*arg*>
- Path: <*arg*>

**Recommended actions**

1. Recreate and download the binary configuration file using the external Profibus configuration tool.

## 71224, Profibus channel has been reflashed

**Description**

The *arg* channel firmware of the Profibus board has been updated from <*arg*> to <*arg*>.

## 71225, Profibus cfg error

**Description**

The local slave channel has more DI/DO than the configuration in its master.

**Recommended actions**

1. Make the number of DI/DO of the external Profibus master more or equal than the local slave.

## 71226, Profibus configuration ok

**Description**

The number of DI/DO of the external Profibus master is now more or equal than for the unit of DP_SLAVE type.

**Recommended actions**

## 71227, Initialization of Profibus slave failed

**Description**

The slave channel on the Profibus-DP master/slave board did not start up correctly.

**Consequences**

No communication on the Profibus slave channel is possible.

**Probable causes**

The  board hardware may be malfunctioning.

**Recommended actions**

1. Restart the system.
2. Replace the Profibus slave board if faulty.

## 71228, Profibus binary cfg fault

**Description**

The configuration data in the binary file is not accepted by the slave at address *arg*.

**Recommended actions**

1. Make the configuration data in the binary file match the configuration for the slave and reboot the system

## 71229, Profibus binary prm fault

**Description**

The parameter data in the binary file is not accepted by the slave at address *arg*.

**Recommended actions**

1. Make the parameter data in the binary file match the parameters for the slave and reboot the system.

## 71230, Unit configuration error

**Description**

Unit *arg* is configured in system parameters but is missing or incorrect in profibus binary file.

**Recommended actions**

1. Check/change system parameters.
2. Check/change profibus binary file.

## 71231, Wrong Profibus unit is connected

**Description**

Profibus unit *arg* at address *arg* has the wrong identity number. Reported identity number is *arg*. Expected identity number is *arg*.

**Consequences**

The system will not be able to enable the unit and no communication on the Profibus will be possible.

**Probable causes**

-The unit at address *arg* may be the wrong type of unit.

-The configuration may be incorrect, i.e. an incorrect binary configuration file and in some cases incorrect system parameters.

**Recommended actions**

1) Make sure the system parameters are correct.

2) Make sure the Profibus binary file is correct.

3) Replace the unit.

## 71241, Too many boards on bus

**Description**

The I/O configuration for unit <*arg*> is invalid.

The number of units on bus <*arg*> must not exceed <*arg*>.

This unit has been rejected.

**Recommended actions**

1. Reduce the number of defined boards and reboot the system.

## 71244, Incorrect Interbus unit type

**Description**

Unit *arg* at address *arg* has a unit type not supported by the system.

**Consequences**

The unit has not been configured, and can not be used by the system.

#### Probable causes

One or more of the units connected to the network is of a hardware version not supported by the system.

#### Recommended actions

1) Replace the unsupported unit with one of the correct version.

2) Make sure the system parameter configuration file is correct. How to check the configuration file is detailed in the Trouble Shooting Manual.

3) Reconfigure the Interbus network.

## 71245, Unit not defined in Interbus

#### Description

Unit *arg.arg* is not assigned to any address in the Interbus configuration.

#### Consequences

The unit has not been configured, and can not be used by the system.

#### Probable causes

Data for defining the unit is missing in the Interbus configuration file.

#### Recommended actions

1) Change the Interbus configuration file using the CMD tool under the Process Data menu. Add an address for the unit. The CMD tool is available from your local ABB representative.

## 71246, No access to Interbus data

#### Description

Access to the Interbus board data interface is denied. *arg* not performed, error code *arg*.

#### Recommended actions

1) The Interbus board may be faulty. Replace any faulty boards if required.

2) Check the Interbus internal configuration.

## 71248, Interbus unit configuration mismatch

#### Description

The Interbus unit with address *arg* is configured in the system parameters configuration file, but not in the Interbus configuration file.

#### Consequences

The unit has not been configured, and can not be used by the system.

#### Probable causes

The Interbus unit address in the Interbus configuration file differs from that in the system parameters configuration file, or the unit may not have been configured at all in the Interbus configuration file.

#### Recommended actions

1) Make sure the configuration file EIO.cfg is correct. How to check the configuration file is detailed in the Trouble Shooting Manual.

2) Reconfigure the Interbus network.

## 71249, Interbus unit configuration mismatch

#### Description

The Interbus unit with address *arg.arg* is configured in the Interbus configuration file, but not in the system parameters configuration file.

#### Consequences

The unit has not been configured, and can not be used by the system.

#### Probable causes

The Interbus unit address in the Interbus configuration file differs from that in the system parameters configuration file, or the unit may not have been configured at all in the system parameters configuration file.

#### Recommended actions

1) Make sure the configuration file EIO.cfg is correct. How to check the configuration file is detailed in the Trouble Shooting Manual.

2) Reconfigure the Interbus network.

## 71250, Can not configure Interbus board

#### Description

An error has occurred when downloading Interbus configuraion files to the Interbus board. Interbus specific error code: *arg*.

#### Consequences

The bus has not been configured, and can not be used by the system.

#### Probable causes

In RobotStudioOnline, the path specifying the configuration files points out the wrong files or that configuration file is incorrect.

#### Recommended actions

1) Use RobotStudioOnline to check the path to the configuration files.

2) Make sure the configuration files are correct.

3) Check the Interbus specific error code as specified in the Interbus Manuals: Firmware Service and Error Messages.

## 71258, Interbus file not found

#### Description

The Interbus configuration file *arg*, configured in the system parameters, was not found.

#### Consequences

The bus has not been configured, and can not be used by the system.

#### Probable causes

The Interbus configuration file does not exist or the path specified in the system parameters was incorrect.

#### Recommended actions

1) Make sure the Interbus configuration files are correctly located.

2) Use RobotStudioOnline to check the path to the configuration files.

## 71259, Can not read the Interbus configuration file

### Description

An error occurred when attempting to read the Interbus board configuration file *arg*.

### Consequences

The bus has not been configured, and can not be used by the system.

### Recommended actions

1) Reload the Interbus configuration file to the robot controller.

2) Restart the system.

## 71260, Interbus bus failure

### Description

The control system has lost communication with the Interbus network. Interbus specific error code: *arg*.

### Consequences

Parts of the Interbus network will not be accessible, depending on the network topology and the nature of the fault.

### Probable causes

A number of errors may cause this. Further information may be found in the standard Interbus documentation.

### Recommended actions

1) Make sure all communication cables and connectors are working correctly and of the recommended type

2) Check the Interbus specific error code as specified in the Interbus Manuals: Firmware Service and Error Messages.

## 71261, Transport layer failure

### Description

The physical channel for transport layer *arg* is invalid.

### Recommended actions

1. Verify that the physical channel is valid, see manual.

## 71273, Unit configuration mismatch

### Description

Unit *arg* is configured in the system parameters, but it cannot be found in the bus specific configuration file.

### Probable causes

1. The address of the unit in the system parameters is not the same as in the bus specific configuration file.

2. The unit has not been configured at all in the bus specific configuration file.

### Recommended actions

1. Check unit configuration in system parameters

2. Check bus specific configuration file

## 71274, Interbus bus failure

### Description

The control system was unable to determine the bus operating mode of the Interbus board.

### Recommended actions

1) Restart the system.

## 71276, Regained contact with unit

### Description

Regained contact with unit <*arg*>.

### Recommended actions

## 71278, Mount Permission denied

### Description

Permission was denied to mount the directory <*arg*> on the server <*arg*>.

### Recommended actions

1. 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: <*arg*>

- Protocol used: <*arg*>

### Recommended actions

Change FTP server mount point or server path.

## 71289, Memory Partition is too big

### Description

The memory partition for communication purposes can not 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 unit <*arg*> the connection 1 input size does not match the unit.

### Recommended actions

1. Change size in configuration.
2. Check module.
3. Use DN_GENERIC unit type

## 71294, Invalid output size

### Description

On DeviceNet unit <*arg*> the connection 1 output size does not match the unit.

### Recommended actions

1. Change size in configuration.
2. Check module.
3. Use DN_GENERIC unit type

## 71295, Invalid input size

### Description

On DeviceNet unit <*arg*> the connection 2 input size does not match the unit.

### Recommended actions

1. Change size in configuration.
2. Check module.

## 71296, Invalid output size

### Description

On DeviceNet unit <*arg*> the connection 2 output size does not match the unit.

### Recommended actions

1. Change size in configuration.
2. Check module.

## 71297, Invalid connection type

### Description

The DeviceNet unit <*arg*> does not support the connections configured.

### Recommended actions

1. Change connection 1 type and/or connection 2 type in configuration.
2. Use DN_GENERIC unit type.

## 71298, Duplicated address

### Description

The address *arg* for the DeviceNet master on bus *arg* is occupied by another IO module on the network.

### Recommended actions

1. Change master address in configuration.
2. Disconnect IO module occupying the address from the network.
3. Restart system.

## 71299, No bus power

### Description

The 24 V power supply from the DeviceNet Power Supply is missing.

### Consequences

No communication on the DeviceNet bus *arg* 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 Trouble Shooting Manual and 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 unit if required.

## 71300, DeviceNet Bus communication warning

### Description

A minor number of communiction errors occured on DeviceNet bus *arg*.

### 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 Bus comm. failure

### Description

A major number of communiction errors occured on DeviceNet bus *arg*.

### 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.

### Recommended actions

1) Make sure the DeviceNet Power Supply unit is working correctly. Replace any faulty unit.

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 system.

## 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 unit *arg* doesn't match value in unit type configuration.

- Configuration: <*arg*>

- Actual: <*arg*>

### Recommended actions

1. Change vendor id in configuration.

2. Check that the type of unit is correct.

## 71304, Invalid DeviceNet device type

### Description

The device type read from DeviceNet unit *arg* doesn't match value in unit type configuration.

- Configuration: <*arg*>

- Actual: <*arg*>

### Recommended actions

1. Change device type in configuration.

2. Check that the type of unit is correct.

## 71305, Invalid DeviceNet product code

### Description

The product code read from DeviceNet unit *arg* doesn't match value in unit type configuration.

- Configuration: <*arg*>

- Actual: <*arg*>

### Recommended actions

1. Change product code in configuration

2. Check that the type of unit is correct.

## 71306, DeviceNet Unknown error

### Description

An unknown error is reported from unit *arg* error code *arg*.

### Recommended actions

1. Restart system.

2. Report problem to ABB.

## 71307, DeviceNet generic connection 1

### Description

On DeviceNet unit *arg* connection 1 configuration are generic.

Real values:

- Connection 1 type: <*arg*>

- Connection 1 input size: <*arg*>

- Connection 1 output size: <*arg*>

### Recommended actions

1. Create a new unit type with correct values.

2. Update your current unit type configuration.

## 71308, DeviceNet generic connection 2

### Description

On DeviceNet unit *arg* connection 2 configuration are generic.

Real values:

- Connection 2 type: <*arg*>

- Connection 2 input size: <*arg*>

- Connection 2 output size: <*arg*>

#### Recommended actions

1. Create a new unit type with correct values.
2. Update your current unit type configuration.

## 71309, DeviceNet generic unit identification

#### Description

On DeviceNet unit *arg* Identity configuration are generic.

Real values:

- Vendor Id: <*arg*>
- Product code: <*arg*>
- Device type: <*arg*>

#### Recommended actions

1. Create a new unit type with correct values.
2. Update your current unit type configuration.

## 71310, DeviceNet Unit connection error

#### Description

DeviceNet IO Unit <*arg*> are occupied by another master.

#### Recommended actions

1. Check configuration.
2. Cycle power on IO unit.

## 71311, Nothing connected to DeviceNet bus

#### Description

Unable to communicate on DeviceNet bus <*arg*> because no units are physically connected.

#### Recommended actions

1. Check cables and connectors.
2. Connect DeviceNet units to bus.
3. Restart system.
4. Remove DeviceNet option

## 71312, DeviceNet Unit explicit connection not enabled

#### Description

DeviceNet IO Unit <*arg*> does not have the explicit message connection enabled.

#### Recommended actions

1. Change configuration.

## 71313, Fieldbus command type order number not unique.

#### Description

The I/O configuration is invalid.

Fieldbus command <*arg*> and <*arg*> are connected to the same unit type <*arg*> and have the same order number <*arg*>.

The order number of commands connected to the same unit must be unique.

This command has been rejected.

#### Recommended actions

1. Correct the configuration.

## 71314, Invalid fieldbus command type

#### Description

The I/O configuration is invalid.

One of the fieldbus commands has a reference to an invalid/unknown command type named < *arg*>.

All fieldbus commands must refer to an existing command type.

This fieldbus command has been rejected.

#### Recommended actions

1. Correct the fieldbus command type for the command.

## 71315, Max number of fieldbus commands exceeded

#### Description

The I/O configuration is invalid.

The maximum number <*arg*> of fieldbus commands in the I/O system has been exceeded.

#### Recommended actions

Modify the configuration of the I/O system (by reducing the number of fieldbus commands) so that the maximum limit is not exceeded.

## 71316, Max number of fieldbus command types exceeded

#### Description

The I/O configuration is invalid.

The maximum number <*arg*> of fieldbus command types in the I/O system has been exceeded.

#### Recommended actions

Modify the configuration of the I/O system (by reducing the number of fieldbus command types) so that the maximum limit is not exceeded.

## 71317, DeviceNet Unit reset

#### Description

DeviceNet IO Unit *arg* have been restarted through fieldbus command *arg*,

to make sure fieldbus command values are activated.

This will cause the unit to loose contact while the unit is restarted and then automatically be reconnected.

#### Recommended actions

1. Do nothing.
2. If restart not necessary remove fieldbus command configuration on unit type.

## 71318, Failed to send fieldbus command

### Description

Fieldbus command <*arg*> to unit <*arg*> was not successfully sent.

### Recommended actions

1. Check fieldbus command configuration.

## 71320, Max number of access levels exceeded

### Description

The I/O configuration is invalid.

The maximum number <*arg*> of 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 access levels) so that the maximum limit is not exceeded.

## 71321, Invalid access level

### Description

The I/O configuration is invalid.

The signal <*arg*> has a reference to an invalid/undefined access level <*arg*>.

All signals must either omit the access level or refer to an existing access level.

This signal has been rejected.

### Recommended actions

1. Change access level to one that exist or define a new access level.

## 71322, FCI option not installed

### Description

The FCI (Fieldbus Command Interface) option has not been correctly installed in the system.

### Recommended actions

Reinstall the system using a proper key containing the FCI option.

## 71323, Invalid bit values

### Description

The I/O configuration for 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 signal has been rejected.

### Recommended actions

1. Check that the 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 signal <*arg*> is invalid.

The physical limitation minimum value must be less than the physical limitation maximum value.

This signal has been rejected.

### Recommended actions

1. Correct the physical limitation values for the signal so that the minimum value becomes less than the maximum value.

## 71325, Invalid bus configuration

### Description

The I/O configuration for bus <*arg*> is invalid.

User-defined (externally loaded) buses must no be specified as local.

This bus has been rejected.

### Recommended actions

1. Change the bus type of the bus.

## 71326, Invalid unit type configuration

### Description

The I/O configuration for unit type < *arg*> is invalid.

User-defined (externally loaded) unit types must no be specified as local.

This bus has been rejected.

### Recommended actions

1. Change the bus type of the unit type.

## 71327, Logical cross-connections option not installed

### Description

The I/O configuration is invalid.

Cross-connections containing logical operators is prohibited since the option for logical cross-connections is not installed.

This cross-connection instance has been rejected.

### Recommended actions

1. Install the option for use of logical cross-connections.

2. Do not use inversion or logical operators (OR / AND) in the cross-connection expressions.

## 71328, Invalid name

### Description

The I/O configuration is invalid.

The configuration instance named <*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 comply 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 board number

#### Description

The I/O configuration for bus <*arg*> is invalid.

Board number <*arg*> is not valid for <*arg*> buses.

Valid board numbers:

- Devicenet {1, 2}
- Profibus {1}
- Interbus {1}
- Local {1}
- Simulated {1, 2}

This bus has been rejected.

#### Recommended actions

1. Correct the board number for the bus.

## 71330, Conflicting bus types

#### Description

The I/O configuration for bus <*arg*> is invalid.

There are duplicated <*arg*> buses with same board number <*arg*>.

Buses of the same type must have unique board numbers.

This bus has been rejected.

#### Recommended actions

1. Correct the board number for the bus.

## 71331, Invalid bus type

#### Description

The I/O configuration for bus <*arg*> is invalid.

The bus type <*arg*> is invalid or unknown

Valid bustypes are:

- DNET (DeviceNet)
- IBUS (Interbus)
- PBUS (Profibus)
- SIM (Simulated)
- LOC (Local)

This bus has been rejected.

#### Recommended actions

1. Correct the bus type for the bus.

## 71332, Invalid recovery time

#### Description

The I/O configuration for bus <*arg*> is invalid.

The value of the recovery time parameter <*arg*> is incorrect.

The recovery time (how often to try regain contact with lost units) must not be less than 5 seconds.

This bus has been rejected.

#### Recommended actions

1. Correct the recovery time for the bus.

## 71333, Invalid DeviceNet baudrate

#### Description

The I/O configuration for bus <*arg*> is invalid.

The value of the DeviceNet baudrate parameter <*arg*> is incorrect.

Valid DeviceNet baudrates are:

- 125
- 250
- 500

This bus has been rejected.

#### Recommended actions

1. Correct the DeviceNet baudrate for the bus

## 71334, Command type without reference to unit type

#### Description

The I/O configuration is invalid.

No reference to a unit type is defined for the command type named <*arg*>.

All command types must have a reference to an existing unit type.

This command type has been rejected.

#### Recommended actions

1. Define a unit type reference for the command type.

## 71335, Invalid unit type

#### Description

The I/O configuration for command type < *arg*> is invalid.

The unit type named <*arg*> is invalid/unknown.

All command types must refer to an existing/defined unit type.

This command type has been rejected.

#### Recommended actions

1. Correct the unit type for the command type.

## 71336, Command type without DeviceNet path

#### Description

The I/O configuration is invalid.

No DeviceNet path is defined for the command type named <*arg*>.

This command type has been rejected.

**Recommended actions**

1. Define a DeviceNet path for the command type.

## 71337, Command type without DeviceNet service identifier

**Description**

The I/O configuration is invalid.

No DeviceNet service identifier is defined for the command type named <*arg*>.

This command type has been rejected.

**Recommended actions**

1. Define a DeviceNet service identifier for the command type.

## 71338, Invalid DeviceNet service identifier

**Description**

The I/O configuration is invalid.

DeviceNet service identifier <*arg*> is not valid for command type <*arg*>.

Valid DeviceNet service identifiers are:

- Reset (5)

- Apply (13)

- Set (16)

This command type has been rejected.

**Recommended actions**

1. Correct the DeviceNet service identifier for the command type.

## 71339, Fieldbus command without reference to unit

**Description**

The I/O configuration is invalid.

One of the fieldbus commands has no reference to a unit.

All fieldbus commands must have a reference to an existing unit.

This fieldbus command has been rejected.

**Recommended actions**

1. Define a unit reference for the fieldbus command.

## 71340, Invalid unit

**Description**

The I/O configuration is invalid.

One of the fieldbus commands has a reference to an invalid/unknown unit name <*arg*>.

All fieldbus commands must have a reference to an existing unit.

This fieldbus command has been rejected.

**Recommended actions**

1. Correct the unit for the fieldbus command.

## 71341, Fieldbus command without reference to command type

**Description**

The I/O configuration is invalid.

One of the fieldbus commands has no reference to a command type.

All fieldbus commands must have a reference to an existing command type.

This fieldbus command has been rejected.

**Recommended actions**

1. Define a command type reference for the fieldbus command.

## 71342, Unit type mismatch

**Description**

The I/O configuration is invalid.

One of the fieldbus commands refers to an unit named <*arg*> and a command-type named <*arg*> that refer to different unit types.

The unit and command type refered to by a fieldbus command must refer to the same unit type.

This fieldbus command has been rejected.

**Recommended actions**

1. Correct the configuration.

## 71344, Unitmap undefined

**Description**

The I/O configuration for signal <*arg*> is invalid.

Unitmap is undefined or empty.

An unitmap must be specified for all physical signals (i.e. signals connected to an unit).

This signal has been rejected.

**Recommended actions**

1. Define an unitmap for the signal.

## 71346, Unitmap out of range

**Description**

The I/O configuration for signal <*arg*> is invalid.

The unitmap <*arg*> is invalid since bit <*arg*> is out of range.

All bits in the unitmap must be in the range [0, *arg*].

This signal has been rejected.

**Recommended actions**

1. Correct the unitmap.

## 71347, Unitmap with overlapping segments

### Description

The I/O configuration for signal <*arg*> is invalid.

The unitmap <*arg*> contains segments (e.g bit *arg*) that overlap each other.

This signal has been rejected.

### Recommended actions

1. Correct the unitmap.

## 71348, Unitmap with unexpected character

### Description

The I/O configuration for signal <*arg*> is invalid.

Found unexpected end or character at position <*arg*> in the unitmap: <*arg*>.

This signal has been rejected.

### Recommended actions

Correct the unitmap so that is comply with the following syntax:

- {bit} = ([0-9]+)
- {range} = ([0-9]+[-][0-9]+)
- {segment} = ({bit} | {range})
- {unitmap} = ({segment}[,])*{segment}

Examples of valid unitmaps:

- "1"
- "0-7, 15-8"
- "1,4-3,7"

## 71349, Invalid signal size

### Description

The I/O configuration for 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 unitmap: <*arg*>.

This signal has been rejected.

### Recommended actions

Correct either the signal type or the unitmap so that the following rules are fulfilled:

- The size of digital signals must be exactly one bit.
- The size of analog and group signals must be between 2 and 32 bits.

## 71350, Invalid bus type

### Description

The I/O configuration is invalid.

The unit type <*arg*> has an invalid/unknown bus type <*arg*>.

Valid bustypes are:

- DNET (DeviceNet)
- IBUS (Interbus)
- PBUS (Profibus)
- SIM (Simulated)
- LOC (Local)

This signal has been rejected.

### Recommended actions

1. Correct the bus type for the unit 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 ommitted or one of the following:

- POLLED
- STROBE
- COS
- CYCLIC
- COS_ACKSUP
- CYCLIC_ACKSUP

This unit type has been rejected.

### Recommended actions

Correct the connection 2 type of the unit type.

## 71353, Unit without reference to unit type

### Description

The I/O configuration is invalid.

No reference to a unit type is defined for the unit named <*arg*>.

This signal has been rejected.

### Recommended actions

1. Define a unit type reference for the unit.

## 71354, Unit without reference to bus

### Description

The I/O configuration is invalid.

No reference to a bus is defined for the unit named <*arg*>.

This unit has been rejected.

### Recommended actions

1. Define a bus reference for the unit.

## 71355, Invalid trustlevel

### Description

The I/O configuration is invalid.

Unit type <*arg*> has an invalid/unknown trustlevel <*arg*>.

Valid trustlevel values are:

- 0 (Required)
- 1 (Error when lost)
- 2 (Loss accepted)
- 3 (Stop when lost)

This command type has been rejected.

### Recommended actions

1. Correct the trustlevel for the unit type.

## 71356, Bus type mismatch

### Description

The I/O configuration is invalid.

Unit <*arg*> refers to a bus and a unit type with different bus types.

This unit has been rejected.

### Recommended actions

1. Check that the unit is connected to the correct bus and that the bus type of that bus is correct.
2. Check that the unit refers to the correct unit type and that the bus type of that unit type is correct.

## 71357, Duplicated units on local bus

### Description

The I/O configuration for unit <*arg*> is invalid.

There is already another user-defined unit connected to the local bus.

Only one user-defined unit may be connected to the local bus.

This unit has been rejected.

### Recommended actions

1. Correct the configuration.

## 71358, Power fail restore full

### Description

Unit <*arg*> could not be setup for power failure restore.

The table for power fail is full.

### Recommended actions

1. Remove some other units from the restore list.

## 71359, Option Multiple Serial Ports is not installed

### Description

The system has attempted to address the serial port *arg*, and failed.

### Consequences

The connector and the physical channel using the connector will not be available for use.

### Probable causes

The option, Multiple Serial Ports, has not been installed in the system.

### Recommended actions

1) If the option is required: configure a new system WITH this option, and install the system.

2) If the option is NOT required: remove the unsupported communication channels from the configuration.

## 71361, Cross-connection with non digital resultant signal

### Description

The I/O configuration is invalid.

The parameter <Resultant signal> of one of the cross-connections refer to a signal named <*arg*>, that is not digital.

Only digital signals can be cross-connected.

This cross-conection has been rejected.

### Recommended actions

1. Remove the non-digital signal from the cross-connection.

## 71362, Signal mapped outside the unit data area

### Description

Cannot change physical state of signal <*arg*> to VALID.

The reason is that the signal is mapped to bit(s) that lies outside the data area of the unit it is assigned to.

Signal assigned to unit: <*arg*>

Signal mapped to bit(s): <*arg*>

Data area of unit: <0 - *arg*>

The physical state of this signal remains NOT VALID.

### Recommended actions

1. Check that the unit mapping of the signal is correct.
2. Check that the signal is assigned to the correct unit.

## 71363, Slave configuration invalid

### Description

The unit *arg* configured on the master address is not valid as an internal slave.

#### Recommended actions

1. Change the address on the unit.
2. Change the unit type on the unit to DN_SLAVE.

## 71364, I/O queue overload

#### Description

The I/O queue handling input and output signals to and from the system 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 signals or cross connections between signals.

#### Recommended actions

1) Check the cross connections. How to check the configuration file is detailed in the Trouble Shooting Manual.

2) Check the frequency of input 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 input and output 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 signals. Sometimes this may be due to erratic ground connection in signals from external equipment.

#### Recommended actions

1) Repeated safety input 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 signals.

3) Check the frequency of input 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 input and output signals to and from the system 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 or output signals being actors in cross connections.

#### Recommended actions

1) Check the cross connections. How to check the configuration file is detailed in the Trouble Shooting Manual.

2) Check the frequency of input and output 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 unit

#### Description

During startup, no communication was established with unit *arg* on bus *arg*.

#### Consequences

It is not possible to access the unit or signals on the unit, since it is currently not communicating with the controller. The system will go to state SYS FAIL, if the unit has been assigned trustlevel 0 in the configuration.

#### Probable causes

The unit is either not connected to the system, or it is connected, but has been assigned the wrong address.

#### Recommended actions

1) Make sure all unit addresses match the configuration.

2) Make sure all addresses are unique, and not used by more than one unit.

3) Change the address and/or connect the missing unit.

4) If you changed the address, the power supply to the unit must be cycled (switched OFF and then back ON), to make sure the address has been changed.

## 71368, No InterBus option has been installed

#### Description

A Interbus master/slave board has been fitted, but no InterBus option has been installed.

#### Consequences

No communication on the InterBus is possible. There may be consequential errors from configuring InterBus when no such option has been installed.

#### Probable causes

An attempt may have been made to add the InterBus functionality, without installing the option correctly.

#### Recommended actions

1) If the InterBus option is required: configure a new system WITH this option, and install the system.

2) If the InterBus option is NOT required: configure a new system WITHOUT this option, and install the system.

## 71379, Communication physical channel connector is unknown

#### Description

The connector *arg* defined for the physical channel *arg* is unknown.

#### Consequences

The physical channel will not be available for use.

#### Probable causes

-The connector defined in the physical channel configuration may be misspelt or refers to a connector not available for use.

- Connector configuration is missing due to faulty configuration files.

#### 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 physical channel 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

1) 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 unit, and the watchdog timer has timed out.

#### Consequences

The DeviceNet bus is NOT running, and no communication on the DeviceNet bus *arg* will be possible. The system goes to status SYS FAIL. The full meaning of this status is described in the Trouble Shooting Manual, IRC5.

#### Probable causes

The I/O load on the DeviceNet bus may be too high, for instance if a RAPID program is trying to set signals at a rate that exceeds the bandwidth available on the DeviceNet bus.

#### Recommended actions

1) Reduce the I/O load on the DeviceNet bus.