

Rexroth IndraLogic XLC IndraMotion MLC 13VRS

Diagnostics

Reference Book
R911336358

Edition 06



Title	Rexroth IndraLogic XLC IndraMotion MLC 13VRS Diagnostics
Type of Documentation	Reference Book
Document Typecode	DOK-XLCMLC-DIAG****V13-RE06-EN-P
Internal File Reference	RS-ae5873a187de0db80a6846a001c7fe5a-6-en-US-3

Change Record

Edition	Release Date	Note
Edition 01	2012-06	First edition for MLC/XLC 13VRS, only online help
Edition 02	2013-03	Update, open loop, Safety
Edition 03	2013-06	Robot-Control V02 update
Edition 04	2014-03	NetX function module "RTEthernet/ CANopen" E0112063 / E0112064
Edition 05	2014-06	F5113002 and more
Edition 06	2015-02	New: A00C0004 , F0020010 , F0290508 , F0290510 , F0290516 , F0290517 , F0299528...F029952F , F0299530...F0299531 , F02B9020...F02B9025 , F02C908A , F02C9479 , F02C947A , F02C9482 , F0308003 , F229953E...F229953F , F2299540...F229954F , F2299550...F229955F , F2299560...F229956F , F2299570...F229957F , F2299580 Update: A0200020 , F2229359 , F0220291 , F00D1040 Removed: F2299528...F229952F , F2299530... F2299531

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Editorial Department DC-IA/EAY2 (vha/MePe)

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1 About this documentation

1.1 Validity of the documentation

This documentation describes messages, warnings, command errors and errors of the IndraLogic XLC / IndraMotion MLC in version 13VRS.

It explains how to generate diagnostics and document them in the logbook.

Target group *This documentation is intended for*

- System programmer and commissioner
- Technologist and process specialists
- Machine operator, maintenance technician and service

It supports the operating crew as well as the programmer during the error recovery.

Required qualification: Individual who is able to assess the tasks assigned and identify possible safety risks owing to qualification in the subject, knowledge and experience. The individual should also be familiar with the standards and regulations.

Application phases This documentation supports the user during the following phases:

- Engineering
- Commissioning
- Operation

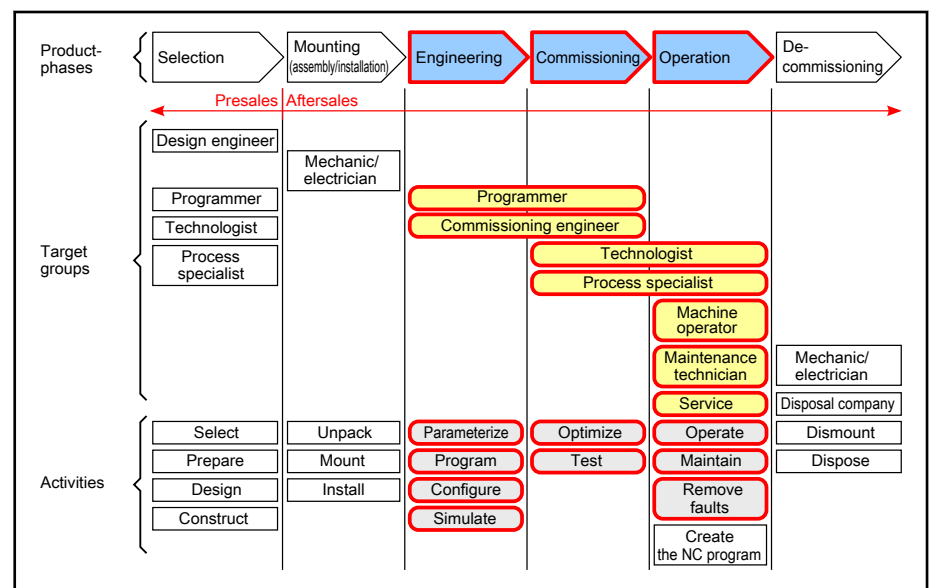


Fig. 1-1: Application phases

1.2 Documentation structure

The first part of the document describes the basics of the IndraLogic XLC / IndraMotion MLC diagnostic system.

The actual diagnostics are classified in

- [Diagnostics on errors impeding the control startup on page 63](#)
- [Messages on page 63](#)
- [Warnings on page 93](#)

About this documentation

- [Command errors on page 117](#)
- [F0 errors on page 119](#)
- [F1 errors on page 258](#)
- [F2 errors on page 284](#)
- [F5 errors on page 326](#)
- [F8 errors on page 329](#)
- [F9 errors on page 332](#)

Diagnostics on [Sercos errors](#), on [page 346](#) supplement this documentation.

For information on the Bosch Rexroth customer service help desk, refer to [Service and support on page 353](#).

1.3 Using safety instructions

1.3.1 Safety instructions – Structure

The safety instructions are structured as follows:

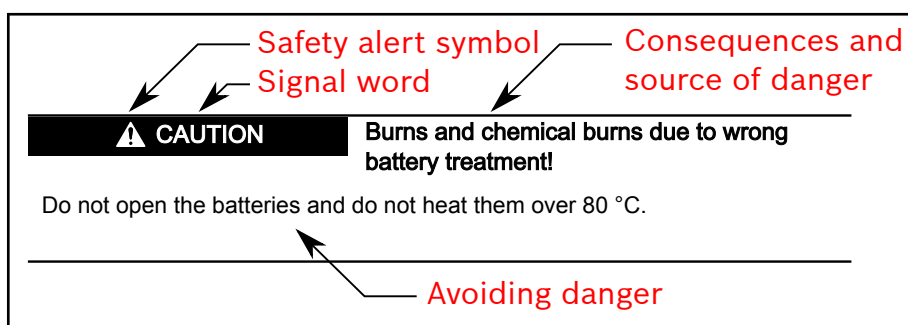


Fig. 1-2: Safety instructions – structure

1.3.2 Explaining signal words and safety alert symbol

The safety instructions in this documentation contain specific signal words (danger, warning, caution, notice) and, if necessary, a safety alert symbol (according to ANSI Z535.6-2006).

The signal word is used to draw attention to the safety instruction and also provides information on the severity of the hazard.

The safety alert symbol (a triangle with an exclamation point), which precedes the signal words danger, warning and caution is used to alert the reader to personal injury hazards.

DANGER

In the event of non-compliance with this safety instruction, death or serious injury **will** occur.

WARNING

In the event of non-compliance with this safety instruction, death or serious injury **will** occur.

About this documentation

⚠ CAUTION

In the event of non-compliance with this safety instruction, minor or moderate injury can occur.

NOTICE

In the event of non-compliance with this safety instruction, material damage can occur.

About this documentation

1.3.3 Symbols used

Pointers are displayed as follows:



This is a note.

Tips are displayed as follows:



This is a tip.

1.4 Required and supplementing documentations

Documentation titles with type codes and parts numbers

IndraWorks		MLC	XLC
/36/	Rexroth IndraWorks 13VRS Software Installation DOK-IWORKS-SOFTINS*V13-CORS-EN-P, R911336880 This documentation describes the IndraWorks installation.	X	X
/5/	Rexroth IndraWorks 13VRS Engineering DOK-IWORKS-ENGINEE*V13-APRS-EN-P, R911336870 This documentation describes the application of IndraWorks in which the Rexroth Engineering tools are integrated. It includes instructions on how to work with IndraWorks and how to operate the oscilloscope function.	X	X
/20/	Rexroth IndraMotion MLC 13VRS Functional Description DOK-MLC***-FUNC****V13-APRS-EN-P, R911336295 This documentation describes wizards, context menus, dialogs, control commissioning, device configuration and functionalities of the IndraMotion MLC.	X	
/20/	Rexroth IndraLogic XLC 13VRS Functional Description DOK-XLC***-FUNC****V13-APRS-EN-P, R911336352 This documentation describes wizards, context menus, dialogs, control commissioning, device configuration and functionalities of the IndraLogic XLC.		X
/7/	Rexroth IndraWorks 13VRS CamBuilder DOK-IWORKS-CAMBUIL*V13-APRS-EN-P, R911336291 This documentation describes the basic principles and operation of the CamBuilder, the cam editing tool.	X	X
/37/	Rexroth IndraLogic XLC IndraMotion MLC 13VRS Automation Interface DOK-XLCMLC-AUT*INT*V13-APRS-EN-P, R911336356 This documentation describes the script-based access to IndraWorks project data via the interface of the Automation Interface.	X	X
/38/	Rexroth IndraWorks 12VRS FDT Container DOK-IWORKS-FDT*CON*V12-APRS-EN-P, R911334398 This documentation describes the IndraWorks FDT Container functionality. It includes the activation of the functionality in the project and working with DTMs.	X	X

About this documentation

IndraWorks		MLC	XLC
/29/	Rexroth IndraLogic XLC IndraMotion MLC 13VRS Project Conversion DOK-XLCMLC-PROCONV*V13-APRS-EN-P, R911336366 This documentation describes the project conversion of IndraLogic 04VRS and IndraMotion MLC04VRS on IndraWorks version 12 with IndraLogic 2G. Changes with regard to Motion and PLC are described in detail.	X	X
/28/	Rexroth IndraMotion MLC 13VRS Commissioning DOK-MLC***-STARTUP*V13-CORS-EN-P, R911336308 This documentation describes the steps to commission and service the IndraMotion MLC system. It includes checklists for frequent tasks and a detailed description of the steps.	X	

Tab. 1-1: XCL/MLC documentation overview

About this documentation

Motion		MLC	XLC
/23/	Rexroth IndraLogic XLC IndraMotion MLC 13VRS PLCopen Libraries DOK-XLCMLC-FUNLIB**V13-LIRS-EN-P, R911336360 This documentation describes the function blocks, functions and data types of the RIL_Common-Types, ML_Base and ML_PLCOpen libraries for the IndraLogic XLC/IndraMotion MLC. It also includes the error reactions of function blocks.	X	X
/27/	Rexroth IndraLogic XLC IndraMotion MLC 13VRS Generic Application Template DOK-XLCMLC-TF*GAT**V13-APRS-EN-P, R911336370 This documentation provides a structured template to the IndraLogic PLC programmer. This template can be used to add and edit the PLC programming code. It includes the template, the template wizard and example applications.	X	X
/31/	Rexroth IndraMotion MLC 13VRS RCL Programming Instruction DOK-MLC***-RCL*PRO*V13-APRS-EN-P, R911336297 This documentation provides information on the RobotControl. The programming language RCL (RobotControl Language) is focused. The program structure, variables, functions, motion statements and the required system parameters are described.	X	
/32/	Rexroth IndraMotion MLC 13VRS Robot Control V2 DOK-MLC***-ROCO***V13-RERS-EN-P, R911341035 The documentation provides information about the Robot Control V2. The focus of this documentation is on PLCopen programming. The program structure, variables, functions and motion commands as well as the required system parameters are described. Furthermore, the documentation contains the description of the ML_Robot library.	X	
/21/	Rexroth IndraLogic XLC IndraMotion MLC 13VRS Parameters DOK-XLCMLC-PARAM***V13-RERS-EN-P, R911336364 This documentation describes the parameters of the XLC/MLC systems as well as the interaction between parameterization and programming. It includes the axis parameters, control parameters, kinematic parameters, touch probe parameters and programmable limit switch parameters.	X	X
/10/	Rexroth IndraDrive Firmware for Drive Controllers MPH-, MPB-, MPD-, MPC-07 DOK-INDRV*-MP*-07VRS**-FKRS-EN-P, R911328670 This documentation describes all functional properties of the IndraDrive firmware in the variants MPH-07, MPB-07, MPD-07 and MPC-07.		
/11/	Rexroth IndraDrive MPx-17 Functions DOK-INDRV*-MP*-17VRS**-APRS-EN-P, R911331236 This documentation describes all functional properties of the IndraDrive firmware in the variants MPB-17, MPM-17, MPC-17 and MPE-17.		

Tab. 1-2: XCL/MLC documentation overview

About this documentation

Field Buses		MLC	XLC
/4/	Rexroth IndraWorks 13VRS Field Buses DOK-IWORKS-FB*****V13-APRS-EN-P, R911336872 This documentation describes the supported field buses and their diagnostic function blocks.	X	X
/4a/	Rexroth IndraWorks 13VRS Field Buses Libraries DOK-IWORKS-FB*LIB**V13-LIRS-EN-P, R911337857 This manual describes the field bus libraries: RIL_ProfibusDP_02, RIL_ProfibusDP Slave, RIL_Profine-tIO, RIL_ProfinetIODevice, RIL_EtherNetIPAdapter, RIL_MappingList, RIL_SERCOSIII, RIL_Inline including their diagnostics and error reactions of the function blocks.	X	X
/63/	SERCOS System Manual for I/O Devices DOK-CONTRL-ILS3*****-APRS-EN-P, R911333512 This documentation describes the configuration, parameterization, commissioning and diagnostics of I/O devices with a SERCOS interface.	X	X

Tab. 1-3: XCL/MLC documentation overview

HMI		MLC	XLC
/8/	Rexroth IndraWorks 13VRS HMI DOK-IWORKS-HMI*****V13-APRS-EN-P, R911336874 This documentation describes the functions, configuration and operation of the user interfaces IndraWorks HMI Engineering and IndraWorks HMI Operation.	X	X
/6/	Rexroth IndraWorks 13VRS WinStudio DOK-IWORKS-WINSTUD*V13-APRS-EN-P, R911336882 This documentation describes the installation of the software, working with WinStudio and the creation and operation of applications.	X	X
/50/	Rexroth IndraLogic XLC IndraMotion MLC 13VRS HMI Connection DOK-XLCMLC-HMI*****V13-APRS-EN-P, R911336362 This documentation describes the visualization systems supported by the IndraLogic XLC and IndraMotion MLC and their connection.	X	X

Tab. 1-4: XCL/MLC documentation overview

PLC		MLC	XLC
/3/	Rexroth IndraWorks 13VRS IndraLogic 2G Programming Instruction DOK-IWORKS-IL2GPRO*V13-APRS-EN-P, R911336876 This documentation describes the PLC programming tool IndraLogic 2G and its use. It includes the basic use, first steps, visualization, menu items and editors.	X	X
/33/	Rexroth IndraWorks 13VRS Basic Libraries IndraLogic 2G DOK-IL*2G*-BASLIB**V13-LIRS-EN-P, R911336285 This documentation describes the system-comprehensive PLC libraries.	X	X

Tab. 1-5: XCL/MLC documentation overview

About this documentation

Technology		MLC	XLC
/30/	Rexroth IndraMotion MLC 13VRS Technology Libraries DOK-MLC***-TF*LIB**V13-LIRS-EN-P, R911336324 This documentation describes the function blocks, functions and data types of the "ML_TechInterface.library", "ML_TechMotion.library", "RMB_TechCam.library" and "ML_TechBase.library". It also includes libraries for the winder functionality, register controller functionality and CrossCutter functionality.	X	
/60/	Rexroth IndraMotion MLC 13VRS RegisterControl (Library) DOK-MLC***-REGI*CO*V13-LIRS-EN-P, R911336306 This documentation describes the inputs and outputs of the individual function blocks and provides notes on their use.	X	
/62/	Rexroth IndraMotion MLC 13VRS RegisterControl (Application Manual) DOK-MLC***-REGI*CO*V13-APRS-EN-P, R911336304 This documentation describes the application of the integrated register control for a rotogravure printing machine. The components of the mark stream sensor, the HMI application and the error recovery options are described. This instruction provides information on how to operate the register control, react to errors and query diagnostics. This documentation is written for machine setters and machine operators.	X	
/49/	Rexroth IndraMotion MLC 13VRS Winder Function Application DOK-MLC***-TF*WIND*V13-APRS-EN-P, R911336326 This application-related system documentation describes the application of the winder technology functions.	X	

Tab. 1-6: XCL/MLC documentation overview

Hydraulics		MLC	XLC
/40/	Rexroth IndraLogic XLC IndraMotion MLC 13VRS Sequential Programming DOK-XLCMLC-SEQPROG*V13-LIRS-EN-P, R911336368 This documentation includes the library for the sequential programming.	X	X
/41/	Rexroth IndraMotion MLC 13VRS MH_TechHydrBase DOK-MLC***-TF*HBASEV13-LIRS-EN-P, R911336312 No purpose defined.	X	
/42/	Rexroth IndraMotion MLC 13VRS MH_TechHydrMotion DOK-MLC***-TF*HMOT*V13-LIRS-EN-P, R911336316 No purpose defined.	X	
/43/	Rexroth IndraMotion MLC 13VRS MH_HydrControl DOK-MLC***-TFHCLIB*V13-LIRS-EN-P, R911336328 No purpose defined.	X	
/44/	Rexroth IndraMotion MLC 13VRS MH_SynchControl DOK-MLC***-TFHSLIB*V13-LIRS-EN-P, R911336330 No purpose defined.	X	

Tab. 1-7: XCL/MLC documentation overview

About this documentation

Hardware		MLC	XLC
/1/	Rexroth IndraControl L45/L65/L85 Control DOK-CONTRL-ICL45L65L85-PRRS-EN-P, R911332116 This documentation describes the IndraControl L45/L65/L85 controls.	X	X
/2/	Rexroth IndraControl L25 DOK-CONTRL-IC*L25****-PRRS-EN-P, R911328474 This documentation describes the IndraControl L25 controls.	X	X
/24/	Rexroth IndraControl Lxx 13VRS Function Modules DOK-CONTRL-FM*LXX**V13-APRS-EN-P, R911336283 This documentation describes all function modules of the Lxx controls including engineering and diagnostics.	X	X
/12/	Rexroth IndraDrive Drive Controllers MPx-02 to MPx-07 DOK-INDRV*-GEN-**VRS**-PARS-EN-P, R911297317 This documentation describes all parameters implemented in the firmware for drive controllers of the IndraDrive family. It supports the parameterization of the drive controllers.		
/13/	Rexroth IndraDrive MPx-02 to MPx-07 and HMV DOK-INDRV*-GEN-**VRS**-WARS-EN-P, R911297319 This documentation describes all diagnostics implemented in the following firmwares: • Drive controller firmwares from MPx-02 to MPx-08 and • firmwares of the supply devices of the type "HMV". It supports the operating crew as well as the programmer at troubleshooting.		
/35/	Rexroth IndraDrive Drive Controller Control Sections CSB01, CSH01, CDB01 DOK-INDRV*-CSH*****-PRRS-EN-P, R911295012 This documentation is a project planning manual to select and use the control sections CSB01, CDB01 and CSH01 for drive controllers of the product families Rexroth IndraDrive M and Rexroth IndraDrive C.		

Tab. 1-8: XCL/MLC documentation overview

Diagnostics and service		MLC	XLC
/26/	Rexroth IndraWorks 13VRS IndraMotion Service Tool DOK-IWORKS-IMST****V13-RERS-EN-P, R911337707 This documentation describes the IndraMotion Service Tool (IMST). It is a web-based diagnostic tool to access the control systems IndraMotion MLC L25, L45 or 65 as well as the MLP via an Ethernet high-speed connection. The IMST allows OEMs, end users and service engineers to access and remotely diagnose a system. A PC with Internet Explorer version 6 or 7 is required.	X	X
/22/	Rexroth IndraLogic XLC IndraMotion MLC 13VRS Diagnostics DOK-XLCMLC-DIAG****V13-RERS-EN-P, R911336358 This documentation includes all control diagnostics implemented in the control systems IndraLogic XLC and IndraMotion MLC.	X	X

Tab. 1-9: XCL/MLC documentation overview

About this documentation

System Overview		MLC	XLC
/48/	Rexroth IndraMotion for Printing 13VRS System Overview DOK-IM*PR*-SYSTEM**V13-PRRS-EN-P, R911336289 This documentation describes the product IndraMotion for Printing. It introduces the control systems, drive systems and I/O systems as well as the commissioning and programming.	X	
/48/	Rexroth IndraMotion for Packaging 13VRS System Overview DOK-IM*PA*-SYSTEM**V13-PRRS-EN-P, R911336287 This documentation describes the product IndraMotion for Packaging. It introduces the control systems, drive systems and I/O systems as well as the commissioning and programming.	X	
/9/	Rexroth IndraMotion MLC 13VRS System Overview DOK-MLC***-SYSTEM**V13-PRRS-EN-P, R911336310 This documentation provides an overview on the hardware/software components of the automation system IndraMotion MLC in the mentioned version. It helps assembling a system.	X	
/9/	Rexroth IndraLogic XLC 13VRS System Overview DOK-XLC***-SYSTEM**V13-PRRS-EN-P, R911336354 This documentation provides an overview on hardware/software components of the automation system IndraLogic XLC in the respective version. It helps assembling a system.		X

Tab. 1-10: XCL/MLC documentation overview

First Steps		MLC	XLC
/25/	Rexroth IndraMotion MLC 13VRS, First Steps DOK-MLC***-F*STEP**V13-CORS-EN-P, R911336293 This documentation describes the first steps of the IndraMotion MLC and the RobotControl. It includes the hardware and software prerequisites as well as the creation of a project.	X	
/25/	Rexroth IndraLogic XLC 13VRS, First Steps DOK-XLC***-F*STEP**V13-CORS-EN-P, R911336350 This documentation describes the first steps of the IndraLogic XLC. It includes the hardware and software prerequisites as well as the creation of a project.		X

Tab. 1-11: XCL/MLC documentation overview

1.5 Names and abbreviations

Term	Explanation
IndraLogic XLC	Compact PLC system with integrated Motion functionality
IndraMotion MLC	Compact Motion Logic systems with Motion, Robot and Logic Control functionalities
IndraWorks Engineering Framework	Project planning and commissioning tool of Bosch Rexroth
IndraDrive	Drive control device
HydraulicDrive	Hydraulic drive control section
SercosDrive	Drive control device with simplified parameter interface
Wizard	Wizard guiding the user through several dialogs for an ergonomic data input
IEC	International Electrotechnical Commission
OEM	Original Equipment Manufacturer

About this documentation

Sercos	Sercos (SErial Realtime COmmunication System) interface is a world-wide standardized interface for the communication between controls and drives
XML	Extensible Markup Language (XML). It is a markup language to represent hierarchical structured data as text data

Tab. 1-12: Names and abbreviations used

2 General information on the XLC/MLC diagnostic system

2.1 Structure of an XLC/MLC diagnostics

An XLC/MLC diagnostics consists of an 8-digit diagnostic number and a diagnostic text in several languages and, for some selected messages, also a plain language text displayed instead of the diagnostic number.

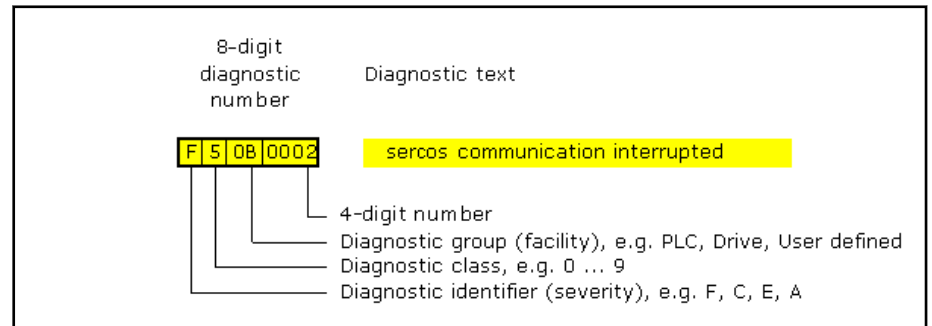


Fig. 2-1: Structure of a diagnostics

Diagnostic identifier

Currently, four different categories (severity) are supported:

- F - Error
- C - Command error
- E - Warning
- A - Message

The severity is defined as follows: **F > C > E > A**.



Plain language displays have the lowest message priority (**A0**).

Severity of the diagnostics

Currently, ten classes of severity are supported for the control system:

F9 > ... > F1 > F0 ; C8 > ... > C1 > C0 ; E8 > ... > E0 ; A8 > ... > A0.

Currently, the system uses F9 ... F0, C0, E0 and A0.

Messages (A8...A0) can also be displayed in addition to errors (F8..F0) and warnings (E8...E0) (via the functions ML_SetAxisDiagEntry and ML_SetDiagEntry).

The following table shows the different evaluations of error classes and error reactions.

	Description/name	Error reaction
0	Non-fatal error	Logbook entry is generated; message is shown on the display; no error reaction.
1	Axis group error	Logbook entry is generated; message is shown on the display. If an axis belonging to a group triggers an error of the severity F2, setting the axis to standstill, this axis is currently lost to the group and the group reacts with an F1 error, setting all axes of the group to standstill.

General information on the XLC/MLC diagnostic system

	Description/name	Error reaction
2	Axis error	Logbook entry is generated; message is shown on the display. Axis (or drive) is decelerated the best possible (velocity to 0); all other axes are not affected.
3	Axis error	Logbook entry is generated; message is shown on the display. Axis (or drive) is decelerated the best possible (torque enabled); all other axes are not affected.
4/5/6/7	Control error	Logbook entry is generated; message is shown on the display. All axes are decelerated the best possible.
8	Fatal control error	Logbook entry is generated; message is shown on the display. All axes are decelerated the best possible.
9	Fatal system error Exception, undefined system states	Logbook entry is generated; message is shown on the display. Firmware is no longer operating; call of FatalSystemErrorHandler(), No error reaction to the drive; torque enabled.

Tab. 2-1: Error reaction depending on the error class

Display order The most severe diagnostics is always displayed. Once it is acknowledged, the next most severe diagnostics is displayed.

Diagnostic group It indicates the components the diagnostics has caused. (Combinations not named are reserved for future use.)

Group	Cause/error table
00	IndraDrive/HydraulicDrive drive errors on page 57 , IndraDrive/Hydraulic-Drive drive warnings on page 57 / INDRV_TABLE
01...A9	MLC firmware, e.g. Virtual Axis , error messages on page 58
2D	Sercos Error Messages on page 59 / SERCOS_TABLE
2E	SercosDrive, PackProfile , error messages on page 58
39	Messages of the 3S kernel
3A	Messages of BRC components
3B	User Diagnostics , Transfer of Diagnostics from the PLC Program to the Logbook on page 60
AA	GAT internal error
AE	Application errors
B1..B9	Plug-in "additional diagnostics"
FB	Function block error

Tab. 2-2: Diagnostic groups (error origin)

There is no scaling between groups.

Number There is a numerical range between 0000 ... FFFF for each group. There is no scaling.

2.2 Diagnostic Numbers and Texts in the IndraControl L25/L45/L65 Display

Diagnostic texts and diagnostic numbers are displayed via the IndraControl L25/L45/L65 display. They describe the control startup, show the control

General information on the XLC/MLC diagnostic system

state and display errors flashing as error number or alternating for drive errors with drive number.

Press <Esc> and <Enter> for eight seconds to switch to "Advanced Mode". Only for authorized personnel. This enables the functions in orange below.

Additionally, user-specific texts can be displayed from the PLC program. These overwrite the default display. However, they are also overwritten by error messages.

The following figure shows the error display options for the IndraMotion MLC:

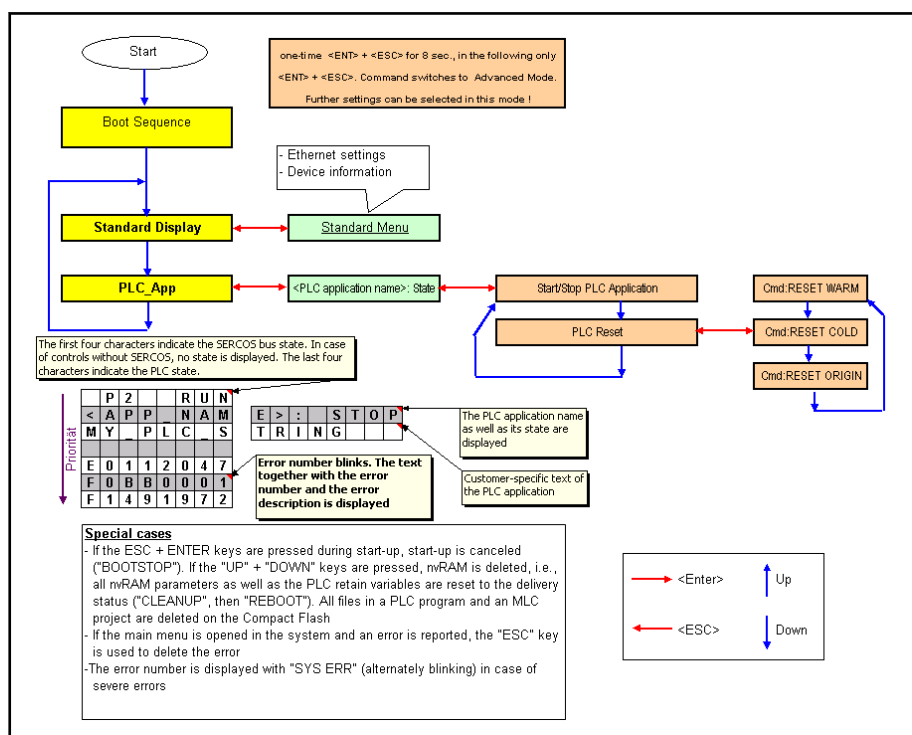


Fig. 2-2: Default display

If <Esc> + <Enter> are pressed while booting, the startup is aborted ("BOOTSTOP").

If <Up> + <Down> are pressed within a certain period of time, the nvRAM is deleted. That means that all nvRAM parameters as well as retain variables of the PLC are reset to delivery state ("CLEANUP" then "REBOOT").

Additionally, all files belonging to a PLC program as well as the files belonging to an MLC project are deleted on the Compact Flash.

If the system is in the main menu and an error is present, press <Esc> to clear the error.

In case of severe errors, the error number and "SYS ERR" flash alternately.

2.3

Diagnostic Numbers and Diagnostic Texts in the "Error/Diagnostics Memory", IndraWorks MLC/XLC

The Error/Diagnostics Memory dialog provides an overview on the error state of the control and its drives. The dialog box evaluates the control logbook. It is accessed via the parameters described below. Error memory/logbook are organized as batch. The current status is on top and with the highest index (top line in the figure).

General information on the XLC/MLC diagnostic system

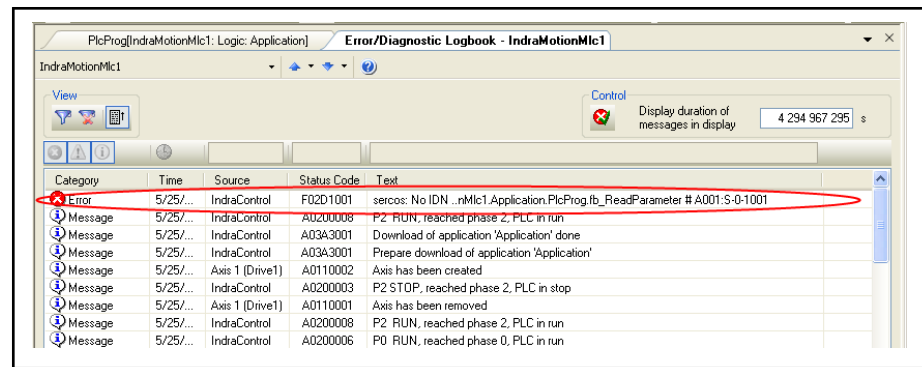


Fig. 2-3: Error/diagnostic memory dialog from the "Functional Description" on the IndraMotion MLC/XLC

Double-click on the desired line to open the <F1> help topic on the corresponding diagnostics.

Error messages of the PLC function block instances are entered in the "Error/Diagnostic Memory" like drive errors.

This applies to the function blocks of the libraries ML_PLCopen and ML_Robot.

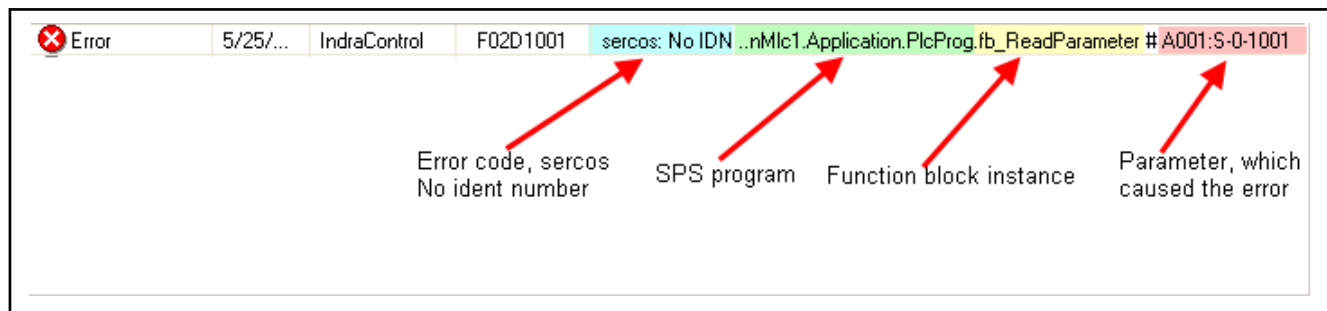


Fig. 2-4: Extended diagnostic line for error messages of PLC function block instances

- The source is **IndraControl** followed by an 8-digit error code. In the example: **F02D1001**, sercos, no ID number.
- The following text contains the instance path to the error cause. Since the number of characters is limited, it can be shortened at the beginning with "...".
- Additional information is provided depending on the error cause. Additional information is separated by a hash "#". The respective POU inputs are listed in italics in brackets.

Function block types and their additional information

- RD / WR parameter** (MB_Read..., MB_Write..., MB_Command, MC_ReadActualPosition, MC_ReadAxisError, MB_Group...)

Axis address (AxisRef.AxisNo): Parameter ident number (Parameter-Number)

Example: "A002:S-0-0815"

If the parameter ident number type (A, C, ...) cannot be resolved, the additional information is displayed as value without being formatted.

Example: "0x00900980.20037654"

General information on the XLC/MLC diagnostic system

- **Motion POU**s (MC_MoveAbsolute, MC_..., ML_OpenCyclic..., ML_ControlOn, ML_ControlOff, MB_Home, MB_Phasing..., ML_FlexProfile, MC_ReadStatus)
Axis address (AxisRef.AxisNo)
Example: "A042"
- **MB_ChangeCamData:**
Axis address (AxisRef.AxisNo) | Cam table (CamTableID) | Number of data points (NumberOfElements)
Example: "A001 | CamNo 2 | NofEle 42"
- **MB_ChangeMotionProfileStep:**
Axis address (AxisRef.AxisNo) | MotionProfile (SetNumber) | Motion step (StepNumber)
Example: "A001 | Set 1 | Step 5"
- **MB_ChangeMotionProfileSet:**
Axis address (AxisRef.AxisNo) | MotionProfile (SetNumber) | Number of motion steps (NumberOfSteps)
Example: "A001 | Set 1 | NofStep 5"
- **MB_ChangeFlexProfileStep:**
Axis address (AxisRef.AxisNo) | FlexProfile (SetNumber) | Motion step (StepNumber)
Example: "A001 | Set 1 | Step 5"
- **MB_ChangeFlexProfileSet:**
Axis address (AxisRef.AxisNo) | FlexProfile (SetNumber) | Number of motion steps (NumberOfSteps)
Example: "A001 | Set 1 | NofStep 5"
- **MB_ChangeFlexEventSet:**
Axis address (AxisRef.AxisNo) | FlexProfile (SetNumber) | Number of Events (NumberOfEvents)
Example: "A001 | Set 1 | NofEv 5"
- **ML_WriteCyclic...:**
Axis address (AxisRef.AxisNo)
Example: "A001"
- **ML_ControlWriteActualData:**
Axis address (AxisRef.AxisNo)
Example: "A001"

2.4 Accessing Diagnostics of the "Error/Diagnostic Memory) from a PLC Program

The access options on the error/diagnostic memory of the IndraLogic XLC/IndraMotion MLC from 13V06.



Depending on the information required, use the ML_ReadDiagLog function block or the ML_GetDiagnosisLog function.

General information on the XLC/MLC diagnostic system

ML_ReadDiagLog The function block ML_ReadDiagLog, ML_Basexxx.library reads entries from the control log starting from the entry "NumEntries" specified in "FirstEntry" and transfers those entries to the array specified with "LogbookAdr".

The inputs "FirstEntry" and "NumEntries" determine the part of the log to be read. The latest entry has the number zero. The log can save up to 1000 entries.

Information: ML_LOGBOOK.

ML_GetDiagnosisLog

The function ML_GetDiagnosisLog, ML_Basexxx.library, reads a number of diagnostic log entries starting from "startIndex". The read number of entries is returned in "numberRead". If less entries than "dataNumber" are available, only this number of entries is read.

Information: ML_DIAGNOSIS_LOG.

2.5 Diagnostic numbers in the PLC program

PLCopen function blocks are provided with an error management that indicates errors with a 0/1 transition on the "Error" bit briefly explained by an Enum text at the "ErrorID" output and provides a detailed description on the "ErrorIdent" output.

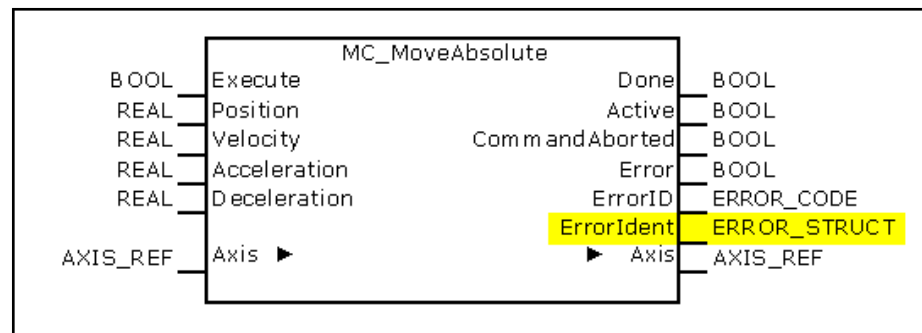


Fig. 2-5: Error management of the MC_MoveAbsolute function block
Program:

```
(* Structure to implement the diagnostics of the function block *)
TYPE ERROR_STRUCT :
STRUCT
    Table      : ERROR_TABLE; (* Additional diagnostic table *)
    Additional1 : DWORD;      (* It contains the error number (diagnostics) *)
    Additional2 : DWORD;      (* as in the table. *)
END_STRUCT
END_TYPE
```

Each of the following table numbers can be issued as "Table" number.

List of error tables

```
(* Enumeration of valid tables in additional information *)
TYPE ERROR_TABLE:
(
    NO_TABLE_USED      := 16#0000, (* reserved *)
    SERCOS_TABLE       := 16#0010, (* Sercos Error: Additional1 = Sercos Code *)
    MLD_TABLE          := 16#0020, (* Drive-based Motion - Logic *)
    MLC_TABLE          := 16#0030, (* Controller - based Motion - Logic *)
    MTX_TABLE          := 16#0040, (* CNC *)
    MLP_TABLE          := 16#0050, (* PC - based Motion Logic *)
    PLC_TABLE          := 16#0060, (* PLC *)
    INDRV_TABLE        := 16#0070, (* IndraDrive *)
    DIAX_TABLE         := 16#0080, (* DIAX *)
    ECO_TABLE          := 16#0090, (* EcoDrive *)
    PB_DP_TABLE        := 16#0130, (* Profibus *)
    DEVICENET_TABLE    := 16#0140, (* DeviceNet *)
)
```

General information on the XLC/MLC diagnostic system

```
ETHERNET_TABLE      := 16#0150, (* EtherNet                      *)
ETHERNET_IP_TABLE   := 16#0151, (* EtherNet/IP ODVA          *)
INTERBUS_TABLE      := 16#0160, (* Interbus                  *)
F_RELATED_TABLE     := 16#0170, (* function related          *)
CAN_TABLE           := 16#0180, (* CAN bus                   *)
INLINEIO_TABLE      := 16#0190, (* Inline IOs                *)
PROFINETIO_TABLE    := 16#0200, (* ProfinetIO, ProfinetIO Device *)

USER1_TABLE         := 16#1000, (* free User Table           *)
(* ...                *)
USER10_TABLE        := 16#1009 (* free User Table           *)
);
END_TYPE
```

2.6 Implementing diagnostic messages

2.6.1 IndraDrive/HydraulicDrive drive errors

The diagnostics is extended to eight digits and error class 2 is specified (e.g.: E-stop interpreted as error message: **F4034** ⇒ **F2004034**).

Error class 2 specifies the error reaction of the control (drive F4 and control F2):

- "Error/Diagnostic Memory" entry is generated
- Message is shown on the display
- Axis set to standstill the best possible.

The original message of the drive is also displayed in the text in IndraWorks.

Display location	Message content
Drive message S-0-0390	F4034
Drive diagnostics S-0-0095	Diagnostic text
Axis diagnostic message A-0-0020	Diagnostic text from S-0-0095
Axis diagnostic message A-0-0023	F2004034
L25/L45/L65 display C-0-0626	Axis 1 F2004034
Error reaction	Class 2
IW text	"IndraDrive F4034"
Help topic for IW_Text (double-click on the line)	Diagnostics for IndraDrive

Tab. 2-3: Example: IndraDrive error



IndraDrive/HydraulicDrive drive errors are also generated when "calculating on the control".

2.6.2 IndraDrive/HydraulicDrive drive warnings

The diagnostics is extended to eight digits and class 0 is always used (there is only one class for warnings in the control (e.g.: E-Stop, interpreted as warning: **E8034**).

- "Error/Diagnostic Memory" entry is generated
- Message is shown on the display
- No drive/axis reaction is triggered by the control.

The original message of the drive is also displayed in the text in IndraWorks.

General information on the XLC/MLC diagnostic system

Display location	Message content
Drive message S-0-0390	E8034
Drive diagnostics S-0-0095	Diagnostic text
Axis diagnostic message A-0-0020	Diagnostic text from S-0-0095
Axis diagnostic message A-0-0023	E0008034
L25/L45/L65 display C-0-0626	Axis 1 E0008034
Error reaction	Class 0
IW text	"IndraDrive E8034" + diagnostic text from S-0-0095
Help topic for IW_Text (double-click on the line)	Diagnostics for IndraDrive

Tab. 2-4: Example: IndraDrive warning



IndraDrive/HydraulicDrive drive warnings are also generated when "computing on the control".

2.6.3 Virtual Axis, error messages

The diagnostics consists of eight digits and the error class is always 2 (e.g.: MC_Stop is enabled in IndraLogic and MC_MoveVelocity is started afterwards):

- "Error/Diagnostic Memory" entry is generated
- Message is shown on the display
- Best possible standstill of the axis

The message from the database is also displayed in the text in IndraWorks.

Display location	Message content
Drive message S-0-0390	Not applicable
Axis diagnostic message A-0-0020	"F229206"
Axis diagnostic message A-0-0023	F229206
L25/L45/L65 display C-0-0626	Axis 2 F229206
Error reaction	Class 2
IW text	Virtual axis F229206 " 'Stopping' state command rejected"
Help topic for IW_Text (double-click)	Diagnostics for MLC

Tab. 2-5: Example: Virtual axis error

2.6.4 SercosDrive, PackProfile, error messages

The diagnostics of a SercosDrive cannot be directly determined. Diagnostics F22E2000 is identified in case of error:

- "Error/Diagnostic Memory" entry is generated
- Message is shown on the display
- Best possible standstill of the axis

The original message of the drive is also displayed in the text in IndraWorks.

General information on the XLC/MLC diagnostic system

Display location	Message content
Drive message S-0-0390	Not applicable
Axis diagnostic message A-0-0020	"F22E0000"
Axis diagnostic message A-0-0023	F22E0000
L25/L45/L65 display C-0-0626	Axis 3 F22E0000
Error reaction	Class 2
IW text	Drive error!
Help topic on IW_Text	Diagnostics for MLC

Tab. 2-6: Example: Error of a generic axis

For a definitive diagnostics, the user has to use the diagnostic tools of his drive manufacturer.



If an IndraDrive is operated as SercosDrive, only the diagnostics common for SercosDrive are available.

2.6.5 Sercos Error Messages

The four-digit error messages are extended to eight digits. All messages obtain error class 0 (e.g.: **1001** ⇒ F02D**1001**). The original error and the respective text are displayed in the IndraWorks logbook (e.g.: MC_ReadParameter on S-0-0200; Access to a non-existent parameter).

Display location	Message content
L25/L45/L65 display C-0-0627	F02D1001
Error reaction	Class 0
IW text	Error 1001: ID numbers not available
Help topic on IW_Text	Diagnostics for MLC

Tab. 2-7: Example: sercos error message

2.6.6 Command error message

The four-digit command messages are extended to eight digits. All messages obtain error class 0 (e.g.: **0101** ⇒ C0280**101**). The original error and the respective text are displayed in the IndraWorks logbook (C2C-C0101 - Parameter set incomplete/incorrect).

Display location	Message content
L25/L45/L65 display C-0-0627	C0280101
Error reaction	Class 0
IW text	C2C-C0101 - Parameter set incomplete/incorrect
Help topic on IW_Text	Diagnostics for MLC

Tab. 2-8: Example: Command error message

General information on the XLC/MLC diagnostic system

2.6.7 User Diagnostics, Transfer of Diagnostics from the PLC Program to the Logbook

	The following functions are available in the "ML_Base_xxx_yyy" library which can be used to initiate a diagnostic entry in the logbook of the control and to generate an error reaction according to the error class.
ML_SetAxisDiagEntry	The function "ML_SetAxisDiagEntry" triggers an entry in the control logbook. At the same time, the diagnostics is displayed on the control display. The diagnostics can be a message or a warning, with both types being independent of the class without error reaction. In case of errors, the system additionally triggers an error reaction, page 51, according to the error class. Depending on the error class, the axis (drive) referenced via the "Axis" input is affected as follows: <i>Possible error classes</i> • F03B....: Non-fatal error, no error reaction, • F13B....: Axis group error, deceleration to standstill of the axis and all other axes belonging to the axis group, • F23B..../F33B..../F43B....: Axis error, the referenced axis is decelerated the best possible, • F53B..../F63B..../F73B....: Control error, all axes are decelerated the best possible, • F83B....: Fatal control error, all axes are decelerated the best possible.  The function may not be called cyclically in the PLC program, since an entry is made in the logbook with every call and the logbook overflows!
ML_SetDiagEntry	The function "ML_SetDiagEntry" triggers an entry in the control logbook. At the same time, the diagnostics is displayed on the control display. The diagnostics can be a message or a warning, with both types being independent of the class without error reaction. In case of errors, the system additionally triggers an error reaction, page 51, according to the error class. <i>Useful error classes</i> • F03B....: Non-fatal error, no error reaction, • F53B..../F63B..../F73B....: Control error, all axes are decelerated the best possible, • F83B....: Fatal control error, all axes are decelerated the best possible.  The function may not be called cyclically in the PLC program, since an entry is made in the logbook with every call and the logbook overflows!

2.7 Overview: XLC/MLC Diagnostic Parameters

The following parameters are used for diagnostic purposes:

General information on the XLC/MLC diagnostic system

Device status

C-0-0010, Version number, hardware
C-0-0012, Version number, firmware
C-0-0023, System status
C-0-0030, Control name
C-0-0031, Control address
C-0-0050, System time
C-0-0203, Engineering, user name
C-0-0626, Diagnostics

Extended device status

C-0-0010, Version number, hardware
C-0-0011, Version number, PLC firmware
C-0-0012, Version number, firmware
C-0-0013, Version number, BSP
C-0-0021, Hardware, details
C-0-0022, Local bus, configuration
C-0-0023, System status
C-0-0032, Serial number of control

Axis status

A-0-0002, Axis name
A-0-0020, Axis diagnostic message
A-0-0021, Axis status
A-0-0022, Extended axis status
A-0-0023, Axis diagnostic number
A-0-0100, Actual position value
S-0-0095, Diagnostics
S-0-0390, Diagnostic number

Clearing an Error

A-0-1030, Command: Clear all axis errors
C-0-1030, Command: Clear all control errors

Error/diagnostic memory

C-0-0620, Diagnostic memory index
C-0-0621, Diagnostics, indexed message
C-0-0622, Diagnostics, number of messages in the memory

General information on the XLC/MLC diagnostic system

C-0-0623, Diagnostics, last reset message
C-0-0624, Diagnostics, absolute indices
C-0-0625, Diagnostics, display message
C-0-0626, Diagnostics
C-0-0627, Diagnostic number
C-0-0650, Diagnostics, status word
C-0-0660, Display, display period of messages

Invalid Parameters

C-0-0111, List of all invalid C-parameters
C-0-0626, Diagnostics
and the parameters required for each axis
A-0-0011, List of all invalid A-parameters
A-0-0014, List of incorrect synchronized A-parameters
and the parameters required for each real axis and for each encoder axis
S-0-0021, IDN list of invalid operating data for phase 2
S-0-0022, IDN list of invalid operating data for phase 3
S-0-0390, Diagnostic number

Cycle times

C-0-0400, Motion, cycle time, command value
C-0-0503, sercos master, cycle time
C-0-0410, Motion, cycle time (Tcyc), actual value
C-0-0412, List of current time slot measurements
C-0-0413, List of maximum time slot measurements
C-0-0414, List of minimum time slot measurements
C-0-0420, Motion, watchdog sensitivity
C-0-0421, Motion, absolute error counter
C-0-0422, Motion, number of successive errors
C-0-1050, Command: Reset parameter C-0-0413 and C-0-0414
C-0-1052, Command: Reset parameter C-0-0421 and C-0-0422

3 XLC/MLC diagnostic system tables

3.1 XLC/MLC diagnostics

3.1.1 Diagnostics on Errors Impeding Control Startup

Diagnostics on Errors Impeding Control Startup, General Information

A successful control startup can be impeded due to different reasons, but one of the following messages is then output on the control display:

Diagnostic you might be able to (partially) troubleshoot yourself:

- [UNSUPPHW, page 63](#), Firmware version on the CF card does not support the hardware
- [ERROR_IP, page 63](#), IP address already used in the network

Further diagnostics the support helps you to troubleshoot

- STARTERR
- BSP_ERR
- SPSMGERR
- ErrBSP
- ErrHwChg
- ErrFMCfg
- ErrArch

For the error analysis, send the file "BootLog.dat" stored on the user partition.

UNSUPPHW

The firmware version on the CF card does not support this hardware.

Thus, the control startup is canceled.

Plug in a CF card with a firmware version released for this hardware.

ERROR_IP

It was detected that the IP address is already used in the network.

Cause:	Remedy:
The IP of the Engineering interface is already in the network.	Change the IP address of the control (C-0-0200) or the IP address of another device in the network.
The control is located in the C2C link and the parameter "C-0-0031, Control address" is set to the same on both controls.	Change the parameter "C-0-0031 Control address" on a control.

For more information on this topic, refer to IP Communication.

3.1.2 Messages

Messages, general information

A message consists of an 8-digit diagnostic number and a diagnostic text in several languages and, for some selected messages, also a plain language text displayed instead of the diagnostic number.

The first character of the diagnostic number in a message is an "A", followed by a "0".

XLC/MLC diagnostic system tables

A00B0005, Drive messageDisplay: [A00B0005](#)

System message

A drive can trigger a message as an alternative to an error or a warning.

The message is a one-time process that is not acknowledged.

A message is detected at "C-0-0500, sercos Master, configuration, bit 0", and "C-0-0023, System status, bit 24", and the message bit is set in each case.

Cause: A minimum of one drive has issued a message.

Remedy: Relevant Online Help is available with own-production drives. With external drives, please use the documentation for the drive.

A00B0007, sercos driver: ZeroBit, Test mode, Zero bit stream

Display: ZeroBit

System message

"Zero bit stream" test mode for the drive interface sercos interface was selected in parameter (C-0-0500).

Cause: Test mode was selected in parameter "C-0-0500, sercos Master, configuration".

Remedy: Modify parameter "C-0-0500, sercos Master, configuration" accordingly.

A00B0008, sercos driver: LightOn, Test mode, Continuous light on

Display: LightOn

System message

Test mode "Continuous light on" for the drive interface sercos interface was selected in parameter (C-0-0500).

Cause: Test mode was selected in parameter "C-0-0500, sercos Master, configuration".

Remedy: Modify parameter "C-0-0500, sercos Master, configuration" accordingly.

A00B0009, sercos driver: LightOff, Test mode, Continuous light off

Display: LightOff

System message

Test mode "Continuous light off" for the drive interface sercos interface was selected in parameter (C-0-0500).

Cause: Test mode was selected in parameter "C-0-0500, sercos Master, configuration".

Remedy: Modify parameter "C-0-0500, sercos Master, configuration" accordingly.

A00B0020, Hardware initialization, don't switch off the control

Display: HW- INIT

System message

The onboard sercos III FPGA is updated. The power supply of the control may not be switched off during the update.

Cause: The firmware used requires a newer version of the sercos III FPGA. This is executed only once after the exchange of firmware or hardware.

A00B0030, sercos: modul activated, cycletimes set to defaultDisplay: [A00B0030](#)

System message

A sercos module configured as master communication in parameter C-0-0040 has been enabled. The default value of the parameters C-0-0400 and C-0-0503 have been loaded.

A00B0161, Set point transfer errorDisplay: [A00B0161](#)

System message

Error in cyclic data transfer.

XLC/MLC diagnostic system tables

Cause: The command values in the MDT telegrams could not be consistently transferred to the slaves.

Remedy: Increase sercos cycle time.

If the error cannot be corrected, please contact the customer service.

A00C0001, BOOT END, boot up of control finished

Display: BOOT END

System message

Boot up of the control has been successfully completed. There is a switch-over to target startup phase "C-0-0450, Motion, startup target mode".

A00C0002, ErrClear, error cleared

Display: ErrClear

System message

The command to clear the error has been successfully executed.

Depending on whether the cause of the error still exists or not, an active error transfers to

- Passive error, the cause still exists,
- Error reset, the cause no longer exists.

A00C0003, BOOTWAIT, startup delay active

Display: BOOTWAIT

System message

The control startup is delayed by the value specified in parameter "C-0-0060, Startup delay time".

A00C0004, Firmware version:

Display: [A00C0004](#)

System message

The currently started firmware on the control is displayed. The complete message is dynamically created when booting the control.

A00D0001, Warning

Display: [A00D0001](#)

System message

The runtime system of the PLC has output a warning. It is displayed in a dialog box.

Cause: See dialog box.

Remedy: See dialog box.

A00D0002, Info

Display: [A00D0002](#)

System message

The runtime system of the PLC has output a warning. It is displayed in a dialog box.

Cause: See dialog box.

Remedy: See dialog box.

A00D0010, PLC user task watchdog expired

Display: [A00D0010](#)

System message

The software watchdog of the IEC-Task is expired.

Cause: The IEC-Task was not finished within the defined time.

Remedy: Increase the task cycletime or reduce the IEC-Program(s) of the affected IEC-Task.

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A00D0011, Hardware watchdog expiredDisplay: [A00D0011](#)

System message

The hardware watchdog is expired.

Cause: The hardware watchdog is expired.**Remedy:** Switch off/on the control. If the error appears again, please inform the customer service.**A00D0012, Bus error**Display: [A00D0012](#)

System message

Cause: In the IEC program there was an access to an invalid address.**Remedy:** You can find more information in the call-up tree.**A00D0013, Checksum error**Display: [A00D0013](#)

System message

Error regarding the checksum after program download.

Cause: This error may be caused by

- a faulty data transfer or
- a corrupt file system.

Remedy: Please repeat the download.**A00D0014, Field bus error**Display: [A00D0014](#)

System message

This error may have several reasons. These are indicated by the error text in the IndraLogic-Programming user interface.

Cause:	Remedy:
"Error loading IO drivers!": At least one configured IO-Driver could not be loaded.	Inform the customer service.
"Error init IO-Driver!"	Inform the customer service.
"Error in Configuration Data!"	Inform the customer service.

A00D0015, Error while I/O updateDisplay: [A00D0015](#)

System message

I/O-Update aborted.

Cause: A fieldbus driver causes an internal error.**Remedy:** Please check whether configured and not configured IOs are applied in the project and the address test is switched off. Turn on address test if necessary.**A00D0016, Cycletime exceeded**Display: [A00D0016](#)

System message

This error does not appear in the current runtime.

Cause: -**Remedy:** -**A00D0017, Not enough memory**Display: [A00D0017](#)

System message

XLC/MLC diagnostic system tables

Online-Change-Code is too big.

Cause: With online changes the memory space in the control is limited.

Remedy: Please repeat the download.

A00D0018, Online change not possible

Display: [A00D0018](#)

System message

Cause: The references of an external library could not be unresolved.

Remedy: Ensure that the installed target and the firmware of the control used fit.

A00D0019, Not enough memory

Display: [A00D0019](#)

System message

Cause: The program download has been denied by a customer-specific adaption.

Remedy: Follow the instructions in the dialog box.

A00D001A, Boot project not loaded, retain variables not relocatable

Display: [A00D001A](#)

System message

Cause: The boot project could not be load because the retain-variables could not be reset.

Remedy: Please restart the control. Should the error appear again, please inform the customer service.

A00D001B, Boot project not loaded and deleted

Display: [A00D001B](#)

System message

Cause: Possibly the file system is corrupt.

Remedy: Please create a new boot project and load it into the control.

A00D001C, System memory very low (memory leak)

Display: [A00D001C](#)

System message

Cause: Because of a memory leak the available system memory is very low.

Remedy: Please reboot the control.

A00D001D, Retain memory corrupt or cannot be mapped

Display: [A00D001D](#)

System message

Cause: The retain memory is corrupt or it cannot be mapped.

Remedy: Please call the customer service.

A00D001E, Boot project that could be loaded but caused a crash later

Display: [A00D001E](#)

System message

The boot project could be loaded but caused a system crash later.

Cause: The application is incorrect.

Remedy: Remove the error in the application and then create a new boot project.

A00D001F, Not enough memory for target visu

Display: [A00D001F](#)

System message

Cause: Not enough memory available for the target visualization.

Remedy: No text available.

A00D0020, Not enough memory for configuration

Display: [A00D0020](#)

System message

XLC/MLC diagnostic system tables

Cause: There is not enough memory available for the configuration.

Remedy: No text available.

A00D0021, Target ID (bootproject) doesn't match the current target

Display: [A00D0021](#)

System message

Cause: The target system settings of the boot projects does not match the current target system.

Remedy: Please adjust a matching target system.

A00D0022, Error at scheduling tasks

Display: [A00D0022](#)

System message

Cause: An error occurred in the task scheduler.

Remedy: Reboot your system and inform the customer service if the error appears again.

A00D0023, Checksum error at transfer of file

Display: [A00D0023](#)

System message

Cause: Either a file transfer error appeared or the file system is corrupt.

Remedy: Transfer the file again. If the error appears again please inform the customer service.

A00D0024, Retain identity does not match to bootproject identity

Display: [A00D0024](#)

System message

Cause: The identification of the Retain-Data does not match the identification of the boot project.

Remedy: Transfer the file again. If the error appears again please inform the customer service.

A00D0025, Task could not be created

Display: [A00D0025](#)

System message

Cause: With the creation of an IEC-Task an error appeared.

Remedy: Transfer or load your PLC-Program a new. Should the error appear again, please inform the customer service.

A00D0026, Task could not be stopped

Display: [A00D0026](#)

System message

Cause: While stopping the PLC the IEC-Task could not be stopped within a specified timeout and was suspended therefore.

Remedy: Should the error appear again, please inform the customer service.

A00D0030, Create boot project done

Display: [A00D0030](#)

System message

Short text: The boot project creation has been completed successfully.

A00D0050, Illegal instruction

Display: [A00D0050](#)

System message

Cause: The programming system has generated a faulty compilation.

Remedy: Please send the archive file to the customer service.

XLC/MLC diagnostic system tables

A00D0051, Access violation

Display: [A00D0051](#)

System message

- Cause:** There was an access to an invalid memory range.
- Remedy:** Please check your PLC-Program on use of pointer and array accesses. If necessary include the library RIL_CheckRtv.Lib.



This library needs runtime so that the cycletime increases. Further informations are contained in the description of this library.

A00D0052, Privileged instruction

Display: [A00D0052](#)

System message

- Cause:** The programming system has generated a faulty compilation.
- Remedy:** Please send the archive file to the customer service.

A00D0053, Page fault

Display: [A00D0053](#)

System message

- Cause:** The programming system has generated a faulty compilation.
- Remedy:** Please send the archive file to the customer service.

A00D0054, Stack overflow

Display: [A00D0054](#)

System message

- Cause:** The programming system has generated a faulty compilation.
- Remedy:** Please send the archive file to the customer service.

A00D0055, Invalid disposition

Display: [A00D0055](#)

System message

- Cause:** The programming system has generated a faulty compilation.
- Remedy:** Please send the archive file to the customer service.

A00D0056, Invalid handle

Display: [A00D0056](#)

System message

- Cause:** The programming system has generated a faulty compilation.
- Remedy:** Please send the archive file to the customer service.

A00D0057, Access on guarded page

Display: [A00D0057](#)

System message

- Cause:** The programming system has generated a faulty compilation.
- Remedy:** Please send the archive file to the customer service.

A00D0058, Double fault

Display: [A00D0058](#)

System message

- Cause:** The programming system has generated a faulty compilation.
- Remedy:** Please send the archive file to the customer service.

A00D0059, Invalide Opcode

Display: [A00D0059](#)

System message

- Cause:** The programming system has generated a faulty compilation.
- Remedy:** Please send the archive file to the customer service.

XLC/MLC diagnostic system tables

A00D0100, Access on odd addressDisplay: [A00D0100](#)

System message

Cause: Access using the pointer was made to an unauthorized address.**Solution:** Check the PLC program regarding the use of pointers. Possibly integrate the library RIL_CheckRtv.Lib.

This library requires runtime so that the cycle time of the tasks increases. Further information can be found in the description of this library.

A00D0101, Array bounds exceededDisplay: [A00D0101](#)

System message

Cause: The index of an array has been exceeded.**Solution:** Check the PLC program regarding the use of array accesses. Possibly integrate the library RIL_CheckRtv.Lib.

This library requires runtime so that the cycle time of the tasks increases. Further information can be found in the description of this library.

A00D0102, Division by zeroDisplay: [A00D0102](#)

System message

Cause: A division has been programmed by zero in the PLC program.**Solution:** Check the PLC program regarding the division. Possibly integrate the library RIL_CheckRtv.Lib.

This library requires runtime so that the cycle time of the tasks increases. Further information can be found in the description of this library.

A00D0103, OverflowDisplay: [A00D0103](#)

System message

Cause: The programming system has generated an incorrect compilation.**Solution:** Please send the archive file to customer service.**A00D0104, Non continuable exception**Display: [A00D0104](#)

System message

Cause: The programming system has generated an incorrect compilation.**Solution:** Please send the archive file to customer service.**A00D0150, FPU, Unspecified error**Display: [A00D0150](#)

System message

Cause: The programming system has generated a faulty compilation.**Remedy:** Please send the archive file to the customer service.**A00D0151, FPU, Denormal operand**Display: [A00D0151](#)

System message

Cause: The programming system has generated a faulty compilation.

XLC/MLC diagnostic system tables

Remedy: Please send the archive file to the customer service.

A00D0152, FPU, Division by zero

Display: [A00D0152](#) System message

Cause: In the IEC-Program a division by zero ((L)REAL) was executed.

Remedy: Please check your PLC-Program on a division by zero (Type (L)REAL). If necessary include the library RIL_CheckRtv.Lib.



This library needs runtime so that the cycletime increases. Further informations are contained in the description of this library.

A00D0153, FPU, Inexact result

Display: [A00D0153](#) System message

Cause: The programming system has generated a faulty compilation.

Remedy: Please send the archive file to the customer service.

A00D0154, FPU, Invalid operation

Display: [A00D0154](#) System message

Cause: The programming system has generated a faulty compilation.

Remedy: Please send the archive file to the customer service.

A00D0155, FPU, Overflow

Display: [A00D0155](#) System message

Cause: The programming system has generated a faulty compilation.

Remedy: Please send the archive file to the customer service.

A00D0156, FPU, Stack check failed

Display: [A00D0156](#) System message

Cause: The programming system has generated a faulty compilation.

Remedy: Please send the archive file to the customer service.

A00D0157, FPU, Underflow

Display: [A00D0157](#) System message

Cause: The programming system has generated a faulty compilation.

Remedy: Please send the archive file to the customer service.

A00D0158, Specific diagnosis of node

Display: [A00D0158](#) System message

Cause: The programming system has generated a faulty compilation.

Remedy: Please send the archive file to the customer service.

A00D07D0, Fatal error: Communication

Display: [A00D07D0](#) System message

Cause: A fatal error occurred in the communication.

Remedy: Switch off/on the control. If this error appears again, please inform the customer service.

A00D07D1, Fatal error: Semaphores

Display: [A00D07D1](#) System message

XLC/MLC diagnostic system tables

- Cause:** An error occurred in the semaphore administration.
- Remedy:** Switch off/on the control. If this error appears again, please inform the customer service.

A00D07D2, Fatal error: Memory management

- Display: [A00D07D2](#) System message
- Cause:** An error occurred in the memory administration.
- Remedy:** Switch off/on the control. If this error appears again, please inform the customer service.

A00D07D3, Rexroth-Inline configuration mismatch from node

- Display: [A00D07D3](#) System message
- The projected configuration with IndraWorks does not match the actual configuration of a fieldbus.
- If the program is loaded in IndraLogic, the programming user interface displays the corresponding fieldbus.

Cause:	Remedy:
The projected configuration in IndraWorks is incorrect.	Correct the projected configuration of the Inline-IO-Bus and load it into the control.
Wrong Inline-Modules are plugged to the control.	Switch off the control and plug the correct Inline-Modules to the control.

A00D07D4, File not written ()

- Display: [A00D07D4](#) System message
- A file could not be written.
- The error window that appears in the programming user interface IndraLogic indicates the name of the file which could not be written.

Cause:	Remedy:
The memory card is full.	Delete not used files on the memory card.

A00D07E3, PLC can not be started with pending error - RESET

- Display: [A00D07E3](#) System message
- Integration of the library RIL_CheckRtv.lib has detected an error in the runtime of the PLC project and stopped the PLC.
- The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.
- Cause:** Restarting the PLC project requires the PLC to be reset. This error is generated if an attempt is made to start the PLC instead of resetting the control.



A renewed attempt to restart the PLC without reset is rejected with runtime error 2039 and the same error text.

Error message 2019 (or 16#7E3) and 2039 (or 16#7F7) alternate, providing no further error message occurs.

- Solution:** Please reset the control. Restart the PLC.

XLC/MLC diagnostic system tables

A00D07E4, Array lower bounds violation - RESET

Display: [A00D07E4](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: An array is accessed by an unauthorized small index.

Program:

```
Declaration:
  x: BOOL;
  Fehlerarray: Array [1..100] of BOOL;
Implementation:
  LD x
  ST Fehlerarray[0];
```

Solution: Reset the control. Restart the PLC once you have amended your PLC project.

A00D07E5, Array upper bounds violation - RESET

Display: [A00D07E5](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: An array is accessed by an unauthorized large index.

Program:

```
Declaration:
  x: BOOL;
  Fehlerarray: Array [1..100] of BOOL;
Implementation:
  LD x
  ST Fehlerarray[101];
```

Solution: Reset the control. Restart the PLC once you have amended your PLC project.

A00D07E6, Division (8bit) by zero - RESET

Display: [A00D07E6](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the division, an 8-bit variable was divided by 0.

XLC/MLC diagnostic system tables

Solution: Reset the control. Restart the PLC once you have amended your PLC project.

A00D07E7, Division (16bit) by zero - RESETDisplay: [A00D07E7](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the division, a 16-bit variable was divided by 0.

Solution: Reset the control. Restart the PLC once you have amended your PLC project.

A00D07E8, Division (32bit) by zero - RESETDisplay: [A00D07E8](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the division, a 32-bit variable was divided by 0.

Solution: Reset the control. Restart the PLC once you have amended your PLC project.

A00D07E9, Division (REAL) by zero - RESETDisplay: [A00D07E9](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the division, a REAL variable was divided by 0.

Solution: Reset the control. Restart the PLC once you have amended your PLC project.

A00D07EA, Lower range bounds (unsigned) violation - RESETDisplay: [A00D07EA](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

XLC/MLC diagnostic system tables

Cause: A value smaller than the lower limit has been assigned to a variable declared as a sub-range type.

Program:

```
Declaration:
    uil : UINT (10..20);
Implementation:
    LD 5
    ST uil
```

Solution: Reset the control. Restart the PLC once you have amended your PLC project.

A00D07EB, Upper range bounds (unsigned) violation - RESET

Display: [A00D07EB](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: A value greater than the upper range limit has been assigned to a variable declared as a sub-range type (unsigned).

Program:

```
Declaration:
    uil : UINT (5...20);
Implementation:
    LD 100
    ST uil
```

Solution: Reset the control. Restart the PLC once you have amended your PLC project.

A00D07EC, Lower range bounds (signed) violation - RESET

Display: [A00D07EC](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: A value smaller than the lower range limit has been assigned to a variable declared as a sub-range type (signed).

Program:

```
Declaration:
    il : INT (5...20);
Implementation:
    LD 1
    ST il
```

Solution: Reset the control. Restart the PLC once you have amended your PLC project.

XLC/MLC diagnostic system tables

A00D07ED, Upper range bounds (signed) violation - RESETDisplay: [A00D07ED](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: A value greater than the upper range limit has been assigned to a variable declared as a sub-range type (signed).

Program:

```
Declaration:
    i1 : INT (5...20);
Implementation:
    LD 100
    ST i1
```

Solution: Reset the control. Restart the PLC once you have amended your PLC project.

A00D07EE, Division (LREAL) by zero - RESETDisplay: [A00D07EE](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the division, an LREAL variable has been divided by 0.

Solution: Reset the control and restart the PLC once you have amended your PLC project.

A00D07EF, Invalid pointer access (address) - RESETDisplay: [A00D07EF](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the PLC project, an attempt was made by a pointer to access a variable, whereby the access was outside of the valid PLC memory range.

Solution: Reset the control. Restart the PLC once you have amended your PLC project.

A00D07F0, Invalid pointer access (area) - RESETDisplay: [A00D07F0](#)

System message

XLC/MLC diagnostic system tables

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the PLC project, an attempt was made by a pointer to access a variable, whereby the access was outside of the memory range reserved for this variable.

Solution: Please reset the control. Restart the PLC once you have amended your PLC project.

A00D07F1, Invalid pointer access (Write access on input) - RESET

Display: [A00D07F1](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the PLC project, a pointer has tried to write to an input variable.

Program:

```
Declaration:
  var_in AT %IB0: BYTE;
  ptr_var_in: POINTER TO BYTE;
Implementation:
  ptr_var_in := ADR(var_in);
  ptr_var_in^:=16#AA;
```

Solution: Reset the control. Restart the PLC once you have amended your PLC project.

A00D07F2, Invalid pointer access (Alignment) - RESET

Display: [A00D07F2](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the PLC project, a pointer has attempted to access a variable and the alignment is not consistent.

Solution: Please reset the control. Restart the PLC once you have amended your PLC project.

A00D07F7, PLC can not be started with pending error - RESET

Display: [A00D07F7](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

XLC/MLC diagnostic system tables

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

Cause: Restarting the PLC project requires the PLC to be reset. This error is generated if an attempt is made to start the PLC instead of resetting the control.



A renewed attempt to restart the PLC without reset is rejected with runtime error 2019 and the same error text. Error message 2019 (or 16#7E3) and 2039 (or 16#7F7) alternate, providing no further error message occurs.

Solution: Please reset the control. Restart the PLC.

A00D07F8, Array lower bounds violation - Index modified to MIN!

Display: [A00D07F8](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the runtime of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: An attempt was made to access an array with an unauthorized small index.

Program:

```
Declaration:
  x: BOOL;
  Fehlerarray: Array [1..100] of BOOL;
Implementation:
  LD x
  ST Fehlerarray[0];
```

The index was corrected to the minimum permissible index.

Solution: Please amend your PLC project.

A00D07F9, Array upper bounds violation - Index modified to MAX!

Display: [A00D07F9](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the runtime of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: An array is accessed by an unauthorized large index.

Program:

```
Declaration:
  x: BOOL;
  Fehlerarray: Array [1..100] of BOOL;
Implementation:
  LD x
  ST Fehlerarray[200];
```

The index was corrected to the maximum permissible index.

XLC/MLC diagnostic system tables

Solution: Please amend your PLC project.

A00D07FA, Division (8bit) by zero - Divisor modified to 1!

Display: [A00D07FA](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the division, an 8-bit variable is to be divided by 0. The divisor was corrected to the value 1.

Solution: Please amend your PLC project.

A00D07FB, Division (16bit) by zero - Divisor modified to 1!

Display: [A00D07FB](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the division, a 16-bit variable is to be divided by 0. The divisor was corrected to the value 1.

Solution: Please amend your PLC project.

A00D07FC, Division (32bit) by zero - Divisor modified to 1!

Display: [A00D07FC](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the division, a 32-bit variable is to be divided by 0. The divisor was corrected to the value 1.

Solution: Please amend your PLC project.

A00D07FD, Division (REAL) by zero - Divisor modified to 1.0!

Display: [A00D07FD](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

XLC/MLC diagnostic system tables

Cause: In the division, a REAL variable is to be divided by 0. The divisor was corrected to the value 1.0.

Solution: Please amend your PLC project.

A00D07FE, Lower range bounds (unsigned) violation - Value to MIN!

Display: [A00D07FE](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: A value smaller than the lower range limit is to be assigned to a variable declared as a sub-range type.

Program:

```
Declaration:
  ui1: UINT (10..20);
Implementation:
  LD 5
  ST ui1
```

The value of the variable ui1 was corrected to the minimum permitted value.

Solution: Please amend your PLC project.

A00D07FF, Upper range bounds (unsigned) violation - Value to MAX!

Display: [A00D07FF](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: A value greater than the upper range limit is to be assigned to a variable declared as a sub-range type (unsigned).

Program:

```
Declaration:
  ui1 : UINT (5...20);
Implementation:
  LD 100
  ST ui1
```

The value of the variable ui1 was corrected to the maximum permitted value.

Solution: Please amend your PLC project.

A00D0800, Lower range bounds (signed) violation - Value to MIN!

Display: [A00D0800](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

XLC/MLC diagnostic system tables

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: A value smaller than the lower range limit is to be assigned to a variable declared as a sub-range type (signed).

Program:

```
Declaration:
  i1 : INT (5...20);
Implementation:
  LD 1
  ST i1
```

The value of the variable ui1 was corrected to the minimum permitted value.

Solution: Please amend your PLC project.

A00D0801, Upper range bounds (signed) violation - Value to MAX!

Display: [A00D0801](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: A value greater than the upper range limit is to be assigned to a variable declared as a sub-range type (signed).

Program:

```
Declaration:
  i1 : INT (5...20);
Implementation:
  LD 100
  ST i1
```

The value of the variable ui1 was corrected to the maximum permitted value.

Solution: Please amend your PLC project.

A00D0802, Division (LREAL) by zero - Divisor modified to 1.0!

Display: [A00D0802](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the division, an LREAL variable is to be divided by 0. The divisor was corrected to the value 1.0.

Solution: Please amend your PLC project.

XLC/MLC diagnostic system tables

A00D0803, Invalid pointer access (address) - Pointer to dummy!Display: [A00D0803](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the PLC project, an attempt was made by a pointer to access a variable, whereby the access is outside of the valid PLC memory range.

The pointer accessed a dummy variable.

Solution: Please amend your PLC project.

A00D0804, Invalid pointer access (area) - Pointer to dummy!Display: [A00D0804](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the PLC project, a pointer has tried to access a variable. Access would have been outside of the memory range reserved for this variable.

The pointer accessed a dummy variable.

Solution: Please amend your PLC project.

A00D0805, Invalid pointer access (write on input)- Pointer to dummy!Display: [A00D0805](#)

System message

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the PLC project, a pointer has tried to write to an input variable.

Program:

```
Declaration:
    var_in AT %IB0: BYTE;
    ptr_var_in: POINTER TO BYTE;
Implementation:
    ptr_var_in:= ADR(var_in);
    ptr_var_in^:= 16#AA;
```

The pointer access was corrected to a dummy variable.

Solution: Please amend your PLC project.

A00D0806, Invalid pointer access (alignment) - Pointer to dummy!Display: [A00D0806](#)

System message

XLC/MLC diagnostic system tables

Integration of the library RIL_CheckRtv.lib has detected an error in the run-time of the PLC project and stopped the PLC.

The error that has occurred is specified by an error message in the IndraLogic programming interface and can be localized by menu item "Call stack menu" providing the "Debugging" compilation option is enabled.

The network that follows the network causing the error is displayed in the call stack menu.

Cause: In the PLC project, a pointer is to try to access a variable and the alignment is not consistent.

Access was to a dummy variable.

Solution: Please amend the PLC project.

A00D0807, Identification PROFINET device

Display: PN_IDENT

System message

A PROFINET IO-Controller identified the control as PROFINET IO-Device.

Solution: The text display in the display of the control remains present until the identification is completed.

The display is also deleted if further entries are made in the diagnostic memory of the control.

A00D1200, WriteParameter, data type not supported by POU

Display: A00D1200

System message

The error was generated by one of the following function blocks. The type of parameter (list or individual parameter) or the type (REAL, DINT) is not consistent with the input of the function block.

Cause: The access error occurs when writing a parameter data if the wrong function block has been selected.

Solution: Check the function block type in accordance with your required parameters.

Writing parameters:

	DINT	REAL	List of parameters
MB_WriteParameter	X		
MB_WriteRealParameter		X	
MB_WriteListParameter			X

A00D1201, WriteParameter, data type not supported by POU

Display: A00D1201

System message

The error was generated by one of the following function blocks. The type of parameter (list or individual parameter) or the type (REAL, DINT) is not consistent with the input of the function block.

Cause: The access error occurs when writing a parameter data if the wrong function block has been selected.

Solution: Check the function block type in accordance with your required parameters.

Writing parameters:

XLC/MLC diagnostic system tables

	DINT	REAL	List of parameters
MB_WriteParameter	X		
MB_WriteRealParameter		X	
MB_WriteListParameter			X

A00D1202, WriteParameter, data type not supported by POUDisplay: [A00D1202](#)

System message

The error was generated by one of the following function blocks. The type of parameter (list or individual parameter) or the type (REAL, DINT) is not consistent with the input of the function block.

Cause: The access error occurs when writing a parameter data if the wrong function block has been selected.

Solution: Check the function block type in accordance with your required parameters.

Writing parameters:

	DINT	REAL	List of parameters
MB_WriteParameter	X		
MB_WriteRealParameter		X	
MB_WriteListParameter			X

A00D1203, WriteParameter, data type not supported by POUDisplay: [A00D1203](#)

System message

The error was generated by one of the following function blocks. The type of parameter (list or individual parameter) or the type (REAL, DINT) is not consistent with the input of the function block.

Cause: The access error occurs when writing a parameter data if the wrong function block has been selected.

Solution: Check the function block type in accordance with your required parameters.

Writing parameters:

	DINT	REAL	List of parameters
MB_WriteParameter	X		
MB_WriteRealParameter		X	
MB_WriteListParameter			X

A00D1204, WriteParameter, data type not supported by POUDisplay: [A00D1204](#)

System message

The error was generated by one of the following function blocks. The type of parameter (list or individual parameter) or the type (REAL, DINT) is not consistent with the input of the function block.

Cause: The access error occurs when writing a parameter data if the wrong function block has been selected.

Solution: Check the function block type in accordance with your required parameters.

Writing parameters:

XLC/MLC diagnostic system tables

	DINT	REAL	List of parameters
MB_WriteParameter	X		
MB_WriteRealParameter		X	
MB_WriteListParameter			X

A00D2EE4, Module error Inline bus goes

Display: [A00D2EE4](#)

System message

At the Inlinebus of the control a queuing module error has been deleted again or has disappeared.

So, e.g., a short circuit in an output module can have caused a module error which has disappeared now, however, again.

A00E0001, No entry found in data base

Display: [A00E0001](#)

System message

The data base contains no information to the actual diagnosis number.

Remedy: Please contact the service.

A00E0002, OK

Display: [A00E0002](#)

System message

The message contains the standard information for an error-free working axis.

A0110001, Axis has been removed

Display: [A0110001](#)

System message

The axis was removed by the control firmware.

A0110002, Axis has been created

Display: [A0110002](#)

System message

The axis was recreated by the control firmware.

A0110031, PM: Axis not in standstill

Display: [A0110031](#)

System message

Switching to parameterization mode is not possible, since the axis is not in "Standstill" state.

A0110032, PM: Axis not in power off

Display: [A0110032](#)

System message

Switching to parameterization mode is not possible, since the axis is not in "Power off" state.

A0110033, PM: Parameterization level not supported

Display: [A0110033](#)

System message

Switching to parameterization mode is not possible, since the axis does not support the "Parameterization level" function.

A0110034, PM: Switching to parameterization level failed

Display: [A0110034](#)

System message

Due to an error, it is not switched to parameterization mode.

XLC/MLC diagnostic system tables

A0110035, PM: Switching to operation level failedDisplay: [A0110035](#)

System message

Due to an error, it is not switched to operating mode.

A01D0001, Operation mode switch was switched to RUNDisplay: [A01D0001](#)

System message

The operation mode switch of the XM21 was switched to the RUN position (up).

This diagnostics signals that the user operated the switch. Switching the operation mode switch does not mandatorily result in a triggered action.

A01D0002, Operation mode switch was switched to STOPDisplay: [A01D0002](#)

System message

The operation mode switch of the XM21 was switched to the STOP position (center).

This diagnostics signals that the user operated the switch. Switching the operation mode switch does not mandatorily result in a triggered action.

A01D0003, Operation mode switch was switched to CLEARDisplay: [A01D0003](#)

System message

The operation mode switch of the XM21 was switched to the CLEAR position (down).

This diagnostics signals that the user operated the switch. Switching the operation mode switch does not mandatorily result in a triggered action.

A0200001, P0 STOP, reached phase 0, PLC in stop

Display: P0 STOP

System message

The Motion is in phase 0, the PLC in "Stop" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is stopped.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be started using IndraWorks.

A0200002, P1 STOP, reached phase 1, PLC in stop

Display: P1 STOP

System message

The Motion is in phase 1, the PLC in "Stop" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is stopped.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be started using IndraWorks.

A0200003, P2 STOP, reached phase 2, PLC in stop

Display: P2 STOP

System message

The Motion is in phase 2, the PLC in "Stop" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is stopped.

XLC/MLC diagnostic system tables

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be started using IndraWorks.

A0200004, P3 STOP, reached phase 3, PLC in stop

Display: P3 STOP System message

The Motion is in phase 3, the PLC in "Stop" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is stopped.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be started using IndraWorks.

A0200005, BB STOP, Motion ready, PLC in stop

Display: BB STOP System message

The Motion is ready, the PLC is in "Stop" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is stopped.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be started using IndraWorks.

A0200006, P0 RUN, reached phase 0, PLC in run

Display: P0 RUN System message

The Motion is in phase 0, the PLC is in "Run" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is started.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be stopped using IndraWorks.

A0200007, P1 RUN, reached phase 1, PLC in run

Display: P1 RUN System message

The Motion is in phase 1, the PLC is in "Run" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is started.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be stopped using IndraWorks.

A0200008, P2 RUN, reached phase 2, PLC in run

Display: P2 RUN System message

The Motion is in phase 2, the PLC is in "Run" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is started.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be stopped using IndraWorks.

A0200009, P3 RUN, reached phase 3, PLC in run

Display: P3 RUN System message

The Motion is in phase 3, the PLC is in "Run" status.

XLC/MLC diagnostic system tables

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is started.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be stopped using IndraWorks.

A0200010, BB RUN, Motion ready, PLC in run

Display: BB RUN

System message

The motion is ready, the PLC is in "Run" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is started.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be stopped using IndraWorks.

A0200011, P0 INIT, reached phase 0, PLC in init

Display: P0 INIT

System message

The Motion is in phase 0, the PLC is in "Init" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is still being initialized.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be started using IndraWorks.

A0200012, P1 INIT, reached phase 1, PLC in init

Display: P1 INIT

System message

The Motion is in phase 1, the PLC is in "Init" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is still being initialized.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be started using IndraWorks.

A0200013, P2 INIT, reached phase 2, PLC in init

Display: P2 INIT

System message

The Motion is in phase 2, the PLC is in "Init" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is still being initialized.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be started using IndraWorks.

A0200014, P3 INIT, reached phase 3, PLC in init

Display: P3 INIT

System message

The Motion is in phase 3, the PLC is in "Init" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is still being initialized.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be started using IndraWorks.

XLC/MLC diagnostic system tables

A0200015, BB INIT, Motion ready, PLC in init

Display: BB INIT

System message

The Motion is ready, the PLC is in "Init" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is still being initialized.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be started using IndraWorks.

A0200016, Firmware download successfully finished

Display: [A0200016](#)

System message

Firmware download successfully completed.

Cause: The new firmware has been successfully loaded into the control.
The system is ready for reboot. The downloaded firmware will only be enabled with a reboot.

Solution: -

A0200017, Hardware changed; Restoring NVRAM

Display: [A0200017](#)

System message

A hardware change took place.

The resulting behavior depends on the control hardware used, however the result is identical.

The following applies to the CML65/45/25 hardware:

The control parameters and the PLC-RETAIN data are only saved on the Compact Flash card (CF) and therefore no longer need synchronization.

This message is only a notification about the hardware change.

Cause: A hardware change has taken place.

Solution: -

A0200018, Restoring NVRAM

Display: [A0200018](#)

System message

The NVRAM has been manually restored using parameter C-0-1001.

All of the data saved in the flash and in the NVRAM, as well as values saved internally, for instance axis position, are overwritten with values saved when the command "C-0-1002, Command: store MotionControl parameters in FW module" was executed the last time (refer to the parameter documentation on C-0-1001 or C-0-1002).

A reboot is needed once this command has been executed.

Cause: The NVRAM has been manually restored using parameter C-0-1001.

Solution: -

A0200020, Power cycle of control necessary

Display: PWRCYCLE

System message

The system detected that a control restart is required. This can be the case for example if hardware function blocks also have to be initialized after a firmware update and if this can only be performed by switching off and on the current voltage supply.

XLC/MLC diagnostic system tables

Cause: A firmware update, for example, after which the hardware has to be reinitialized.

Solution: Switch on and off the voltage supply of the control (hardware has to be voltage-free for a short period).

Please contact the customer support if this message occurs upon each control startup.

A0200021, P0 RDY, reached phase 0, PLC in ready

Display: P0 RDY

System message

The Motion is in phase 0, the PLC in "Breakpoint" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is at a breakpoint.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be moved into another status using IndraWorks.

A0200022, P1 RDY, reached phase 1, PLC in ready

Display: P1 RDY

System message

The Motion is in phase 1, the PLC in "Breakpoint" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is at a breakpoint.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be moved into another status using IndraWorks.

A0200023, P2 RDY, reached phase 2, PLC in ready

Display: P2 RDY

System message

The Motion is in phase 2, the PLC in "Breakpoint" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is at a breakpoint.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be moved into another status using IndraWorks.

A0200024, P3 RDY, reached phase 3, PLC in ready

Display: P3 RDY

System message

The Motion is in phase 3, the PLC in "Breakpoint" status.

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is at a breakpoint.

Solution: Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be moved into another status using IndraWorks.

A0200025, BB RDY, Motion ready, PLC in ready

Display: BB RDY

System message

The Motion is ready, the PLC is in "Breakpoint" status.

XLC/MLC diagnostic system tables

- Cause:** The Motion was switched into this mode (e.g. by the parameter "C-0-0450, Motion, startup target mode" or "C-0-0451, Motion target mode". The PLC is at a breakpoint.
- Solution:** Parameter "C-0-0451, Motion, target mode" can be used for switching into other Motion modes. The PLC can be moved into another status using IndraWorks.

A0200026, Time write-protected because LINK slave

- Display: [A0200026](#) System message
- The adaptation of the control system time (C-0-0050) failed.
- Ursache:** In the link, the control is operated as a slave control and automatically accepts the master's control system time (C-0-0050). For this reason, the control system time of the slave control is therefore not writable.
- The system times of the link slaves are synchronized to the system time of the master.

A0200027, Finishing download, don't switch off the control

- Display: [A0200027](#) System message
- The download of the firmware or the archive is completed. During this period, the control may not be switched off since this might result in a storage of inconsistent firmware states and archive states up to the case that the firmware or hardware cannot be operated anymore.
- Cause:** The new firmware or an archive is loaded into the control.
- Remedy:** Control is not switched off until the download is completed.

A0200028, PLC runtime incompatible, application invalid

- Display: [A0200028](#) System message
- During the firmware download the runtime environment for the PLC application might be exchanged. The system checks the compatibility between the runtime of the new firmware and the existing PLC application. If an incompatibility has been detected the existing application will be marked invalid.
- Cause:** New PLC-runtime is no longer compatible to the existing application.
- Remedy:** Reload the PLC application with IndraWorks.

A0200030, INIT, PLC in init

- Display: INIT System message
- The device is in INIT operating state, i.e. the control is rebooted.

A0200031, RDY, PLC in ready

- Display: RDY System message
- The device is in READY operating state, i.e. no valid PLC application is loaded.

A0200032, STOP, PLC in stop

- Display: STOP System message
- The device is in STOP operating state, i.e. a valid PLC application is loaded that is in STOP or DEBUG status.

A0200033, RUN, PLC in run

- Display: RUN System message

XLC/MLC diagnostic system tables

The device is in RUN operating state, i.e. a valid PLC application is loaded that is in RUN status.

A0200034, Hardware watchdog not active during boot configurationDisplay: [A0200034](#)

System message

That hardware watchdog of the control was disabled via the boot configuration. Disabling the hardware watchdog is signaled in the system state (C-0-0023, Bit 22).

A0200035, Hardware watchdog not active during control configurationDisplay: [A0200035](#)

System message

That hardware watchdog of the control was disabled via the control configuration (C-0-0036, Bit 28). Disabling the hardware watchdog is signaled in the system state (C-0-0023, Bit 22).

A0290001, Kinematics has been removedDisplay: [A0290001](#)

System message

The kinematics was removed by the firmware control.

A0290002, Kinematics has been createdDisplay: [A0290002](#)

System message

The kinematics was recreated by the firmware control.

A0290010, Axis coordinate systemDisplay: [A0290010](#)

System message

Achskoordinatensystem

A0290011, Base coordinate systemDisplay: [A0290011](#)

System message

Basiskoordinatensystem

A0290012, Machine coordinate systemDisplay: [A0290012](#)

System message

Maschinenkoordinatensystem

A0290013, Product coordinate systemDisplay: [A0290013](#)

System message

Produktkoordinatensystem

A039**, PLC messages from the kernel**

Cause: The PLC kernel reports a message.

Solution: There is no further information available about this warning. Check the IndraLogic online error list or contact the customer support.

A03A0002, Online changeDisplay: [A03A0002](#)

System message

The message shows the start and the end of an online change.

For details, please refer to the short text.

A03A3001, Messages from DCC-ComponentsDisplay: [A03A3001](#)

System message

XLC/MLC diagnostic system tables

Common message, triggered by company-internal components of IndraLogic 2G.

For details, please refer to the respective short text.

3.1.3 Warnings

General information

A warning consists of an 8-digit diagnostic number and a diagnostic text in several languages.

The first character of the diagnostic number of a warning is an "E", followed by a "0".

E000****, Drive warning with warning number E****

Warning in the drive.

Cause: At least one axis/drive issues a warning with the warning number E****.

Solution: The respective online help is available for self-manufactured drives.

Example:

- E8034 E-STOP enabled <=> E0008034

Please enter into the IndraWorks online help:

- **Find** tab: E8034

For third-party drives, use the drive documentation.

See also: [IndraDrive/HydraulicDrive drive warnings](#) , page 57

E00B0001, ASIC Error

Display: [E00B0001](#)

Non-fatal warning

A non-fatal internal firmware error occurred

Cause: An error occurred in the firmware.

Remedy: Stop the machine in the common way, subsequently switch off/on the machine. If the error still exist, please contact the service.

E00B0005, Drive warning

Display: [E00B0005](#)

Non-fatal warning

As an alternative to an error, an axis can trigger a warning (or message) in less critical cases.

The warning is retained independently of the deletion of an error and only disappears once the reason for its occurrence has been eliminated.

A warning is detected at "C-0-0650, Diagnostic, status word, bit 1", and "C-0-0023, System status, bit 25", and the warning bit is set in each case.

Cause: At least one axis / one drive reports a warning.

Solution: Relevant Online Help is available with own-production drives. With external drives, please use the documentation for the drive.

E00B0179, sercos III: redundancy loss

Display: [E00B0179](#)

Non-fatal warning

Die Verbindung zwischen zwei sercos Geräten ist unterbrochen.

Ursache:

- Faulty connectors
- sercos cable defective
- sercos device defective

XLC/MLC diagnostic system tables

- Solution:**
1. Check the connection between the sercos devices.
 - sercos addresses of devices among which the redundancy error was detected, can be read out in parameter C-0-0517
 - The topology position of the interruption can be read out in parameter C-0-0518.
 2. Error removal: E.g., replace the defective cable
 3. Re-establish the redundancy:
 - C-0-0511, set bit 4. If bit 4 is set, the control tries to restore the redundant ring topology after a loss of redundancy in the sercos ring
 - By setting the bit, the same effect can be achieved in the PLC program

```
GVL_Base.ControlData[ ].DRIVE_BUS_REBUILD_RING
```

The warning can be permanently disabled via the parameter C-0-0506, bit 7.



If the cable connection is interrupted between two sercos devices, the green link LEDs are not active at the corresponding sercos connections.

E00C0001, Parameter inconsistent, restorage via C-0-1001

Display: [E00C0001](#)

Non-fatal warning

A hardware change has taken place, i.e. the MLC parameters and the PLC RETAIN data saved on the Compact Flash card (CF) differ from the MLC parameters and the PLC RETAIN data saved in the NVRAM of the MLC hardware.

Therefore, the parameter C-0-1001 is automatically executed during the boot up after the hardware has been changed.

All of the data saved in the flash and in the NVRAM, as well as values saved internally, for instance axis position, are overwritten with values saved when the command "C-0-1002, Command: store MotionControl parameters in FW module" was executed the last time



After executing this command, the system will restart automatically to accept the new system data.

Cause: A hardware change has taken place.

Solution: -

E00C0002, Running on unsupported hardware

Display: [E00C0002](#)

Non-fatal warning

The control firmware is operated on unsupported hardware. This can lead to unforeseeable system statuses and even to the system crashing with the loss of all parameters and PLC RETAIN data.

Cause: An unsupported hardware is used.

Solution: Please change to supported hardware.

E00C0003, Running on unsupported hardware revision

Display: [E00C0003](#)

Non-fatal warning

The control firmware is operated on an unsupported hardware revision (e.g. an HW prototype among others). This can lead to unforeseeable system statuses and even to the system crashing with the loss of all parameters and PLC RETAIN data.

XLC/MLC diagnostic system tables

Cause: An unsupported hardware revision is used.
Solution: Please change to a supported hardware revision. Please contact customer service.

E00C0004, Running on unsupported hardware revision

Display: [E00C0004](#) Non-fatal warning

The control firmware is operated on an unsupported hardware revision (e.g. an HW prototype among others) and should only be used without function modules. The use of function modules on this hardware can lead to unforeseeable system statuses and even to the system crashing with the loss of all parameters and PLC RETAIN data.

Cause: An unsupported hardware revision is used.
Solution: Please change to a supported hardware revision. Please contact customer service.

E00D0004, Acyclic communication active yet

Display: [E00D0004](#) Non-fatal warning

Acyclic communication still active

Reason: The function block has been retriggered before the requested data has been received.
Solution: Only set the function block to "Execute/Enable:= TRUE" again using an edge change after a successful "Done = TRUE".

E00D1001, Writeaccess to parameter S-0-0000 of UserCmdDataX

Display: [E00D1001](#) Non-fatal warning

There is a write access to parameter (S-0-0000).

Cause: There is a write access in the PLC user program to a not configured, user-defined command value A, B, C or D. If this command value is not configured, it is contained in parameter (S-0-0000).

Remedy: 1. Configure the corresponding user-defined command value in IndraWorks by a valid parameter unequal (S-0-0000).
2. Or remove the access from the PLC-Program.

E00D1002, Unknown PLC system task

Display: [E00D1002](#) Non-fatal warning

This diagnostics is only used for internal purposes. Contact customer support.

E00D2EE0, Nonconforming Inline IO Configuration

Display: [E00D2EE0](#) Non-fatal warning

The projected configuration by IndraWorks does not agree with the actual configuration of the inline io bus.

Cause:	Remedy:
The configuration pro-jected in IndraWorks is incorrect.	Correct these settings and load it into the control.
Wrong inline modules are connected to the control.	Switch off the control and plug the proper inline modules to the control.

E00E0026, Version conflict in error logbook, logbook deleted!

Display: [E00E0026](#) Non-fatal warning

XLC/MLC diagnostic system tables

The error memory (diagnostic logbook) has a version ID.

At system start, it is checked whether the error memory version is compatible to the firmware version.

If the version is not compatible, incompatible entries or all entries are deleted if required.

The system continues its normal operation.

Cause: Firmware update, firmware downgrade. The new firmware does not support the version of the error memory.

Solution: None.

Not required, since only the old entries are lost.

E00E0050, Logbook is inconsistent. Faulty entries deleted.

Display: [E00E0050](#)

Non-fatal warning

The error memory (diagnostic logbook) is stored on the CF card at control runtime.

When reading in the entries, inconsistent entries were found.

The following entries cannot be interpreted and are thus deleted.

The system continues its normal operation.

Cause: While saving, the control is disconnected from the power supply.

Solution: None. Only the older entries are lost.

E0110001, Axis in 'PowerOn'

Display: [E0110001](#)

Non-fatal warning

The control should be switched from operating mode to parameterization mode, while an axis is in the "Power on carried out" state.

Cause: An axis is in the "Power on carried out" state.

Solution: Move axis using MC_Power to "No power connected" state, parameter "A-0-0022, Extended axis status, bit 3 = 0".

E0110002, Axis not in 'StandStill'

Display: [E0110002](#)

Non-fatal warning

The control is to be switched from operating mode to parameterization mode while an axis is not in the "Axis velocity less/equal to A-0-0222 standstill" ("A-0-0021, Axis status, bit 5").

Cause: An axis is not reporting "Axis velocity $\leq$ A-0-0222 standstill".

Solution: Bring the axis to a standstill or adjust parameter "A-0-0222, Standstill window".

E0110029, Positive travel limit exceeded

Display: [E0110029](#)

Non-fatal warning

The drive provides a function to monitor a permitted travel range by means of parameterizable software end switches.



The monitoring of the travel range must be enabled and parameterized using the parameters "A-0-0030, Position limit value, positive", "A-0-0031, Position limit value, negative" and "A-0-0029, Position polarities".

The drive's reaction (warning or error) to an infringement of a travel range must be parameterized in parameter "A-0-0028, Travel range limit".

XLC/MLC diagnostic system tables

Cause:	Solution:
A command value has been specified for the axis which leads to an axis position outside of the positive travel range/ position/limit value "A-0-0030, Position limit value, positive".	Specify a command value that leads again to the permitted travel range. Contact the machine manufacturer to clarify the cause of the faulty command value.
Incorrect parameterization of the positive travel range / position limit value.	Check and possibly correct parameterization of "A-0-0030, Position limit value, positive".



The parameter "A-0-2795, Position window" is used to execute a hysteresis function when evaluating the position limit values.

Refer also to the functional description "Position limitation/Travel range limit"

E0110030, Negative travel limit exceeded

Display: [E0110030](#)

Non-fatal warning

The drive provides a function to monitor a permitted travel range by means of parameterizable software end switches.



The monitoring of the travel range must be enabled and parameterized using the parameters "A-0-0030, Position limit value, positive", "A-0-0031, Position limit value, negative" and "A-0-0029, Position polarities".

The drive's reaction (warning or error) to an infringement of a travel range must be parameterized in parameter "A-0-0028, Travel range limit".

Cause:	Solution:
A command value has been specified for the axis which leads to an axis position outside of the negative travel range/ position/limit value "A-0-0031, Position limit value, negative".	Specify a command value that leads again into the permitted travel range. Contact the machine manufacturer to clarify the cause of the faulty command value.
Incorrect parameterization of the positive travel range / position limit value.	Check and possibly correct parameterization of "A-0-0031, Position limit value, negative".



The parameter "A-0-2795, Position window" is used to execute a hysteresis function when evaluating the position limit values.

Refer also to the functional description "Position limitation/Travel range limit"

E0110050, Axis position is extrapolated

Display: [E0110050](#)

Non-fatal warning

Link axes offer the functionality of extrapolating the axis position with AT or MDT failures. The warning indicates that an extrapolation such as this is taking place. The number of cycles after which the diagnostics is displayed depends on the cycle time of the link. This means that the warning is displayed when the axis extrapolates 32 ms long (at 2 ms):

XLC/MLC diagnostic system tables

Cycle time in the link	Cycles with AT/MDT failures before the diagnostics is displayed
2000 µs	16
4000 µs	8
8000 µs	4

Tab. 3-1: Dependency of cycle time for display of diagnostics

Cause:	Solution:
MDT or AT failures on the link ring.	Check the link ring cabling. Check the parameter "C-0-0702, C2C, OWG length".
Link ring breakage.	Eliminate ring breakage on the link ring.

E0110100, Control axis in warningDisplay: [E0110100](#)

Non-fatal warning

The controller has a warning set from the PLC. A certain diagnostic code in A-0-0627 was not removed.

Cause: During the execution of the PLC program, the controller axis issued a warning.

Remedy: Correct the cause of the warning in the controller.

E0110101, Control axis, command in PLC-Stop or breakpoint refusedDisplay: [E0110101](#)

Non-fatal warning

To execute commands on the controller axis, the PLC program may not be stopped or located at a breakpoint if there is a PLC parameter system is active.

Cause: While starting a command on the controller axis, it was detected that the PLC is either in "Stop" state or at a breakpoint.

Solution: Delete the breakpoint and restart the PLC program.

E0112039, Maximum acceleration exceededDisplay: [E0112039](#)

Non-fatal warning

The acceleration specified by the function block is checked against the maximum value "A-0-0034, Acceleration limit value, bipolar".

Cause:	Solution:
"A-0-0034, Acceleration limit value, bipolar" too low.	Check and possibly correct parameterization of "A-0-0034, Acceleration limit value, bipolar".
The specified acceleration was greater than the value parameterized in "A-0-0034, Acceleration limit value, bipolar".	Reduce the acceleration value used.

E0112047, Velocity of interpolation = 0Display: [E0112047](#)

Non-fatal warning

At discrete movements the programmed velocity is checked.

Cause: The specified velocity is 0.

Remedy: Adjust the velocity to the desired value.

XLC/MLC diagnostic system tables

E0112048, Acceleration of interpolation = 0

Display: [E0112048](#)

Non-fatal warning

At discrete movements the programmed velocity is checked.

Cause: The specified velocity is 0.

Remedy: Adjust the velocity to the desired value.

E0112049, Positioning velocity greater than limit (A-0-0032/ 33)

Display: [E0112049](#)

Non-fatal warning

The effective velocity command value (positioning velocity) is limited to the value parameterized in "A-0-0032, Velocity limit value, positive" or "A-0-0033, Velocity limit value, negative".

Cause:	Solution:
Incorrect velocity specification. The value specified in the program is too large.	Change the programmed velocity to the required value.
"A-0-0032, Velocity limit value, positive" or "A-0-0033, Velocity limit value, negative" have been incorrectly parameterized.	Monitor the parameter content of "A-0-0032, Velocity limit value, positive" or "A-0-0033, Velocity limit value, negative".

E0112050, Torque/force limit exceeded (A-0-0038)

Display: [E0112050](#)

Non-fatal warning

The specified force or specified torque is crosschecked against the maximum value "A-0-0038, Torque/force limit value, bipolar".

Cause:	Remedy:
The value in "A-0-0038, Torque/force limit value, bipolar" is too low.	Check and correct parameterization of "A-0-0038, Torque/force limit value, bipolar" if required
The force/torque specification was higher than the value parameterized in "A-0-0038, Torque/force limit value, bipolar".	Reduce the torque/force value used

E0112051, Commanded torque/force grather than Limit (A-0-0038)

Display: [E0112051](#)

Non-fatal warning

The command force or command torque is limited to the value parameterized in "A-0-0038, Torque/force limit value, bipolar".

Cause:	Remedy:
Incorrect force/torque specification. The value specified in the program is too high	Change the programmed force or programmed torque to a possible value
"A-0-0038, Bipolar torque/force limit value" is incorrectly parameterized	Check the parameter content of "A-0-0038, Torque/force limit value, bipolar"

E0112055, Feedrate Override A-0-0240=0

Display: [E0112055](#)

Non-fatal warning

Cause: Feedrate Override A-0-0240=0.

E0112063, Commanded velocity greater than Limit (A-0-0032/ 33)

Display: [E0112063](#)

Non-fatal warning

The command velocity is limited to the value parameterized in "A-0-0032, Velocity limit value, positive" or "A-0-0033, Velocity limit value, negative".

XLC/MLC diagnostic system tables

Cause:	Solution:
Incorrect velocity specification. The value specified in the program is too large.	Change the programmed velocity to a possible value.
"A-0-0032, Velocity limit value, positive" or "A-0-0033, Velocity limit value, negative" have been incorrectly parameterized.	Check the parameter content of either "A-0-0032, Velocity limit value, positive" or "A-0-0033, Velocity limit value, negative".



The command velocity should be limited to 99% of the maximum velocity for a **virtual axis** as well as for a **real axis with interpolation in the control**. (Computational accuracy in case the command value is specified via the control and by taking the actual value encoder noise into consideration)

In this case, the limit values A-0-0032 "Velocity limit value, positive" and A-0-0033 "Velocity limit value, negative" have to be set to a larger value.

E0112064, Slave axis, velocity limit exceeded (A-0-0032/33)Display: [E0112064](#)

Non-fatal warning

An axis in the "Synchronized Motion" state exceeds "A-0-0032, Velocity limit value, positive" or "A-0-0033, Velocity limit value, negative".



In case of a virtual axis there is no motion to the limit values!

Cause:	Solution:
Velocity specification by the master axis is too high.	Change the programmed velocity to a lower value.
"A-0-0032, Velocity limit value, positive" or "A-0-0033, Velocity limit value, negative" have been incorrectly parameterized.	Check the parameter content of either "A-0-0032, Velocity limit value, positive" or "A-0-0033, Velocity limit value, negative".

E0113001, Maximum jerk exceededDisplay: [E0113001](#)

Non-fatal warning

The specified jerk is checked against the maximum value "A-0-0036, Jerk limit value, bipolar".

Cause:	Solution:
"A-0-0036, Jerk limit value, bipolar" too low.	Check and possibly correct parameterization of "A-0-0036, Jerk limit value, bipolar".
The specified acceleration was greater than the value parameterized in "A-0-0036, Jerk limit value, bipolar".	Reduce the acceleration value used.

E0113002, Velocity too high for cycletimeDisplay: [E0113002](#)

Non-fatal warning

A maximum permissible velocity for axes interpolated on the control results from the defined cycle time.

A velocity higher or equal to the maximum permissible velocity has been commanded in the user program. The velocity has been limited by the control.

XLC/MLC diagnostic system tables

For more information, refer to

- Rexroth IndraMotion MLC 13VRS Functional Description, chapter
Operating modes for synchronous motions with electronic gear function
- Boundary conditions for the velocity specifications to an axis in the
PLCopen state "Synchronized Motion"

E0113003, Dynamic jerk adjust active

Display: [E0113003](#)

Non-fatal warning

With active jerk limitation (A-0-0216!= 0) an unfortunate choice of commands can cause the velocity to be greatly exceeded.

For example, this can happen if a motion command that is running is prematurely interrupted by another motion command and the new commanded jerk is significantly below the previous commanded jerk. As the reduction of the acceleration that has already been built up now takes considerably longer using the new lower commanded jerk, this can lead to the velocity being exceeded.

In the event of a delay, this can therefore also cause an unwanted change of direction.

"Dynamic jerk adjustment" is intended to prevent precisely this behavior. To do this, the commanded jerk is adjusted (increased) in such a way that if the velocity is exceeded, it is limited to a range set between two boundaries.

The lower limit is set to 0 (standstill, i.e. no change in direction). The upper limit is set by the velocity limit set in parameter A-0-0032.

If the jerk is adjusted, this is indicated by the warning "E113003; Dynamic jerk adjust active".

Dynamic jerk adjustment can be disabled in parameter "A-0-0201, Interpolator configuration".

E0170001, Configured master axis is parking

Display: [E0170001](#)

Non-fatal warning

The control should be switched from operation mode to parameterization mode while an axis, configured as master, is parked.

Cause: A configured master axis is parked.

Remedy: Set parameter "A-0-0024, Axis condition" of the according axis to 0 so that the axis is parked no longer.

E0180005, Warning: Motion kernel exceeded control cycle time

Display: [E0180005](#)

Non-fatal warning

Motion commands are generated in the PLC program that lead to runtime fluctuations in the control core. The "monolithic" mode of the control core is enabled in parameter "C-0-0404, Timing control word"

Due to this runtime fluctuation, the PLC time slice exceeds the monitoring limit in the control.

XLC/MLC diagnostic system tables

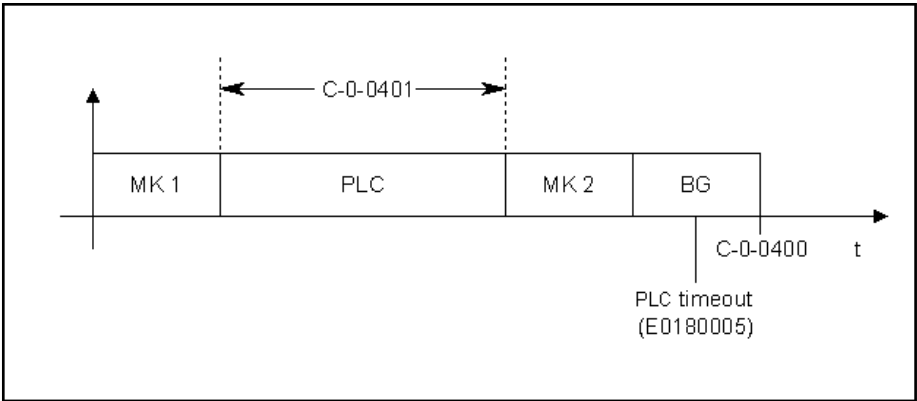


Fig. 3-1: Monolithically working control core

The cycle time of the control is defined in parameter "C-0-0400, Motion, cycle time, command value". The control core and the PLC time slice must be ended within the defined cycle. Parameter "C-0-0401, Relative PLC time slot" defines how much computing time the PLC receives. The remaining computing time can be used to process the control core.

The warning "E0180005" is generated if the control requires more computing time for processing (refer to Description of Parameters C-0-0400, C-0-0401 and C-0-0404).

Cause: Motion commands were generated in the PLC program that have led to the cycle being exceeded in the control.

Solution: Increase the "C-0-0400, Motion, cycle time, command value" or reduce the "C-0-0401, Relative PLC time slot".

E0200000, Usable memory (RAM) near minimum

Display: E0200000 Non-fatal warning

The available user memory (RAM) is near minimum. This may result in a critical system condition, because other operations in the system, which need memory, possibly cannot be performed. For example, no communication to the drives may be performed.

Cause:	Remedy:
An error in the PLC-User program, in which always memory is allocated, but never is released again.	Check the PLC-User program for this kind of errors. For that purpose, stop the machine manually in the common way, switch off/on the control to subsequently perform the check.
An error in the firmware.	If after accurate analysis the problem still exist, please contact the service.

E0200001, Usable memory (CF) near minimum

Display: E0200001 Non-fatal warning

The available memory of the CompactFlash is near minimum. This may result in a critical system condition, because other operations in the system, which need memory on the CompactFlash, possibly cannot be performed. For example, a PLC-Bootproject may no longer be stored.

XLC/MLC diagnostic system tables

Cause:	Remedy:
Too many, resp. too large projects are stored on the control (Com-pactFlash)	Check the PLC-User program, resp. the project(s) for this kind of errors, resp. delete the too many/incorrect saved projects.
Too large PLC-User programs (possibly also defective by reason of the size) have been stored	If after accurate analysis the problem still exist, please contact the service.

E0200002, Temperature warning

Display: [E0200002](#)

Non-fatal warning

The following control-dependent temperatures were exceeded:

Control-dependent temperature warnings

Control	Temperature
CML25	87°C (188°F)
CML45, CML65	70°C (158°F)
VEP	65°C (149°F)

This warning is automatically deleted with the following temperature:

Control-dependent reset temperatures

Control	Temperature
CML25	82°C (180°F)
CML45, CML65	65°C (149°F)
VEP	60°C (140°F)

Refer also to the diagnostics "[F8200023](#), Critical Temperature reached; processor is stopped"

- Cause:**
- The control was mounted in a position that does not ensure sufficient ventilation.
 - No fan is mounted on the control when it is in a position that does not ensure sufficient ventilation.

Solution: Provide adequate ventilation or mount a fan on the control hardware.

E0200003, CPU-Load critical

Display: [E0200003](#)

Non-fatal warning

The CPU-Load has exceeded the adjusted value for "CPU-Load, level for warning" in parameter C-0-0418.

The warning is automatically deleted if the CPU-Load is lower than the adjusted value in parameter C-0-0418.

The control is working to full capacity:

Cause:	Remedy:
Cycletime for PLC too low.	Increase PLC cycletime.
Time slice of the integrated PLC on the MC-Cycletime too high (C-0-0401).	Reduce time slice of the integrated PLC (C-0-0401).

XLC/MLC diagnostic system tables

Cause:	Remedy:
Too many parameter accesses have been programmed.	Reduce number of parameter accesses.
Overcharged network traffic to the control.	Reduce network traffic to the control.

E0200004, Usable memory (USR) near minimumDisplay: [E0200004](#)

Non-fatal warning

The available memory on the user partition of the CompactFlash is at the minimum. This can lead to a critical system condition, because other events in the system which need memory on the CompactFlash possibly cannot be executed any more. For example, a PLC-Boot project perhaps cannot be filed any more.

Cause:	Remedy:
Too many or too big projects are stored (archived) on the control (CompactFlash). Too big PLC-User programs (perhaps also subjected to errors on account of the size) were filed.	Check the PLC-User program or the project(s) for errors of this kind or delete the too much/wrongly stored projects.
An error in the firmware.	If the error is still indicated after careful examination, please, take contact with the customer service.

E0200005, Usable memory (SYS) near minimumDisplay: [E0200005](#)

Non-fatal warning

The available memory on the system partition of the CompactFlash is at the minimum. This can lead to a critical system condition, because other events in the system which need memory on the CompactFlash possibly cannot be executed any more. For example, a firmware download perhaps cannot be executed any more.

Cause:	Remedy:
User files on the system partition were filed wrongly.	All wrongly stored files must be deleted on the system partition.
An error in the firmware.	If the error is still indicated after careful examination, please, take contact with the customer service.

E0200006, Usable memory (OEM) near minimumDisplay: [E0200006](#)

Non-fatal warning

The available memory on the OEM partition of the CompactFlash is at the minimum. This can lead to a critical system condition, because other events in the system which need memory on the CompactFlash possibly cannot be executed any more. For example, a PLC-Boot project perhaps cannot be filed any more.

Cause:	Remedy:
Too many or too big projects are stored (archived) on the control (CompactFlash). Too big PLC-User programs (perhaps also subjected to errors on account of the size) were filed.	Check the PLC-User program or the project(s) for errors of this kind or delete the too much/wrongly stored projects.
An error in the firmware.	If the error is still indicated after careful examination, please, take contact with the customer service.

XLC/MLC diagnostic system tables

E0200007, Battery of SRAM module low

Display: [E0200007](#)

Non-fatal warning

The battery of an SRAM module has fallen below the limiting voltage of 2.7 V. Based on experience, after it has fallen below the limit value, a buffer of at least one month is guaranteed.

With typical buffer streams, the battery lasts for 4.2 years.

An additional number is attached to the diagnostic message. It indicates the slot (1, 2, 3 or 4) on which the respective SRAM module is located. "0" indicates an SRAM module directly integrated in the control.

Cause:	Solution:
The battery of an SRAM module (on a function module or directly integrated in the control) does not supply sufficient voltage.	Replace the battery as soon as possible in the respective SRAM module to avoid data loss when switching off the control.
An error in the firmware.	If, even after careful investigation (also always refer to the notes), the error is still displayed, contact the customer service.



To exchange the battery without data loss, the device has to be switched on.

The battery is only checked in larger intervals, since it has to be discharged for a short period during the measuring cycles. Thus, the reset of the warning is mostly not carried out directly after the new battery has been inserted, but can require several hours (corresponding to the interval for the next measuring cycle).

The battery can be replaced on the function modules from from without disassembly. When changing to a battery integrated in the control, disassembling of neighboring components might be required.

E0200009, Modified functionality of sercos FMs, reboot is necessary

Display: [E0200009](#)

Non-fatal warning

As an option, an sercos II function module (CrossCom) on the PCI bus of an L65/L45/L25 can be used as a drive or a C2C interface (control link). The sercos FM functionality can be used to select the desired interface.

The function module bus commanded configuration (C-0-0040) parameter is available for configuring the sercos function module. In addition to functionality, determinations such as the slot address on the PCI bus, module type, etc. can be made using this parameter.

This warning provides notification that the functionality of an individual sercos II FM has changed within the commanded configuration and that the control must be restarted.

Cause:	Remedy:
There is only one sercos II FM on the PCI bus. The functionality has changed here.	The control must be switched off and back on again so that the new functionality becomes effective. Otherwise the previous functionality will remain in effect.
There are two sercos II FMs on the PCI bus. Here the functionality has changed across the two.	The control must be switched off and back on again so that the new functionalities become effective. Otherwise the previous functionalities will remain in effect.

XLC/MLC diagnostic system tables



A sercos III FM on the PCI bus can only ever be operated as a C2C interface.

E0200010, Modif. nr of com. sercos FMs, reboot may be necessaryDisplay: [E0200010](#)

Non-fatal warning

As an option, an sercos II function module (CrossCom) on the PCI bus of an L65/L45/L25 can be used as a drive or a C2C interface (control link). The sercos FM functionality can be used to select the desired interface.

The Function module bus - commanded configuration (C-0-0040) parameter is available for configuring the sercos function module. In addition to functionality, determinations such as the slot address on the PCI bus, module type, etc. can be made using this parameter.

All sercos FMs needed for control operation are entered in parameter C-0-0040, regardless of whether the functionality (e.g. C2C) is activated or deactivated. A restart depends on the change in commanded number as well as on the status of the function module or on the requirements of the new project, if a project transition has occurred.

This warning provides notification of a change in the commanded number of sercos FMs for the cases listed below. In most cases, the control must be restarted.

Cause:	Remedy:
A new sercos FM has been entered in the current commanded configuration and its functionality is to be activated immediately or during operation. It is possible that the functionality of the old sercos FMs will change.	The control must be switched off and back on again so that the new function module (and possibly the old function modules) will be initialized according to their respective functionalities. Otherwise the new (and the changed) functionalities will not become effective.
In the newly projected commanded configuration, an old sercos II FM that was used in the ongoing project as a drive interface has been removed.	The control must be switched off and back on again so that the drive interface onboard in the new project will operate as a sercos III interface. Otherwise the old sercos II interface will remain in effect for the drive ring.
In the newly projected commanded configuration, an old sercos FM that was configured in the ongoing project as a C2C interface has been removed. However, the control has not yet been part of the link or will no longer be part of the combined system for the new project.	In this case, the control does not have to be switched off and back on again because effectively this module was not needed or will no longer be needed. The warning can be ignored and deleted.
All sercos FMs have been removed from the commanded configuration (empty list).	This is a combination of both previous cases. For this reason, it is not necessary to switch the control off and back on again. However, in a more complex transition a restart is recommended in case of doubt.



A sercos III FM on the PCI bus can only ever be operated as a C2C interface.

E0200011, Invalid commanded config. of drive ring via sercos FMDisplay: [E0200011](#)

Non-fatal warning

A sercos II function module (CrossCom) on a PCI bus of an L65/L45/L25 is configured as a drive interface but cannot be initialized as such.

Instead, the control starts up the drive ring automatically onboard using the sercos III interface if this is possible.

XLC/MLC diagnostic system tables

Cause:	Remedy:
No sercos II function module was found with the slot address set in the function module bus commanded configuration (C-0-0040) for the sercos II drive interface.	Either: reset the commanded configuration in C-0-0040 to the actual slot address of the sercos II FM and switch the control off and back on again. Or: switch off the control, reset the slot address and the slot for the sercos II -FM and switch the control back on again.



A sercos III FM on the PCI bus can only ever be operated as a C2C interface.

E0200012, Invalid commanded config. of link ring via sercos FM

Display: [E0200012](#)

Non-fatal warning

A sercos II function module (CrossCom) on a PCI bus of an L65/L45/L25 is configured as a C2C interface but cannot be initialized as such.

In this case, if need be, the control can still be part of a sercos III link if a sercos III function module is still available on the PCI bus.

Cause:	Remedy:
No sercos II function module was found with the slot address set in the function module bus commanded configuration (C-0-0040) for the sercos II C2C interface.	Either: reset the commanded configuration in C-0-0040 to the actual slot address of the sercos II -FM and switch the control off and back on again. Or: switch off the control, reset the slot address and the slot for the sercos II -FM and switch the control back on again.



A sercos III FM on the PCI bus can only ever be operated as a C2C interface. In this case no comparison is made between the commanded/actual configuration; it is always active as a C2C interface.

A sercos III FM on the PCI bus is dominant with respect to a sercos II -FM. If sercos III and sercos II FMs are both present on the PCI bus, only one drive interface can be supported with the sercos II module.

E0200013, Error in SYS-partition, check done

Display: [E0200013](#)

Non-fatal warning

An error was discovered in the CompactFlash System partition file system, following which this partition was checked and the error was eliminated. The aim of this measure is to reestablish the partition, which may no longer be usable, so that it can be reused.



Depending on the degree of damage to the file system, in the worst case, one or more files may have to be deleted. The function of the controller may possibly be impaired by this.

Cause: An error has occurred in the CompactFlash System partition file system. This can be the case, for example, if files are still being written while the controller is being switched off.

Remedy: Finish writing files before switching off the controller.

Please contact Customer Support if this problem occurs each time the controller starts up.

XLC/MLC diagnostic system tables

E0200014, Error in OEM-partition, check doneDisplay: [E0200014](#)

Non-fatal warning

An error was discovered in the CompactFlash OEM partition file system, following which this partition was checked and the error was eliminated. The aim of this measure is to reestablish the partition, which may no longer be usable, so that it can be reused.



Depending on the degree of damage to the file system, in the worst case, one or more files may have to be deleted. The function of the controller may possibly be impaired by this.

Cause: An error has occurred in the CompactFlash OEM partition file system. This can be the case, for example, if files are still being written while the controller is being switched off.

Remedy: Finish writing files before switching off the controller.
Please contact Customer Support if this problem occurs each time the controller starts up.

E0200015, Error in USR-partition, check doneDisplay: [E0200015](#)

Non-fatal warning

An error was discovered in the CompactFlash USR partition file system, following which this partition was checked and the error was eliminated. The aim of this measure is to reestablish the partition, which may no longer be usable, so that it can be reused.



Depending on the degree of damage to the file system, in the worst case, one or more files may have to be deleted. The function of the controller may possibly be impaired by this.

Cause: An error has occurred in the CompactFlash USR partition file system. This can be the case, for example, if files are still being written while the controller is being switched off.

Remedy: Finish writing files before switching off the controller.
Please contact Customer Support if this problem occurs each time the controller starts up.

E0200016, Rem. memory (NVRAM) near min. - reboot may be necessaryDisplay: [E0200016](#)

Non-fatal warning

The available remanent memory for the MLC system (NVRAM) is at a minimum. This can lead to a loss of performance up to a critical system condition because other system procedures that require memory may no longer be able to be executed.



This warning does not concern the area of PLC-retain data.

XLC/MLC diagnostic system tables

Cause:	Remedy:
The user has reserved lots of remanent memory. This may be the case if many objects have already been created that require remanent data (e.g. axes, certain parameters) and now another axis was created, for example. Also see the entry on "Memory" in the parameter descriptions.	Do not reserve more remanent memory (i.e. do not create any further objects that require remanent memory) or release objects (e.g. axes) that were already created or restart the control to optimized memory assignment.
An error in the firmware.	If, after careful investigation, the error is still displayed, please contact customer service.

E0200018, security mechanisms inactive for system mode debugging

Display: [E0200018](#)

Non-fatal warning

System mode Debugging has been enabled.

This mode disabled the Motion kernel cycle time monitoring and prevents IndraDrive drives to switch to sercos phase P0 in case of individual telegram failures.

Additionally, the hardware watchdog of the control is disabled and an available ready relay is not closed.



When enabling this setting, safety measures of the control are disabled. This facilitates the system mode debugging of an OCI application using the OEM workbench. Please note that this setting should only be enabled temporarily and exclusively for debugging.

In a productive system, the system mode debugging should be disabled by deleting the bit 28 in parameter C-0-0036 and thus, the safety measures should be enabled again.

Cause:	Solution:
Bit 28 "Enable system mode debugging" was set in parameter C-0-0036	Deleting bit 28 in parameter C-0-0036

E0200019, security mechanisms inactive for task mode debugging

Display: [E0200019](#)

Non-fatal warning

Task mode Debugging has been enabled.

This mode disabled the Motion kernel cycle time monitoring and prevents IndraDrive drives to switch to sercos phase P0 in case of individual telegram failures.



When enabling this setting, safety measures of the control are disabled. This facilitates the task mode debugging of an OCI application using the OEM workbench. Please note that this setting should only be enabled temporarily and exclusively for debugging.

In a productive system, the "task mode debugging" should be disabled by deleting the bit 27 in parameter C-0-0036 and thus, the safety measures should be enabled again.

XLC/MLC diagnostic system tables

Cause:	Solution:
Bit 27 "Enable task mode debugging" was set in parameter C-0-0036	Deleting bit 27 in parameter C-0-0036

E02C00B7, Velocity of the axis too highDisplay: [E02C00B7](#)

Non-fatal warning

Causes in the automatic mode: The velocity limit value of an axis (A-0-0032 or A-0-0033) was exceeded. The velocity is reduced.

V, V_PTP, VFACTOR was programmed too high or the feed override factor is too high (refer to K-0-0240) or the point to be traversed goes towards a singularity.

Remedy: Adapt the programmed or specified values accordingly or increase the velocity limit value of the axis.

Causes in the manual mode: The velocity of an axis has exceeded the fast jog velocity (A-0-0083).

Possible causes are:

Jog velocity when jogging within world coordinates is too high (K-0-0083)

The point to be traversed goes towards a singularity.

The feed override factor is too high (refer to K-0-0240).

Remedy: Adjust the parameters A-0-0083 and K-0-0083 accordingly.

E02C00B8, Velocity of the axis too highDisplay: [E02C00B8](#)

Non-fatal warning

Cause: The maximum path velocity (refer to K-0-0003) was exceeded. The velocity was limited.

The programmed or resulting path velocity was specified too high (refer to V or VFACTOR in the RCL program) or

the feed override factor is too high (refer to K-0-0240).

Remedy: Reduce the given path velocity or increase the maximum path velocity in the parameter K-0-0003.

E02C0184, Vector assignment with different componentsDisplay: [E02C0184](#)

Non-fatal warning

Cause: Vector assignment with different components.

E02C085E, SRAM batterie lowDisplay: [E02C085E](#)

Non-fatal warning

Cause: SRAM Battery low.

E02C0880, Axis deactivatedDisplay: [E02C0880](#)

Non-fatal warning

Cause: Axis Deactivated

E02C08CD, Resulting path jerk too highDisplay: [E02C08CD](#)

Non-fatal warning

Cause: The maximum path jerk (refer to K-0-0035) has been exceeded.

The path jerk has been limited.

The value of the programmed or resulting path jerk was too large.

XLC/MLC diagnostic system tables

Solution: Reduce the specified path jerk or increase the maximum path jerk in parameter K-0-0035.

E02C08CE, Resulting path acceleration too high

Display: [E02C08CE](#) Non-fatal warning

Cause: The maximum path acceleration (refer to K-0-0034) has been exceeded.
The path acceleration has been limited. The programmed or resulting path acceleration value was too large or the acceleration override factor (see K-0-0242) is too large.

Solution: Reduce the specified path acceleration or increase the maximum path acceleration in the parameter K-0-0034.

E02C08CF, Resulting path velocity too high

Display: [E02C08CF](#) Non-fatal warning

Cause: The maximum path velocity (refer to K-0-0003) was exceeded. The velocity was limited.
The programmed or resulting path velocity was specified too high (refer to V or VFACTOR in the RCL program) or the feed override factor is too high (refer to K-0-0240).

Remedy: Reduce the given path velocity or increase the maximum path velocity in the parameter K-0-0003.

E02C08D2, Resulting path velocity too high

Display: [E02C08D2](#) Non-fatal warning

Cause: The maximum path velocity (refer to K-0-0003) was exceeded. The velocity was limited.
The programmed or resulting path velocity was specified too high (refer to V or VFACTOR in the RCL program) or the feed override factor is too high (refer to K-0-0240).

Remedy: Reduce the given path velocity or increase the maximum path velocity in the parameter K-0-0003.

E02C08D3, Resulting path velocity too high

Display: [E02C08D3](#) Non-fatal warning

Cause: The maximum path velocity (refer to K-0-0003) was exceeded. The velocity was limited.
The programmed or resulting path velocity was specified too high (refer to V or VFACTOR in the RCL program) or the feed override factor is too high (refer to K-0-0240).

Remedy: Reduce the given path velocity or increase the maximum path velocity in the parameter K-0-0003.

E02C08D4, Resulting path velocity too high

Display: [E02C08D4](#) Non-fatal warning

Cause: The maximum path velocity (refer to K-0-0003) was exceeded. The velocity was limited.
The programmed or resulting path velocity was specified too high (refer to V or VFACTOR in the RCL program) or the feed override factor is too high (refer to K-0-0240).

XLC/MLC diagnostic system tables

Remedy: Reduce the given path velocity or increase the maximum path velocity in the parameter K-0-0003.

E02C08D5, Resulting path velocity too highDisplay: [E02C08D5](#)

Non-fatal warning

Cause: The maximum path velocity (refer to K-0-0003) was exceeded. The velocity was limited.

The programmed or resulting path velocity was specified too high (refer to V or VFACTOR in the RCL program) or the feed override factor is too high (refer to K-0-0240).

Remedy: Reduce the given path velocity or increase the maximum path velocity in the parameter K-0-0003.

E02C08D6, Resulting path velocity too highDisplay: [E02C08D6](#)

Non-fatal warning

Cause: The maximum path velocity (refer to K-0-0003) was exceeded. The velocity was limited.

The programmed or resulting path velocity was specified too high (refer to V or VFACTOR in the RCL program) or the feed override factor is too high (refer to K-0-0240).

Remedy: Reduce the given path velocity or increase the maximum path velocity in the parameter K-0-0003.

E02C08D7, Resulting path velocity too highDisplay: [E02C08D7](#)

Non-fatal warning

Cause: The maximum path velocity (refer to K-0-0003) was exceeded. The velocity was limited.

The programmed or resulting path velocity was specified too high (refer to V or VFACTOR in the RCL program) or the feed override factor is too high (refer to K-0-0240).

Remedy: Reduce the given path velocity or increase the maximum path velocity in the parameter K-0-0003.

E02C08DF, No name specified with call of SET_RK_SYSTEMDisplay: [E02C08DF](#)

Non-fatal warning

Cause: No Name Specified with Call of SET_RK_SYSTEM.

E02C0900, Blending error: InterpolatorDisplay: [E02C0900](#)

Non-fatal warning

Cause: An error occurred in the interpolator while calculating blending motion. Transition velocities and accelerations were not calculated.

Solution: Contact customer support.

E02C0901, Blending error: Lead distance of the spline too highDisplay: [E02C0901](#)

Non-fatal warning

Cause: The lead distance of the spline calculation exceeds the path distance of the traversing command.

The lead distance results from the path velocity, the lead time of K-0-0250 and the current position when late blending takes place.

Blending is aborted with CONT_SLOPE.

XLC/MLC diagnostic system tables

Solution: Select a lower path velocity.
Select a lower lead time.
Issue the next traversing command earlier.

E02C0902, Blending error: Deceleration distance too short

Display: [E02C0902](#) Non-fatal warning

Cause: The required deceleration distance while blending exceeds the path distance of the traversing command.
Blending is aborted with CONT_SLOPE.

Solution: Select a lower path velocity.
Select a lower lead time.
Issue the next traversing command earlier.

E02C0903, Blending error: Radius too small

Display: [E02C0903](#) Non-fatal warning

Cause: The radius for the blending motion is too small.
Blending is aborted with CONT_SLOPE.

Solution: Program a bigger radius.

E02C0904, Blending error: Lead distance of the spline exceeded

Display: [E02C0904](#) Non-fatal warning

Cause: The lead distance of the spline calculation was exceeded.
The lead distance results from the path velocity, the lead time of K-0-0250 and the current position when late blending takes place.
Blending is aborted with CONT_SLOPE.

Solution: Select a lower path velocity.
Select a higher lead time.
Issue the next traversing command earlier.
Reduce the control load.

E02C0905, Blending error: Point invalid

Display: [E02C0905](#) Non-fatal warning

Cause: The point of the blending motion could not be calculated.
Blending is aborted with CONT_SLOPE.

Solution: Contact customer support.

E02C0906, Blending error: Parameter length of the spline invalid

Display: [E02C0906](#) Non-fatal warning

Cause: The parameter length of the spline could not be determined.
Blending is aborted with CONT_SLOPE.

Solution: Contact customer support.

E02C0907, Blending error: Spline function invalid

Display: [E02C0907](#) Non-fatal warning

Cause: The spline function could not be determined.
Blending is aborted with CONT_SLOPE.

Solution: Contact customer support.

XLC/MLC diagnostic system tables

E02C0908, Blending error: Arc length of the spline invalidDisplay: [E02C0908](#)

Non-fatal warning

Cause: The arc length of the spline could not be determined.
Blending is aborted with CONT_SLOPE.

Solution: Contact customer support.

E02C0909, Blending error: Inverse path length function invalidDisplay: [E02C0909](#)

Non-fatal warning

Cause: The inverse path length function of the spline could not be determined.
Blending is aborted with CONT_SLOPE.

Solution: Select a lower path velocity.
Select a lower lead time.
Issue the next traversing command earlier.
Select a bigger radius for blending.

E02C090A, Blending error: Spline interpolatorDisplay: [E02C090A](#)

Non-fatal warning

Cause: An error occurred in the interpolator while calculating blending motion.
Blending is aborted with CONT_SLOPE.

Solution: Contact customer support.

E02C090B, Blending error: Spline invalidDisplay: [E02C090B](#)

Non-fatal warning

Cause: The spline function could not be determined.
Blending is aborted with CONT_SLOPE.

Solution: Contact customer support.

E02C090C, Blending error: Shorten path at the endDisplay: [E02C090C](#)

Non-fatal warning

Cause: The path of the motion command could not be shortened.
Blending is aborted with CONT_SLOPE.

Solution: Contact customer support.

E02C090D, Blending error: Shorten path at the beginningDisplay: [E02C090D](#)

Non-fatal warning

Cause: The path of the motion command could not be shortened.
Blending is aborted with CONT_SLOPE.

Solution: Contact customer support.

E02C090E, Blending error: Calc.of the deceleration distance incorrectDisplay: [E02C090E](#)

Non-fatal warning

Cause: An error occurred when calculating the deceleration distance of a blending motion.
Blending is aborted with CONT_SLOPE.

Solution: Contact customer support.

XLC/MLC diagnostic system tables

E02C090F, Multiple De-/Synchronization not allowed

Display: [E02C090F](#)

Non-fatal warning

This warning can be output for the function blocks ML_BeltDeSynchronizationWithLimits and ML_BeltSynchronizationWithLimits.

It was tried to desynchronize or synchronize the axis group to a belt using limit values, even though the axis group has already been synchronized or desynchronized to this belt.

The corresponding function blocks were aborted or not executed.

E0350154, RCL Compiler: Character not read

Display: [E0350154](#)

Non-fatal warning

Cause: RCL-Compiler: Character Not Read

E0350175, RCL Compiler: Symbols will be ignored up to end of file

Display: [E0350175](#)

Non-fatal warning

Cause: Symbols Up to End of File will be Ignored

E0350176, RCL Compiler: Symbols up to end of file will be ignored

Display: [E0350176](#)

Non-fatal warning

Cause: Symbols Up to End of File will be Ignored

E0350187, RCL Compiler: Only EXTERN and GLOBAL permitted

Display: [E0350187](#)

Non-fatal warning

Cause: RCL-Compiler: Only EXTERN and GLOBAL Permitted

E035021C, RCL Compiler: No defined variable as BINARY declared

Display: [E035021C](#)

Non-fatal warning

Cause: RCL-Compiler: No Defined Variable as Type BINARY Declared

E035021D, RCL Compiler: No defined variable as CHAR declared

Display: [E035021D](#)

Non-fatal warning

Cause: RCL-Compiler: No Defined Variable as Type CHAR Declared

E0350236, RCL Compiler: Implicit point definition

Display: [E0350236](#)

Non-fatal warning

Cause: RCL-Compiler: Implicit Point Definition

E0350246, RCL Compiler: Illegal alignment

Display: [E0350246](#)

Non-fatal warning

Cause: RCL-Compiler: Illegal alignment

E0370001, System overloaded

Display: [E0370001](#)

Non-fatal warning

Nicht alle Tasks des Systems sind in der im Parameter "C-0-0407, Kommunikations-Watchdog" eingestellten Zeit zur Abarbeitung gekommen.

Ursache Die verfügbare Rechenzeit ist durch hochpriorie Tasks ausgelastet und der, über den Parameter "C-0-0408, Zeitschlitz, Kommunikation" eingestellte, Zeitschlitz reicht nicht aus, um alle Tasks des Systems abzuarbeiten. Hochpriorie Tasks, die dies verursachen, können SPS-Tasks sowie die Task zur Berechnung der Motion sein.

XLC/MLC diagnostic system tables

Lösung Im Dialogfenster "Zykluszeiten" kann die Zeit, die zur Berechnung der Motion benötigt wird, ausgelesen werden. Die Zeiten der konfigurierten SPS-Task kann über die "Taskkonfiguration" ausgelesen werden.

Ursache:	Lösung:
Die Task zur Berechnung der Motion verbraucht die gesamte Rechenzeit	Erhöhen Sie die Motion- Zykluszeit "C-0-0400 MC-Zykluszeit (Tcyc) Sollwert"
Eine zyklische SPS-Task verbraucht die gesamte Rechenzeit	Erhöhen Sie die Zykluszeit der SPS-Task
Eine nicht zyklische SPS-Task verbraucht die gesamte Rechenzeit	Versuchen Sie Programmteile der SPS-Task, die viel Zeit beanspruchen, in zyklische SPS-Tasks auszulagern, deren Zykluszeit größer ist
Der eingestellte Zeitschlitz reicht nicht aus, um alle Task des Systems abzuarbeiten	Erhöhen Sie den Zeitschlitz "C-0-0408, Zeitschlitz, Kommunikation"
Die Zeit für den Watchdog ist zu gering	Erhöhen Sie die Zeit "C-0-0407, Kommunikations-Watchdog"

E03C0001, Check of integrity of XML configuration failedDisplay: [E03C0001](#)

Non-fatal warning

The integrity check of the XML configuration failed.

Cause: The configuration file of the control "DeviceXCC.xml" is checked for modifications during control startup.

This warning is issued if an uncertified modification of the configuration is detected.

Solution: The correct functioning of the control cannot be guaranteed.

It is strongly recommended to restore the configuration file using a firmware download for example.

E0400001, Defect type plateDisplay: [E0400001](#)

Non-fatal warning

The type plate data on the control is incorrect.

Thus, it can be possible that the following information cannot be read out:

- Serial number
- Parts number
- Material index number
- Type plate

E039**, PLC warnings from the kernel**

Cause: The PLC kernel issues a warning.

Solution: There is no further information available on this warning.

Check the IndraLogic online error list or contact the customer support.

E03A**, PLC warnings from company components**

Cause: One of the company components issues a warning.

Solution: There is no further information available on this warning.

Contact customer support.

3.1.4 C0 Errors, Non-Fatal Errors

C0 Errors, Error Reaction

Logbook entry is generated; message is shown on the display; no error reaction.

C2C-C100 means that switching the C2C slaves in the link from C2C phase P2 to P3 failed.

C2C-C200 means that switching the C2C slaves in the link from C2C phase P3 to P4 (BB) failed.

C0280101, C2C-C0100: incomplete/invalid parameter set

Display: [C0280101](#) C0, command error, Command_Error

The C2C master has attempted without success to start up the C2C link into operating status. This attempt failed during the switch from phase 2 to phase 3.

Cause: At least one of the C2C slaves aborts the command 'Switch from phase 2 to phase 2' (C-0-0100) with a command error because it detected a problem when checking its C2C configuration. The parameter set sent from the C2C master is either incomplete or contains an error.

Reasons for this may be different command cycle times for C2C and drive ring (see parameters C-0-0400, C-0-0503, C-0-0700) or inconsistencies among the producing and local planned axes (see C-0-0778).

A transmission error in the C2C service channel cannot be excluded as a cause.

Remedy: Make sure that the master axes configured by the C2C master (to be produced by the participants are also configured locally in the respective participants and that the specified C2C cycle time in the C2C slaves corresponds with the cycle time for the control communication (drive ring).



The C2C master aborts the C2C start up with the error message 'C2C error when switching to phase 3' ([F0280029](#)).



This error is also reported as a standard error if none of the reasons for the other specified command errors are valid.

C0280102, C2C-C0100: communication parameter limit exceeded

Display: [C0280102](#) C0, command error, Command_Error

The C2C master has attempted without success to start up the C2C link into operating status. This attempt failed during the switch from phase 2 to phase 3.

Cause: At least one of the C2C slaves aborts the command 'Switch from phase 2 to phase 2' (C-0-0100) with a command error because it detected a problem when checking its C2C configuration. The parameter set sent by the C2C master leads to limit value errors at the slave.

Remedy: Make sure that the C2C cycle time specified by the C2C master can be set in the C2C slaves.



The C2C master aborts the C2C start up with the error message 'C2C error when switching to phase 3' ([F0280029](#)).

XLC/MLC diagnostic system tables

C0280108, C2C-C0100: invalid timing parameter (cycle time)Display: [C0280108](#)

C0, command error, Command_Error

The C2C master has attempted without success to start up the C2C link into operating status. This attempt failed during the switch from phase 2 to phase 3.

Cause: At least one of the C2C slaves aborts the command 'Switch from phase 2 to phase 2' (C-0-0100) with a command error because it detected a problem when checking its C2C configuration. The C2C timing specified by the C2C master could not be set internally by the slave.

Remedy: Please contact customer service.



The C2C master aborts the C2C start up with the error message 'C2C error when switching to phase 3' ([F0280029](#)).

C0280109, C2C-C0100: invalid offset in HotPlug field (MDT address)Display: [C0280109](#)

C0, command error, Command_Error

The C2C master has attempted without success to integrate recently connected C2C slaves dynamically into the running C2C link using a hot plug. This attempt failed in hot plug phase 2.

Cause: At least one of the new C2C slaves cannot be integrated into the C2C link using the hot plug mechanism because an illegal offset in the hot plug field was detected in the hot plug phase 2 during switch command S-0-0127.

Remedy: Please contact customer service.



The C2C master reports the error 'C2C master - hot plug mechanism aborted' ([F0280065](#)).

C0280113, C2C-C0100: invalid ratio of cycle times (motion/sercos)Display: [C0280113](#)

C0, command error, Command_Error

The C2C master has attempted without success to start up the C2C link into operating status. This attempt failed during the switch from phase 2 to phase 3.

Cause: At least one of the C2C slaves aborts the command 'Switch from phase 2 to phase 2' (C-0-0100) with a command error because it detected a problem when checking its C2C configuration. The C2C cycle time specified by the C2C master could not be set in the C2C slaves because it is not a multiple of the locally specified cycle time for control communication or vice versa (see parameters C-0-0400, C-0-0503, C-0-0700).

Remedy: Make sure that the various cycle times set are multiples of each other.



The C2C master aborts the C2C start up with the error message 'C2C error when switching to phase 3' ([F0280029](#)).

C0280171, C2C-C0100: maximum length for connections exceededDisplay: [C0280171](#)

C0, command error, Command_Error

The C2C master has attempted without success to start up the C2C link into operating status. This attempt failed during the switch from phase 2 to phase 3.

XLC/MLC diagnostic system tables

Cause: At least one of the C2C slaves aborts the command 'Switch from phase 2 to phase 2' (C-0-0100) with a command error because it detected a problem when checking its C2C configuration. The connection configuration sent by the C2C master exceeded the maximum length for the C2C data to be transmitted.

Remedy: Make sure that the data to be transmitted to your connections do not exceed the permissible total length for connection data.



The C2C master aborts the C2C start up with the error message 'C2C error when switching to phase 3' ([F0280029](#)).

C0280172, C2C-C0100: no delay measuring executed (S-0-1024)

Display: [C0280172](#)

C0, command error, Command_Error

The C2C master has attempted without success to start up the C2C link into operating status. This attempt failed during the switch from phase 2 to phase 3.

Cause: At least one of the C2C slaves aborts the command 'Switch from phase 2 to phase 2' (C-0-0100) with a command error because it could not execute its delay message (command S-0-1024) at all or only with an error.

Remedy: Please contact customer service.



The C2C master aborts the C2C start up with the error message 'C2C error when switching to phase 3' ([F0280029](#)).

C0280173, C2C-C0100: maximum number of connections exceeded

Display: [C0280173](#)

C0, command error, Command_Error

The C2C master has attempted without success to start up the C2C link into operating status. This attempt failed during the switch from phase 2 to phase 3.

Cause: At least one of the C2C slaves aborts the command 'Switch from phase 2 to phase 2' (C-0-0100) with a command error because it detected a problem when checking its C2C configuration. The connection configuration sent by the C2C master exceeded the maximum number of connections.

Remedy: Make sure that the number of your configured connections does not exceed the permissible total.



The C2C master aborts the C2C start up with the error message 'C2C error when switching to phase 3' ([F0280029](#)).

3.1.5 F0 errors, non-fatal errors

F0 errors, error reaction

Logbook entry is generated; message is shown on the display; no error reaction.

F0020001 up to F0020009, RTOS Error (Real Time Operating System)

A non-fatal internal firmware error occurred.

Cause: A firmware error occurred.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

XLC/MLC diagnostic system tables

F0020010, No socket availableDisplay: [F0020010](#)

Non-fatal error, System_Error

A non-fatal error occurred in the internal firmware.

Cause: No socket could be opened in the firmware. All sockets of the firmware might have been used by a user program.

Solution: Stop the machine manually and switch off and on the control. Check whether many sockets are used in the user program. If the error is still reported, please contact the customer service.

F0020011 up to F0050013, RTOS Error (Real Time Operating System)

A non-fatal internal firmware error occurred.

Cause: A firmware error occurred.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0070001, Size of parameter changedDisplay: [F0070001](#)

Non-fatal error, System_Error

This error may occur after changing the firmware. In the new version the data size of at least one parameter has changed. The parameter is set to its default value and simultaneously the data status is set to invalid.

While phase run-up the parameter is listed in "List of all invalid C parameters" (C-0-0111 / A-0-0011 / K-0-0011).

Cause: This error may occur after a firmware change.

Remedy: Write valid values to all parameters, listed in C-0-0111 resp. A-0-0011/ K-0-0011.

F00A0001, Parameter write-error during import, see C-0-0114Display: [F00A0001](#)

Non-fatal error, Other_Error

The parameter import has been triggered from a par file using parameter "C-0-1011, Command: Import parameter".

At least one parameter could not be written here. The list of failed parameters can be checked using parameter "C-0-0114, IDN list of import errors".

Cause: The par file was possibly edited manually and may have been subject to an error.

Solution: Correct error and repeat import or correct incorrect parameters manually.

F00A0002, Import/Export: File could not be openedDisplay: [F00A0002](#)

Non-fatal error, Other_Error

The parameter import has been triggered from a par file using parameter "C-0-1011, Command: Import parameter".

The par file required for this could not be found.

Cause:

- No export was executed or
- the file was deleted.

Solution: Create a new file.

F00A0003, Import/Export: Unknown parameter typeDisplay: [F00A0003](#)

Non-fatal error, Other_Error

The parameter import has been triggered from a par file using parameter "C-0-1011, Command: Import parameter".

XLC/MLC diagnostic system tables

Types of parameter were used in the file that are not supported by the control.

Cause: The par file was possibly created using another firmware version.

Solution: Delete the relevant parameters in the file.

F00A0004, Import: Length of line in import file exceeds maximum

Display: **F00A0004** Non-fatal error, Other_Error

The parameter import has been triggered from a par file using parameter "C-0-1011, Command: Import parameter".

Cause: There is at least one parameter in the file, the line length of which is greater than 999 characters.

Solution: Delete the relevant parameters in the file and enter them manually.

F00A0005, Import/Export: Unsupported sercos parameter format

Display: **F00A0005** Non-fatal error, Other_Error

The parameter import has been triggered from a par file using parameter "C-0-1011, Command: Import parameter".

Cause: There is at least one parameter in the file, the parameter format of which (for example 8-byte parameter) is not supported.

Solution: Delete the relevant parameters in the file and enter them manually.

F00A0009, Import/Export: parametertype invalid

Display: **F00A0009** Non-fatal error, Other_Error

A parameter import from a par file was triggered.

The file contains parameters whose parameter type does not match to the specified ID in the corresponding header.

Cause: The par file might have been edited by the user and an error might have occurred.

Solution: Remove the corresponding parameters from the file

F00A0010, Import/Export: parameter attribute invalid

Display: **F00A0010** Non-fatal error, Other_Error

A parameter import from a par file was triggered.

The file contains parameters whose attributes differ from the corresponding parameter attributes in the drive.

Cause: The par file might have been created with a drive version whose attributes are defined different from the target drive.

Solution: Remove corresponding parameters from the file and enter manually.

F00A0011, Import/Export: Value exceeds datarange (maximum)

Display: **F00A0011** Non-fatal error, Other_Error

A parameter import from a par file was triggered.

The file contains parameters whose values exceed the maximum value of the defined data type.

Cause: The par file might have been edited by the user and an error might have occurred.

Solution: Remove corresponding parameters from the file and enter manually.

XLC/MLC diagnostic system tables

F00A0012, Import/Export: Value below datarange (minimum)Display: [F00A0012](#)

Non-fatal error, Other_Error

A parameter import from a par file was triggered.

The file contains parameters whose values fall below the minimum value of the defined data type.

Cause: The par file might have been edited by the user and an error might have occurred.**Solution:** Remove corresponding parameters from the file and enter manually.**F00B0003, sercos bus not closed**Display: [F00B0003](#)

Non-fatal error, System_Error

After switching on the control the sercos ring was not closed. The control cannot receive 10 consecutive phase 0 MDT telegrams.

sercos 2:

Cause:	Solution:
Fiber optic cable swapped or not correctly screwed on.	Check all fiber optic cables.
Defective fiber optic cable ring.	Check all fiber optic cables.
Data rate for the drives and the control are set differently.	Check data rates.
The optical transmitting power of the control "C-0-0502, sercos Master, OWG length " or that of one of the participants in the sercos interface ring is set incorrectly.	Adapt the optical transmitting power of all participants on the sercos ring to the actual OWG length.
The supply voltage for the drives was first turned on after control start up.	Ensure that the supply voltage is switched on at the same time as or before the supply voltage for the control is switched on.
Defective drive.	Replacement

sercos III:

Cause:	Solution:
Ethernet cable not correctly connected.	Check link LEDs on the bus participants.
Defective Ethernet cable.	Check all Ethernet cables.
The supply voltage for the bus participants was only turned on after startup of the control.	Ensure that the supply voltage is switched on at the same time as or before the supply voltage for the control is switched on.
Defective bus participant.	Replacement
Bus participants are present on the sercos bus that do not meet the requirements of the sercos III V1.1 specification.	Replacement

F00B0006, Progression to phase 3 not possibleDisplay: [F00B0006](#)

Non-fatal error, System_Error

The control cannot execute the switchover from parameterization mode to sercos phase 3.

Cause: At least one drive declines to switch to phase 3.**Solution:** Eliminate the error in the respective drive.

XLC/MLC diagnostic system tables

F00B0007, Progression to state ready not possible

Display: [F00B0007](#)

Non-fatal error, System_Error

The control cannot execute the switchover from parameterization mode to operating mode.

Cause: At least one drive declines to switch to operating mode.

Solution: Eliminate the error in the respective drive.

F00B0008, Drive not found

Display: [F00B0008](#)

Non-fatal error, Other_Error

The control compares the drive addresses entered in parameter "C-0-0484, Axes configuration list" with the drives actually found.

Cause: At least one drive was not found.

Solution: Correct the axis configuration.
Check the address setting on the drives.

F00B0009, Maximum number of servos devices exceeded

Display: [F00B0009](#)

Non-fatal error, System_Error

The number of servos devices that can be operated on a control is limited according to the version (and selected cycle time).

Cause: The number of servos devices exceeds the number approved for the version.

Solution: Structure your project accordingly.

F00B0013, MC cycletime too less

Display: [F00B0013](#)

Non-fatal error, System_Error

The control sets the required cycle time in parameter "C-0-0400, Motion, cycle time, command value".

Cause: The set cycle time cannot be achieved.

Solution:

- Increase the cycle time set in "C-0-0400, Motion, cycle time, command value" or
- reduce the number of drives.

F00B0014, Parameter write-protected by password

Display: [F00B0014](#)

Non-fatal error, Access_Error

The control must set different parameters in the drive while switching from parameterization mode to operating mode.

Cause: The parameters to be set are write-protected by passwords in the drive.

Solution: Remove write protection in the relevant drive.

F00B0090, RTOS error (Real Time Operating System)

Display: [F00B0090](#)

Non-fatal error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F00B0098, Cannot write on parameter S-0-0015

Display: [F00B0098](#)

Non-fatal error, System_Error

While switching from parameter mode to operating mode the control must set parameter "S-0-0015, Telegram type parameters" in the drive.

XLC/MLC diagnostic system tables

Cause: The parameter in the drive cannot be write.

Remedy: Remove write protection in the corresponding drive.

F00B0099, Cannot write on parameter S-0-0016

Display: [F00B0099](#)

Non-fatal error, System_Error

While switching from parameter mode to operating mode the control must set parameter "S-0-0016, Configuration list DT" in the drive.

Cause: The parameter in the drive cannot be write.

Remedy: Remove write protection in the corresponding drive.

F00B0100, Cannot write on parameter S-0-0024

Display: [F00B0100](#)

Non-fatal error, System_Error

While switching from parameter mode to operating mode the control must set parameter "S-0-0024, Configuration list MDT" in the drive.

Cause: The parameter in the drive cannot be write.

Remedy: Remove write protection in the corresponding drive.

F00B0101, Cannot write on parameter S-0-0007

Display: [F00B0101](#)

Non-fatal error, System_Error

While switching from parameter mode to operating mode the control must set parameter "S-0-0007, Measuring time actual values (T4)" in the drive.

Cause: The parameter in the drive cannot be write.

Remedy: Remove write protection in the corresponding drive.

F00B0102, Cannot read time slot parameter

Display: [F00B0102](#)

Non-fatal error, System_Error

While switching from parameter mode to operating mode the control must read the following parameters:

- S-0-0003, Transmission reaction drive telegram (T1min)
- S-0-0004, Switchover time transmit/receive (TATMT)
- S-0-0005, Minimum time actual value measurement (T4min)
- S-0-0088, Recovery time receive/receive (TATSY)
- S-0-0090, Copying time setpoints (TMTSG)

Cause: The parameter in the drive cannot be read.

Remedy: Remove protection in the corresponding drive.

F00B0103, Cannot read time slot parameter

Display: [F00B0103](#)

Non-fatal error, System_Error

While switching from parameter mode to operating mode the control must read the following parameters:

- S-0-0003, Transmission reaction drive telegram (T1min)
- S-0-0004, Switchover time transmit/receive (TATMT)
- S-0-0005, Minimum time actual value measurement (T4min)
- S-0-0088, Recovery time receive/receive (TATSY)
- S-0-0090, Copying time setpoints (TMTSG)

Cause: The parameter in the drive cannot be read.

Remedy: Remove protection in the corresponding drive.

XLC/MLC diagnostic system tables

F00B0104, Cannot write on time slot parameter

Display: [F00B0104](#)

Non-fatal error, System_Error

While switching from parameter mode to operating mode the control must process the following parameters:

- S-0-0003, Transmission reaction drive telegram (T1min)
- S-0-0004, Switchover time transmit/receive (TATMT)
- S-0-0005, Minimum time actual value measurement (T4min)
- S-0-0088, Recovery time receive/receive (TATSY)
- S-0-0090, Copying time setpoints (TMTSG)

Cause: The parameter in the drive cannot be written.

Remedy: Remove protection in the corresponding drive.

F00B0105, Cannot write on time slot parameter

Display: [F00B0105](#)

Non-fatal error, System_Error

While switching from parameter mode to operating mode the control must process the following parameters:

- S-0-0015, Telegram type parameters
- S-0-0006, Transmission time of drive telegram (T1)
- S-0-0009, Start address master data telegram

Cause: The parameter in the drive cannot be written.

Remedy: Remove protection in the corresponding drive.

F00B0121, sercos: IO Error

Display: [F00B0121](#)

Non-fatal error, Device_Error

There is an error in the configuration of the sercos III IO modules.

Cause: At least one sercos III IO module is not correctly configured.

Solution: Check the sercos III IO configuration.

Further information and status messages relating to the cause of the error are shown as entries in the control's Error/Diagnostic recorder index.

With certain causes of error, the incorrect IO in the Project Explorer is also highlighted with a yellow triangle symbol.

A detailed error message is shown by double clicking on the slave node in the Project Explorer.

The following error texts are displayed here:

Error Text	Description
Wrong VendorCode	Master reports errors when comparing the command/actual configuration. The manufacturer's identifier of the slave participant is not identical to the command configuration.
Wrong VendorDeviceID	Master reports errors when comparing the command/actual configuration. The manufacturer's identifier of the slave participant is not identical to the command configuration.
Wrong ModuleTypeCode	Master reports errors when comparing the command/actual configuration. The ModuleType-Code (module identifier) of the modules is not consistent with the command configuration.
Wrong Set ParamP2	Master reports errors when comparing the command/actual configuration. An error has occurred when writing application parameters to the slave.

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Error Text	Description
Wrong MDT length	Master reports errors when comparing the command/actual configuration. The MDT (output data) connection length of the slave participant is not identical to the configured connection length.
Wrong AT length	Master reports errors when comparing the command/actual configuration. The MDT (output data) connection length of the slave participant is not identical to the configured connection length.
Class 1 Error	The slave reports errors to the master. Error code stands in the slave's parameter S-0-0390.

F00B0130, sercos III: Connection configuration not read/writeableDisplay: [F00B0130](#)

Non-fatal error, Communication_Error

Error when reading or writing the following parameters during the sercos III phase startup. Refer to the short text for the parameter number and the corresponding error code.

Cause:

- S-0-1050.si.SE1 "sercos III connection: Configuration": Incorrect writing of devices with the classification "SCP_VarCFG".
- S-0-1050.si.SE6 "sercos III connection: Configuration list": Incorrect writing in configuration type "Configuration list with EIDNs" and classification "SCP_VarCFG".
- S-0-0015 "Telegram type parameter": Incorrect writing in configuration type "FSP drive" and classification "SCP_VarCFG".
- S-0-1050.si.SE5 "sercos III connection: Current connection length": Error while reading the parameter.
- S-0-1050.si.SE4 "sercos III connection: Maximum connection length": Incorrect reading of devices with the classification "SCP_VarCFG".
- S-0-1005 "sercos III: Minimum time between t4 and t1 (t5)": Incorrect reading of devices with the function package "+SCP_Sync".

Solution: Check write protection of the parameters. Check connection configuration S-0-1050.si.se.

F00B0131, sercos III: Parameter for configuration not writeableDisplay: [F00B0131](#)

Non-fatal error, Communication_Error

Error when writing the following parameters in the sercos III phase startup. Refer to the short text for the parameter number and the corresponding error code.

Cause for devices with basic classification SCP_FixCFG or SCP_VarCFG:

- S-0-1002 sercos III: sercos cycle time (tSync)
- S-0-1009 sercos III: Device control (C-Dev) offset in the MDT
- S-0-1010 sercos III: MDT length
- S-0-1011 sercos III: Device status (S-Dev) offset in the AT
- S-0-1012 sercos III: AT length
- S-0-1013 sercos III: SVC offset in the MDT
- S-0-1014 sercos III: SVC offset in the AT
- S-0-1003 sercos III: MST failures allowed

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	• S-0-1050.si.SE3 sercos III connection: Telegram assignment • S-0-1017 sercos III: NRT transmission time (t6/t7)
Cause for devices with basic classification SCP_VarCFG:	
Cause for devices with function package +SCP_Sync:	• S-0-1050.si.SE2 sercos III connection: Connection number
	• S-0-1006 sercos III: Transmission starting time of the drive telegram (t1) • S-0-1007 sercos III: Measurement point in time of actual values (t4) • S-0-1008 sercos III: Point in time command value valid MDT (t3) • S-0-1015 sercos III: Ring delay • S-0-1023 sercos III: SYNC jitter • S-0-1050.si.SE11 sercos III connection: Producer failures allowed
Cause for devices with basic classification SCP_FixCFG and with function package +SCP_Sync or +SCP_WD:	
Cause for devices with function package +SCP_Sync or SCP_WD:	• S-0-1050.si.SE1 sercos III connection: Configuration • S-0-1050.si.SE10 sercos III connection: Producer cycle time
Solution:	Check write protection of the parameters. Check connection configuration S-0-1050.si.se.

F00B0132, sercos III: Communication capabilities not readable

Display:	F00B0132	Non-fatal error, Communication_Error
Error when reading S-0-1000 in the sercos III phase startup. Refer to the short text for the parameter number and the corresponding error code.		
Cause:	While reading the parameter "S-0-1000 sercos III: SCP type & version", a service channel error occurred.	
Solution:	Retry phase switching (see C-0-0451). Replace sercos III slave. If the error cannot be corrected, please contact the customer service.	

F00B0133, sercos III: Error in transfer of configuration

Display:	F00B0133	Non-fatal error, Communication_Error
Error when reading or writing the parameters in the sercos III phase startup. Refer to the short text for the parameter number and the corresponding error code.		
Cause:	• sercos III connection configuration S-0-1050.si.se. faulty. • A service channel error occurred in the sercos III phase startup.	
Solution:	Check write protection of the parameters. Check connection configuration S-0-1050.si.se.	

F00B0134, sercos III: Connection configuration error

Display:	F00B0134	Non-fatal error, Communication_Error
sercos III connection configuration is inconsistent.		
Cause:		

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- Error in producer relations / consumer relations.
- Error in telegram assignment.

Remedy: Check connection configuration S-0-1050.si.se.

F00B0135, sercos III: Error in phaseswitch to CP1

Display: [F00B0135](#)

Non-fatal error, Communication_Error

Error during phase switching in sercos III phase startup

Cause:

- A new communication phase was specified and the "New CP Bit" was set. Not all devices at the bus stopped the transmission of telegrams until the timeout elapsed. The structure of the telegrams cannot be reconfigured.

Remedy: Check device. Try switchover again (see C-0-0451). If the error cannot be corrected, please contact the customer service.

F00B0136, sercos III: Error in phaseswitch to CP1

Display: [F00B0136](#)

Non-fatal error, Communication_Error

Error during phase switching in sercos III phase startup

Cause:

- The telegram structure was reconfigured for the new communication phase. The new CP was specified and the "New CP Bit" was deleted. Not all devices at the bus started the transmission of telegrams until the timeout elapsed.

Remedy: Check device. Try switchover again (see C-0-0451). If the error cannot be corrected, please contact the customer service.

F00B0137, sercos III: Max. number of MDT-Data exceeded

Display: [F00B0137](#)

Non-fatal error, Communication_Error

Error in the sercos III connection configuration during phase startup

Cause:

- The command values to be transferred cyclically for all devices to be operated, do not fit into four MDT telegrams.

Remedy: Downsize the connection configuration.

F00B0138, sercos III: Max. number of AT-Data exceeded

Display: [F00B0138](#)

Non-fatal error, Communication_Error

Error in the sercos III connection configuration during phase startup.

Cause:

- The data to be transferred cyclically for all devices to be operated, do not fit into four AT telegrams.

Remedy: Downsize the connection configuration.

F00B0139, sercos III: Cycletime exceeded

Display: [F00B0139](#)

Non-fatal error, Communication_Error

Error in the sercos III connection configuration during phase startup.

Cause:

- The transmission period for all MDT and AT telegrams for the specified configuration is higher than the sercos cycle time tScyc.

Remedy: Downsize the connection configuration. Increase sercos III cycle time.

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F00B0140, sercos III: Length of connection inconsistent

Display: [F00B0140](#) Non-fatal error, Communication_Error

Error in the sercos III connection configuration during phase startup.

Cause:

- The current data length in S-0-1050.si.SE5 has to be identical for all connections with the same connection number.
- All parameters configured in S-0-1050.si.SE6 have to be in the sercos III device.

Remedy: Check connection configuration S-0-1050.si.se.

F00B0141, sercos III: Length of connection greater than max.

Display: [F00B0141](#) Non-fatal error, Communication_Error

Error in the sercos III connection configuration during phase startup.

Cause:

- The current length of a connection in S-0-1050.SI.5 is greater than the maximum length allowed in S-0-1050.SI.4

Remedy: Check connection configuration S-0-1050.si.se. Downsize the connection configuration.

F00B0142, sercos III: Cycletime of connection inconsistent

Display: [F00B0142](#) Non-fatal error, Communication_Error

Error in the sercos III connection configuration during phase startup.

Cause:

- The producer cycle time of a produced connection is smaller than or a multiple of S-0-1002.

Remedy: Adjust producer cycle time or sercos III cycle time.

F00B0143, sercos III: Connection Number not unique

Display: [F00B0143](#) Non-fatal error, Communication_Error

Error in the sercos III connection configuration during phase startup.

Cause:

- The connection numbers are not unique in the configuration of the produced connections of all devices and the master.

Remedy: Check connection configuration S-0-1050.si.se.

F00B0144, sercos III: Error in type of configuration

Display: [F00B0144](#) Non-fatal error, Communication_Error

Error in the sercos III connection configuration during phase startup.

Cause:

- For a device with basic classification SCP_VarCFG, a configuration type, which is not supported, is entered in the connection configuration in S-0-1050.SI.1. The following values are allowed:
 - 0 = Configuration list with EIDNs (SE6 relevant).
 - 1 = Container without content specification (SE5 relevant).
 - 2 = Telegram type parameter FSP-Drive (S-0-0015 relevant).

Remedy: Check connection configuration S-0-1050.si.se.

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F00B0145, sercos III: Max. number of connections exceededDisplay: [F00B0145](#)

Non-fatal error, Communication_Error

Error in the sercos III connection configuration during phase startup.

Cause:

- For a device with basic classification SCP_VarCFG, the number of the configured connections is greater than the number of supported connections.

Remedy: Check connection configuration S-0-1050.si.se. Downsize the connection configuration.

F00B0146, sercos III: Wrong number of connectionsDisplay: [F00B0146](#)

Non-fatal error, Communication_Error

Error in the sercos III connection configuration during phase startup.

Cause:

- For a device with basic classification SCP_FixCFG, the number of configured connections is not equal to 2.

Remedy: Check connection configuration S-0-1050.si.se.

F00B0147, sercos III: SCP classification errorDisplay: [F00B0147](#)

Non-fatal error, Communication_Error

Error when checking the sercos III classification of the connected devices in the phase startup.

Cause:

- In S-0-1000, both the basic classifications (SCP_FixCFG and SCP_VarCFG) are activated for one device. This is not allowed.

Remedy: Exchange device.

F00B0148, sercos III: Error in procedure command S-0-0128Display: [F00B0148](#)

Non-fatal error, Communication_Error

Error when switching to CP4 in the sercos III phase startup.

Cause:

- The execution of the command "S-0-0128, C0100 Communication phase 4 transition check" was ended with an error for at least one device.

Remedy: Check error messages of the devices. Adjust configuration.

F00B0149, sercos III: Error in procedure command S-0-0127Display: [F00B0149](#)

Non-fatal error, Communication_Error

Error when switching to CP3 in the sercos III phase startup.

Cause:

- The execution of the command "S-0-0127, C0100 Communication phase 3 transition check" was ended with an error for at least one device.

Remedy: Check error messages of the devices. Adjust configuration.

F00B0150, sercos III: Bus not stableDisplay: [F00B0150](#)

Non-fatal error, Communication_Error

In CP0, no stable device configuration was detected at the bus.

Cause:

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- Within the timeout period (2000 sercos cycles), no stable device configuration was detected at the bus (100 following AT0 telegrams with the same content).

Remedy: Check all devices. Check all Ethernet connections between the control and the devices.

F00B0151, sercos Address not valid

Display: [F00B0151](#) Non-fatal error, Communication_Error

In CP0, devices with invalid sercos address were found.

Cause:

- Devices with sercos addresses greater than 511 were found.

Remedy: Check sercos addresses of all devices.

F00B0152, sercos Addresses inconsistent

Display: [F00B0152](#) Non-fatal error, Communication_Error

In CP0, no stable device configuration was detected at the bus.

Cause:

- In case of detected ring topology: The number or the sercos addresses of the detected slaves at port 1 and port 2 are not identical.

Remedy: Check all devices. Check all Ethernet connections between the control and the devices.

F00B0153, sercos III: Error in phaseswitch to CP2

Display: [F00B0153](#) Non-fatal error, Communication_Error

Error during phase switching in sercos III phase startup

Cause:

- A new communication phase was specified and the "New CP Bit" was set. Not all devices at the bus stopped the transmission of telegrams until the timeout elapsed. The structure of the telegrams cannot be reconfigured.

Remedy: Check device. Try switchover again (see C-0-0451). If the error cannot be corrected, please contact the customer service.

F00B0154, sercos III: Error in phaseswitch to CP2

Display: [F00B0154](#) Non-fatal error, Communication_Error

Error during phase switching in sercos III phase startup

Cause:

- The telegram structure was reconfigured for the new communication phase. The new CP was specified and the "New CP Bit" was deleted. Not all devices at the bus started the transmission of telegrams until the timeout elapsed.

Remedy: Check device. Try switchover again (see C-0-0451).
If the error cannot be corrected, please contact the customer service.

F00B0155, sercos III: Error in phaseswitch to CP3

Display: [F00B0155](#) Non-fatal error, Communication_Error

Error during phase switching in sercos III phase startup

Cause:

- A new communication phase was specified and the "New CP Bit" was set. Not all devices at the bus stopped the transmission of telegrams un-

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til the timeout elapsed. The structure of the telegrams cannot be reconfigured.

Remedy: Check device. Try switchover again (see C-0-0451).
If the error cannot be corrected, please contact the customer service.

F00B0156, sercos III: Error in phaseswitch to CP3

Display: **F00B0156** Non-fatal error, Communication_Error
Error during phase switching in sercos III phase startup

Cause:

- The telegram structure was reconfigured for the new communication phase. The new CP was specified and the "New CP Bit" was deleted. Not all devices at the bus started the transmission of telegrams until the timeout elapsed.

Remedy: Check device. Try switchover again (see C-0-0451). If the error cannot be corrected, please contact the customer service.

F00B0157, sercos III: Error in phaseswitch to CP4

Display: **F00B0157** Non-fatal error, Communication_Error
Error during phase switching in sercos III phase startup

Cause:

- A new communication phase was specified and the "New CP Bit" was set. Not all devices at the bus stopped the transmission of telegrams until the timeout elapsed. The structure of the telegrams cannot be reconfigured.

Remedy: Check device. Try switchover again (see C-0-0451).
If the error cannot be corrected, please contact the customer service.

F00B0158, sercos III: Error in phaseswitch to CP4

Display: **F00B0158** Non-fatal error, Communication_Error
Error during phase switching in sercos III phase startup

Cause:

- The telegram structure was reconfigured for the new communication phase. The new CP was specified and the "New CP Bit" was deleted. Not all devices at the bus started the transmission of telegrams until the timeout elapsed.

Remedy: Check device. Try switchover again (see C-0-0451).
If the error cannot be corrected, please contact the customer service.

F00B0159, Error in transfer of configuration

Display: **F00B0159** Non-fatal error, Communication_Error
Error during phase switching in the sercos III phase startup. Refer to the short text for the parameter number and the corresponding error code.

Cause:

- Service channel error during phase switching to CP3

Solution: Check device. Check connection configuration. Try switchover again (see C-0-0451).
If the error cannot be corrected, please contact the customer service.

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F00B0160, Error in transfer of configuration

Display: **F00B0160**

Non-fatal error, Communication_Error

Error during phase switching in the sercos III phase startup. Refer to the short text for the parameter number and the corresponding error code.

Cause:

- Service channel error during phase switching to CP4.

Solution: Check device. Check connection configuration. Try switchover again (see C-0-0451).

If the error cannot be corrected, please contact the customer service.

F00B0164, Control timing error (T4)

Display: **F00B0164**

Non-fatal error, Communication_Error

Error during phase switching in sercos III phase startup.

Cause:

- T4 outside the time slot permitted.

Remedy: Check connection configuration. Increase sercos cycle time.

F00B0165, Drive error

Display: **F00B0165**

Non-fatal error, System_Error

A drive with interpolation on the control (IndraDrive with interpolation on the control / SercosDrive) reports an F2xxx- / F3xxx error. The error reaction on control side was switched off.

⚠ CAUTION

The error reaction of the control for this axis was switched off with parameter A-0-0651.

There is therefore no error reaction from the control if the drive reports an error.

The user must perform the error reaction.

Implement an error reaction in the user program.

An error is detected in "C-0-0650, Diagnostics, status word, bit 2" and "C-0-0023, System status, bit 26", the error bit is always set in the AxisData[] structure.

Cause: At least one drive reports an error of error class 1.

Solution: Contact the drive manufacturer or take the appropriate measures from the drive documentation.

F00B0166, sercos III: Insufficient FPGA-TxRam

Display: **F00B0166**

Non-fatal error, Communication_Error

Error during phase change in sercos III phase start-up.

Reason:

too many cyclic MDT data configured for the sercos III interface.

Not all cyclic data could be processed.

Solution: Reduce the number of cyclic MDT data and retry switching (see C-0-0451).

F00B0167, sercos III: Insufficient FPGA-RxRam

Display: **F00B0167**

Non-fatal error, Communication_Error

Error during phase switching in the sercos III phase startup.

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Cause:

- Too much cyclic AT data is configured for the sercos III interface. Not all cyclic data can be processed.

Solution: Reduce number of cyclic AT data. Try switchover again (see C-0-0451).

F00B0168, sercos III: Bus configuration inconsistent

Display: [F00B0168](#)

Non-fatal error, Communication_Error

Error during phase switching in the sercos III phase startup.

Cause:

- sercos III devices are configured in the Motion part on the control, which are not known to the PLC program on the control.
- sercos III devices are configured in the PLC program on the control, which are not known to the Motion part on the control.

Solution:

- Transfer the PLC program with the current device configuration into the control.
- Switch the control online via IndraWorks.

F00B0169, sercos III: Data format in C-0-0520 not valid

Display: [F00B0169](#)

Non-fatal error, Other_Error

Error during phase switching in the sercos III phase startup.

Cause:

- The connection configuration stored in C-0-0520 contains an incorrect table header.
- The connection configuration stored in C-0-0520 contains an incorrect version in the table header.
- The format of the connection configuration stored in C-0-0520 does not correspond to the specification.

Solution:

- Store the connection configuration in the correct format in C-0-0520.

F00B016A, sercos III: Invalid sercos address

Display: [F00B016A](#)

Non-fatal error, Input_Invalid_Error

Error during phase switching in the sercos III phase startup.

Cause:

- In the connection configuration C-0-0520, connections for sercos III devices not included in C-0-0478 are configured. These connections are not supported by the sercos III bus.

Solution:

- Remove the connections for non-existing sercos III devices from the connection configuration C-0-0520.
- Include the required sercos III device in the configuration in C-0-0478.

F00B016B, sercos III: Connection number already used

Display: [F00B016B](#)

Non-fatal error, Input_Range_Error

Error during phase switching in the sercos III phase startup.

Cause:

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- Connection numbers are specified in the connection configuration C-0-0520. These numbers are already used for internally configured connections.

Solution:

- Adjust the connection numbers in the connection configuration.

F00B016C, sercos III: Connection instance already used

Display: **F00B016C**

Non-fatal error, INPUT_RANGE_ERROR

Error during phase switching in the sercos III phase startup.

Cause:

- Connection instances are specified in the connection configuration C-0-0520. These instances are already used for internally configured connections.

Solution:

- Adjust the connection instances in the connection configuration.

F00B016D, sercos III: Connection instance not valid

Display: **F00B016D**

Non-fatal error, INPUT_RANGE_ERROR

Error during phase switching in the sercos III phase startup.

Cause:

- Connection instances are specified in the connection configuration C-0-0520. These instances are not supported in the sercos III overall configuration.

Solution:

- Adjust the connection instances in the connection configuration.

F00B016E, sercos III: Configuration too large

Display: **F00B016E**

Non-fatal error, INPUT_RANGE_ERROR

Error during phase switching in the sercos III phase startup.

Cause:

- Too many connections are specified in the connection configuration C-0-0520. These are not supported in the sercos III overall configuration.

Solution:

- Reduce the connection configuration.
- Reduce the number of configured sercos III devices in the C-0-0478.

F00B016F, sercos III: Max. number of connections exceeded

Display: **F00B016F**

Non-fatal error, INPUT_RANGE_ERROR

Error during phase switching in the sercos III phase startup.

Cause:

- Too many connections are specified in the connection configuration C-0-0520 for a sercos III device. These are not supported in the sercos III overall configuration.

Solution:

- Reduce the connection configuration for a sercos III device.

F00B0170, sercos III: Max. number of real-time bits exceeded

Display: **F00B0170**

Non-fatal error, INPUT_RANGE_ERROR

Error during phase switching in the sercos III phase startup.

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Cause:

- Too many real-time bits are specified in the connection configuration C-0-0520. This is not supported in the sercos III overall configuration.

Solution:

- Reduce the number of real-time bits in the connection configuration.

F00B0171, sercos III: Max. number of IDN for one connection exceededDisplay: [F00B0171](#)

Non-fatal error, INPUT_RANGE_ERROR

Error during phase switching in the sercos III phase startup.

Cause:

- Too many IDNs are specified in the connection configuration C-0-0520 for one connection.

Solution:

- Reduce the number of IDNs in one connection in the connection configuration.

F00B0173, Ring topology could not be establishedDisplay: [F00B0173](#)

Non-fatal error, Communication_Error

An error occurred while restoring the "ring" topology. There is no redundancy.

Cause:

- Cables between the slaves reported in the parameter C-0-0517 is either not available or incorrect.
- There is no ring topology.
- The communication phase is lower than CP2.
- At least one slave did not apply the specified topology.
- The last slaves of the lines reported an incorrect topology. There is either no telegram or a wrong telegram at the disabled port.

Solution:

- Check the cabling between the slaves.
- Check all sercos devices. All slaves have to be at least in communication phase CP2. Devices that are not at least CP2 have to be switched to active first with a regular phase startup. Only then can the "ring" topology be restored.

F00B0174, sercos III: Data format in C-0-0519 not validDisplay: [F00B0174](#)

Non-fatal error, Other_Error

Error during phase switching in the sercos III phase startup.

Cause:

- The connection configuration stored in C-0-0519 contains an incorrect table header.
- The connection configuration stored in C-0-0519 contains an incorrect version in the table header.
- The format of the connection configuration stored in C-0-0519 does not correspond to the CSM_Cfg.bin (CoSeMa configuration binary) format.

Solution:

- Store the connection configuration in the correct format in C-0-0519.

F00B0175, sercos III: Connection has no producer or consumerDisplay: [F00B0175](#)

Non-fatal error, Other_Error

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Error during phase switching in the sercos III phase startup.

Cause:

- The connection configuration stored in C-0-0519 contains a connection without producer.
- The connection configuration stored in C-0-0519 contains a connection with several producers.
- The connection configuration stored in C-0-0519 contains a connection without consumers.

Solution:

- Adjust the connection configuration. Each connection requires one producer and at least one consumer.

F00B0176, sercos III: Connection has no producer or consumer

Display: [F00B0176](#)

Non-fatal error, Other_Error

Error during phase switching in the sercos III phase startup.

Cause:

- The connection configuration stored in C-0-0520 contains a connection without producer.
- The connection configuration stored in C-0-0520 contains a connection with several producers.
- The connection configuration stored in C-0-0520 contains a connection without consumers.

Solution:

- Adjust the connection configuration. Each connection requires one producer and at least one consumer.

F00B0177, sercos III: Max. number of slave setup parameters exceeded

Display: [F00B0177](#)

Non-fatal error, Other_Error

Error during phase switching in the sercos III phase startup.

Cause:

- The connection configuration stored in C-0-0519 contains too many parameters to be written in the phase transition from P2 to BB.

Solution:

- Reduce number of parameters.

F00B0178, sercos III: Max. number of slave setup parameters exceeded

Display: [F00B0178](#)

Non-fatal error, Other_Error

Error during phase switching in the sercos III phase startup.

Cause:

- The connection configuration stored in C-0-0520 contains too many parameters to be written in the phase transition from P2 to BB.

Solution:

- Reduce number of parameters.

F00B0179, sercos: Initialisation of hardware failed

Display: [F00B0179](#)

Non-fatal error, INPUT_RANGE_ERROR

- Cause:** A sercos module configured as master communication in parameter C-0-0040 has been enabled. The module has not been found or is not working correctly.

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- Solution:** Check for sercos module on the control.
- Check in parameter C-0-0039, if a sercos module configured as master communication could be detected.
- If a sercos module is physically available but cannot be detected correctly, please contact the customer service.

F00B7010, Command already setDisplay: **F00B7010**

Non-fatal error, Access_Error

By program processed function blocks, partial commands in the drive are used (e.g. "S-0-0148, Command drive-controlled referencing"). If the function block is in process and the command is set manually in the drive, this diagnosis is set.

Cause: Drive commands which are used by the FB's, were set manually.

Remedy: Reset manually the started command.

F00C0001, Error while setting module referencesDisplay: **F00C0001**

Non-fatal error, System_Error

An internal firmware error occurred. The boot sequence was aborted.

Cause: An error occurred in the firmware.

Remedy: Please contact the service.

F00C0003, Error in power up delayDisplay: **F00C0003**

Non-fatal error, System_Error

An internal firmware error occurred. The power up delay, which is adjusted in C-0-0060, was possibly not executed. This may cause, that e.g. there is an access to not yet by the system created axes, and consequently other errors occur.

Cause: An error occurred in the firmware.

Remedy: Please contact the service.

F00C0004, Error while switching to power up target modeDisplay: **F00C0004**

Non-fatal error, System_Error

An internal firmware error occurred. This may cause, that possibly it was not switched to the motion mode, determined in parameter C-0-0450 (e.g. "BB RUN").

Cause: An error occurred in the firmware.

Remedy: Switch to the desired motion mode using parameter C-0-0451. If the problem exists furthermore at each start of the control, please contact the service.

F00C0005, Error remanent data; data clearedDisplay: **F00C0005**

Non-fatal error, System_Error

An error occurred while restoring the remanent data (parameters and PLC data). That means that this data is inconsistent.

The result is that all remanent data is cleared due to security reasons. With regard to the remanent data, the control is thus in its delivery (default) state again.

To further analyze or restore the system, the control startup was interrupted. Thus, the settings in C-0-0450 "Motion, startup target mode" were not applied.

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This error can occur once when booting a newly delivered control or when changing to a new Compact Flash, as the remanent data has not yet been initialized.

This error does not affect RoCo data saved in the SRAM (that is RoCo files like *.ird, *.pkt, *.qll, *.sym).

Cause: An error occurred in the firmware.

Solution: Normally, this remanent data only represents a part of the project-related settings (such as PLC projects, flash parameters, RoCo files). It is thus recommended to return to the delivery state (also refer to "C-0-1019, Command: Restart and reset to default " or the chapter "Deleting Memory/Resetting Control") to subsequently restore the complete project based on the project releases previously stored with IndraWorks for example.

If it is assumed that a remanent data backup is sufficient, there are the following options:

If a parameter backup was created via IndraWorks for example, these can be re-imported. This does not include any remanent PLC data if available.

If a backup was created on the flash card immediately before the error occurred using the parameter C-0-1002 (or a usable version of a phase switching is stored on the flash card before the control restart) this backup can be used for restoration purposes (for details, refer to the description of C-0-1001 and C-0-1002). It also contains the remanent PLC data. Note that NVRAM parameters or data changed after the backup on the flash card are not contained in the backup (that is after the execution of C-0-1002 or the last phase switching).

Contact the customer support if this problem occurs at each further control startup.

F00C0006, Error remanent data; restored last backup

Display: **F00C0006**

Non-fatal error, System_Error

An error occurred while restoring the remanent data (parameters and PLC data). When switching off the control (soft reboot or voltage switch-off) data could not be saved. That means all changes between the second last and the last switch-off are lost. The control is then in the state of the second last switch-off.

To further analyze or restore the system, the control startup was interrupted. Thus, the settings in C-0-0450 "Motion, startup target mode" were not applied.



This error does not affect RoCo data saved in the SRAM (that is RoCo files like *.ird, *.pkt, *.qll, *.sym).

Cause: An error occurred in the firmware.

Solution: If no remanent data (parameters and PLC data) was changed between the second last and the last restart of the control was changed, no further action is required.

If this cannot be ensured, the following solutions are possible:

Normally, this remanent data only represents a part of the project-related settings (such as PLC projects, flash parameters, RoCo files). It is thus recommended to return to the delivery state (also refer to "C-0-1019, Command: Restart and reset to default " or the chapter "Deleting Memory/Resetting Con-

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trol") to subsequently restore the complete project based on the project releases previously stored with IndraWorks for example.

If it is assumed that a remanent data backup is sufficient, there are the following options:

If a parameter backup was created via IndraWorks for example, these can be re-imported. This does not include any remanent PLC data if available.

If a backup was created on the flash card immediately before the error occurred using the parameter C-0-1002 (or a usable version of a phase switching is stored on the flash card before the control restart) this backup can be used for restoration purposes (for details, refer to the description of C-0-1001 and C-0-1002). It also contains the remanent PLC data. Note that NVRAM parameters or data changed after the backup on the flash card are not contained in the backup (that is after the execution of C-0-1002 or the last phase switching).

Contact the customer support if this problem occurs at each further control startup.

F00C0007, Firmware does not fit hardware

Display: [F00C0007](#)

Non-fatal error, System_Error

The firmware variant on the CF card cannot be operated on the hardware.

Cause: The CF card from a CML65 control is plugged in a CML45 control.

Solution: Plug in the CF card in the CML65 control.

F00D0002, Axis access error

Display: [F00D0002](#)

Non-fatal error, Access_Error

The axis data for the specified axis could not be written or read using direct variable access.

Cause:	Remedy:
The specified axis is not or no longer configured.	Configure the axis or remove the access from the PLC program.
An axis parameter was accessed that is not available for this axis type.	Adjust the PLC program accordingly.
There is a consecutive error from F00D1016 , F00D1017 or F00D1018 (wrong # address of the axis data).	See the documentation for this error.
A firmware error has occurred.	Contact customer service.

F00D0030, Create boot project failed

Display: [F00D0030](#)

Non-fatal error, Other_Error

Cause: An error occurred while creating the boot project.

Solution: Repeat the operation.

If the error cannot be fixed, please contact the customer service.

F00D0060, Maximum number of PLC applications exceeded

Display: [F00D0060](#)

Non-fatal error, Resource_Error

Cause: More than the maximum number of permitted applications are in RUN state on the control.

Solution: Do not exceed the maximum permissible number when switching applications to RUN state.

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Currently only a single application is permitted in RUN state.

Moreover, with several applications, note that the state of parameter "C-0-0023, System status" and the display and the status LED are no longer valid!

Example: An application is switched to STOP state, then the display shows STOP status and the status LED is active, but another application is still in RUN state and is possibly continuing to serve the IOs. The axes are stopped.

F00D0300, Output shorted

Display: **F00D0300** Non-fatal error, System_Error

Cause: An output of the function module "Fast-IO" has short-circuited.
The module's status LED lights up red.

Solution: Check the outputs of the corresponding function module for a short-circuit or overload.
The number of the module is specified in the error message. Counting from 1 to 4, whereby 1 stands for the module near the CML control.

F00D0301, Voltage supply dropped

Display: **F00D0301** Non-fatal error, System_Error

Cause: The 24 V voltage supply of the function module "Fast-IO" is not in order.
The module's status LED lights up red.

Solution: Check the 24 V of the corresponding function module for its value. The number of the module is specified in the error message. Counting from 1 to 4, whereby 1 stands for the module near the CML control.

F00D0302, Watchdog error

Display: **F00D0302** Non-fatal error, System_Error

Cause: The watchdog of the function module "Fast-IO" has expired.
The module's status LED lights up red.

Solution: Switch the control off and on again. Should the error continue to occur, then please inform customer service.
The number of the module is specified in the error message. Counting from 1 to 4, whereby 1 stands for the module near the CML control.

F00D0303, Module removed

Display: **F00D0303** Non-fatal error, System_Error

Cause: At least one "Fast-IO" function block fewer was found than was configured.
This error can occur during project transfer and also during run-time.

Solution: Check whether all of the function modules are fixed on the control.
Check whether there are more modules included in your configuration than there are on the control.

F00D0304, Fault repaired

Display: **F00D0304** Non-fatal error, System_Error

Cause: This message is displayed if the last pending error of a Fast-IO function module has been eliminated.

The status LED of all Fast-IO function modules is lit green.

Solution: --

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F00D0305, Multiple error, fast IOsDisplay: [F00D0305](#)

Non-fatal error, System_Error

Cause: The Fast-IO function module has reported several errors simultaneously.
The module's status LED lights up red.

Solution: Check the corresponding "Fast-IO" function module for

- 24 V power supply,
- the short-circuiting of an output.

The number of the module is specified in the error message. Counting from 1 to 4, whereby 1 stands for the module near the CML control.

F00D0400, Error restoring PLC-retain-data from fileDisplay: [F00D0400](#)

Non-fatal error, INPUT_RANGE_ERROR

An error occurred while restoring the RETAIN and PERSISTENT RETAIN data of the PLC.

Cause:	Remedy:
The file "PlcRetain.save" is not available on the storage medium.	To restore data, data had to be backed up earlier on the storage medium.
The file "PlcRetain.save" is available on the storage medium.	Contact customer service.

F00D0401, Error saving PLC-retain-data to fileDisplay: [F00D0401](#)

Non-fatal error, INPUT_RANGE_ERROR

An error occurred, while saving the PLC RETAIN and PERSISTENT RETAIN data.

Cause:	Remedy:
The file "PlcRetain.save" could not be created on the storage medium.	Check the memory space on the storage medium and repeat the backup. If the error occurs again, contact the customer service.

F00D1002, Cyclic position channel already openDisplay: [F00D1002](#)

Non-fatal error, Access_Error

A cyclic command channel has been opened with the function block ML_OpenCyclicPositionChannel for an axis that was already open.

Cause: Multiple opening of the cyclic command channel for one axis.

Solution: In the PLC program, prevent the cyclic command channel being able to be opened several times.

F00D1003, Cyclic force channel already openDisplay: [F00D1003](#)

Non-fatal error, Access_Error

A cyclic force channel was open using the ML_OpenCyclicTorqueChannel function block for an axis that was already open.

Cause: Multiple opening of the cyclic force command value channel for one axis.

Solution: In the PLC program, prevent the cyclic force command value channel from being opened several times.

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F00D1004, Cyclic velocity channel already open

Display: **F00D1004**

Non-fatal error, Access_Error

A cyclic velocity channel was opened using the ML_OpenCyclicVelocityChannel function block for an axis that was already open.

Cause: Multiple opening of the cyclic velocity channel for one axis.

Solution: In the PLC program prevent the cyclic velocity channel from being opened several times.

F00D1005, Cyclic analog channel already open

Display: **F00D1005**

Non-fatal error, Access_Error

A cyclic analog channel was opened with the function block ML_OpenCyclicAnalogChannel for an axis that was already open.

Cause: Multiple opening of the cyclic analog channel for one axis.

Solution: In the PLC program prevent the cyclic analog channel from being opened several times.

F00D100A, Error while reading C-0-0483

Display: **F00D100A**

Non-fatal error, Access_Error

The parameter "C-0-0483, List of configured axes" could not be read.

Cause: An error occurred in the firmware.

Solution: Please contact customer service.

F00D100B, Error while reading C-0-0484

Display: **F00D100B**

Non-fatal error, Access_Error

The parameter "C-0-0483, List of configured axes" could not be read.

Cause: An error occurred in the firmware.

Solution: Please contact customer service.

F00D100C, Error while opening cyclic channel

Display: **F00D100C**

Non-fatal error, Access_Error

The cyclic channel for the configured user-defined parameter could not be opened.

Cause: A user-defined actual value A, B, C or D was configured in IndraWorks that cannot be cyclically transmitted.

Solution: Check the configured user-defined actual value.

F00D100D, Error while opening cyclic channel

Display: **F00D100D**

Non-fatal error, Access_Error

The cyclic channel for the configured user-defined parameter could not be opened.

Cause: A user-defined command value A, B, C or D was configured in IndraWorks that cannot be cyclically transmitted.

Solution: Check the configured user-defined command value.

F00D1014, No reference for opening cyclic channel available

Display: **F00D1014**

Non-fatal error, Access_Error

A firmware error occurred.

Cause: An error occurred in the firmware.

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Remedy: Please contact the service.**F00D1016, Wrong #-address of axis data**Display: [F00D1016](#)

Non-fatal error, Access_Error

The direct variable address (*) with which the axis data should be accessed could not be decoded.

Cause:	Remedy:
A variable was declared and programmed manually which contains a faulty #-address.	Use only the automatic generated global MLC-Variables for the access on the axis data.
The automatic generation of this address is incorrect.	Please contact the customer service.

F00D1017, Wrong #-address of axis dataDisplay: [F00D1017](#)

Non-fatal error, Access_Error

The direct variable address (*) with which the axis data should be accessed could not be decoded.

Cause:	Remedy:
A variable was declared and programmed manually which contains a faulty #-address.	Use only the automatic generated global MLC-Variables for the access on the axis data.
The automatic generation of this address is incorrect.	Please contact the customer service.

F00D1018, Wrong #-address of axis dataDisplay: [F00D1018](#)

Non-fatal error, Access_Error

The direct variable address (*) with which the axis data should be accessed could not be decoded.

Cause:	Remedy:
A variable was declared and programmed manually which contains a faulty #-address.	Use only the automatic generated global MLC-Variables for the access on the axis data.
The automatic generation of this address is incorrect.	Please contact the customer service.

F00D1019, Error while closing cyclic channelDisplay: [F00D1019](#)

Non-fatal error, Communication_Error

A firmware error occurred.

Cause: An error occurred in the firmware.**Remedy:** Please contact the service.**F00D1027, Error while closing cyclic channel**Display: [F00D1027](#)

Non-fatal error, Communication_Error

An internal firmware error occurred when closing the cyclic channel for AT-Data.

Cause: Firmware error.**Remedy:** Please contact the service.**F00D102A, ListParameter requested, ReadParameter**Display: [F00D102A](#)

Non-fatal error, Device_Error

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This error has occurred because a function block MB_ReadParameter or MB_ReadRealParameter has accessed a list parameter.

Cause: Access error, incorrect function block for list parameters.

Solution: Please use MB_ReadListParameter to read list parameters.

F00D1030, Error while closing cyclic channel

Display: **F00D1030**

Non-fatal error, Communication_Error

At closing the cyclic channel for MTD-Data, an internal firmware error occurred.

Cause: Firmware error.

Remedy: Please contact the service.

F00D103B, Invalid control number

Display: **F00D103B**

Non-fatal error, Input_Invalid_Error

A variable of the type AXIS_REF is used in the PLC program that addresses an axis in a remote control. This present firmware version only supports access to local control axes.

Cause: In the PLC program an axis of a remote control was addressed.

Remedy: Update the PLC program.

F00D103C, Invalid axis number

Display: **F00D103C**

Non-fatal error, Input_Invalid_Error

A variable of the type AXIS_REF is used in the PLC program that addresses an unknown axis in the control.

Cause: An unknown axis was addressed in the PLC program.

Remedy: Update the PLC program or configure the missing axis in the control (see parameter "C-0-0484, Axes configuration list").

F00D1040, Invalid Value

Display: **F00D1040**

Non-fatal error, Input_Invalid_Error

The current values of a controller axis implemented into the PLC code can be written to the control via the PLC function block "ML_ControlWriteActual". An invalid float value was applied to the control.

Cause:	Solution:
An invalid float value was written for the "ActualPosition" output.	Check the current position values. Ensure that no invalid values are written to the control via the function block.
An invalid float value was written for the "ActualVelocity" output.	Check the current velocity values. Ensure that no invalid values are written to the control via the function block.
An invalid float value was written for the "ActualTorque" output.	Check the current force values. Ensure that no invalid values are written to the control via the function block.

F00D1205, Error, cannot handle a single parameter

Display: **F00D1205**

Non-fatal error, System_Error

This error has occurred because a function block MB_ReadListParameter has accessed a single parameter.

Cause: Access error, incorrect function block for single parameters.

Solution: Please use MB_ReadParameter or MB_ReadRealParameter to read single parameters.

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F00D1207, Error, data greater 64KBytesDisplay: [F00D1207](#)

Non-fatal error, System_Error

This error has occurred because a function block MB_WriteListParameter has attempted to write more than 65,532 bytes of data to a list parameter.

Cause: The data that can be written to a list parameter is generally limited to 65,532 bytes. The limit can even be below this with selected list parameters.

Solution: Please note that it is not possible to write more than 65,532 bytes of data to a list parameter.

Reduce the corresponding input size of the function block that displays the number of bytes to be written.

F00D1210, Error, cannot handle a single parameterDisplay: [F00D1210](#)

Non-fatal error, System_Error

This error has occurred because a function block MB_WriteListParameter has attempted to write a single parameter.

Cause: Access error, incorrect function block for single parameters.

Solution: Please use MB_WriteParameter or MB_WriteRealParameter to write single parameters.

F00D1211, Error ReadSERCOSDataStatus, no memory availableDisplay: [F00D1211](#)

Non-fatal error, System_Error

This error has occurred with function block MB_ReadSercosDataStatus when reading the parameter's data.

Cause: This firmware error occurs when reading a parameter date.

Solution: Should the error re-occur when trying to read the parameter again, please inform customer service.

F00D1218, Error, no memory availableDisplay: [F00D1218](#)

Non-fatal error, Access_Error

This error has occurred with function block MB_ReadStringparameter when reading the parameter's data.

Cause: This firmware error occurs when reading a parameter date.

Solution: Should the error re-occur when trying to read the parameter again, please inform customer service.

F00D1219, Error, cannot handle a single parameterDisplay: [F00D1219](#)

Non-fatal error, Access_Error

This error has occurred because a function block MB_ReadStringParameter has accessed a single parameter.

Cause: Access error, incorrect function block for single parameters

Solution: Please use MB_ReadParameter or MB_ReadRealParameter to read single parameters.

F00D1220, Unsupported selection of sercos elementDisplay: [F00D1220](#)

Non-fatal error, INPUT_RANGE_ERROR

Selection of the sercos element is not supported by the function block.

Cause: A sercos element (ident number, name, attribute (MLC data type, editability, ...), unit, minimum value, maximum value, operating date (value)) has

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been selected at the "SercosElement" input of the function block that is not supported by the type of function block.

Solution: The value of the "SercosElement" input must be adapted to the type of function block.

Alternatively the corresponding function block must be selected for the desired value.

The function block MB_ReadParameter supports the sercos elements.

- E_SERCOS_ELEMENT_ATTRIBUTE ,
- E_SERCOS_ELEMENT_MIN,
- E_SERCOS_ELEMENT_MAX and
- E_SERCOS_ELEMENT_DATA.

The function block MB_ReadStringParameter supports the sercos elements.

- E_SERCOS_ELEMENT_NAME,
- E_SERCOS_ELEMENT_UNIT and
- E_SERCOS_ELEMENT_DATA.

F00D1221, Timeout on parameter access

Display: [F00D1221](#)

Non-fatal error, INPUT_RANGE_ERROR

The execution of the function block was interrupted by a timeout when accessing the parameter.

Cause: A timeout can occur if an online change is executed when accessing the parameters of a function block.

Solution: The execution of the parameter access must be repeated.

F00D1222, Too many data to transmit

Display: [F00D1222](#)

Non-fatal error, Access_Error

This error has occurred because a function block MB_WriteStringParameter has attempted to write more than 255 bytes of data to a string parameter.

Cause: The data that can be written to a string parameter is generally limited to 255 bytes. The limit can even be below this with selected string parameters.

Solution: Please note that it is not possible to write more than 255 bytes of data to a string parameter. Reduce the number of bytes to be written.

F00D1224, Error, no memory available

Display: [F00D1224](#)

Non-fatal error, Access_Error

This error has occurred with function block MB_WriteStringParameter when writing the data of a parameter.

Cause: This firmware error occurs when writing a parameter date.

Solution: Should the error re-occur when retrying to write the parameter, please inform customer service.

F00D1225, Error, cannot handle a single parameter

Display: [F00D1225](#)

Non-fatal error, Access_Error

This error has occurred because a function block MB_WriteStringParameter has attempted to write a single parameter.

Cause: Access error, incorrect function block for single parameters.

Solution: Please use MB_WriteParameter or MB_WriteRealParameter to write single parameters.

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F00D1227, Error while writing dateDisplay: [F00D1227](#)

Non-fatal error, Access_Error

This error has occurred with function block MB_WriteStringParameter when writing a date.

Cause: The date to be written was incorrect or was transmitted incorrectly. (e.g. date transmitted too short etc.).

Solution: Check whether the date to be written is correct for this parameter. Should the error re-occur when retrying to write the parameter, please inform customer service.

F00D1230, Error ReadSERCOSAttribute, no memory availableDisplay: [F00D1230](#)

Non-fatal error, Access_Error

This error has occurred with function block MB_ReadSercos Attribute when reading the parameter's data.

Cause: This firmware error occurs when reading a parameter date.

Solution: Should the error re-occur when trying to read the parameter again, please inform customer service.

F00D2001, Access error, axis 1Display: [F00D2001](#)

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016 , F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D2002, Access error, axis 2Display: [F00D2002](#)

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016 , F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D2003, Access error, axis 3Display: [F00D2003](#)

Non-fatal error, Access_Error

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The axis data of the specified axis could not be written or read using direct variable access.

Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016 , F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D2004, Access error, axis 4

Display: [F00D2004](#)

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016 , F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D2005, Access error, axis 5

Display: [F00D2005](#)

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016 , F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D2006, Access error, axis 6

Display: [F00D2006](#)

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

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Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016, F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D2007, Access error, axis 7

Display: F00D2007

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016, F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D2008, Access error, axis 8

Display: F00D2008

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016, F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D2009, Access error, axis 9

Display: F00D2009

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

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Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016 , F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D200A, Access error, axis 10

Display: [F00D200A](#)

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016 , F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D200B, Access error, axis 11

Display: [F00D200B](#)

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016 , F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D200C, Access error, axis 12

Display: [F00D200C](#)

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

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Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016, F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D200D, Access error, axis 13

Display: F00D200D

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016, F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D200E, Access error, axis 14

Display: F00D200E

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016, F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D200F, Access error, axis 15

Display: F00D200F

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

XLC/MLC diagnostic system tables

Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016 , F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D2010, Access error, axis 16

Display: [F00D2010](#)

Non-fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016 , F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D2064, Axis not configured

Display: [F00D2064](#)

Non-fatal error, Access_Error

The axis data of the specified axias could not be written or read using direct variable access.

Cause:	Remedy:
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016 , F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D2EE1, Fatal error: Inline los

Display: [F00D2EE1](#)

Non-fatal error, Device_Error

At the Inline IO-Bus a fatal error has appeared in the running operation. After a fatal error the other operation of the whole bus is not possible any more.

Cause: The following causes are possible:

- In the running operation an Inline module was pulled
- The Inline modules are not put together correctly and have a loose connection
- An Inline module is faulty

XLC/MLC diagnostic system tables

- Strong EMV interferences (grid-bound or irradiation),
- Power supply has dips,
- Firmware error

Remedy: Switch off the control and check whether the Inline modules are put together correctly. Possibly exchange modules to find out whether a module is faulty.
Check whether the control was installed in accordance with the installation directives (EMV interferences, power supply).
If no physical causes are recognizable and the error appears repeated, then a firmware error could be also present. In this case report the error to the customer service.



This error might occur (together or as aftereffect) with error **F00D2EE3**.

F00D2EE2, An untreated Inlinebus error has occurred

Display: **F00D2EE2**

Non-fatal error, System_Error

At the Inline IO-Bus an untreated fatal error has appeared in the running operation.

Remedy: If no physical causes are recognizable and the error appears repeated, then a firmware error could be also present. In this case report the error to the customer service.

F00D2EE3, Reset on Inlinebus occurred

Display: **F00D2EE3**

Non-fatal error, System_Error

At the Inline IO-Bus a fatal error has appeared in the running operation. After a fatal error the other operation of the whole bus is not possible any more.

Cause: The following causes are possible:

- In the running operation an Inline module was pulled
- The Inline modules are not put together correctly and have a loose connection
- An Inline module is faulty
- Strong EMV interferences (grid-bound or irradiation),
- Power supply has dips,
- Firmware error

Remedy: Switch off the control and check whether the Inline modules are put together correctly. Possibly exchange modules to find out whether a module is faulty.
Check whether the control was installed in accordance with the installation directives (EMV interferences, power supply).
If no physical causes are recognizable and the error appears repeated, then a firmware error could be also present. In this case report the error to the customer service.



This error might occur (together or as aftereffect) with error **F00D2EE1**.

F00D2EE5, Module error Inline bus comes

Display: **F00D2EE5**

Non-fatal error, System_Error

Cause: At the Inline-Bus of the control a module error has appeared.

XLC/MLC diagnostic system tables

Remedy: This module error is module-specific and, therefore, can have several causes. Please, read the description of the appropriate module.
Example: shorted output.

F00D2EE7, System at the maximum load

Display: [F00D2EE7](#) Non-fatal error, System_Error

Cause: All system calculation time is used.

Remedy: Check if the runtimes for the IEC tasks and the motion kernel fit within the related cycle times. If one or more runtimes is greater than the set cycle time, this task uses full system capacity. The runtimes for the IEC tasks can be read in the task configuration dialog. The runtimes for the motion kernel can be read in the cycle times dialog.

If this is the case, increase the cycle time or transfer program parts that require a lot of time to a task with a greater cycle time.

If necessary, check the parts of your program that use a lot of calculation time to see if they contain any errors.

Example: Endless loops in a PLC task

F00F0001 up to F00F0006, RTOS Error (Real Time Operating System)

A non-fatal internal firmware error occurred.

Cause: A firmware error occurred.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0110001, No power turned

Display: [F0110001](#) Non-fatal error, Other_Error

Power must be connected to execute MC_Power.

Cause: The function block MC_Power was executed without power connected.

Solution: Connect power to the drive controllers via the power supply unit and restart the function block.

F0110010, Error while synchronization of system time of the drive

Display: [F0110010](#) Non-fatal error, System_Error

The system time of a drive could not be synchronized.

Synchronization of the drives takes place if

- the control is switched from P0 to P2,
- the system time of the control is changed, i.e. parameter C-0-0050 is written,
- the control is configured as a slave and the value of the local real-time clock deviates from the time basis of the sercos link.

This situation occurs if

- the real-time clocks are not running one hundred percent synchronously and the times drift apart,
- the system time of the master control was written.

Cause:	Solution:
The system time of a drive could not be written.	
A configured drive was not found.	Check configuration in IndraWorks.

XLC/MLC diagnostic system tables

Cause:	Solution:
Error in the control firmware	If, after careful investigation, the error is still displayed, please contact customer service.
Error in the drive	If, after careful investigation, the error is still displayed, please contact customer service.

F0110040, Axis reference invalid, axis is master axisDisplay: [F0110040](#)

Non-fatal error, Input_Invalid_Error

Operation could not be executed with the selected axis, since the specified axis is used as master axis on the local control or in the MLC link.

It is limited to avoid jumps in the command value specification of the slave axes for example.

F0140001, Error in device configurationDisplay: [F0140001](#)

Non-fatal error, Other_Error

- When switching the sercos phase from
 - P0 to P2 or
 - P2 to P4, and
- after writing parameter "C-0-0478, Drive setup",

the sercos devices configured in the parameters C-0-0478 are compared with the sercos devices on the sercos ring. An error has occurred here.

Cause:	Solution:
The following checks are performed if a device is parameterized and active or parked in parameter C-0-0478:	Parameter C-0-0478 is written by IndraWorks depending on the configured sercos devices.
• Is the device in the sercos ring?	• If there is not a device in the sercos ring, this must either be added or the device must be disabled.
• Is the device firmware version identical?	• If not, the device firmware is incorrect.
• If the function package identical?	• If not, the function package is incorrect.
If at least one of the checks has failed...,	then the device must be reconfigured in IndraWorks.

F0160001 up to F0160002, RTOS Error (Real Time Operating System)

A non-fatal internal firmware error occurred.

Cause: A firmware error occurred.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0160003, Error while changing to P0Display: [F0160003](#)

Non-fatal error, System_Error

The switching to the desired motion mode was aborted.

Cause: Possible causes:

- the switching may not take place since an error occurred possibly before,
- an internal firmware error occurred.

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

XLC/MLC diagnostic system tables

F0160004, Error while changing to P0

Display: **F0160004**

Non-fatal error, System_Error

The switching to the desired motion mode was aborted.

Cause: Possible causes:

- the switching may not take place since an error occurred possibly before,
- an internal firmware error occurred.

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160005, Error while changing to P2

Display: **F0160005**

Non-fatal error, System_Error

The switch into the desire motion mode was aborted.

Cause: Possible causes:

- One or more devices on the sercos III bus do not support the sercos III specification V1.1.1 (e.g. MPx06 or higher is required).
- The switch cannot be carried out due to an error that may have occurred earlier.
- An internal firmware error occurred.

Remedy: Access the diagnostics logbook, correct any errors and try switching again (see C-0-0451). If the error cannot be corrected, please contact the customer service.

F0160006, Error while changing to P2

Display: **F0160006**

Non-fatal error, System_Error

The switching to the desired motion mode was aborted.

Cause: Possible causes:

- the switching may not take place since an error occurred possibly before,
- an internal firmware error occurred.

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160008, Error while changing to P3

Display: **F0160008**

Non-fatal error, System_Error

The switching to the desired motion mode was aborted.

Cause: Possible causes:

- the switching may not take place since an error occurred possibly before (e.g. see S-0-0095),
- an internal firmware error occurred.

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160009, Error while changing to P3

Display: **F0160009**

Non-fatal error, System_Error

The switching to the desired motion mode was aborted.

Cause: Possible causes:

- the switching may not take place since an error occurred possibly before (e.g. see S-0-0095),

XLC/MLC diagnostic system tables

- an internal firmware error occurred.
- Remedy:** See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160010, Error while changing to P3

- Display: [F0160010](#) Non-fatal error, System_Error
- Switching to the desired Motion mode has been canceled due to an axis error.
- Cause:** Possible causes:
- Switching cannot take place due to an error that may have occurred earlier (e.g. S-0-0095),
 - the configuration "Cyclic sercos channel" contains an invalid parameter
 - An internal firmware error occurred.
- Solution:** Access the diagnostics logbook, correct any errors and try switching again (see C-0-0451). If the error cannot be corrected, please contact the customer service.

F0160011, Error during preparation for changing to P2

- Display: [F0160011](#) Non-fatal error, System_Error
- The switching preparation to the desired motion mode was aborted.
- Cause:** Possible causes:
- the switching may not take place since an error occurred possibly before,
 - an internal firmware error occurred.
- Remedy:** See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160012, Error while changing to BB

- Display: [F0160012](#) Non-fatal error, System_Error
- The switching to the desired motion mode was aborted.
- Cause:** Possible causes:
- the switching may not take place since an error occurred possibly before,
 - an internal firmware error occurred.
- Remedy:** See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160013, Error while changing to BB

- Display: [F0160013](#) Non-fatal error, System_Error
- The switching to the desired motion mode was aborted.
- Cause:** Possible causes:
- the switching may not take place since an error occurred possibly before.
 - an internal firmware error occurred.
- Remedy:** See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160014, Error while changing to BB

- Display: [F0160014](#) Non-fatal error, System_Error
- The switching to the desired motion mode was aborted.
- Cause:** Possible causes:

XLC/MLC diagnostic system tables

- the switching may not take place since an error occurred possibly before,
- an internal firmware error occurred.

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160015 up to F0160023, RTOS Error (Real Time Operating System)

A non-fatal internal firmware error occurred.

Cause: A firmware error occurred.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0160024, Error in cross-check C-parameters

Display: [F0160024](#)

Non-fatal error, System_Error

While crosschecking the C-parameter, an invalid combination, an invalid min./max. value, inconsistency between functionality and hardware or similar has been detected.

Cause: Possible causes are:

- minimum/maximum values have been exceeded or not achieved,
- invalid parameter combinations have been detected,
- functions/objects have been parameterized/configured for which the hardware needed is not available. For instance, link axes for a control link have been created for a control link, although no function module CFL01.01-Q2 has been plugged in.

Solution: Call parameter C-0-0111 and check the parameters noted therein.

If parameter C-0-0484 is executed in C-0-0111 and there is a link axis (element = 64) in this, it must be ensured that there is a functioning module CFL01.1-Q2 (see also C-0-0025).

F0160025, Error in cross-check A-parameters

Display: [F0160025](#)

Non-fatal error, System_Error

During cross-checking of the A-parameters, an invalid combination/an invalid min./max. value or similar occurred.

Cause: Possible causes e.g.:

- minimum/maximum values have been exceeded or not achieved,
- invalid parameter combinations have been detected.

Solution: Call parameter A-0-0111 and check the parameters noted therein.

F0160026 up to F0160029, RTOS Error (Real Time Operating System)

A non-fatal internal firmware error occurred.

Cause: A firmware error occurred.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0160030, Multiple configuration of cyclic parameter

Display: [F0160030](#)

Non-fatal error, Input_Invalid_Error

An error occurred while crosschecking the cyclically configured parameters of a drive. It was detected that a parameter was configured multiple times at cyclic transfer. There is no switching to the next control phase.

XLC/MLC diagnostic system tables

Cause:	Solution:
The user configured a parameter multiple times at cyclic transfer.	Check the list of invalid parameters. Ensure that one parameter is only defined once in the user-defined container (A-0-0500 - A-0-0531).
One parameter was configured for the cyclic transfer by the control firmware and by the user.	Check the list of invalid parameters. Delete the parameter from the configuration of the user-defined container (A-0-0500 - A-0-0531). The corresponding parameter is already available for cyclic accesses (since defined by the control firmware).



For the parameters used for the cyclic communication by the control firmware, refer to Data Exchange Between Control and Drives

F0160031, Cyclic channel not available

Display: [F0160031](#)

Non-fatal error, Input_Invalid_Error

The number of cyclic data channels available for the user has changed. There is no switching to the next control phase.

Cause: The control firmware requires a broader band width for communication compared to the previous version. Thus, the number of data channels for the user reduces.

Solution: Check the list of invalid parameters as well as the documentation on the cyclic sercos data channel. Disable the data channels no longer available by writing on the corresponding configuration parameter with S-0-0000.

Example:

The cyclic command value container F is omitted starting from firmware version 13VRS. Due to reasons of compatibility, the parameters A-0-0510 and A-0-0511 are still used.

Disable the command value container to switch to phase 4. Write on A-0-0510 with S-0-0000. Check the PLC program and adjust it if required.

F0160032, Error while changing to P2

Display: [F0160032](#)

Non-fatal error, System_Error

The switching to the desired motion mode was aborted.

Cause: Possible causes:

- the switching may not take place since an error occurred possibly before,
- an internal firmware error occurred.

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160033, Error while changing to P2

Display: [F0160033](#)

Non-fatal error, System_Error

The switch into the desired Motion mode was aborted.

Cause: Possible causes:

- The switch cannot be carried out due to an error that may have occurred earlier.
- the configuration "Cyclic sercos channel" contains an invalid parameter
- An internal firmware error occurred.

XLC/MLC diagnostic system tables

Solution: Access the diagnostics logbook, correct any errors and try switching again (see C-0-0451). If the error cannot be corrected, please contact the customer service.

F0160034, Error while changing to P3

Display: [F0160034](#) Non-fatal error, System_Error

The switching to the desired motion mode was aborted.

Cause: Possible causes:

- the switching may not take place since an error occurred possibly before (e.g. see S-0-0095),
- an internal firmware error occurred.

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160035, Error during configuration of link communication

Display: [F0160035](#) Non-fatal error, System_Error

The control is to be switched from operating mode to parameterization mode. An error has occurred when configuring the link communication.

Cause: A configured master axis is not present as an axis in parameter "C-0-0484, Axes configuration list".

Solution: Configure the master axis used in parameter "C-0-0484, Axes configuration list", or remove the master axis from parameter "C-0-0703, C2C, Configuration of master axes".

F0160036, Error during configuration of link communication

Display: [F0160036](#) Non-fatal error, System_Error

The control is to be switched from operating mode to parameterization mode. An error has occurred when configuring the link communication.

Cause:	Solution:
The MLC participates in the link, is configured as the master and a further master has been detected in the MLC link.	Only configure one MLC as the master in parameter "C-0-0701, C2C, configuration of function modes".
The MLC participates without error in the link. The time slot of the integrated PLC on the MC cycle time is increased in parameterization mode.	Reduce parameter "C-0-0401, Relative PLC time slot" again to an uncritical value or Increase the cycle time in parameters "C-0-0700, C2C, cycle time (Tcyc), command value " and "C-0-0400, Motion, cycle time, command value".
The MLC participates without error in the link. The cycle time in the drive and link ring is reduced in parameterization mode.	increase the cycle time in parameters "C-0-0700, C2C, cycle time (Tcyc), command value " and "C-0-0400, Motion, cycle time, command value" again to a critical value or Reduce parameter "C-0-0401, Relative PLC time slot".
The configured control address is invalid.	Configure a valid control address in parameter "C-0-0031, Control address", without exceeding the maximum value in accordance with the following table.

A valid control address must be less than the maximum permissible number depending on parameter "C-0-0700, C2C, Cycle time (Tcyc), command value".

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Cycle time	Maximum control address
2000 µs	16
4000 µs	32
8000 µs	64

Tab. 3-2: Maximum control address

F0160037, Error during configuration of link communicationDisplay: [F0160037](#)

Non-fatal error, System_Error

The control is to be switched from operating mode to parameterization mode. An error has occurred when configuring the link communication.

Cause: A configured master axis is not present as an axis in parameter "C-0-0484, Axes configuration list".

Solution: Configure the master axis used in parameter "C-0-0484, Axes configuration list", or remove the master axis from parameter "C-0-0703, C2C, configuration of master axes".

F0160038, Unable to deactivate link axesDisplay: [F0160038](#)

Non-fatal error, System_Error

A local link axis of the control configured in IndraWorks cannot be disabled.

This option is not provided in the current firmware version and is also not supported by IndraWorks.

Cause: An attempt was made to disable a local link axis by a write access to parameter "A-0-0024, Axis condition" via the parameter interfaces.

Solution: If the local link axis is not needed in the application, it must be removed from the IndraWorks project.

F0160040, Error in cross-check K-parametersDisplay: [F0160040](#)

Non-fatal error, System_Error

At the cross check of the K-Parameters an invalid combination/an invalid min/max-value or similar, occurred.

Cause: Possible causes e.g.:

- Min-/max-values are exceeded, resp. under-run,
- invalid parameter combinations are detected.

Remedy: Call parameter K-0-0011 and check the listed parameters.

F0180008, Motion kernel exceeded control cycle timeDisplay: [F0180008](#)

Non-fatal error, System_Error

The cycle time of the control is defined in parameter "C-0-0400, Motion, cycle time, command value". The control core must be processed within the defined cycle.

The Motion kernel primarily fulfills two tasks. These are:

Actual value measurement

Command value generation

An error reaction is executed if the second part of the Motion kernel, the command value generation, cannot be completely processed within the Motion cycle set.

XLC/MLC diagnostic system tables

If the number of these failures (C-0-0422) is less than the value set via parameter "C-0-0420 Motion, watchdog sensitivity", error "F0180005: Timeout cycle time Motion kernel" is issued.

To check the times, the time needed to calculate the Motion can be read in the "Cycle times" dialog window. The times of the configured PLC task can be read from the "Task configuration".

Cause:	Solution:
The time the Motion kernel requires is longer than one Motion cycle.	Increase the Motion cycle time "C-0-0400, Motion, cycle time, command value".
The Motion kernel has been displaced by one or more higher priority tasks.	- Check the runtimes of the tasks that have higher priority than the Motion kernel. Try to transfer program parts of this task that require a lot of time to tasks that have a lower priority than the Motion kernel. - Check if it is necessary that these tasks have higher priority than the Motion kernel. If necessary, reduce the priority of this task or increase the priority of the Motion kernel.

F0180009, Calculation of actual values exceeded cycle time

Display: **F0180009**

Non-fatal error, System_Error

The cycle time of the control is defined in parameter "C-0-0400, Motion, cycle time, command value". The control core must be processed within the defined cycle.

The Motion kernel primarily fulfills two tasks. These are:

Actual value measurement

Command value generation

If the first part of the Motion kernel, the actual value measurement cannot be completely processed within the set Motion cycle, the error "F0180009: Cycle time exceeded for actual value measurement" is issued.

To check the times, the time needed to calculate the Motion can be read in the "Cycle times" dialog window. The times of the configured PLC task can be read from the "Task configuration".

Cause:	Solution:
The time the Motion kernel requires for the actual value measurement is longer than for one Motion cycle.	Increase the Motion cycle time "C-0-0400, Motion, cycle time, command value".
The Motion kernel has been displaced by one or more higher priority tasks.	- Check the runtimes of the tasks that have higher priority than the Motion kernel. Try to transfer program parts of this task that require a lot of time to tasks that have a lower priority than the Motion kernel. - Check if it is necessary that these tasks have higher priority than the Motion kernel. If necessary, reduce the priority of this task or increase the priority of the Motion kernel.

F01B0000, RTOS error (Real Time Operating System)

Display: **F01B0000**

Non-fatal error, System_Error

When restoring remanent data (parameters and PLC data) from the flash card to the NVRAM area of the control, an error occurred. Thus, no remanent data was changed.

XLC/MLC diagnostic system tables

- Cause:** An error occurred in the firmware.
- Remedy:** Try to load remanent data manually to the NVRAM area of the control by executing the command "C-0-1001, Command: Load MotionControl parameters from FW module".
- If this problem occurs again, contact the customer support.

F01B0001, RTOS error (Real Time Operating System)Display: **F01B0001**

Non-fatal error, System_Error

When restoring remanent data (parameters and PLC data) from the flash card to the NVRAM area of the control, an error occurred. Thus, no remanent data was changed.

- Cause:** An error occurred in the firmware.
- Remedy:** Try to load remanent data manually to the NVRAM area of the control by executing the command "C-0-1001, Command: Load MotionControl parameters from FW module".
- If this problem occurs again, contact the customer support.

F01B0002, RTOS error (Real Time Operating System)Display: **F01B0002**

Non-fatal error, System_Error

When backing up remanent data (parameters and PLC data) from the NVRAM area of the control to the flash card, an error occurred.

Thus, when executing "C-0-1001, Command: Load MotionControl parameters from FW module", backed up data cannot be accessed and the command "C-0-1002, Command: Store MotionControl parameters in FW module" has to be executed.



The current remanent data is not affected by this error.

- Cause:** An error occurred in the firmware.
- Remedy:** Execute the command "C-0-1002, Command: Store MotionControl parameters in FW module" to store the remanent data (parameter and PLC data) from the NVRAM area of the control to the flash card.
- Subsequently, remanent data can be backed up on the flash card using the command "C-0-1001, Command: Load MotionControl parameters from FW module"
- If this problem occurs again, contact the customer support.

F01B0003, RTOS error (Real Time Operating System)Display: **F01B0003**

Non-fatal error, System_Error

When backing up remanent data (parameters and PLC data) from the NVRAM area of the control to the flash card, an error occurred.

Thus, when executing "C-0-1001, Command: Load MotionControl parameters from FW module", backed up data cannot be accessed and the command "C-0-1002, Command: Store MotionControl parameters in FW module" has to be executed.



The current remanent data is not affected by this error.

- Cause:** An error occurred in the firmware.

XLC/MLC diagnostic system tables

Remedy: Execute the command "C-0-1002, Command: Store MotionControl parameters in FW module" to store the remanent data (parameter and PLC data) from the NVRAM area of the control to the flash card.

Subsequently, remanent data can be backed up on the flash card using the command "C-0-1001, Command: Load MotionControl parameters from FW module"

If this problem occurs again, contact the customer support.

F01B0004, RTOS error (Real Time Operating System)

Display: **F01B0004**

Non-fatal error, System_Error

When restoring remanent data (parameters and PLC data) from the flash card to the NVRAM area of the control, an error occurred. Thus, no remanent data was changed.

Cause: An error occurred in the firmware.

Remedy: Try to load remanent data manually to the NVRAM area of the control by executing the command "C-0-1001, Command: Load MotionControl parameters from FW module".

If this problem occurs again, contact the customer support.

F01B0005, RTOS error (Real Time Operating System)

Display: **F01B0005**

Non-fatal error, System_Error

When restoring remanent data (parameters and PLC data) from the flash card to the NVRAM area of the control, an error occurred. Thus, no remanent data was changed.

Cause: An error occurred in the firmware.

Remedy: Try to load remanent data manually to the NVRAM area of the control by executing the command "C-0-1001, Command: Load MotionControl parameters from FW module".

If this problem occurs again, contact the customer support.

F01B0006, RTOS error (Real Time Operating System)

Display: **F01B0006**

Non-fatal error, System_Error

After the remanent data (parameters or PLC data) was restored from the flash card, no automatic reboot was triggered.

Cause: An error occurred in the firmware.

Remedy: Perform a manual reboot without write/read-only access to remanent data as fast as possible, since a proper functionality of the control is not ensured anymore.

F01B0007, RTOS error (Real Time Operating System)

Display: **F01B0007**

Non-fatal error, System_Error

When restoring remanent data (parameters and PLC data) from the flash card to the NVRAM area of the control, an error occurred. Thus, no remanent data was changed.

Cause: An error occurred in the firmware.

Remedy: Try to load remanent data manually to the NVRAM area of the control by executing the command "C-0-1001, Command: Load MotionControl parameters from FW module".

If this problem occurs again, contact the customer support.

XLC/MLC diagnostic system tables

F01B0008, RTOS error (Real Time Operating System)Display: **F01B0008**

Non-fatal error, System_Error

When restoring remanent data (parameters and PLC data) from the flash card to the NVRAM area of the control, an error occurred. Thus, no remanent data was changed.

Cause: An error occurred in the firmware.

Remedy: Try to load remanent data manually to the NVRAM area of the control by executing the command "C-0-1001, Command: Load MotionControl parameters from FW module".

If this problem occurs again, contact the customer support.

F01B0009, RTOS error (Real Time Operating System)Display: **F01B0009**

Non-fatal error, System_Error

An error occurred during the reboot.

Cause: An error occurred in the firmware.

Remedy: Execute "C-0-1021, Command: Restart" or "C-0-1019, Command: Restart and reset to default" to trigger a new reboot.

F01B0010, RTOS error (Real Time Operating System)Display: **F01B0010**

Non-fatal error, System_Error

An error occurred during the reboot.

Cause: An error occurred in the firmware.

Remedy: Execute "C-0-1021, Command: Restart" or "C-0-1019, Command: Restart and reset to default" to trigger a new reboot.

F01B0011, Error while starting DHCP clientDisplay: **F01B0011**

Non-fatal error, Device_Error

The DHCP client could not be started.

F01B0012, Error while starting DHCP clientDisplay: **F01B0012**

Non-fatal error, Input_Invalid_Error

The DHCP server could not be started.

Cause: Incorrect configuration of the DHCP server.

Solution: Please correct the configuration in parameters C-0-0250 to C-0-0299.

F01B0013, Error DHCP Client - No lease, default restoredDisplay: **F01B0013**

Non-fatal error, Other_Error

At least one interface is configured as a DHCP client and no DHCP server could be found. The last settings could be restored.

Cause: DHCP server cannot be reached.

Solution: Enable the DHCP server in the corresponding "Subnet" or configure the interface to a static IP address.

F01D0001 bis F01D0014, Error RTOS (Real Time Operating System)

A non-fatal internal firmware error occurred.

Cause: A firmware error occurred.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

XLC/MLC diagnostic system tables

F01D0015, Execution locked by C-0-0036

Display: [F01D0015](#)

Non-fatal error, INPUT_RANGE_ERROR

The action could not be executed, since it is blocked.

Cause: The action to be executed is blocked by the parameter C-0-0036.

Remedy: Bit 12 of the parameter C-0-0036 has to be reset.

F01D0016, No application found to load

Display: [F01D0016](#)

Non-fatal error, INPUT_RANGE_ERROR

No application could be loaded via the "Advanced" mode.

Cause: There is no application to be loaded on the Compact Flash card of the control.

Remedy: An application has to be loaded to the control using IndraWorks for example.

F0200001, Firmware download failed

Display: [F0200001](#)

Non-fatal error, System_Error

A non-fatal internal firmware error occurred. The firmware download was canceled.

Cause: A firmware error occurred.

Remedy: Try the firmware download again. If the error persists, contact customer service.

F0200002, Firmware download failed

Display: [F0200002](#)

Non-fatal error, System_Error

A non-fatal internal firmware error occurred. The firmware download was canceled.

Cause: A firmware error occurred.

Remedy: Try the firmware download again. If the error persists, contact customer service.

F0200003, Firmware download failed

Display: [F0200003](#)

Non-fatal error, System_Error

A non-fatal internal firmware error occurred. The firmware download was canceled.

Cause: A firmware error occurred.

Remedy: Try the firmware download again. If the error persists, contact customer service.

F0200004, Firmware download failed

Display: [F0200004](#)

Non-fatal error, System_Error

A non-fatal internal firmware error occurred. The firmware download was canceled.

Cause: A firmware error occurred.

Remedy: Try the firmware download again. If the error persists, contact customer service.

F0200005, Firmware download failed

Display: [F0200005](#)

Non-fatal error, System_Error

A non-fatal internal firmware error occurred. The firmware download was canceled.

XLC/MLC diagnostic system tables

- Cause:** A firmware error occurred.
- Remedy:** Try the firmware download again. If the error persists, contact customer service.

F0200006, Firmware download failed

- Display: [F0200006](#) Non-fatal error, System_Error
- A non-fatal internal firmware error occurred. The firmware download was canceled.
- Cause:** A firmware error occurred.
- Remedy:** Try the firmware download again. If the error persists, contact customer service.

F0200007, Firmware download failed

- Display: [F0200007](#) Non-fatal error, System_Error
- A non-fatal internal firmware error occurred. The firmware download was canceled.
- Cause:** A firmware error occurred.
- Remedy:** Try the firmware download again. If the error persists, contact customer service.

F0200008, Firmware download failed

- Display: [F0200008](#) Non-fatal error, System_Error
- A non-fatal internal firmware error occurred. The firmware download was canceled.
- Cause:** A firmware error occurred.
- Remedy:** Try the firmware download again. If the error persists, contact customer service.

F0200009, Firmware download failed

- Display: [F0200009](#) Non-fatal error, System_Error
- An internal firmware error occurred. The firmware update was cancelled.
- Cause:** The firmware issued an error.
- Remedy:** Restarting firmware update. If the error occurs again, please contact the customer service.

F0200010 up to F0200022, RTOS Error (Real Time Operating System)

- A non-fatal internal firmware error occurred.
- Cause:** A firmware error occurred.
- Remedy:** Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0200024, Firmware download failed

- Display: [F0200024](#) Non-fatal error, System_Error
- A non-fatal internal firmware error occurred. The firmware download was canceled.
- Cause:** A firmware error occurred.
- Remedy:** Try the firmware download again. If the error persists, contact customer service.

XLC/MLC diagnostic system tables

F0200025, Firmware download failed

Display: **F0200025**

Non-fatal error, System_Error

A non-fatal internal firmware error occurred. The firmware download was canceled.

Cause: A firmware error occurred.

Remedy: Try the firmware download again. If the error persists, contact customer service.

F0200026, Firmware download failed

Display: **F0200026**

Non-fatal error, System_Error

A non-fatal internal firmware error occurred. The firmware download was canceled.

Cause: A firmware error occurred.

Remedy: Try the firmware download again. If the error persists, contact customer service.

F0200027, Firmware download failed

Display: **F0200027**

Non-fatal error, System_Error

A non-fatal internal firmware error occurred. The firmware download was canceled.

Cause: A firmware error occurred.

Remedy: Try the firmware download again. If the error persists, contact customer service.

F0200028, Firmware download failed

Display: **F0200028**

Non-fatal error, System_Error

A non-fatal internal firmware error occurred. The firmware download was canceled.

Cause: A firmware error occurred.

Remedy: Try the firmware download again. If the error persists, contact customer service.

F0200029, Firmware download failed

Display: **F0200029**

Non-fatal error, System_Error

A non-fatal internal firmware error occurred. The firmware download was canceled.

Cause: A firmware error occurred.

Remedy: Try the firmware download again. If the error persists, contact customer service.

F0200030, Error deleting files in SYSTEM partition

Display: **F0200030**

Non-fatal error, System_Error

An error occurred while deleting the files in the SYSTEM partition. Maybe only some or no files were deleted.

Cause: The firmware issued an error.

Remedy: Avoid accessing files during the execution of the command by restricting access from IndraWorks, IndraLogic etc. If the error occurs again, please contact the customer service.

XLC/MLC diagnostic system tables

F0200031, Error deleting files in OEM partitionDisplay: [F0200031](#)

Non-fatal error, System_Error

An error occurred while deleting the files in the OEM partition. Maybe only some or no files were deleted.

Cause: The firmware issued an error.

Remedy: Avoid accessing files during the execution of the command by restricting access from IndraWorks, IndraLogic etc.

If the error occurs again, please contact the customer service.

F0200032, Error deleting files in USER partitionDisplay: [F0200032](#)

Non-fatal error, System_Error

An error occurred while deleting the files in the USER partition. Maybe only some or no files were deleted.

Cause: The firmware issued an error.

Remedy: Avoid accessing files during the execution of the command by restricting access from IndraWorks, IndraLogic etc.

If the error occurs again, please contact the customer service.

F0200033, Storage of remanent data impossibleDisplay: [F0200033](#)

Non-fatal error, System_Error

A backup of the remanent data (parameters and PLC data) is not possible since an error occurred. All parameter changes and/or changes carried out in the PLC data are lost when the supply voltage for the control is switched off.

Cause: The firmware issued an error.

Remedy: Restart the control before any parameters and/or PLC data are changed.

If this problems occurs during every startup of the control, please contact the customer support.

F0200036, Error initialising the hardware watchdogDisplay: [F0200036](#)

Non-fatal error, System_Error

An error occurred when initializing the Watchdog within the control hardware.

As a result, the Watchdog is no longer used from within the hardware to monitor the correct functioning of the control software. Example: executing a program section that contains an error could require the entire CPU time for itself for an extended period such that other important functionalities such as communication, PLC program, etc. cannot run in their required time periods. Because the Watchdog, which usually runs independently, is not running, this situation cannot be diagnosed.

In addition, the ready relay cannot be closed because that is only possible when the Watchdog is running.

Cause: The firmware issued an error.

Remedy: If hardware Watchdog or ready relay functionality is required, the control must be restarted.

Please contact Customer Support if this problem occurs each time the controller starts up.

F0200037, Error triggering the hardware watchdogDisplay: [F0200037](#)

Non-fatal error, System_Error

An error occurred when triggering the Watchdog within the control hardware.

XLC/MLC diagnostic system tables

As a result, the Watchdog is no longer used from within the hardware to monitor the correct functioning of the control software. Example: executing a program section that contains an error could require the entire CPU time for itself for an extended period such that other important functionalities such as communication, PLC program, etc. cannot run in their required time periods. Because the Watchdog, which usually runs independently, is not running, this situation cannot be diagnosed.

In addition, the ready relay cannot be closed because that is only possible when the Watchdog is running.

If the Watchdog has already been started internally, the system error "F9200017, Hardware watchdog expired" may be generated and the ready relay opened again because the Watchdog will no longer be triggered and will expire after a specified period of time.

Cause: The firmware issued an error.

Remedy: If hardware Watchdog or ready relay functionality is required or if the the system error "F9200017, Hardware watchdog expired" was generated due to this error, the control must be restarted.

Please contact Customer Support if this problem occurs each time the controller starts up.

F0200038, Firmware download failed

Display: [F0200038](#) Non-fatal error, System_Error

A non-fatal internal firmware error occurred.

Cause: A firmware error occurred.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0200039, Firmware download failed

Display: [F0200039](#) Non-fatal error, System_Error

A non-fatal internal firmware error occurred.

Cause: A firmware error occurred.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0200040, Failure of temperature monitoring, hardware defect impends

Display: [F0200040](#) Non-fatal error, System_Error

The temperature measurement of the control is omitted

Cause: It is not possible anymore to read out the temperature of the control.

The temperature can thus not be monitored and the hardware could fail.

Solution: Switch off the control to avoid a complete defect of the control and contact the customer support.

F0220200, General drive error

Display: [F0220200](#) Non-fatal error, Other_Error

In the PLC-Program a movement command was generated, which is aborted during execution by an error in the addressed axis. The addressed real axis is connected to a drive. This drive reports an error.

Cause: In the PLC-Program a movement command for a real axis was generated. The drive of the real axis has detected an error during execution.

XLC/MLC diagnostic system tables

Remedy: Correct the error in the drive and quit the error in the axis. Subsequently activate the desired movement command again.

F0220201, Invalid control number

Display: [F0220201](#)

Non-fatal error, Resource_Error

A variable of the type AXIS_REF is used in the PLC program that addresses an axis in a remote control. This present firmware version only supports access to local control axes.

Cause: In the PLC program an axis of a remote control was addressed.

Solution: Update the PLC program.

F0220202, Invalid axis number

Display: [F0220202](#)

Non-fatal error, Resource_Error

A variable of the type AXIS_REF is used in the PLC program that addresses an unknown axis in the control.

Cause: An unknown axis was addressed in the PLC program.

Solution: Update the PLC program or configure the missing axis in the control (see parameter "C-0-0484, Axes configuration list").

F0220203, Invalid command type

Display: [F0220203](#)

Non-fatal error, State_Machine_Error

In the PLC-Program an unknown command is generated.

Cause: In the PLC-Program an unknown command was generated.

Remedy: Actualize the PLC-Program.

F0220204, Command not supported by axis

Display: [F0220204](#)

Non-fatal error, State_Machine_Error

A command that is not supported by the addressed axis is generated in the PLC program.

When configuring the axis, an axis type was selected that does not support the desired command.

Cause: An illegal command was generated for the addressed axis in the PLC program.

Solution: Update the PLC program or change the configuration of the axis in the control (see parameter "C-0-0484, Axis configuration").

F0220205, Command rejected, no power

Display: [F0220205](#)

Non-fatal error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program. No power or torque is currently switched on for the axis.

Cause: A motion command is generated for an axis in the PLC program without power being enabled.

Solution: Switch on the power or torque of the axis using function block MC_Power.

F0220206, Command rejected while 'Stopping'

Display: [F0220206](#)

Non-fatal error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

XLC/MLC diagnostic system tables

The axis was switched to "Stopping" state using a function block MC_Stop. The function block MC_Stop is still active and has priority over other function blocks or motion commands (see Axis type status diagram).

Cause: In the PLC program, an unauthorized motion command was generated for an axis in the "Stopping" state.

Solution: Switch the axis to "Standstill" state using the MC_Stop function block. Then enable the desired motion command.

F0220207, Command rejected while 'Homing'

Display: [F0220207](#) Non-fatal error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis was switched to "Homing" state using a function block MB_Home. The function block MB_Home is still active and has priority over other function blocks or motion commands (see Axis type status diagram).

Cause: In the PLC program, a motion command was generated for an axis in the "Homing" state.

Solution: Wait until the function block MB_Home has been processed by the control or use function block MC_Stop to switch the axis to "Standstill" state. Then enable the desired motion command.

F0220208, Invalid command number

Display: [F0220208](#) Non-fatal error, Access_Error

A movement command is generated in the PLC-Program by a function block. When generating the command, the function block obtains a command number from the control kernel. When reading the command status, the function block assign the command number as reference to the command. The assigned command number is invalid, resp. obsolete.

Cause: In the PLC-Program the status of a movement command was prompted by a function block. The assigned command number is invalid, resp. obsolete.

Remedy: Actualize the PLC-Program.

F0220210, Reset still 'ErrorStop'

Display: [F0220210](#) Non-fatal error, State_Machine_Error

The function block MC_Reset is used to generate the command "Error deletion" in the PLC program.

The pending error cannot be deleted.

Cause: The function block MC_Reset is used to generate the command "Error deletion" in the PLC program. The pending error could not be deleted.

Solution: Eliminate the cause of the error and then acknowledge the error.

F0220211, Command rejected while 'Diskrete Motion'

Display: [F0220211](#) Non-fatal error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis is in "Discrete Motion" state. The requested motion command and the enabled function block are not permitted in "Discrete Motion" state (see the Axis type status diagram).

Cause: An unauthorized motion command was generated for an axis in the "Discrete Motion" state in the PLC program.

XLC/MLC diagnostic system tables

- Solution:** Enable the desired motion command after the control has executed the current Motion command and the axis has been switched to "Standstill" state or switch the axis to "Standstill" state using function block MC_Stop. Then enable the desired motion command.

F0220212, Command rejected while 'Continuous Motion'Display: [F0220212](#)

Non-fatal error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis is in "Continuous Motion" state. The requested motion command and the enabled function block are not permitted in "Continuous Motion" state (see the Axis type status diagram).

- Cause:** An unauthorized motion command is generated for an axis in the "Continuous Motion" state in the PLC program.

- Solution:** Using function block MC_Stop, switch the axis to "Standstill" state and then enable the desired motion command.

F0220213, Command rejected while 'Synchronized Motion'Display: [F0220213](#)

Non-fatal error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis is in "Synchronized Motion" state. The requested motion command and the enabled block are not permitted in "Synchronized Motion" state (see the Axis type status diagram).

- Cause:** An unauthorized motion command was generated for an axis in the "Synchronized Motion" state in the PLC program.

- Solution:** Using function blocks MC_GearOut, MC_CamOut or MC_Stop, switch the axis to "Continuous Motion" or "Standstill" state. Then enable the desired motion command.

F0220214, Command rejected while 'ErrorStop'Display: [F0220214](#)

Non-fatal error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis has detected an error and switched to "Errorstop" state. The requested motion command and the enabled function block are not permitted in "Errorstop" state (see the Axis type status diagram).

- Cause:** An unauthorized motion command was generated for an axis in "Errorstop" state in the PLC program.

- Solution:** Delete the pending axis error or, using function block MC_Reset, switch the axis to "Standstill" state. Then enable the desired motion command.

F0220216, No power availableDisplay: [F0220216](#)

Non-fatal error, Access_Error

A command that cannot be executed by the addressed axis is generated in the PLC program.

The axis torque cannot be switched on by the function block MC_Power. Power is not connected to the drive controller (see Drive documentation).

- Cause:** Power is not connected to the drive controller.

- Solution:** Check the drive controller or its power supply (see Drive documentation).

XLC/MLC diagnostic system tables

F0220217, Command rejected while 'StandStill' and 'PowerOn'

Display: [F0220217](#)

Non-fatal error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis is in "Standstill" / "PowerOn" state. The requested motion command or the enabled function block are not permitted in "Standstill" state (for instances MC_CamOut, MC_GearOut).

Cause: An unauthorized motion command was generated for an axis in the "Standstill" / "PowerOn" state in the PLC program.

Solution: Update the PLC program.

F0220218, Command rejected while 'StandStill'

Display: [F0220218](#)

Non-fatal error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis is in "Standstill" state. The requested motion command or the enabled function block are not permitted in "Standstill" state (see the Axis type status diagram).

Cause: An unauthorized motion command was generated for an axis in the "Standstill" state in the PLC program.

Solution: Update the PLC program.

F0220223, Velocity below minimum

Display: [F0220223](#)

Non-fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The velocity for the required movement command, resp. the activated function block is less than the permitted minimum value in parameter commanded velocity (see parameter "A-0-2202, Commanded velocity").

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Actualize the PLC-Program.

F0220224, Velocity above maximum

Display: [F0220224](#)

Non-fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The velocity for the required movement command, resp. the activated function block is greater than the permitted maximum value in parameter commanded velocity (see parameter "A-0-2202, Commanded velocity").

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Actualize the PLC-Program.

F0220225, Acceleration below minimum

Display: [F0220225](#)

Non-fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The acceleration for the required movement command, resp. the activated function block is less than the permitted minimum value in parameter commanded acceleration (see parameter "A-0-2203, Commanded acceleration").

XLC/MLC diagnostic system tables

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Actualize the PLC-Program.

F0220226, Acceleration above maximum

Display: [F0220226](#)

Non-fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The acceleration for the required movement command, resp. the activated function block is greater than the permitted maximum value in parameter commanded acceleration (see parameter "A-0-2203, Commanded acceleration").

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Actualize the PLC-Program.

F0220227, Deceleration below minimum

Display: [F0220227](#)

Non-fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The deceleration for the required movement command, resp. the activated function block is less than the permitted minimum value in parameter commanded deceleration (see parameter "A-0-2204, Commanded deceleration").

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Actualize the PLC-Program.

F0220228, Deceleration above maximum

Display: [F0220228](#)

Non-fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The deceleration for the required movement command, resp. the activated function block is greater than the permitted maximum value in parameter commanded deceleration (see parameter "A-0-2204, Commanded deceleration").

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Actualize the PLC-Program.

F0220229, Jerk below minimal

Display: [F0220229](#)

Non-fatal error, INPUT_RANGE_ERROR

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The jerk (A-0-0216) for the required movement command or the activated function block is less than the allowable minimum value.

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Remedy: Update the PLC program.

F0220230, Jerk above maximum

Display: [F0220230](#)

Non-fatal error, INPUT_RANGE_ERROR

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

XLC/MLC diagnostic system tables

The jerk (A-0-0216) for the required movement command or the activated function block is greater than the allowable maximum value.

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Remedy: Update the PLC program.

F0220232, Invalid master control number

Display: [F0220232](#) Non-fatal error, Resource_Error

A variable of the type AXIS_REF is used in the PLC program that addresses a master axis in a remote control.

This present firmware version only supports access to local control axes.

Cause: A master axis of a remote control was addressed in the PLC program.

Solution: Update the PLC program.

F0220233, Invalid master axis number

Display: [F0220233](#) Non-fatal error, Resource_Error

A variable of the type AXIS_REF is used in the PLC program that addresses a master axis unknown in the control.

Cause: An unknown axis was addressed in the PLC program.

Solution: Update the PLC program or configure the missing axis in the control (see parameter "C-0-0484, Axes configuration list").

F0220234, Invalid CamTable ID

Display: [F0220234](#) Non-fatal error, Resource_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The required cam (CAMTableID) is unknown (refer to Description of data type MC_CAM_ID and parameter "A-0-2740, ELS, CamIn, cam table preselection").

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.
Upload a correct cam.

F0220263, RatioNumerator below minimum

Display: [F0220263](#) Non-fatal error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The master drive gear input revolutions (RatioNumerator) for the requested motion command or the enabled function block are less than the permitted minimum value in parameter "A-0-2720, ELS, master axis gear, input revolutions".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F0220264, RatioNumerator above maximum

Display: [F0220264](#) Non-fatal error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

XLC/MLC diagnostic system tables

The master drive gear input revolutions (RatioNumerator) for the requested motion command or the enabled function block are greater than the permitted maximum value in parameter "A-0-2720, ELS, master axis gear, input revolutions".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F0220265, RatioDenominator below minimum

Display: [F0220265](#)

Non-fatal error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The master drive gear output revolutions (RatioDenominator) for the requested motion command or the enabled function block are less than the permitted minimum value in parameter "A-0-2721, ELS, master axis gear, output revolutions".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F0220266, RatioDenominator above maximum

Display: [F0220266](#)

Non-fatal error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The master drive gear output revolutions (RatioDenominator) for the requested motion command or the enabled function block are greater than the permitted maximum value in parameter "A-0-2721, ELS, master axis gear, output revolutions".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F0220267, MasterFineAdjust below minimum

Display: [F0220267](#)

Non-fatal error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The gear ratio fine adjust (MasterFineadjust) for the requested motion command or the enabled function block is less than the permitted minimum value in parameter "A02722, ELS, gear ratio fine adjust".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F0220268, MasterFineAdjust above maximum

Display: [F0220268](#)

Non-fatal error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The gear ratio fine adjust (MasterFineadjust) for the requested motion command or the enabled function block is greater than the permitted maximum value in parameter "A02722, ELS, gear ratio fine adjust".

XLC/MLC diagnostic system tables

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F0220269, Invalid SyncMode

Display: [F0220269](#)

Non-fatal error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The required synchronization direction (SyncMode) is unknown (refer to Description of data type MC_SYNC_DIRECTION).

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F0220270, Invalid StartMode

Display: [F0220270](#)

Non-fatal error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The required type of synchronization (StartMode) is unknown (refer to Description of data type MC_START_MODE).

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F0220271, Cam distance below minimum value

Display: [F0220271](#)

Non-fatal error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The cam distance (CamShaftDistance) for the requested motion command or the enabled function block is less than the permitted minimum value in parameter "A02741, ELS, CamIn, cam distance".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F0220272, Cam distance above maximum value

Display: [F0220272](#)

Non-fatal error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The cam distance (CamShaftDistance) for the requested motion command or the enabled function block is greater than the permitted maximum value in parameter "A02741, ELS, CamIn, cam distance".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F0220273, Command rejected while 'Parameter Mode'

Display: [F0220273](#)

Non-fatal error, Other_Error

XLC/MLC diagnostic system tables

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The control and all axes are in parameter mode. In parameter mode no movement commands are executable.

Cause: In the PLC-Program a movement command was generated, although the control is in parameter mode.

Remedy: Switch the control to operating mode and subsequently activate the desired movement command.

F0220274, Axis not referenced

Display: [F0220274](#)

Non-fatal error, Other_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program. The axis is not homed and can only be moved relatively.

Cause: A motion command was generated in the PLC program for an axis without position reference that requires the position reference of the axis.

Solution: Home the axis using function block MB_Home or parameter "A-0-2807, Command: Set absolute measuring" and then enable the required motion command.

F0220275, Command aborted

Display: [F0220275](#)

Non-fatal error, Other_Error

In the PLC-Program a movement command is generated and aborted during execution. This command must not be aborted.

Cause: In the PLC-Program a movement command is generated and aborted during execution. This command must not be aborted.

Remedy: Actualize the PLC-Program.

F0220276, Control error

Display: [F0220276](#)

Non-fatal error, System_Error

The axis is stopped because of a control error. An ongoing motion command in the PLC - program will be aborted. The control doesn't accept any further motion command.

Remedy: Correct and quit the error of the control. Subsequently activate the desired movement command again.

F0220277, Direct master axis change

Display: [F0220277](#)

Non-fatal error, Other_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The command requests the axis to follow a master axis (e.g. MC_CamIn or MC_GearIn). The axis is already following another master axis. The direct switchover to a new master axis is not supported in this firmware version.

Cause: A motion command was generated in the PLC program that requires a direct change of master axis from the axis.

Solution: Disconnect the axis from the original master axis (for instance using MC_CamOut or MC_GearOut). Then enable the desired motion command.

F0220278, Command 'Disabled axis' active

Display: [F0220278](#)

Non-fatal error, Access_Error

The axis was switched to the "disabled" state using the parameter "A-0-0024, Axis state". A disabled axis cannot execute motion commands.

XLC/MLC diagnostic system tables

- Cause:** A motion command for a disabled axis was generated in the PLC program.
- Solution:** Switch the control to parameterization mode (parameter C-0-0451, Motion, target mode). Enable the axis subsequently or use the functionality "Command value decoupling" (parameter A-0-0024, Axis state). Subsequently, restart the desired motion command.

F0220279, Command 'parking axis' active

Display: [F0220279](#)

Non-fatal error, Access_Error

The axis was switched to "parked" state using parameter "A-0-0024, Axis condition". A parked axis cannot execute motion commands.

- Cause:** A motion command for a parked axis was generated in the PLC program.
- Solution:** Switch the control to parameterization mode (parameter C-0-0451, Motion, target mode) and enable the axis (parameter A-0-0024, Axis condition). Then restart the desired motion command.

F0220280, Command rejected while 'Coordinated Motion'

Display: [F0220280](#)

Non-fatal error, System_Error

Following the successful call of MC_AddAxisToGroup, the axis is in the "Coordinated Motion" state.

The following function modules can be used in this state:

- all kinematics function blocks
- MC_Reset

All other FBs result in the error described above.

- Cause:** An unauthorized motion command was generated for an axis in the "Coordinated Motion" state in the PLC program.
- Solution:** Update the PLC program.

F0220281, Invalid float data

Display: [F0220281](#)

Non-fatal error, System_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis.

At least one input parameter of a function block contains an invalid floating point value.

- Cause:** In the PLC-Program a movement command for an axis was generated with invalid parameters.
- Remedy:** Actualize the PLC-Program.

F0220282, MotionProfile, SetSelection below minimum value

Display: [F0220282](#)

Non-fatal error, System_Error

A motion command "MotionProfile" that cannot be executed by the addressed axis is generated in the PLC program.

- Cause:** The input value "SetSelection" was assigned a value of less than the minimum value (currently 0).
- Remedy:** Update the PLC program.

F0220283, MotionProfile, SetSelection above maximum value

Display: [F0220283](#)

Non-fatal error, System_Error

A motion command "MotionProfile" that cannot be executed by the addressed axis is generated in the PLC program.

XLC/MLC diagnostic system tables

Cause: The input value "SetSelection" was assigned a value of greater than 1.

Remedy: Update the PLC program.

F0220284, Command rejected while 'Parameter Mode'

Display: [F0220284](#)

Non-fatal error, Access_Error

The axis was switched to the "parameterization mode" state using the parameter "A-0-0024, Axis state". An axis in parameterization mode cannot execute any motion commands.

Cause: In the PLC program, a motion command for an axis in parameterization mode is generated.

Solution: Enable the axis or use the functionality "Command value decoupling" (parameter A-0-0024, Axis state). Subsequently, restart the desired motion command.

F0220287, Unreferenced cam table object

Display: [F0220287](#)

Non-fatal error, Access_Error

The function block MB_ChangeCamData is used in the PLC program to initiate a change of a cam that cannot be executed by the control.

Cause: There is an internal problem with the control firmware when accessing the cam.

Remedy: Contact customer service.

F0220288, ChangeCamTable: above maximum value

Display: [F0220288](#)

Non-fatal error, Input_Range_Error

The function block MB_ChangeCamData is used in the PLC program to initiate a change of a cam that cannot be executed by the control.

Cause: At least one of the homed input values "pdiCamTable" is above the permitted maximum value.

Remedy: Update the PLC program.

F0220289, ChangeCamTable: below minimum value

Display: [F0220289](#)

Non-fatal error, Input_Range_Error

The function block MB_ChangeCamData is used in the PLC program to initiate a change of a cam that cannot be executed by the control.

Cause: At least one of the homed input values "pdiCamTable" is below the permitted minimum value.

Remedy: Update the PLC program.

F0220290, ChangeCamTable: invalid ID

Display: [F0220290](#)

Non-fatal error, Access_Error

The function block MB_ChangeCamData is used in the PLC program to initiate a change of a cam that cannot be executed by the control.

Cause: The input value "uiCamTableNumber" was assigned a value that is greater than the maximum number (99) of supported control cams. Or 0 was written as the input value.

Remedy: Update the PLC program.

F0220291, Unreferenced MotionProfile object

Display: [F0220291](#)

Non-fatal error, Access_Error

XLC/MLC diagnostic system tables

Either the function block MB_ChangeMotionProfileSet or MB_ChangeMotionProfileStep are used in the PLC program to initiate a change of a MotionProfile that cannot be executed by the addressed axis.

Cause: An invalid address was specified for either the inputs `MasterAxisInitialPosAdr`, `DistanceAdr`, `SlaveAxisVelocityAdr` or `StepModeAdr` at the MB_ChangeMotionProfileSet function block.

Solution: Correct the PLC program.

Cause: There is an internal problem with the control firmware when accessing the MotionProfile.

Solution: Contact the customer service.

F0220292, ChangeMotionProfileSet: SetNumber below minimum value

Display: [F0220292](#)

Non-fatal error, Input_Range_Error

The function blocks MB_ChangeMotionProfileSet or MB_ChangeMotionProfileStep are used in the PLC program to initiate a change of a MotionProfile that cannot be executed by the addressed axis.

Cause: At least one of the transmitted (homed) input values "(p)rMasterAxisInitialPos" and/or "(p)rSlaveAxisVelocity/Adr" is below the permitted minimum value.

Remedy: Update the PLC program.

F0220293, ChangeMotionProfileSet: SetNumber above maximum value

Display: [F0220293](#)

Non-fatal error, Input_Range_Error

The function blocks MB_ChangeMotionProfileSet or MB_ChangeMotionProfileStep are used in the PLC program to initiate a change of a MotionProfile that cannot be executed by the addressed axis.

Cause: The input value "uiSetNumber" was assigned a value of greater than 1.

Remedy: Update the PLC program.

F0220294, ChangeMotionProfileSet: Selected profile write-protected

Display: [F0220294](#)

Non-fatal error, Access_Error

The function blocks MB_ChangeMotionProfileSet or MB_ChangeMotionProfileStep are used in the PLC program to initiate a change of a MotionProfile that cannot be executed by the addressed axis.

Cause: The selected MotionProfile is currently active and cannot therefore be overwritten.

Remedy: Disable the selected MotionProfile before carrying out the update.

F0220295, ChangeMotionProfileStep, invalid StepNumber

Display: [F0220295](#)

Non-fatal error, Access_Error

The function block MB_ChangeMotionProfileStep is used in the PLC program to initiate a change of a MotionProfile that cannot be executed by the addressed axis.

Cause: The input value "uiStepNumber" was assigned a value that is greater than the maximum or the current number of steps of the selected MotionProfile.

Remedy: Update the PLC program.

F0220300, Invalid command channel

Display: [F0220300](#)

Non-fatal error, Access_Error

An invalid command channel is selected in the PLC program using the function module MB_OpenCyclic...

XLC/MLC diagnostic system tables

Cause: Firmware version and PLC library (ML_PLCOpen.lib, MLBase.lib) do not match.

Remedy: Use the corresponding PLC library version for the firmware.

F0220301, Command rejected while 'Controlled Motion'

Display: [F0220301](#)

Non-fatal error, Access_Error

After the successful call of ML_ControlOn, the axis is in the "Controlled Motion" state.

The following function modules can be used in this state:

- ML_OpenCyclicPositionChannelCtrl,
- ML_OpenCyclicVelocityChannelCtrl,
- ML_OpenCyclicTorqueChannelCtrl,
- ML_OpenCyclicAnalogChannelCtrl,
- ML_ControlOff.

All other FBs result in the error described above.

Cause: An unauthorized motion command was generated in the PLC program for an axis in the "Controlled Motion" state.

Solution: Update the PLC program.

F0220316, ChangeFlexProfile: Length of FlexProfile lists inconsist.

Display: [F0220316](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Cause: Depending on whether the error is in block 0, block 1, block 2 or block 3, the list length of the parameters that define a MotionProfile is not consistent.

Block 0

- A-0-3020, FlexProfile 0, master axis velocity,
- A-0-3021, FlexProfile 0, list of master axis sources,
- A-0-3022, FlexProfile 0, list of slave axis distances,
- A-0-3023, FlexProfile 0, list of master axis ranges,
- A-0-3025, FlexProfile 0, list of motion laws,
- A-0-3026, FlexProfile 0, list of motion step types,
- A-0-3027, FlexProfile 0, list of slave axis starting velocities,
- A-0-3028, FlexProfile 0, list of slave axis starting accelerations,
- A-0-3029, FlexProfile 0, list of slave axis starting jerks,
- A-0-3030, FlexProfile 0, list of slave axis end velocities,
- A-0-3031, FlexProfile 0, list of slave axis end accelerations,
- A-0-3032, FlexProfile 0, list of slave axis end jerks,
- A-0-3033, FlexProfile 0, list of slave axis travel velocities,
- A-0-3034, FlexProfile 0, list of slave axis travel accelerations,
- A-0-3035, FlexProfile 0, list of slave axis travel jerks,
- A-0-3036, FlexProfile 0, list of turning point displacements (WPV),

Block 1

- A-0-3050, FlexProfile 1, master axis velocity,

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- A-0-3051, FlexProfile 1, list of master axis sources,
- A-0-3052, FlexProfile 1, list of slave axis distances,
- A-0-3053, FlexProfile 1, list of master axis ranges,
- A-0-3055, FlexProfile 1, list of motion laws,
- A-0-3056, FlexProfile 1, list of motion step types,
- A-0-3057, FlexProfile 1, list of slave axis starting velocities,
- A-0-3058, FlexProfile 1, list of slave axis starting accelerations,
- A-0-3059, FlexProfile 1, list of slave axis starting jerks,
- A-0-3060, FlexProfile 1, list of slave axis end velocities,
- A-0-3061, FlexProfile 1, list of slave axis end accelerations,
- A-0-3062, FlexProfile 1, list of slave axis end jerks,
- A-0-3063, FlexProfile 1, list of slave axis travel velocities,
- A-0-3064, FlexProfile 1, list of slave axis travel accelerations,
- A-0-3065, FlexProfile 1, list of slave axis travel jerks,
- A-0-3066, FlexProfile 1, list of turning point displacements (WPV),

Block 2

- A-0-3080, FlexProfile 2, master axis velocity,
- A-0-3081, FlexProfile 2, list of master axis sources,
- A-0-3082, FlexProfile 2, list of slave axis distances,
- A-0-3083, FlexProfile 2, list of master axis ranges,
- A-0-3085, FlexProfile 2, list of motion laws,
- A-0-3086, FlexProfile 2, list of motion step types,
- A-0-3087, FlexProfile 2, list of slave axis starting velocities,
- A-0-3088, FlexProfile 2, list of slave axis starting accelerations,
- A-0-3089, FlexProfile 2, list of slave axis starting jerks,
- A-0-3090, FlexProfile 2, list of slave axis end velocities,
- A-0-3091, FlexProfile 2, list of slave axis end accelerations,
- A-0-3092, FlexProfile 2, list of slave axis end jerks,
- A-0-3093, FlexProfile 2, list of slave axis travel velocities,
- A-0-3094, FlexProfile 2, list of slave axis travel accelerations,
- A-0-3095, FlexProfile 2, list of slave axis travel jerks,
- A-0-3096, FlexProfile 2, list of turning point displacements (WPV),

Block 3

- A-0-3110, FlexProfile 3, master axis velocity,
- A-0-3111, FlexProfile 3, list of master axis sources,
- A-0-3112, FlexProfile 3, list of slave axis distances,
- A-0-3113, FlexProfile 3, list of master axis ranges,
- A-0-3115, FlexProfile 3, list of motion laws,
- A-0-3116, FlexProfile 3, list of motion step types,
- A-0-3117, FlexProfile 3, list of slave axis starting velocities,
- A-0-3118, FlexProfile 3, list of slave axis starting accelerations,
- A-0-3119, FlexProfile 3, list of slave axis starting jerks,

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- A-0-3120, FlexProfile 3, list of slave axis end velocities,
- A-0-3121, FlexProfile 3, list of slave axis end accelerations,
- A-0-3122, FlexProfile 3, list of slave axis end jerks,
- A-0-3123, FlexProfile 3, list of slave axis travel velocities,
- A-0-3124, FlexProfile 3, list of slave axis travel accelerations,
- A-0-3125, FlexProfile 3, list of slave axis travel jerks,
- A-0-3126, FlexProfile 3, list of turning point displacements (WPV),

Solution: Update the PLC program and/or correct the selected MotionProfile.

F0220317, ChangeFlexProfile: No steps in profile

Display: [F0220317](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 64 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Cause: No MotionSteps have been defined. An empty MotionProfile cannot be applied.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220318, ChangeFlexProfile: Unknown master

Display: [F0220318](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: An invalid value was specified for the master source.

A list of invalid motion laws can be found in the description of parameter "A-0-3021, FlexProfile 0, list of master axis sources" and the enumeration type MB_MASTER_TYPE.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220319, ChangeFlexProfile: Motion law unknown

Display: [F0220319](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

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Cause: An invalid motion law was specified.

A list of valid motion laws can be found in the description of parameter "A-0-3025, FlexProfile 0, list of motion laws" and the enumeration type MB_STEP_TYPE.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220320, ChangeFlexProfile: Step mode unknown

Display: [F0220320](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: An invalid motion step type was specified.

A list of valid motion laws and their description can be found in the description of parameter "A-0-3026, FlexProfile 0, list of motion step types" and the enumeration type MB_STEP_TYPE.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220321, ChangeFlexProfile: Step range 0 or negative

Display: [F0220321](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: An invalid master axis range was specified.

The master axis range may not be 0 or negative.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220322, ChangeFlexProfile: Invalid comb. of boundary value types

Display: [F0220322](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"

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- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: An invalid boundary value combination was specified.

The motion law of the following motion step cannot be combined with this motion step. This can occur, for instance, if the current motion law is a rest-to-rest law and the following motion law is a velocity-in-rest type.

A list of valid motion laws and their description can be found in the description of parameter "A-0-3026, FlexProfile 0, list of motion step types" and the enumeration type MB_STEP_TYPE.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220323, ChangeFlexProfile: Invalid boundary values

Display: [F0220323](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: Invalid boundary values were specified.

Boundary values were specified for a motion step that do not support the selected motion law. It is therefore not possible, for example, to give a start or end velocity for a rest-in-rest motion law. These must be defined with 0 in this case.

A list of valid motion laws and their description can be found in the description of parameter "A-0-3026, FlexProfile 0, list of motion step types" and the enumeration type MB_STEP_TYPE.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220324, ChangeFlexProfile: Invalid Hub

Display: [F0220324](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: An invalid distance was specified.

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A distance was parameterized for a motion step that is invalid or is not permitted in conjunction with the selected motion law.

A list of valid motion laws and their description can be found in the description of parameter "A-0-3026, FlexProfile 0, list of motion step types" and the enumeration type MB_STEP_TYPE.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220325, ChangeFlexProfile: Invalid value for turnaround point disp

Display: [F0220325](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: An invalid value was specified for the turning point displacement.

A turning point displacement was parameterized for a motion step that is invalid or is not permitted in conjunction with the selected motion law.

A list of valid motion laws and their description can be found in the description of parameter "A-0-3026, List of motion step types, FlexProfile 0" and the enumeration type MB_STEP_TYPE. Further information on turning point displacement can be found in the parameter "A-0-3036, FlexProfile 0, list of turning point displacements".

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220326, ChangeFlexProfile: Invalid slope

Display: [F0220326](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: An invalid value was specified for the turning point displacement.

"Constant velocity" has been parameterized as motion law for a motion step. The specified start and end velocity do not match the velocity resulting from the distance and the master axis section of the motion step.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220327, ChangeFlexProfile: Invalid Cam table

Display: [F0220327](#)

Non-fatal error, Access_Error

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The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: A cam point table was selected for a motion step that cannot be travelled. The cam possibly contains no points.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220328, ChangeFlexProfile: Motion law + selected step mode

Display: [F0220328](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: The motion law selected in a motion step cannot be used if this was defined as a FlexStep.

If "FlexStep with absolute distance and absolute master axis range", "FlexStep with relative distance and absolute master axis range", "FlexStep with absolute distance and relative master axis range" or "FlexStep with relative distance and relative master axis range" are selected as the "step type" instead of "StandardStep", then not all motion laws can be used in this step. A possible motion law is the "General Polynomial 5th order".

A list of valid motion laws and their description can be found in the description of parameter "A-0-3026, FlexProfile 0, list of motion step types" and the enumeration type MB_STEP_TYPE.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220329, ChangeFlexProfile: Velocity jump in profile

Display: [F0220329](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"

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- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: A velocity jump was parameterized within the MotionProfile, i.e. the end velocity of the incorrect motion step is not consistent with the starting velocity of the following motion step.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220330, ChangeFlexProfile: Acceleration jump in profile

Display: [F0220330](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: An acceleration jump was parameterized within the MotionProfile, i.e. the end velocity of the incorrect motion step is not consistent with the starting acceleration of the following motion step.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220331, ChangeFlexProfile: Jerk jump in profile

Display: [F0220331](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: A jerk jump was parameterized within the MotionProfile, i.e. the end jerk of the incorrect motion step is not consistent with the starting jerk of the following motion step.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220332, ChangeFlexProfile: Velocity limit invalid

Display: [F0220332](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"

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- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: Too low or invalid travel velocities were specified.

Either a travel velocity was specified for a motion step, although it is not supported by the selected motion law, or the specified travel velocity is too low to execute the required motion.

A list of valid motion laws and their description can be found in the description of parameter "A-0-3026, FlexProfile 0, list of motion step types" and the enumeration type MB_STEP_TYPE. Parameter "A-0-3033, FlexProfile 0, list of slave axis travel velocities" defines the required travel velocity.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220333, ChangeFlexProfile: Acceleration limit invalid

Display: [F0220333](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: Too low or an invalid travel acceleration was specified.

Either a travel acceleration was specified for a motion step, although it could not be supported by the selected motion law, or the specified travel acceleration is too low to execute the required motion.

A list of valid motion laws and their description can be found in the description of parameter "A-0-3026, FlexProfile 0, list of motion step types" and the enumeration type MB_STEP_TYPE. Parameter "A-0-3034, FlexProfile 0, list of slave axis travel accelerations" defines the required travel acceleration.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220334, Unreferenced FlexProfile object

Display: [F0220334](#)

Non-fatal error, Access_Error

Either the function block MB_ChangeFlexProfileSet or MB_ChangeFlexEventSet is used in the PLC program to initiate a change of a MotionProfile that cannot be executed by the addressed axis.

Cause: There is a control firmware problem when accessing the MotionProfile.

Remedy: Check the axis configuration. Does the addressed axis exist and does it support the execution of the FlexProfile operation mode?

Check the axis addressing at the function block.

Contact the customer service.

F0220335, FlexProfile: Set is write-protected

Display: [F0220335](#)

Non-fatal error, Access_Error

The selected profile cannot be applied.

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Cause: The selected motion profile is currently active and can therefore not be overwritten.

Remedy: Deactivate the selected motion profile before carrying out the update.

F0220341, FlexEvent: Set is write-protected

Display: [F0220341](#)

Non-fatal error, Access_Error

A change in the event definitions of a FlexProfile MotionProfile that cannot be executed by the addressed axis is initiated in the PLC program using the function block MB_ChangeFlexEventSet.

Cause: The selected MotionProfile is currently active and cannot therefore be overwritten.

Remedy: Disable the selected MotionProfile before carrying out the update.

F0220343, ChangeFlexEvent: Length of FlexProfile lists inconsistent

Display: [F0220343](#)

Non-fatal error, Access_Error

The control checks whether the defined EventProfile (a maximum of 16 single events) is plausible when writing a FlexProfile EventProfile. The error is generated if the plausibility checks failed.

Cause: Depending on whether the error is in block 0, block 1, block 2 or block 3, the list length of the parameters that define an EventProfile is not consistent.

Block 0

- A-0-3040, FlexProfile 0, events, list of motion step assignments,
- A-0-3041, FlexProfile 0, events, list of trigger modes,
- A-0-3042, FlexProfile 0, events, list of trigger modes and
- A-0-3043, FlexProfile 0, events, list of trigger values.

Block 1

- A-0-3070, FlexProfile 1, events, list of motion step assignments,
- A-0-3071, FlexProfile 1, events, list of trigger modes,
- A-0-3072, FlexProfile 1, events, list of trigger modes and
- A-0-3073, FlexProfile 1, events, list of trigger values.

Block 2

- A-0-3100, FlexProfile 2, events, list of motion step assignments,
- A-0-3101, FlexProfile 2, events, list of trigger modes,
- A-0-3102, FlexProfile 2, events, list of trigger modes and
- A-0-3103, FlexProfile 2, events, list of trigger values.

Block 3

- A-0-3130, FlexProfile 3, events, list of motion step assignments,
- A-0-3131, FlexProfile 3, events, list of trigger modes,
- A-0-3132, FlexProfile 3, events, list of trigger modes and
- A-0-3133, FlexProfile 3, events, list of trigger values.

Solution: Update the PLC program and/or correct the selected EventProfile.

F0220344, ChangeFlexEvent: Step Number assignment is invalid

Display: [F0220344](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

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Cause: A FlexProfile event was defined and assigned to a motion step that does not exist in the assigned MotionProfile.

Further information about the assignment of events to the motion steps can be found in parameter "A-0-3040, FlexProfile 0, Events, list of motion step assignments" and in the description of the structure type MB_FLEX_EVENT.

Solution: Update the PLC program and/or correct the selected EventProfile.

F0220345, ChangeFlexEvent: Trigger-Mode is invalid

Display: [F0220345](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect event, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: A FlexProfile event was defined in which an invalid trigger mode was parameterized.

Further information about the trigger modes of events can be found in parameter "A-0-3041, FlexProfile 0, Events, list of trigger modes " and in the description of the structure type MB_FLEX_EVENT.

Solution: Update the PLC program and/or correct the selected EventProfile.

F0220346, ChangeFlexEvent: Action-Mode is invalid

Display: [F0220346](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect event, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: A FlexProfile event was defined in which an invalid action mode was parameterized.

Further information about the trigger modes of events can be found in parameter "A-0-3042, FlexProfile 0, Events, list of action modes " and in the description of the structure type MB_FLEX_EVENT.

Solution: Update the PLC program and/or correct the selected EventProfile.

F0220349, ChangeFlexProfile: Jerk limit invalid

Display: [F0220349](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

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Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: Too low or an invalid travel acceleration was specified.

Either a travel jerk was specified for a motion step, although it could not be supported by the selected motion law, or the specified travel jerk is too low to execute the required motion.

A list of valid motion laws and their description can be found in the description of parameter "A-0-3026, FlexProfile 0, list of motion step types" and the enumeration type MB_STEP_TYPE. Parameter "A-0-3035, FlexProfile 0, list of slave axis travel jerks" defines the required travel acceleration.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220350, ChangeFlexProfile: Limit too low

Display: [F0220350](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: A motion law was selected for a motion step that provides a maximum travel velocity, travel acceleration and/or travel jerk. The requested motion cannot however be achieved with the specified maximum values.

A list of valid motion laws and their description can be found in the description of parameter "A-0-3026, FlexProfile 0, list of motion step types" and the enumeration type MB_STEP_TYPE.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220355, ChangeFlexProfile: Invalid sequence of Flex-Steps

Display: [F0220355](#)

Non-fatal error, Access_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

XLC/MLC diagnostic system tables

Cause: Within the MotionProfile, an invalid sequence of FlexSteps was parameterized, that is several "FlexSteps" were placed behind each other. However, a "FlexStep" must always be enclosed by two "Standard steps". The reason for this is that a motion step defined as a "FlexStep" does not have proprietary defined limit values, such as starting and end velocities and instead it uses the limit values of its neighboring steps at runtime that must be in the form of "Standard steps".

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220360, Command rejected while 'Controlled Motion'

Display: [F0220360](#)

Non-fatal error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis is in the "Controlled Motion" state. The requested motion command and the enabled function block are not permitted in the "Controlled Motion" state (see the Axis type status diagram).

Cause: An unauthorized motion command was generated in the PLC program for an axis in the "Controlled Motion" state.

Solution: Enable the desired motion command after the control has executed the current Motion command and the axis has been switched to "Standstill" state or switch the axis to "Standstill" state using function block MC_Stop. Then enable the desired motion command.

F0220361, ChangeFlexProfile: Invalid master axis source

Display: [F0220361](#)

Non-fatal error, Input_Range_Error

The control checks whether the defined MotionProfile (a maximum of 16 single motion steps) is plausible when writing a FlexProfile MotionProfile. The error is generated if the plausibility checks failed.

Depending on whether the error is in block 0, block 1, block 2 or block 3, the following information, such as the incorrect motion step, is displayed in the following parameters:

- Block 0, parameter "A-0-3047, FlexProfile 0, diagnostics"
- Block 1, parameter "A-0-3077, FlexProfile 1, diagnostics"
- Block 2, parameter "A-0-3107, FlexProfile 2, diagnostics"
- Block 3, parameter "A-0-3137, FlexProfile 3, diagnostics"

Cause: An invalid master axis source was specified.

A list of valid master axis sources can be found in the description of parameter "A-0-3021, FlexProfile 0, list of master axis sources", (A-0-3051, A-0-3081, A-0-3111), and the enumeration type MB_MASTER_TYPE.

Solution: Update the PLC program and/or correct the corresponding MotionProfile.

F0220501, Wrong data type

Display: [F0220501](#)

Non-fatal error, Access_Error

The error was generated by one of the following function blocks as the type of parameter (list or single parameter) or REAL, DINT type is not consistent with the input of the function block.

Cause: The access error occurs when reading/writing a parameter data if the wrong function block has been selected.

Solution: Check the function block type in accordance with your required parameters.

Reading parameters:

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	DINT	REAL	List of parameters
MB_ReadParameter	X		
MB_ReadRealParameter		X	
MB_ReadListParameter			X

Writing parameters:

	DINT	REAL	List of parameters
MB_WriteParameter	X		
MB_WriteRealParameter		X	
MB_WriteListParameter			X

F0220502, ProbeModule out of range

Display: [F0220502](#)

Non-fatal error, Access_Error

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "ProbeModule" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0005".

Solution: Update the PLC program.

F0220503, ProbeInput out of range

Display: [F0220503](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "ProbeInput" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0005".

Solution: Update the PLC program.

F0220504, ExpectWindowPosEdgeMode out of range

Display: [F0220504](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "ExpectWindowPosEdgeMode" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0007, bit 4".

Solution: Update the PLC program.

F0220505, ExpectWindowNegEdgeMode out of range

Display: [F0220505](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "ExpectWindowNegEdgeMode" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0007, bit 5".

Solution: Update the PLC program.

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F0220506, ExpectWindowPosEdgeStart out of rangeDisplay: [F0220506](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "ExpectWindowPosEdgeStart" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0202".

Solution: Update the PLC program.

F0220507, ExpectWindowPosEdgeEnd out of rangeDisplay: [F0220507](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "ExpectWindowPosEdgeEnd" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0203".

Solution: Update the PLC program.

F0220508, ExpectWindowNegEdgeStart out of rangeDisplay: [F0220508](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "ExpectWindowNegEdgeStart" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0204".

Solution: Update the PLC program.

F0220509, ExpectWindowNegEdgeEnd out of rangeDisplay: [F0220509](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "ExpectWindowNegEdgeEnd" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0205".

Solution: Update the PLC program.

F0220510, ExpectWindowPosEdgeSetPoint out of rangeDisplay: [F0220510](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "ExpectWindowPosEdgeSetPoint" input for the requested measuring command or the enabled function block lies outside of the defined range.

Solution: Update the PLC program.

F0220511, ExpectWindowNegEdgeSetPoint out of rangeDisplay: [F0220511](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "ExpectWindowNegEdgeSetPoint" input for the requested measuring command or the enabled function block lies outside of the defined range.

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Solution: Update the PLC program.

F0220512, MarkerFailureEnable out of range

Display: [F0220512](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "MarkerFailureEnabl" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0007, bit 6".

Solution: Update the PLC program.

F0220513, MaxNumberOfMarkerFailure out of range

Display: [F0220513](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "MaxNumberOfMarkerFailure" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0206".

Solution: Update the PLC program.

F0220514, Interpolation out of range

Display: [F0220514](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "Interpolation" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0007, bit 10-11".

Solution: Update the PLC program.

F0220515, TimeStampEnable out of range

Display: [F0220515](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "TimeStampEnable" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0007, bit 3".

Solution: Update the PLC program.

F0220516, DeadTimePosEdge out of range

Display: [F0220516](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "DeadTimePosEdge" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0200".

Solution: Update the PLC program.

F0220517, DeadTimeNegEdge out of range

Display: [F0220517](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

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Cause: The "DeadTimeNegEdge" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0201".

Solution: Update the PLC program.

F0220518, ProbeData out of range

Display: [F0220518](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "ProbeData" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0006".

Solution: Update the PLC program.

F0220519, PositionEvalMode out of range

Display: [F0220519](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "PositionEvalMode" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0007, bit 0-1".

Solution: Update the PLC program.

F0220520, DiffEvalMode out of range

Display: [F0220520](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "DiffEvalMode" input for the requested measuring command or the enabled function block lies outside of the range defined by the minimum and maximum values of the parameter "M-0-0007, bit 7-9".

Solution: Update the PLC program.

F0220521, TOUCHPROBE_REF is not valid or wrong configuration

Display: [F0220521](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "TOUCHPROBE_REF" input for the requested measuring command or the enabled function block is invalid or not configured

Solution: Update the PLC program.

F0220522, AXIS_REF is not valid or wrong configuration of axis

Display: [F0220522](#)

Non-fatal error, INPUT_RANGE_ERROR

A measuring command that cannot be executed by the addressed touch probe is generated in the PLC program.

Cause: The "AXIS_REF" input for the requested measuring command or the enabled function block is invalid or not configured

Solution: Update the PLC program.

F0220600, Path / file name unknown

Display: [F0220600](#)

Non-fatal error, INPUT_RANGE_ERROR

A file name is specified in the PLC program that is unknown in the system.

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Cause: A file name of a path with a file name that could not be found is specified at input "FileName".

Solution: Specify a valid file name or ensure that the file exists on the control.

F0220601, Unsupported file system

Display: [F0220601](#) Non-fatal error, INPUT_RANGE_ERROR

A file name with a path is specified in the PLC program that is not supported.

Cause: A file name with an invalid path specification was specified at input "FileName".

Solution: Specify a valid path or only the file name (in this case the default path is used).

F0220602, Input 'StartIdx' has an invalid value

Display: [F0220602](#) Non-fatal error, INPUT_RANGE_ERROR

An invalid value is transmitted in the PLC program.

Cause: An invalid value was entered at the "StartIdx" input.

Solution: Enter a valid value (≥ 1) at input "StartIdx".

F0220603, Invalid state of state machine

Display: [F0220603](#) Non-fatal error, INPUT_RANGE_ERROR

An internal error occurred in the function module.

Cause: The module processes internally within different steps. It is to be jumped to a step that does not exist.

Remedy: Reset the module or reset the PLC.

F0220604, Error in file structure

Display: [F0220604](#) Non-fatal error, INPUT_RANGE_ERROR

An error in the file structure was detected in the function module.

Cause: The function module opens a file and searches within the file. An error in the file structure was detected.

Remedy: Reload the file to the control using Indraworks.

F0220605, Input 'ArrayDimension' has an invalid value

Display: [F0220605](#) Non-fatal error, INPUT_RANGE_ERROR

An invalid value is transmitted in the PLC program.

Cause: An incorrect value was entered at the "ArrayDimension" input.

The field specified via the point name contains a different number of dimensions that are specified at the function block.

Alternatively the "PointIdx" input can also contain an incorrect value. In this case the output "ErrorIdent.Additional2" contains a number that specifies the index in the "PointIdx" field which is incorrect.

Solution: Enter a correct value.

F0220606, Point not found

Display: [F0220606](#) Non-fatal error, INPUT_RANGE_ERROR

A point name is specified in the PLC program that was not found in the specified file.

Cause: A point name was specified at input "PointName" that does not exist.

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Solution: Specify a valid point name or ensure that the file containing the point also exists on the control.

F0220607, Wrong number of coordinates per point

Display: [F0220607](#)

Non-fatal error, INPUT_RANGE_ERROR

In the PLC program, a point is given with a different number of coordinates than is given in the file.

Cause: A value has been entered at the "Point" input in the "NbrOfValues" structural element that is not consistent with the number of coordinates of the point.

Solution: Enter a valid value for "NbrOfValues".

F0220608, Wrong number of kinematics

Display: [F0220608](#)

Non-fatal error, INPUT_RANGE_ERROR

A point is given in the PLC program that has a different kinematic number than is found in the file.

Cause: A value has been entered at the "Point" input in the "KinematicNbr" structural element that is not consistent with the number in the opened file.

Solution: Enter a valid value for "KinematicNbr".

F0220609, Wrong point type, point in world or joint coordinates

Display: [F0220609](#)

Non-fatal error, INPUT_RANGE_ERROR

A point is preset in the PLC program, which corresponds to a different type.

Cause: A value has been entered at the "Point" input in the "PointType" structural element that is not consistent with the type of the point.

Solution: Enter a valid value for "PointType". This can either be ML_RO-CO_WORLD_COORD for a point in world coordinates, or ML_RO-CO_JOINT_COORD for a point in axis coordinates.

F0260001, MC_DigitalCamSwitch, Unable to acquire APS reference

Display: [F0260001](#)

Non-fatal error, System_Error

A non-fatal internal firmware error occurred.

Cause: A firmware error occurred.

Remedy: Reload PLC program (no online change). If error persists, contact customer service.

F0260002, MC_DigitalCamSwitch, Unable to open cyclic channel

Display: [F0260002](#)

Non-fatal error, System_Error

A non-fatal internal firmware error occurred.

Cause: A firmware error occurred. The cyclic channel can not be accessed by the function block.

Remedy: Switch the control from parameter mode to operating mode. This will reinitialize the cyclic channel. If error persists, contact customer service.

F0260003, MC_DigitalCamSwitch, Unable to allocate memory

Display: [F0260003](#)

Non-fatal error, Resource_Error

An internal firmware error occurred.

Cause: A firmware error occurred. There is no memory available for allocation.

Remedy: Reload PLC program (no online change). This will release and reallocate all user program memory used by the PLC. If error persists, contact customer service.

XLC/MLC diagnostic system tables

F0260004, MC_DigitalCamSwitch, Unable to read parameter

Display: [F0260004](#) Non-fatal error, Communication_Error

An error has occurred while reading an axis parameter.

Cause: Axis parameters are read acyclically by the drive at the first rising edge of the "Enable" input and at a change of the AXIS_REF input. These are "A-0-0059, Scaling type for position data", "A-0-0056, Scaling type for velocity data" and "A-0-0045, Modulo value".

This error is triggered if one of these parameters could not be read.

Solution: Upload the PLC program again (without online change) or change the AXIS_REF input to repeat the process.

If the error occurs again, please contact customer service.

F0260005, MC_DigitalCamSwitch, Invalid combination of units

Display: [F0260005](#) Non-fatal error, Input_Invalid_Error

The function block has recognized a discrepancy of the units.

Cause: The two axis parameters "A-0-0059, Scaling type for position data" and "A-0-0056, Scaling type for velocity data" are read acyclically by the drive at the first rising edge of the "Enable" input and at a change of AXIS_REF.

The following combinations are valid here:

Position has linear scaling:

- Position in meters, velocity in rpm or rps.
- Position in inches, velocity in rpm or rps.

Position has rotary scaling:

- Position in rad, velocity in rpm or rps.

All other combinations are not valid.

Solution: Ensure that the drive parameters (A-0-0056) and (A-0-0059) have the correct combinations.

F0260006, MC_DigitalCamSwitch, On-/Off compensation time longer 16s

Display: [F0260006](#) Non-fatal error, Input_Invalid_Error

The function block detected an invalid value in inputs.

Cause: The lead / lag time for the individual switches is limited to a maximum time of 16 seconds.

Remedy: Make sure that the lead / lag time for any given switch is limited to less than 16 seconds.

F0260007, MC_DigitalCamSwitch, Invalid state of state machine

Display: [F0260007](#) Non-fatal error, State_Machine_Error

An internal firmware error occurred. The internal state of the state machine is incorrect.

Cause: The function block is processed by a state machine. The state has accepted an invalid value.

Solution: Upload the PLC program again (no online change) If the error occurs again, please contact customer service.

F0260010, ML_PIDType01, Low limit is higher than High limit

Display: [F0260010](#) Non-fatal error, Input_Invalid_Error

The input values of the PID controller have wrong values.

XLC/MLC diagnostic system tables

- Cause:** The lower limit of the PID controller has a higher value than the higher limit.
- Remedy:** Swap the inputs for low and high limit or assign proper values.

F0260011, ML_PIDType01, Invalid state of state machine

Display: [F0260011](#) Non-fatal error, State_Machine_Error

A non-fatal internal firmware error occurred.

- Cause:** The function block is controlled by a state machine. Each state represents an action. The state has now an invalid value.
- Remedy:** Reload PLC program (no online change). If error persists, contact customer service.

F0260012, ML_PIDType01, Selected controller type not supported

Display: [F0260012](#) Non-fatal error, Input_Invalid_Error

The set controller type is invalid.

- Cause:** The combination of the individual controller type (P part, I part and D part) is invalid.
- Remedy:** Check the inputs "PControl", "IControl" and "DControl" and use the correct values. If a controller part is to be switched off, the value 0 is to be assigned to it.

F0260030, Inputs have invalid values

Display: [F0260030](#) Non-fatal error, Input_Range_Error

The assigned input values are either outside their limits, or are not valid in combination.

- Cause:** The input values of the function block are either below their minimum values, above their maximum values or their values are invalid in combination.
- Remedy:** Assign proper values to the inputs and/or assign proper combination of values. See also documentation for the individual function block.

F0260031, Invalid state of state machine

Display: [F0260031](#) Non-fatal error, State_Machine_Error

A non-fatal internal firmware error occurred.

- Cause:** The function block is controlled by a state machine. Each state represents an action. The state has now an invalid value.
- Remedy:** Reload PLC program (no online change). If error persists, contact customer service.

F0260032, Calculations resulted in invalid values

Display: [F0260032](#) Non-fatal error, Calculation_Error

Invalid values occurred during internal calculations

- Cause:** In some instances, intermediate values are calculated during calculation. Those intermediate values can have invalid values.
- Remedy:** Slightly vary the input values to get different intermediate values. See also documentation for the individual function blocks for useful starting values.

F0260040, Reference to base system not found

Display: [F0260040](#) Non-fatal error, Resource_Error

An internal firmware error occurred.

- Cause:** An error occurred in the firmware.

XLC/MLC diagnostic system tables

Remedy: Reload the PLC program (no online modifications!). If it fails again, please contact the customer support.

F0260041, Function block could not be instantiated

Display: [F0260041](#) Non-fatal error, System_Error

An internal firmware error occurred.

Cause: An error occurred in the firmware.

Remedy: Reload the PLC program (no online modifications!). If it fails again, please contact the customer support.

F0260042, Function block may not be located in RETAIN data area

Display: [F0260042](#) Non-fatal error, System_Error

The block may not be in the RETAIN range.

Cause: The block is in the RETAIN range. This is not permitted for the blog.

Remedy: Take the block out of the RETAIN area. If necessary, put the input variables of the block into the RETAIN range to save the data.

F0260050, ML_CtrlJobConnect, Invalid values of inputs of POU

Display: [F0260050](#) Non-fatal error, Input_Invalid_Error

Values of at least one FB input are invalid.

Cause:	Remedy:
Additional2 : 16#00500001 The command specification at the "Command" is not within the valid values.	To specify the command, the values of the ML_CONNECT_CMD_JOB enumeration have to be used.
Additional2 : 16#00500002 The configuration at the "CfgOfConnection" input contains invalid values.	This error code is currently not used.
Additional2 : 16#00500003 The IP address at the "IP" input is invalid.	The IP address has to have a valid value that is not zero.
Additional2 : 16#00500004 The link at the "LinkSendRecvJob" input is invalid.	The link has to have a valid value that is not zero. A valid link is created by an instance of the "ML_SendRecvJobAss" FB.

F0260051, ML_CtrlJobConnect, Set of command into queue failed

Display: [F0260051](#) Non-fatal error, Device_Error

The entry of the command in the command queue failed.

Cause: The FB caused an unrecoverable error. The command could not be transferred to the command queue.

Remedy: The FB has to be switched off normally and switched on again later on. If the error occurs again, please contact customer service.

F0260052, ML_CtrlJobConnect, Reject of inv. command or status error

Display: [F0260052](#) Non-fatal error, Device_Error

The query of the status from the status queue failed.

XLC/MLC diagnostic system tables

Cause:	Remedy:
Additional2 : 16#00520001 The FB caused an unrecoverable error. The command in the command queue contains an invalid IP address.	The FB has to be switched off normally and switched on again later on. If the error occurs again, please contact customer service.
Additional2 : 16#00520002 The FB caused an unrecoverable error. The command in the command queue contains an invalid command specification.	The FB has to be switched off normally and switched on again later on. If the error occurs again, please contact customer service.
Additional2 : 16#00520003 The FB caused an unrecoverable error. The command in the command queue contains an invalid connection index.	The FB has to be switched off normally and switched on again later on. If the error occurs again, please contact customer service.
Additional2 : 16#00520004 The FB caused an unrecoverable error. The command in the command queue contains an invalid configuration.	The FB has to be switched off normally and switched on again later on. If the error occurs again, please contact customer service.
Additional2 : 16#00520005 The connection is already controlled by another FB instance.	The control of the connection has to be enabled first via a command.
Additional2 : 16#00520006 No further connection can be established since the maximum number of connections has been reached.	Connections that are not required anymore have to be closed and the connection establishment has to be started subsequently. The current connection data can be determined via an instance of either the "ML_ShowJobConnect" FB or the "ML_DebugJobConnect" FB.
Additional2 : 16#00520007 The FB caused an unrecoverable error. The command in the command queue contains an IP address which does not correspond to the connection controlling the FB.	The FB has to be switched off normally and switched on again later on. If the error occurs again, please contact customer service.
Additional2 : 16#00520008 Currently, there is no connection to the specified IP address to which a passive synchronization is possible.	The connection to the specified IP address has to be opened actively or the FB has to be switched off and later on to be switched on as normally (polling).
Additional2 : 16#00520009 The connection to the specified IP address is currently established and cannot be closed at the same time.	The connection has to be established completely before it can be closed again. The FB has to be switched off normally and switched on again at a later point in time.
Additional2 : 16#0052000A The connection to the specified IP address is currently closed and cannot be established at the same time.	The connection has to be closed completely before it can be established again. The FB has to be switched off normally and switched on again at a later point in time.
Additional2 : 16#0052000B The connection to the specified IP address was enabled.	This error code is currently not used.
Additional2 : 16#0052000C The connection to the specified IP address was closed since the time monitoring detected that the maximum time allowed between two telegrams was exceeded.	Within the maximum time allowed configured between two telegrams, at least one telegram has to be received by the connection participant. If this cannot be ensured, the maximum time allowed configured between two telegrams has to be increased.
Additional2 : 16#0052000D The FB caused an unrecoverable error. The status in the status queue has an invalid length.	The FB has to be switched off normally and switched on again later on. If the error occurs again, please contact customer service.

XLC/MLC diagnostic system tables

F0260053, ML_CtrlJobConnect, Watch dog - time out

Display: [F0260053](#)

Non-fatal error, Access_Error



The description of this diagnostic message is in preparation.

F026005D, ML_CtrlJobConnect, Invalid state of I/O of POU

Display: [F026005D](#)

Non-fatal error, System_Error



The description of this diagnostic message is in preparation.

F026005E, ML_CtrlJobConnect, Invalid state of state machine of POU

Display: [F026005E](#)

Non-fatal error, State_Machine_Error



The description of this diagnostic message is in preparation.

F026005F, ML_CtrlJobConnect, Error during init of POU instance

Display: [F026005F](#)

Non-fatal error, System_Error



The description of this diagnostic message is in preparation.

F0260060, ML_ShowJobConnect, Invalid values of inputs of POU

Display: [F0260060](#)

Non-fatal error, Input_Invalid_Error



The description of this diagnostic message is in preparation.

F0260061, ML_ShowJobConnect, Set of command into queue failed

Display: [F0260061](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F0260062, ML_ShowJobConnect, Reject of inv. command or status error

Display: [F0260062](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F0260063, ML_ShowJobConnect, Watch dog - time out

Display: [F0260063](#)

Non-fatal error, Access_Error



The description of this diagnostic message is in preparation.

F026006E, ML_ShowJobConnect, Invalid state of state machine of POU

Display: [F026006E](#)

Non-fatal error, State_Machine_Error



The description of this diagnostic message is in preparation.

XLC/MLC diagnostic system tables

F026006F, ML_ShowJobTlg, Error during init of POU instanceDisplay: [F026006F](#)

Non-fatal error, System_Error



The description of this diagnostic message is in preparation.

F0260070, ML_SendJobTlg, Invalid values of inputs of POUDisplay: [F0260070](#)

Non-fatal error, Input_Invalid_Error



The description of this diagnostic message is in preparation.

F0260071, ML_SendJobTlg, Set of command into queue failedDisplay: [F0260071](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F0260072, ML_SendJobTlg, Watch dog - time outDisplay: [F0260072](#)

Non-fatal error, Access_Error



The description of this diagnostic message is in preparation.

F026007E, ML_SendJobTlg, Invalid state of state machine of POUDisplay: [F026007E](#)

Non-fatal error, State_Machine_Error



The description of this diagnostic message is in preparation.

F026007F, ML_SendJobTlg, Error during init of POU instanceDisplay: [F026007F](#)

Non-fatal error, System_Error



The description of this diagnostic message is in preparation.

F0260080, ML_RecvJobTlg, Invalid values of inputs of POUDisplay: [F0260080](#)

Non-fatal error, Input_Invalid_Error



The description of this diagnostic message is in preparation.

F0260081, ML_RecvJobTlg, Set of command into queue failedDisplay: [F0260081](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F0260082, ML_RecvJobTlg, Watch dog - time outDisplay: [F0260082](#)

Non-fatal error, Access_Error



The description of this diagnostic message is in preparation.

XLC/MLC diagnostic system tables

F026008E, ML_RecvJobTlg, Invalid state of state machine of POU

Display: [F026008E](#)

Non-fatal error, State_Machine_Error



The description of this diagnostic message is in preparation.

F026008F, ML_RecvJobTlg, Error during init of POU instance

Display: [F026008F](#)

Non-fatal error, System_Error



The description of this diagnostic message is in preparation.

F0260090, ML_SendRecvJobAss, Invalid values of inputs of POU

Display: [F0260090](#)

Non-fatal error, Input_Invalid_Error



The description of this diagnostic message is in preparation.

F0260091, ML_SendRecvJobAss, Store of recieved job telegram failed

Display: [F0260091](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F0260092, ML_SendRecvJobAss, Watch dog - time out

Display: [F0260092](#)

Non-fatal error, Access_Error



The description of this diagnostic message is in preparation.

F0260095, ML_SendRecvJobAss, Error communication socket (create)

Display: [F0260095](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F0260096, ML_SendRecvJobAss, Error communication socket (close)

Display: [F0260096](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F0260097, ML_SendRecvJobAss, Error communication socket (ioctl)

Display: [F0260097](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F0260098, ML_SendRecvJobAss, Error communication socket (bind)

Display: [F0260098](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

XLC/MLC diagnostic system tables

F0260099, ML_SendRecvJobAss, Error ethernet buffer (recvfrom)Display: [F0260099](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F026009A, ML_SendRecvJobAss, Error ethernet buffer (sendto)Display: [F026009A](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F026009B, ML_SendRecvJobAss, Defrag error of send/ receive bufferDisplay: [F026009B](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F026009C, ML_SendRecvJobAss, Error on communication socketsDisplay: [F026009C](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F026009D, ML_SendRecvJobAss, Invalid state of I/O of POUDisplay: [F026009D](#)

Non-fatal error, System_Error



The description of this diagnostic message is in preparation.

F026009E, ML_SendRecvJobAss, Invalid state of state machine of POUDisplay: [F026009E](#)

Non-fatal error, State_Machine_Error



The description of this diagnostic message is in preparation.

F026009F, ML_SendRecvJobAss, Error during init of POU instanceDisplay: [F026009F](#)

Non-fatal error, System_Error



The description of this diagnostic message is in preparation.

F02600A0, ML_DebugJobConnect, Invalid values of inputs of POUDisplay: [F02600A0](#)

Non-fatal error, Input_Invalid_Error



The description of this diagnostic message is in preparation.

F02600A1, ML_DebugJobConnect, Set of command into queue failedDisplay: [F02600A1](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F02600A2, ML_DebugJobConnect, Invalid command / getting status

Display: [F02600A2](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F02600A3, ML_DebugJobConnect, Invalid command / getting status

Display: [F02600A3](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F02600A4, ML_DebugJobConnect, Watch dog - time out

Display: [F02600A4](#)

Non-fatal error, Access_Error



The description of this diagnostic message is in preparation.

F02600AE, ML_DebugJobConnect, Invalid state of state machine of POU

Display: [F02600AE](#)

Non-fatal error, State_Machine_Error



The description of this diagnostic message is in preparation.

F02600AF, ML_DebugJobConnect, Error during init of POU instance

Display: [F02600AF](#)

Non-fatal error, System_Error



The description of this diagnostic message is in preparation.

F0280001, Invalid number of CFL01.1 modules (-Q2, -R3)

Display: [F0280001](#)

Non-fatal error, Device_Error

The number of sercos function modules connected is not permissible.

A maximum of two of these modules can be connected.

In many applications, one sercos function module is sufficient for communication between individual controls. Two (identical) function modules are only permitted in the following HW configurations:

- Control L25 with two function modules CFL01.1-Q2,
- Control L45 with two function modules CFL01.1-Q2,
- Control L65 with two function modules CFL01.1-Q2.

Cause: More than

- one C2C-CrossCom module (CFL01.1-R3) has been connected to the MLC,
- two different modules (CFL01.1-Q2 and CFL01.1-R3) have been connected to the MLC or
- two CrossCom modules (CFL01.1-Q2) have been connected to a control not intended for this

purpose.

Solution: Connect only the (maximum) permissible number of sercos function modules to the control.

XLC/MLC diagnostic system tables

F0280002, Upload of firmware into des CFL01.1-Q2-FPGA failedDisplay: [F0280002](#)

Non-fatal error, Device_Error

The desired firmware could not be loaded into the FPGA of the CrossComm module (CFL01.1-Q2).

- Cause:**
- The CrossComm module (CFL01.1-Q2) is defective.
 - An unsupported CrossComm module (CFL01.1-Q2) has been connected.
 - The firmware file "querdpll_fpga.bin" was not found on the Compact Flash card.

Solution: Perform a firmware download via IndraWorks.

If the error persists, the function module is defective. It must be exchanged.

F0280003, Initialization of the CFL01.1-Q2 module failedDisplay: [F0280003](#)

Non-fatal error, System_Error

The CrossCom module (CFL01.1-Q2) could not be initialized.

- Cause:**
- The CrossCom module (CFL01.1-Q2) is defective.
 - A CrossCom module (CFL01.1-Q2) which is not supported is being used.

Remedy: Exchange the CrossCom module (CFL01.1-Q2).

F0280004, Link ring brokenDisplay: [F0280004](#)

Non-fatal error, Communication_Error

A fatal hardware-related or sercos technology-related problem has occurred with the result that no data transmission is possible in the link ring. The transmission route has either been interrupted or the sercos data exchange has been cancelled.

Cause: **sercos II link (CFL01.1-Q2):**

Every link participant monitors its optical inputs. If the signals fail to appear on all supported link rings, then an OWG interruption is recognized and error [F0280004](#) is reported.

C2C link (CFL01.1-R3):

A C2C master checks the occurring ATs of its slaves for the maximum permissible number of successive failures (for instance due to cable breakage or incorrect timing) and its own MDTs for punctual preparation. In the event of problems, the C2C link in phase CP0 is switched back and error [F0280004](#) is reported in both cases.

Solution: **sercos II link (CFL01.1-Q2):**

Monitor LEDs ErP and ErS on the DAQs (CFL01.1-Q2) (distortion display, OWG break display). The OWG break is physically located "in front of" the participant reporting this error. Eliminate an OWL break, execute the "Clear error" command and "Restore redundancy" via the PLC (or parameter C-0-0704) with a double ring.

C2C link (CFL01.1-R3):

With IndraWorks, look for port errors (due to cable break) on all participants among the "messages" (parameters C-0-0714) in the "Diagnostics for control link" dialog box. A cable break is physically located "in front of" the participant reporting this error. Remedy the cable break if there is a port error.

XLC/MLC diagnostic system tables

Otherwise check the link configuration in the "Properties" dialog box (parameter C-0-0778) in relation to timing and producer data and adjust if there are inconsistencies (along the entire link).

In both cases the C2C link must be rebooted again after this.



A slave in the C2C link reports a 'C2C link error' (F0280012) in contrast to the C2C master..

F0280005, Link ring: masterposition incorrect MDT

Display: F0280005

Non-fatal error, Communication_Error

The transmission of the master axis from the link master to the link participants is disturbed.

Cause: Data transmission failure (Bit error), Link MDTs of two consecutive cycles incorrect.

Remedy: Check LED ErP (CrossCom), if necessary check LWLs.

F0280006, Link ring: masterposition incorrect AT

Display: F0280006

Non-fatal error, Communication_Error

The transmission of the master axis position from the link slave to the link master is disrupted. Only the Master axis positions are monitored that are used in the proprietary control ring.

Cause: Data transmission fault (bit error). The link drive telegram of a link slave was defective in two successive cycles.

Solution: Check LED ErP (CrossComm) and possibly check OWLs.

F0280007, Link ring: variant cycle time detected

Display: F0280007

Non-fatal error, Communication_Error

The cycle time is compared with the cycle time set in "C-0-0700, C2C, cycle time (Tcyc), command value ".

Cause: The cycle time in parameter "C-0-0700, C2C, cycle time (Tcyc), command value " is not consistent with the actual cycle time.

Solution: Set the parameter "C-0-0700, C2C, cycle time (Tcyc), command value " to the actual cycle time in the link.

F0280010, Link axis not projectable, C2C is not configured yet

Display: F0280010

Non-fatal error, Resource_Error

To start up MLC and C2C-link with a projected local link axis, the entire C2C configuration must be present on the control. Only then is it possible to check whether the parameterized master axis position (master axis) is produced by a participant and can therefore be consumed by the local link axis.

If this is not the case, after the MLC is started up to operation mode this error message will show the user that the link axes are not capable of functioning.

Cause: An attempt is being made to start up the MLC and the C2C link with a projected local link axis without the entire C2C configuration present on the control.

Solution: Go online with IndraWorks and set the C2C setting to parameterization mode or check if it is already set. Before leaving the dialog box, it is imperative that these settings are saved using the **Save button!**

Alternatively, the local link axis can be removed from the project.

After both measures have been taken, the MLC can be started up in operation mode without error.

XLC/MLC diagnostic system tables

F0280011, C2C: Connection not applicable, as not configuredDisplay: [F0280011](#)

Non-fatal error, System_Error

Of the configured local link axes, only the master axis positions (master axes), which are also designated in the entire C2C configuration and produced by a participant, can be consumed.

Cause: The configured local link axis is to consume a master axis position (master axis) of a C2C connection that is not designated in the entire C2C configuration.

Solution: Go online with IndraWorks and adjust the selection of the master axis for the link axis (parameter A-0-0008) to the allowable master axis.

F0280012, C2C: Connection errorDisplay: [F0280012](#)

Non-fatal error, System_Error

The maximum number of NewData failures is exceeded in one of the C2C connections consumed by the control.

Cause: The control producing a C2C connection does not participate in the link anymore.

The consuming control is no longer synchronous to the link ring.

Solution: Check the link data status via C-0-0712.

The controls producing the link data must be entered as valid.

In C-0-0714, the PLL has to be locked in link phase 4.

F0280020, Semaphore error while switching C2C phaseDisplay: [F0280020](#)

Non-fatal error, System_Error

The C2C master has made a futile attempt to execute a C2C phase switch.

The C2C phase switch could either not be started or not ended correctly.

Cause: The semaphore for the C2C phase switch could either not be accepted at the start of the switch or not returned at the end of the switch.

Remedy: Please contact customer service.

F0280021, Invalid commanded C2C phaseDisplay: [F0280021](#)

Non-fatal error, System_Error

The C2C master has made a futile attempt to execute a C2C phase switch.

The set C2C mode is not permitted.

Cause: Either an illegal value has been entered for the C2C mode (C-0-0751) or the control has generated an illegal value internally in the switch algorithm.

Remedy: Make sure that a permissible value is entered in C-0-0751. If the problem continues to occur, please contact customer service.

F0280022, Internal error due to the C2C service channelDisplay: [F0280022](#)

Non-fatal error, System_Error

The C2C master has made a futile attempt to transfer data to a (the) slave(s) using the C2C service channel.

Cause: Internal problems in the control occurred when maintaining the service channels or the data provision.

Remedy:

Please contact customer service.

XLC/MLC diagnostic system tables

F0280023, Incompatible C2C device found

Display: [F0280023](#)

Non-fatal error, System_Error

The C2C master has made a futile attempt to execute a C2C phase start up.
There is at least one C2C device (C2C slave) in the link that is not compatible with the C2C master.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

Cause: The C2C device does not support the SCP-V1.1 version of the sercos III specification required by the C2C master control.

The firmware version of a C2C slave is not compatible with the C2C master control.

Solution: C2C slave firmware update.

Contact customer support.

F0280024, C2C ring not closed

Display: [F0280024](#)

Non-fatal error, System_Error

The C2C master detected that the 2C ring or the C2C line is not connected.
No C2C startup possible.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

Cause: The C2C master is connected to other devices but did not find any C2C slave with which a C2C ring or the C2C line can be established.

The C2C slaves are either not enabled or do not have the same configuration as the master.

Solution: Ensure the consistency of the entire C2C configuration and enable all slaves.



The C2C master only starts up with the slaves detected at the time of the C2C startup.

As subsequent slaves cannot be integrated in the link anymore, start the C2C master as last device. This can be realized using a startup deceleration (parameter C-0-0060).

F0280025, C2C: Configuration not consistent

Display: [F0280025](#)

Non-fatal error, System_Error

The C2C master detected that the data for the entire C2C configuration is not identical on all controls.

The parameters required for the startup cannot be read out or written from the C2C devices.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

Cause: During a conversion in the sercos cycle time in the C2C link, the C2C master tries to start up even though not all devices have been converted.

More C2C devices than devices that are configured are detected as devices by the master.

Corrupt service channel communication to a C2C device.

Solution: Convert all C2C devices and adjust the entire C2C configuration on all controls.

XLC/MLC diagnostic system tables

Configuring all other C2C devices in the master. Disconnecting sercos from the redundant C2C devices.

F0280027, C2C: Error device not found

Display: [F0280027](#)

Non-fatal error, System_Error

The control should participate in the C2C link but has not detected a sercos III function module for C2C. The C2C link master does not detect the configured devices.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

- Cause:**
- The sercos III for C2C function module does not physically exist or has not been detected at the PCI bus since it is defective.
 - During the link startup, the C2C link master detects devices at the bus that were not configured in "C-0-0778, C2C, command configuration".
- Solution:**
- Plug in the function module for C2C at the FM bus or replace the defective module.
 - Check the parameter "C-0-0778, C2C, command configuration".

The control addresses "C-0-0031" of the link slaves must be consistent with the addresses in "C-0-0778".

F0280029, C2C: Error switching phase 3

Display: [F0280029](#)

Non-fatal error, System_Error

The C2C master detected that switching the link to phase 3 is not possible.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

- Cause:** At least one C2C slave did not acknowledge the switch of the master to the specified phase 3 after the specified dead time has elapsed.
- Solution:** Ensure the consistency of the entire C2C configuration and switch all C2C link devices on and off again.

F0280030, C2C: Error command S-0-0127, P3 transition check

Display: [F0280030](#)

Non-fatal error, System_Error

The C2C-Master has recognized that he cannot execute the command "Switching preparation to P3" faultlessly.

After a by chance determined waiting time he starts a new attempt of the C2C-Run-up. This scenario is executed as long as, until the command "Switching preparation to P3" is completed successfully.

- Cause:** At least one C2C-Slave is not able to change over to phase 3.
- Remedy:** Ensure the consistency of the whole C2C-Configuration and switch off/on all participants of the C2C-Link.

F0280031, C2C: Error switching phase 4

Display: [F0280031](#)

Non-fatal error, System_Error

The C2C master detected that switching the link to phase 4 is not possible.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

- Cause:** At least one C2C slave did not acknowledge the switch of the master to the specified phase 4 after the specified dead time has elapsed.
- Solution:** Ensure the consistency of the entire C2C configuration and switch all C2C link devices on and off again.

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F0280034, Invalid configuration of C2C timing

Display: [F0280034](#)

Non-fatal error, System_Error

The C2C master has made a futile attempt to determine or set the C2C timing from the relevant data of all devices.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

Cause: When reading the relevant data from at least one C2C slave, discrepancies occurred between the timing data required by the C2C master and that returned by the slave.

Another reason could be that the C2C master could not write its data to all slaves.

Solution: Ensure that the cycle times for the drive ring and for C2C on all C2C devices are the same. If the error still occurs, please contact the customer service.

F0280041, C2C: sercos cycle time not possible

Display: [F0280041](#)

Non-fatal error, System_Error

The configured C2C cycle time does not match the configured drive ring cycle time.

Cause: The C-0-0700 cycle time does not match the C-0-0503 cycle time.

Solution: Ensure that the cycle times for the drive ring and for C2C on all C2C devices are the same. If the error still occurs, please contact the customer service.

F0280044, Link ring: invalid HW synchronization

Display: [F0280044](#)

Non-fatal error, System_Error

This link error only occurs if a double ring is configured for the CrossComm (CFL01.1-Q2) function module. It indicates a hardware problem with the cycle counters of both sercos rings.



This error does not occur in a C2C link with function module FL01.1-R3.

Cause: A possible cause for this error message is that both counter values drift apart until the difference is greater than an internally set threshold value. This threshold value depends on the cycle time.

There is another reason for this diagnosis if the counter value on the ring that the PLL controls remains constant over more than 100 cycles. Such a state can only occur temporarily in the transient phase of the PLL during synchronization with the link master. In this case the error message is suppressed. However, in a steady state such behavior would indicate an error.

Remedy: Delete the error using IndraWorks or the <Enter> key in the display. If the error continues to occur, please contact customer service.

F0280060, C2C master: hot plug slave w/o sercos III-interface (HP0)

Display: [F0280060](#)

Non-fatal error, System_Error

The C2C master has attempted unsuccessfully to integrate recently connected C2C slaves dynamically into the running C2C link using a hot plug. The attempt failed in hot plug phase 0.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

Cause: At least one of the new devices cannot be integrated into the C2C link using the hot plug mechanism since it apparently does not support the sercos III

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communication interface. This slave either reports a false telegram or does not respond after the C2C master has transferred the basis parameters in hot plug phase 0.

Another cause can be that the last C2C slave in the line does not detect a link on the inactive port.

Solution: Ensure that only devices that are also C2C-compatible and hot plug-compatible are dynamically connected to the C2C link.

F0280061, C2C master: misconfigured hot plug slave (HP0)

Display: [F0280061](#)

Non-fatal error, System_Error

The C2C master has attempted unsuccessfully to integrate recently connected C2C slaves dynamically into the running C2C link using a hot plug. The attempt failed in hot plug phase 0.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

Cause: At least one of the new devices cannot be integrated into the C2C link using the hot plug mechanism since its C2C slave address is either too large or is not configured.

Solution: Ensure that the link configuration of all new C2C slaves is identical to that of the other slaves.

An exception to this is the control address, which is different for all devices.



This error is also reported as a standard error if there are causes other than those specified in error messages [F0280060...](#) [F0280067](#).

F0280062, C2C master: error while scanning the hot plug slaves (HP1)

Display: [F0280062](#)

Non-fatal error, System_Error

The C2C master has attempted unsuccessfully to integrate recently connected C2C slaves dynamically into the running C2C link using a hot plug. The attempt failed in hot plug phase 1.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

Cause: At least one of the new devices cannot be integrated into the C2C link using the hot plug mechanism since it could not be scanned by the master. Either no C2C slave could be found at all or the address(es) of one or more slaves could not be determined.

Solution: Ensure that all new C2C slaves have allowable control addresses that are different from those of all other C2C devices.

If this problem still regularly occurs during every scan procedure despite allowable control addresses, it may also be caused by an error in the C2C master scan algorithm. In this case please contact customer service.

F0280063, C2C master: HP1 parameters faultily receipted (HP1)

Display: [F0280063](#)

Non-fatal error, System_Error

The C2C master has attempted unsuccessfully to integrate recently connected C2C slaves dynamically into the running C2C link using a hot plug. The attempt failed in hot plug phase 1.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

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- Cause:** At least one of the new devices cannot be integrated into the C2C link using the hot plug mechanism since it either did not acknowledge the receipt of the HP1 parameters for C2C configuration or did so erroneously.
- Solution:** Ensure that the link configuration of all new C2C slaves is identical to that of the other slaves. An exception to this is the control address, which is different for all devices. In addition, check whether the Ethernet connection among C2C devices is correct.
- If this problem occurs again, please contact the customer support.

F0280064, C2C master: error running the service channel (HP1)

Display: [F0280064](#)

Non-fatal error, System_Error

The C2C master has attempted unsuccessfully to integrate recently connected C2C slaves dynamically into the running C2C link using a hot plug. The attempt failed in hot plug phase 1.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

- Cause:** The new devices cannot be integrated into the C2C link using the hot plug mechanism since the C2C master could not switch to the serial transmission of communications parameters on the service channel.
- Solution:** Contact customer support.

F0280065, C2C master: hot plug mechanism aborted

Display: [F0280065](#)

Non-fatal error, System_Error

The C2C master has attempted unsuccessfully to integrate recently connected C2C slaves dynamically into the running C2C link using a hot plug. The attempt failed in one of the three hot plug phases.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

- Cause:** The C2C master aborted the current hot plug mechanism since the topology in the C2C ring changed.
- Another reason could be that the user triggered a restart of the C2C link using the parameter C2C target mode (C-0-0751). In this case all C2C slaves currently present are integrated without the hot plug mechanism.
- Solution:** Restore the old topology and repeat the hot plug.
- Ensure that all slaves are integrated in the C2C link after the C2C has rebooted using C-0-0751. Subsequently, simply delete this diagnostic message.
- Otherwise please contact customer service.

F0280066, C2C master: HotPlug not supported

Display: [F0280066](#)

Non-fatal error, System_Error

The C2C master has attempted unsuccessfully to integrate recently connected C2C slaves dynamically into the running C2C link using a hot plug.

The master did not execute a hot plug.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

- Cause:** The following reasons may lead to this behavior:
- The C2C master generally does not support a hot plug.
 - The C2C link has ring topology.
 - The C2C link has not (yet) started up in phase 4.

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Solution: Ensure that the C2C link has started up in phase 4 and that only one line or one double line is wired.



An MLC link master always supports hot plug.

F0280067, C2C master: invalid slave address detected (HP1)

Display: [F0280067](#)

Non-fatal error, System_Error

The C2C master has attempted unsuccessfully to integrate recently connected C2C slaves dynamically into the running C2C link using a hot plug. The attempt failed in hot plug phase 1.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

Cause: At least one of the new devices cannot be integrated into the C2C link using the hot plug mechanism since it could not be detected by the master. Either the address of the C2Cs slave was already found at another slave or was not configured at all.

Solution: Ensure that all new C2C slaves have allowable control addresses that are different from those of all other C2C devices.

If this problem still regularly occurs during every hot plug procedure despite allowable control addresses, it may also be caused by an error in the C2C master scan algorithm. In this case please contact customer service.

F0280068, Ring topology could not be established

Display: [F0280068](#)

Non-fatal error, Communication_Error

An error has occurred while restoring the "ring" topology. There is no redundancy.

Cause:

- The last slaves of the lines reported an incorrect topology. There is either no telegram or a wrong telegram at the disabled port.
- There is no ring topology.
- The communication phase is not equal to CP4.
- At least one slave did not apply the specified topology.
- There is no cabling or the cabling is incorrect.

Solution:

- Check the cabling between the link participants.
- Check the ring structure. All link participants have to be in the link phase CP4. Participants that are not in the CP4 link phase must firstly be actively switched via a hot plug at the link. Only afterwards can the "ring" topology be restored.

F0280080, C2C slave: hot plug via C2C master impossible (HP0.1)

Display: [F0280080](#)

Non-fatal error, System_Error

The new C2C slave has recognized MSTs in C2C phase 4 (CP4) at one of its ports and went into hot plug phase HP 0.1 to allow the C2C master to integrate it dynamically into the running C2C link. However, the attempt failed.

Cause: The C2C slave cannot be integrated using the hot plug mechanism because the C2C master does not support the hot plug mechanism. It is not possible to integrate the new C2C slave dynamically.

Remedy: The C2C master must restart the active C2C link (see parameter description C-0-0751) in order to integrate the new C2C slave.

If you continue to have problems, please contact customer service.

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F0280081, C2C slave: HP0 parameters defective/incomplete (HP0.2)

Display: [F0280081](#)

Non-fatal error, System_Error

The new C2C slave has recognized that the C2C master is trying to use the hot plug mechanism to integrate it dynamically. It is now in HP0.2 expecting the parameters for basic initialization of C2C communication. However, these contain an error or arrive in an incomplete state. No basic initialization of C2C communication is possible.

Cause: The HP0 parameters arrive at the slave either containing errors because the C2C link is malfunctioning or in an incomplete state because the C2C master aborted the hot plug mechanism (see [F0280065](#)).

Remedy: If the C2C master issued error [F0280065](#), the current slave error can be deleted.

Otherwise, make sure that the link configuration of all new C2C slaves is identical to that of the other slaves. An exception to this is the control address, which is different for all devices. In addition, check whether the Ethernet connection among C2C participants is correct.

If you continue to have problems, please contact customer service.

F0280082, C2C slave: slave address missed in HP control word (HP0.3)

Display: [F0280082](#)

Non-fatal error, System_Error

The new C2C slave has recognized that the C2C master is trying to use the hot plug mechanism to integrate it dynamically. It is now in HP0.3 expecting to receive its slave address in the C2C master HP check word in order to switch into phase HP1.

Cause: The C2C slave cannot be integrated into the C2C link using the hot plug mechanism because a slave address has not yet been entered in the C2C master HP check word. This could have happened because the C2C link is malfunctioning or the C2C master aborted the hot plug mechanism (see [F0280065](#)). .

Remedy: If the C2C master issued error [F0280065](#), the current slave error can be deleted.

Otherwise, make sure that the link configuration of all new C2C slaves is identical to that of the other slaves. An exception to this is the control address, which is different for all devices. In addition, check whether the Ethernet connection among C2C participants is correct.

If you continue to have problems, please contact customer service.

F0280083, C2C slave: HP1 parameters defective/incomplete (HP01.1)

Display: [F0280083](#)

Non-fatal error, System_Error

The new C2C slave has recognized that the C2C master is trying to use the hot plug mechanism to integrate it dynamically. It now expects in HP1.1 the parameters for initialization of C2C service channel. However, these contain an error or arrive in an incomplete state. Communication for continued C2C start up is not possible.

Cause: The HP1 parameters arrive at the slave either containing errors because the C2C link is malfunctioning or in an incomplete state because the C2C master aborted the hot plug mechanism (see [F0280065](#)).

Solution: If the C2C master issued error [F0280065](#), the current slave error can be deleted.

Otherwise, make sure that the link configuration of all new C2C slaves is identical to that of the other slaves.

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An exception to this is the control address, which is different for all devices.

In addition, check whether the Ethernet connection among C2C participants is correct.

In case of further problems, please contact customer service.

F0280084, C2C slave: error within C2C service channel (HP1.2)

Display: [F0280084](#)

Non-fatal error, System_Error

The new C2C slave has recognized that the C2C master is trying to use the hot plug mechanism to integrate it dynamically. It expects in HP1.2 that it will be scanned by the C2C master before switching up into phase HP2.

Cause: The C2C slave cannot be integrated using the hot plug mechanism because an error has occurred in the C2C service channel. Continuing the C2C start up is not possible.

Solution: If the C2C master issued error [F0280065](#), the current slave error can be deleted.

Otherwise, make sure that the link configuration of all new C2C slaves is identical to that of the other slaves.

An exception to this is the control address, which is different for all devices.

In addition, check whether the Ethernet connection among C2C participants is correct.

In case of further problems, please contact customer service.

F0280085, C2C slave: faulty scan algorithm within C2C master (HP1.2)

Display: [F0280085](#)

Non-fatal error, System_Error

The new C2C slave has recognized that the C2C master is trying to use the hot plug mechanism to integrate it dynamically. It now expects in HP1.2 that it will be contacted by the C2C master regarding its new control address as a new C2C participant.

Cause: The C2C slave cannot be integrated into the C2C link using the hot plug mechanism because it has recognized an error in the C2C master scan algorithm.

Solution: If the C2C master issued error [F0280065](#), the current slave error can be deleted.

Otherwise, make sure that the link configuration of all new C2C slaves is identical to that of the other slaves.

An exception to this is the control address, which is different for all devices.

In addition, check whether the Ethernet connection among C2C participants is correct.

In case of further problems, please contact customer service.

F0280086, C2C slave: error running switch command S-0-0127/8 (HP2)

Display: [F0280086](#)

Non-fatal error, System_Error

The new C2C slave has recognized that the C2C master is trying to use the hot plug mechanism to integrate it dynamically. It is in hot plug phase HP2 expecting commands S-0-0127 and S-0-0128 to prepare for switching to C2C phases CP3 and CP4.

Cause: The C2C slave cannot be integrated into the C2C link using the hot plug mechanism because an error occurred when the switch command S-0-0127 or S-0-0128 was executed.

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Solution: If the C2C master issued error [F0280065](#), the current slave error can be deleted.

Otherwise, make sure that the link configuration of all new C2C slaves is identical to that of the other slaves.

An exception to this is the control address, which is different for all devices.

In addition, check whether the Ethernet connection among C2C participants is correct.

In case of further problems, please contact customer service.

F0280087, C2C slave: hot plug mechanism failed

Display: [F0280087](#) Non-fatal error, System_Error

The new C2C slave has recognized that the C2C master is trying to use the hot plug mechanism to integrate it dynamically. It now expects to enter into cyclical C2C communication with CP4 after all hot plug phases have been successfully completed.

Cause: The C2C slave cannot be integrated into the C2C link using the hot plug mechanism because the C2C master aborted the hot plug mechanism before achieving cyclical C2C communication in CP4.

Solution: If the C2C master issued error [F0280065](#), the current slave error can be deleted.

Otherwise, make sure that the link configuration of all new C2C slaves is identical to that of the other slaves. An exception to this is the control address, which is different for all devices. In addition, check whether the Ethernet connection among C2C participants is correct.

In case of further problems, please contact customer service.

F0280100, Lack of memory due to the C2C interface data

Display: [F0280100](#) Non-fatal error, System_Error

The firmware did not activate the C2C interface because there is not sufficient RAM memory in the control for the interface data.

Cause: This may be caused either by not enough memory for C2C real time data or (and) too little memory for the internal tools used to check the C2C configuration.

Remedy: Please contact customer service.

F0280101, Initialization of the C2C hardware failed

Display: [F0280101](#) Non-fatal error, System_Error

The firmware did not activate the link interface because the initialization of the link hardware failed.

This problem can occur in the C2C as well as in the sercos II link.

The error is reported once as soon as the control started in the operating mode. The error can be deleted.

Cause: **sercos II link (CFL01.1-Q2):**

This problem could have the following causes:

- No sercos II function module available.
- The configured slot address at the PCI bus (C-0-0040) does not match the address set (C-0-0039) at the function module.

C2C link (CFL01.1-R3):

This problem could have the following causes:

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- No sercos III function module available.
- The configured slot address at the PCI bus (C-0-0040) does not match the address set (C-0-0039) at the function module.
- The FPGA firmware is not on the Compact Flash card.
- The FPGA firmware cannot be loaded to the function module.
- The FPGA firmware does not support the sercos III interface.
- The FPGA firmware supports the wrong function type (master instead of slave).
- The version of the FPGA firmware is not supported by the control.

Solution: Ensure that the required function module is connected for the link at the PCI bus and check the matching of the slot addresses.

Download a (new) firmware at correct hardware and correlated slot address into a C2C link (CFL01.1-R3) via IndraWorks. If the error is still present, the function module is defective. It has to be exchanged.

F0280103, Master axis not applicable, defective internal axis table

Display: [F0280103](#)

Non-fatal error, System_Error

Of the projected local link axes, only the master axis positions (master axes) which are also entered in the internal configuration list for the sercos II link ring can be consumed.

Cause: An internal firmware error occurred. The projected (new) master axis cannot or can no longer be accepted into the internal configuration list.

Remedy: Please contact customer service.

F0280104, Old master axis unerasable, defective internal axis table

Display: [F0280104](#)

Non-fatal error, System_Error

Of the projected local link axes, only the master axis positions (master axes) which are also entered in the internal configuration list for the sercos II link ring can be deleted.

Cause: An internal firmware error occurred. The old projected master axis can not be deleted from the internal configuration list because it cannot be found.

Remedy: Please contact customer service.

F0280105, Setup of the P-/S-Count values via SVCH failed

Display: [F0280105](#)

Non-fatal error, System_Error

The firmware did not activate the C2C interface because the C2C master could not assign the P-/S count values to all C2C slaves. During C2C start up the P-/S count values are communicated acyclically to all slaves via the C2C service channel.

Cause: While the C2C master was attempting to write the P-/S count values acyclically in all C2C slaves, a malfunction occurred in the C2C service channel. At least one slave received data containing an error or no data at all.

Remedy: Switch all C2C controls off and back on again. If the error occurs again, please contact customer service.

F0280106, Enquiry of the P-/S-SyncCnt values via SVCH failed

Display: [F0280106](#)

Non-fatal error, System_Error

The firmware did not activate the C2C interface because the C2C master could not read the P-/S SyncCnt values from all C2C slaves. During C2C start up the master requests the P-/S SyncCnt values acyclically from all slaves via the C2C service channel.

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Cause: While the C2C master was attempting to read the P-/S SyncCnt values acyclically from all C2C slaves, a malfunction occurred in the C2C service channel. For this reason the data from at least one slave contains errors or did not reach the C2C master at all.

Remedy: Switch all C2C controls off and back on again. If the error occurs again, please contact customer service.

F0280107, Enquiry of the ring configuration ID via SVCH failed

Display: **F0280107**

Non-fatal error, System_Error

The firmware did not activate the C2C interface because the C2C master could not read the ring configuration ID from all C2C slaves. During C2C start up the master requests the ring configuration ID acyclically from all slaves via the C2C service channel.

Cause: While the C2C master was attempting to read the ring configuration ID acyclically from all C2C slaves, a malfunction occurred in the C2C service channel. For this reason the data from at least one slave contains errors or did not reach the C2C master at all.

Remedy: Switch all C2C controls off and back on again. If the error occurs again, please contact customer service.

F0280109, Generic (configuration) error due to the C2C interface

Display: **F0280109**

Non-fatal error, System_Error

The firmware did not enable the C2C interface since the C2C master did not find allowable C2C configuration data in all C2C slaves. The master checks the C2C configuration data of all slaves after it has requested this data acyclically via the service channel.

In addition, generic problems with regard to C2C initialization and SVCH communication could occur (see note).

Cause: When checking the C2C configuration, the C2C master recognized either an error in the configuration data from at least one slave or other generic problems.

The reason for these problems could be:

- an erroneous or missing XML file
- an erroneous ring configuration ID
- a generic configuration error that was not specified further (see note)
- a generic initialization error that was not specified further (see note)
- a generic SVCH error that was not specified further (see note)



F0280109 is also the default diagnostic message for the entire C2C start up.

The message is displayed if any problem occurs at the C2C interface that has to do with initialization, configuration and acyclical communication and has not been specifically analyzed.

The parameter number, the corresponding error code and the MLC address are specified in the short text.

Solution: Switch all C2C controls off and back on again. If this error occurs again, please contact the customer support.

F0280161, Set point transfer error

Display: **F0280161**

Non-fatal error, Communication_Error

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Error in cyclic data transfer of the link ring.

Cause:

- The command values in the MDT telegrams of the link ring could not be consistently transferred to the slaves.

Solution: Increase sercos cycle time. If the error cannot be corrected, please contact the customer service.

F0290001, Transformation not valid

Display: [F0290001](#)

Non-fatal error, Input_Invalid_Error

Cause: When selecting a transformation, an invalid transformation was selected, e.g. zero.

Solution: Select a valid transformation.

F0290400, General kinematics error

Display: [F0290400](#)

Non-fatal error, Device_Error

Cause: General Kinematics Error

F0290401, Invalid control number

Display: [F0290401](#)

Non-fatal error, Input_Range_Error

Cause: Invalid Control Number

F0290402, Invalid kinematics number

Display: [F0290402](#)

Non-fatal error, Input_Range_Error

Cause: Invalid Kinematics Number

F0290403, Invalid command type

Display: [F0290403](#)

Non-fatal error, Access_Error

Cause: Invalid Command Type

F0290404, Command not supported by kinematics

Display: [F0290404](#)

Non-fatal error, State_Machine_Error

Cause: Command Not Supported by Kinematics

F0290405, Command rejected while 'StandStill Incomplete'

Display: [F0290405](#)

Non-fatal error, State_Machine_Error

Cause: The kinematics state machine is in the "Standstill Incomplete" state.
An attempt was made to send an invalid command.

Solution: Refer to the description of "K-0-0022, Extended kinematic status" (state machine).

F0290406, Command rejected while 'PM Program Stopping'

Display: [F0290406](#)

Non-fatal error, State_Machine_Error

Cause: The kinematics state machine is in the "PM (Programmed Motion), Program Stopping" state.

An attempt was made to send an invalid command.

Solution: Refer to the description of "K-0-0022, Extended kinematic status" (state machine).

F0290407, Command rejected while 'StandStill Complete'

Display: [F0290407](#)

Non-fatal error, State_Machine_Error

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- Cause:** The kinematics state machine is in the "Standstill Complete" state. An attempt was made to send an invalid command.
- Solution:** Refer to the description of "K-0-0022, Extended kinematic status" (state machine).

F0290408, Invalid command number

Display: [F0290408](#) Non-fatal error, Input_Invalid_Error

- Cause:** Invalid Kinematics Command Number

F0290409, Command not supported in this state

Display: [F0290409](#) Non-fatal error, State_Machine_Error

- Cause:** The command is not supported in this state

F0290410, Reset still 'ErrorStop'

Display: [F0290410](#) Non-fatal error, State_Machine_Error

- Cause:** Reset while Error-Stop active

F0290411, Command rejected while 'PM Program Running'

Display: [F0290411](#) Non-fatal error, State_Machine_Error

- Cause:** The kinematics state machine is in the "PM (Programmed Motion), Program Running" state. It was tried to send an invalid command.
- Remedy:** Refer to the description of K-0-0022, Extended kinematics status (state machine).
The "Programmed Motion" is described with all its substates. The permitted commands can be seen here.

F0290412, Error while selecting RCL program

Display: [F0290412](#) Non-fatal error, Input_Invalid_Error

- Cause:** Error while selecting RCL program.

F0290413, Command rejected while 'Parameter Mode'

Display: [F0290413](#) Non-fatal error, State_Machine_Error

- Cause:** FBs were called in the parameterization mode (P2) via the PLC program. The FBs are only supported in the operating mode (P4).

F0290414, Command rejected while 'ErrorStop'

Display: [F0290414](#) Non-fatal error, State_Machine_Error

- Cause:** The kinematics state machine is in the "Errorstop" state. It was tried to send an invalid command.
- Remedy:** Refer to the description of K-0-0022, Extended kinematics status (state machine).

F0290415, Command aborted

Display: [F0290415](#) Non-fatal error, State_Machine_Error

- Cause:** Command was aborted.

F0290416, Switching to 'StandStill' not possible

Display: [F0290416](#) Non-fatal error, State_Machine_Error

- Cause:** The kinematics state machine is not ready for switch to "Standstill".

XLC/MLC diagnostic system tables

Solution: Refer to the description of "K-0-0022, Extended kinematic status" (state machine).

F0290417, RCL process does not exist

Display: [F0290417](#)

Non-fatal error, Access_Error

Cause: RCL process does not exist.

F0290501, Two PLC-MotionCommands per motion cycle not allowed

Display: [F0290501](#)

Non-fatal error, State_Machine_Error

Cause: Two kinematic Motion commands were issued in one Motion cycle for one kinematics. This is not permitted.

Solution: Use the "InBuffer" output of the function block to start the next function block.

F0290502, Command rejected - buffer full

Display: [F0290502](#)

Non-fatal error, State_Machine_Error

Cause: The buffer for the kinematic Motion command is full. New motion commands can only be issued after a motion has been completed.

F0290503, Invalid motion command

Display: [F0290503](#)

Non-fatal error, State_Machine_Error

Cause: An invalid kinematic Motion command was issued.

F0290505, Synchronisation to more than one belt not possible

Display: [F0290505](#)

Non-fatal error, Input_Invalid_Error

Cause:	Remedy:
A kinematic Motion command was issued that is to synchronize to more than one belt.	Issue only kinematic Motion commands traveling synchronously maximum to one belt.
A kinematic Motion command was issued that is to synchronize to a second belt without being desynchronized from the first belt before.	Issue a kinematic Motion command that is to desynchronize from the first belt before.

F0290508, Invalid coordinate system

Display: [F0290508](#)

Non-fatal error, Input_Invalid_Error

Cause: A kinematic motion command was issued specifying an unsupported coordinate system.

F0290510, Belt not configured

Display: [F0290510](#)

Non-fatal error, INPUT_RANGE_ERROR

Cause: A function block was used to configure a belt, even though the belt was not configured.

F0290516, Wrong PCS index

Display: [F0290516](#)

Non-fatal error, INPUT_RANGE_ERROR

Cause: An unsupported product coordinate system index was specified.

F0290517, Wrong CS selected

Display: [F0290517](#)

Non-fatal error, INPUT_RANGE_ERROR

XLC/MLC diagnostic system tables

Cause: An unsupported coordinate system was specified.

F0299528, TeachIn: No name given

Display: [F0299528](#)

Non-fatal error, Input_Invalid_Error

Cause	Solution
A TeachIn command was issued in which no or an empty point name was specified	Enter a valid point name
A TeachIn command was issued in which no or an empty file name was specified	Enter a valid file name

F0299529, TeachIn: Name too long

Display: [F0299529](#)

Non-fatal error, Input_Range_Error

Cause	Solution
A TeachIn command was issued in which the point name specified is too long.	Enter a valid point name.
A TeachIn command was issued in which the file name specified is too long.	Enter a valid file name.

F029952A, TeachIn: Wrong name

Display: [F029952A](#)

Non-fatal error, Input_Range_Error

Cause: A TeachIn command was issued in which the point name specified contains invalid characters.

Solution: Enter a valid point name.

F029952B, TeachIn: Point already exist

Display: [F029952B](#)

Non-fatal error, Input_Invalid_Error

Cause: A TeachIn command was issued in which the point name specified already exists are should not be overwritten.

Solution: Enter a new, valid point name or allow overwriting.

F029952C, TeachIn: Point doesn't exist

Display: [F029952C](#)

Non-fatal error, Input_Invalid_Error

Cause: A TeachIn command was issued in which the point name specified does not exist.

Solution: Enter a point name that exists.

F029952D, TeachIn: Wrong option

Display: [F029952D](#)

Non-fatal error, Input_Invalid_Error

Cause: A TeachIn command was issued in which an option was specified that is not supported.

Solution: Specify an option that is supported.

F029952E, TachIn: File corrupted

Display: [F029952E](#)

Non-fatal error, Resource_Error

Cause: It was tried to load a TeachIn file, but the file format is corrupt.

Solution: Correct the file format or enter a file name with a valid format.

XLC/MLC diagnostic system tables

F029952F, TeachIn: Wrong coordinateDisplay: [F029952F](#)

Non-fatal error, Input_Invalid_Error

Cause: It was tried to load a TeachIn file, but the format of a coordinate is corrupt.**Solution:** Correct the file format or enter a file name with a valid format.**F0299530, TeachIn: Wrong coordinate system**Display: [F0299530](#)

Non-fatal error, Input_Invalid_Error

Cause: It was tried to load a TechIn file. The coordinate system format is corrupt or the coordinate system does not exist.**Solution:** Correct the file format or enter a file name with a valid format.**F0299531, TeachIn: File could not be opened**Display: [F0299531](#)

Non-fatal error, Input_Invalid_Error

Cause: A kinematic motion command was issued specifying a file that cannot be opened.**Solution:** Enter a file name whose file can be opened.**F0299538, Too many position axes**Display: [F0299538](#)

Non-fatal error, INPUT_RANGE_ERROR

Cause: Too many positioning axes configured in parameter K-0-0008.**Solution:** Configure less positioning axes in parameter K-0-0008.**F0299539, Too many orientation axes**Display: [F0299539](#)

Non-fatal error, Input_Range_Error

Cause: Too many orientation axes configured in parameter K-0-0008.**Solution:** Configure less orientation axes in parameter K-0-0008.**F029953A, Too many belt axes**Display: [F029953A](#)

Non-fatal error, INPUT_RANGE_ERROR

Cause: Too many belt axes configured in parameter K-0-0008.**Solution:** Configure less belt axes in parameter K-0-0008.**F02B0004, Axis not part of kinematics**Display: [F02B0004](#)

Non-fatal error, State_Machine_Error

Cause: When calling the function block MC_AddAxisToGroup or MC_RemoveAxis-FromGroup, an axis was specified that does not belong to the kinematics.**Solution:** Check the inputs of the function blocks.**F02B0005, Axis not existing**Display: [F02B0005](#)

Non-fatal error, State_Machine_Error

Cause: When calling the function block MC_AddAxisToGroup or MC_RemoveAxis-FromGroup, an axis was specified that does not exist.**Solution:** Check the inputs of the kinematic PLCopen function blocks.**F02B0028, Jog in other coordinate system already active**Display: [F02B0028](#)

Non-fatal error, Input_Invalid_Error

Cause: A manual mode command has been triggered while another manual mode has already been active in a different coordinate system.

XLC/MLC diagnostic system tables

Solution: Trigger a manual mode command whose coordinate system matches the already active manual mode command.

F02B0029, Jog in same direction already active

Display: [F02B0029](#) Non-fatal error, Input_Invalid_Error

Cause: A manual mode command has been triggered while another manual mode has already been active in the same or partially the same direction.

Solution: Disable one of the manual mode commands.

F02B9020, Transformation does not exist

Display: [F02B9020](#) Non-fatal error, Input_Invalid_Error

Cause: An unsupported transformation was configured in the parameter K-0-0031.

F02B9021, Axis angles out of definition range

Display: [F02B9021](#) Non-fatal error, Input_Range_Error

Cause: The specified/calculated axis phases are not in the defined area of the transformation specified in the parameter K-0-0031. Check the commanded points or the path motion.

F02B9022, Point can not reached by transformation

Display: [F02B9022](#) Non-fatal error, Input_Range_Error

Cause: The specified/calculated point cannot be reached by the transformation specified in the parameter K-0-0031.

Check the commanded points or the path motion.

F02B9023, In saved range of transformation

Display: [F02B9023](#) Non-fatal error, Input_Range_Error

Cause: A safe zone was configured for the transformation specified in the parameter K-0-0031.

The specified/calculated point is in the safe zone.

Check the commanded points or the path motion.

F02B9024, Axis has wrong scaling for transformation

Display: [F02B9024](#) Non-fatal error, Input_Invalid_Error

Cause: A transformation specifying a scaling of at least one axis was written to the parameter K-0-0031.

One axis was scaled incorrectly for the transformation.

Compare the axis scalings of all axes using the transformation description.

F02B9025, Too less axes for Transformation

Display: [F02B9025](#) Non-fatal error, Input_Invalid_Error

Cause: An axis group with the transformation scheme was created in the parameter K-0-0031. This axis group requires more axes than specified in the parameter K-0-0008.

Check the axis configuration or the transformation scheme.

F02C0066, Axis list in K-0-0008 not completed

Display: [F02C0066](#) Non-fatal error, Other_Error

Cause: Axis List in K-0-0008 incomplete

XLC/MLC diagnostic system tables

F02C00B7, ReservedDisplay: [F02C00B7](#)

Non-fatal error, System_Error

This diagnostics number is reserved.

F02C0173, Illegal jump instructionDisplay: [F02C0173](#)

Non-fatal error, State_Machine_Error

Cause: Return from the subprogram or loop not permitted.**F02C0177, Error in exclusive statement, EXCLUSIVE_END expected**Display: [F02C0177](#)

Non-fatal error, Other_Error

Cause: Error in Exclusive Statement, EXCLUSIVE_END Expected**F02C017B, Subprogram nesting depth exceeded**Display: [F02C017B](#)

Non-fatal error, Other_Error

Cause: Subprogram Nesting Depth Exceeded**F02C017D, Illegal relational operator**Display: [F02C017D](#)

Non-fatal error, Other_Error

Cause: Illegal Relational Operator**F02C017F, Belt type expected**Display: [F02C017F](#)

Non-fatal error, Other_Error

Cause: Belt Type Expected Before calling the SYNCHRON command, the belt type is to be specified with the special function no. 21.**F02C0182, Jump statement not permitted**Display: [F02C0182](#)

Non-fatal error, Other_Error

Cause: Jump Statement Not Permitted JUMP outside the loop into a loop is not permitted.**F02C0183, Circle with one axis not possible**Display: [F02C0183](#)

Non-fatal error, Other_Error

Cause: Circular move not possible with one axis**F02C0202, Programname contains invalid characters**Display: [F02C0202](#)

Non-fatal error, Input_Invalid_Error

Cause: The program name, specified in parameter K-0-0221, contains unauthorized characters.

The following restrictions apply:

- maximum 12 characters with an extension,
- maximum 8 characters without an extension,
- only A...Z, a...z, 0..9, '_' are permitted,
- the first character must be a letter,
- no differentiation is made between upper and lower case, "Robi_1" is identical to "ROBI_1".

F02C0203, QLL-file not foundDisplay: [F02C0203](#)

Non-fatal error, Access_Error

XLC/MLC diagnostic system tables

- Cause:** No QLL file was found for the specified program name in parameter "K-0-0221, Name of the file to be compiled".
- Solution:** Please specify the name of an existing QLL file in parameter K-0-0221.
Please copy the QLL file using parameter "K-0-1060, Command: Load file from CF" into the control's SRAM/RAM.

F02C0204, Error during compilation

Display: [F02C0204](#) Non-fatal error, System_Error

- Cause:** An error has occurred when compiling the QLL file in parameter "K-0-0221, Name of the file to be compiled".



Precise information about the cause of the error is documented in a file.

The name of this file comes from <Programname>.ERR.

This ".ERR" file is stored in the control's SRAM/RAM.

The ".ERR" file can be loaded via parameter "K-0-0220, File transfer name" and "K-0-1061, Command: Save file to CF" from the SRAM/RAM to the control's Compact Flash card.

F02C0205, SRAM semaphore defective

Display: [F02C0205](#) Non-fatal error, System_Error

- Cause:** An internal error has occurred when compiling the QLL file in parameter K-0-0221.

F02C033F, Illegal program name

Display: [F02C033F](#) Non-fatal error, Other_Error

- Cause:** Illegal program name.

F02C0340, Program name too long

Display: [F02C0340](#) Non-fatal error, Other_Error

- Cause:** Program Name Too Long

F02C0342, Illegal file name extension

Display: [F02C0342](#) Non-fatal error, Other_Error

- Cause:** Illegal File Name Extension

F02C0489, IOL-on: Time offset too long

Display: [F02C0489](#) Non-fatal error, System_Error

- Cause:** Special function 1 (switch On): A too long time offset has been programmed.
- Remedy:** Check RCL program.

F02C048A, IOL-off: Time offset too long

Display: [F02C048A](#) Non-fatal error, System_Error

- Cause:** Special function 1 (switch Off): A too long time offset has been programmed.
- Remedy:** Check RCL program.

F02C048B, PPO: Time offset too long

Display: [F02C048B](#) Non-fatal error, System_Error

- Cause:** A too long time offset has been programmed.

XLC/MLC diagnostic system tables

Remedy: Check RCL program.

F02C048C, IOL-on: Function in use

Display: [F02C048C](#)

Non-fatal error, System_Error

Cause: Special function 1 (switch On): The programmed IOL function number (first parameter) is still occupied (active).

Remedy: Check RCL program.

F02C048D, IOL-off: Function in use

Display: [F02C048D](#)

Non-fatal error, System_Error

Cause: Special function 1 (switch Off): The programmed IOL function number (first parameter) is still occupied (active).

Remedy: Check RCL program.

F02C048E, PPO: Function in use

Display: [F02C048E](#)

Non-fatal error, System_Error

Cause: Special function 2: The programmed PPO function number (first parameter) is still occupied (active).

Remedy: Check RCL program.

F02C0491, PPO: Velocity greater than max. velocity

Display: [F02C0491](#)

Non-fatal error, System_Error

Cause: PPO analog output: Voltage to be put out is bigger than $V_{\max}$.

Remedy: Check RCL program.

F02C0895, Data transfer error

Display: [F02C0895](#)

Non-fatal error, Other_Error

Cause: Data transfer error.

F02C0898, Data transfer error

Display: [F02C0898](#)

Non-fatal error, Other_Error

Cause: Data transfer error.

F02C089C, Data transfer error

Display: [F02C089C](#)

Non-fatal error, Other_Error

Cause: Data transfer error.

F02C089D, Data transfer error

Display: [F02C089D](#)

Non-fatal error, Other_Error

Cause: Data transfer error.

F02C08D0, Data transfer error

Display: [F02C08D0](#)

Non-fatal error, Other_Error

Cause: Data transfer error.

F02C0E10, rFkt: invalid length

Display: [F02C0E10](#)

Non-fatal error, System_Error

Cause: Protocol error TCP/IP.
Incorrect function header of function.

XLC/MLC diagnostic system tables

Remedy: Check rho4fkt.dll version.

F02C0E11, rFkt: Client disconnected (1)

Display: [F02C0E11](#) Non-fatal error, System_Error

Cause: TCP/IP channel of the function has been closed.

Remedy: Check the Client-Server connection.

F02C0E12, rFkt: malloc error

Display: [F02C0E12](#) Non-fatal error, System_Error

Cause: System memory too small .

Remedy: Inform after-sales service.

F02C0E13, rFkt: Client disconnected (2)

Display: [F02C0E13](#) Non-fatal error, System_Error

Cause: TCP/IP channel of the function has been closed.

Remedy: Check the Client-Server connection.

F02C0E14, rFkt: wrong channel

Display: [F02C0E14](#) Non-fatal error, System_Error

Cause: Invalid TCP/IP channel .

Remedy: Inform after-sales service.

F02C0E15, rFkt: READ error

Display: [F02C0E15](#) Non-fatal error, System_Error

Cause: Error in opening TCP/IP channel.

Remedy: Inform after-sales service.

F02C0E16, rFkt: WRITE error

Display: [F02C0E16](#) Non-fatal error, System_Error

Cause: Error in opening TCP/IP channel for write.

Remedy: Inform after-sales service.

F02C0E17, rFkt: CONNECT error

Display: [F02C0E17](#) Non-fatal error, System_Error

Cause: Socket cannot be generated.

Remedy: Inform after-sales service.

F02C0E44, Socket error PCL

Display: [F02C0E44](#) Non-fatal error, System_Error

Cause: Socket cannot be generated.

Remedy: Inform after-sales service.

F02C0E45, Unknown server PCL

Display: [F02C0E45](#) Non-fatal error, System_Error

Cause: Incorrect port number or TCP/IP address.

Remedy: Check port number or TCP/IP address.

F02C0E46, No connect PCL

Display: [F02C0E46](#) Non-fatal error, System_Error

XLC/MLC diagnostic system tables

Cause: PCL is not running.
Remedy: Inform after-sales service.

F02C0E47, Socket error

Display: [F02C0E47](#) Non-fatal error, System_Error

Cause: Socket cannot be created.
Remedy: Inform after-sales service.

F02C0E48, Bind error

Display: [F02C0E48](#) Non-fatal error, System_Error

Cause: An address cannot be assigned to socket.
Remedy: Inform after-sales service.

F02C0E49, List error

Display: [F02C0E49](#) Non-fatal error, System_Error

Cause: The socket is not valid; it cannot wait for Client.
Remedy: Inform after-sales service.

F02C0E4A, Accept error

Display: [F02C0E4A](#) Non-fatal error, System_Error

Cause: The Client is not accepted.
Remedy: Inform after-sales service.

F02C0E52, Serial writing is not possible

Display: [F02C0E52](#) Non-fatal error, System_Error

Cause: It is not possible to write or read on a serial channel.
Remedy: Read/write V24_x is to be closed because an error has occurred.

F02C0ECE, Shutdown error

Display: [F02C0ECE](#) Non-fatal error, Other_Error

Cause: Shutdown Error.

F02C0ECF, Shutdown error

Display: [F02C0ECF](#) Non-fatal error, Other_Error

Cause: Shutdown Error.

F02C0F1E, End of file

Display: [F02C0F1E](#) Non-fatal error, System_Error

Cause: Read over the file end.
Remedy: File smaller than expected.

F02C0F1F, File opened for write

Display: [F02C0F1F](#) Non-fatal error, System_Error

Cause: Warning: this file is already opened for writing.
Remedy: You read from a file that is described by another process.

F02C0F20, No compressing

Display: [F02C0F20](#) Non-fatal error, System_Error

Cause: It is not required to compress this file.

XLC/MLC diagnostic system tables

Remedy: File is already compressed.

F02C0F21, File does not exist

Display: [F02C0F21](#) Non-fatal error, System_Error

Cause: The selected RCL program (IRD file) was not found.

Remedy: The compiled RCL program is stored in the IRD file. Check

- whether it was transferred to the control
- whether the string value "IRDProgName" at the MB_IRDProgSelect was correct, if necessary.

F02C0F22, Memory (user) overflow

Display: [F02C0F22](#) Non-fatal error, System_Error

Cause: The user memory is full.

Remedy: Delete unnecessary files.

F02C0F23, File too many opened

Display: [F02C0F23](#) Non-fatal error, System_Error

Cause: The file was too often opened.

Remedy: A file can be opened 128 times for reading.

F02C0F24, File still opened

Display: [F02C0F24](#) Non-fatal error, System_Error

Cause: The file is already opened for writing.

Remedy: A file can only be opened once for writing.

F02C0F25, File opened for write

Display: [F02C0F25](#) Non-fatal error, System_Error

Cause: The file is already opened for writing.

Remedy: A file can only be opened once for writing.

F02C0F26, File already exists

Display: [F02C0F26](#) Non-fatal error, System_Error

Cause: Rename, there is already a file with this name.

Remedy: Choose another name.

F02C0F27, No reserved block empty

Display: [F02C0F27](#) Non-fatal error, System_Error

Cause: No more reserved block free.

Remedy: Inform after-sales service.

F02C0F28, File not found

Display: [F02C0F28](#) Non-fatal error, System_Error

Cause: This file is not existing.

Remedy: Check file name.

F02C0F3B, Not enough heap

Display: [F02C0F3B](#) Non-fatal error, System_Error

Cause: There is not enough heap for this operation.

XLC/MLC diagnostic system tables

Remedy: Inform after-sales service.

F02C0F3F, Read error PKT file

Display: [F02C0F3F](#)

Non-fatal error, System_Error

Cause: Error when reading/writing the point file.

Remedy: Inform after-sales service.

F02C0F40 up to F02C0F57, Access denied

Cause: Read access to this file is not possible.

Remedy: Check file attributes.

F02C908A, Number of axes too small for the current robot type

Display: [F02C908A](#)

Non-fatal error, System_Error

Cause: The number of axes set via K-0-0008 (Axes configuration list) is too low for the present robot type (see K-0-0031, Transformation scheme).
This would cause an FPU trap in the coordinate transformation.

Solution: Set the axis configuration in the parameter K-0-0008 so that it matches the robot type in K-0-0031 and inform the customer service.

F02C9479, WC zero position is singular

Display: [F02C9479](#)

Non-fatal error, System_Error

Cause: A position cannot be uniquely transformed by the transformation (singularity).

Solution: Check the Motion program and adjust it if required.

F02C947A, Too close to stand

Display: [F02C947A](#)

Non-fatal error, System_Error

Cause: Scara transformation: Risk of collision.

Solution: Travel to the valid range in manual mode.

F02C9482, Invalid belt number

Display: [F02C9482](#)

Non-fatal error, Input_Invalid_Error

Cause: A belt with the number specified in SPZ_FKT 15, 21, 28, 51, 52, 54 or 55 is not available.

Solution: Check the RCL program.

F0308001, Over-temperature

Display: [F0308001](#)

Non-fatal error, System_Error

The output monitoring of the PLS module is enabled with error class 'F0' in parameter "C-0-0300, PLS No.1, control word".

The temperature of at least one output driver at plugs 'X201' or 'X202' of the function module is too high. There can be several reasons for this:

- Short circuit in the connected cabling,
- Defect in the connected device,
- Overloading of an output,
- Inadequate ventilation of the function module.



The output driver independently switches off the outputs. The error reaction of the output drivers cannot be influenced.

XLC/MLC diagnostic system tables



Output monitoring can be switched off in parameter "C-0-0300" or the error class increased.

Cause: Excess temperature of output drivers at plugs 'X201' and 'X202' of the programmable limit switch.

Solution: Check the cabling to the connected devices or the devices themselves.

F0308002, Power failure

Display: [F0308002](#)

Non-fatal error, System_Error

Voltage monitoring of the programmable limit switch is enabled with error class 'F0' in parameter "C-0-0300, PLS No.1, control word".

The voltage at plug 'X1S' of the function module is inadequate.



Voltage monitoring can be switched off in parameter "C-0-0300" or the error class increased.

Cause: Undervoltage at plug 'X1S' of the programmable limit switch.

Solution: Check the voltage supply to the function module.

F0308003, PLS: Invalid configuration of cycle times

Display: [F0308003](#)

Non-fatal error, INPUT_RANGE_ERROR

The current configuration of the cycle times is not supported by the programmable limit switch.

Cause: The programmable limit switch can only be operated under the following conditions:

- Sercos cycle time "C-0-0503" and Motion cycle time "C-0-0400" are identical.
- Sercos cycle time "C-0-0503" and Motion cycle time "C-0-0400" are at least 1000 µs.

Solution: Correct the configuration of the cycle times to operate the network.

F0310004, Basic internal error in the oscilloscope

Display: [F0310004](#)

Non-fatal error, System_Error

The control firmware has detected a fatal internal error in the oscilloscope. Please contact the support team.

F0310007, Starting the oscilloscope is not possible

Display: [F0310007](#)

Non-fatal error, System_Error

The oscilloscope trace could not be started due to an error during initialization. Please contact the support team.

F0310008, Error during trigger-check

Display: [F0310008](#)

Non-fatal error, System_Error

An error occurred during evaluation of the oscilloscope trigger. Please contact the support team.

F0310009, Error during data recording

Display: [F0310009](#)

Non-fatal error, System_Error

An error occurred while the oscilloscope was tracing data. Please contact the support team.

XLC/MLC diagnostic system tables

F03500FA, RCL Compiler: Time constant too greatDisplay: [F03500FA](#)

Non-fatal error, Other_Error

Cause: Time constant value too high**F03500FB, RCL Compiler: Variable longer than 12 characters**Display: [F03500FB](#)

Non-fatal error, Other_Error

Cause: Variable longer than 12 characters**F03500FD, RCL Compiler: Unexpected end of line**Display: [F03500FD](#)

Non-fatal error, Other_Error

Cause: The compiler encountered an unexpected end of line.**F03500FF, RCL Compiler: Syntax error, number expected**Display: [F03500FF](#)

Non-fatal error, Other_Error

Cause: Syntax error detected, a number is expected.**F0350101, RCL Compiler: Colon expected**Display: [F0350101](#)

Non-fatal error, Other_Error

Cause: A colon is expected.**F0350102, RCL Compiler: Left squared bracket expected**Display: [F0350102](#)

Non-fatal error, Other_Error

Cause: The compiler expects an open squared bracket.**F0350103, RCL Compiler: Right squared bracket expected**Display: [F0350103](#)

Non-fatal error, Other_Error

Cause: The compiler expects a close squared bracket.**F0350104, RCL Compiler: END expected**Display: [F0350104](#)

Non-fatal error, Other_Error

Cause: The compiler expects an END keyword.**F0350105, RCL Compiler: EXACT or CIRCA expected**Display: [F0350105](#)

Non-fatal error, Other_Error

Cause: The compiler expects the EXACT or CIRCA keyword.**F0350106, RCL Compiler: INTEGER constant expected**Display: [F0350106](#)

Non-fatal error, Other_Error

Cause: The compiler expects an integer value as a constant.**F0350107, RCL Compiler: Equal sign expected**Display: [F0350107](#)

Non-fatal error, Other_Error

Cause: The compiler expects an equals sign.**F0350108, RCL Compiler: Left bracket expected**Display: [F0350108](#)

Non-fatal error, Other_Error

Cause: The compiler expects an open bracket.**F0350109, RCL Compiler: Right bracket expected**Display: [F0350109](#)

Non-fatal error, Other_Error

XLC/MLC diagnostic system tables

Cause: The compiler expects a close bracket.

F035010A, RCL Compiler: Smaller or greater expected

Display: [F035010A](#) Non-fatal error, Other_Error

Cause: The compilers expects a lower or upper case character.

F035010B, RCL Compiler: End of line or file or colon expected

Display: [F035010B](#) Non-fatal error, Other_Error

Cause: The compiler expects a Line, End of File or colon.

F035010C, RCL Compiler: Multiplication expected

Display: [F035010C](#) Non-fatal error, Other_Error

Cause: The compiler expects the TO or VIA keyword.

F035010D, RCL Compiler: TO or VIA expected

Display: [F035010D](#) Non-fatal error, Other_Error

Cause: The compiler expects multiplication.

F035010E, RCL Compiler: Variable expected

Display: [F035010E](#) Non-fatal error, Other_Error

Cause: The complier expects a variable symbol.

F035010F, RCL Compiler: Keyword PROGRAM expected

Display: [F035010F](#) Non-fatal error, Other_Error

Cause: The compiler expects the keyword PROGRAM.

F0350110, RCL Compiler: FILE expected

Display: [F0350110](#) Non-fatal error, Other_Error

Cause: The compiler expects the FILE keyword.

F0350111, RCL Compiler: SUBROUTINE expected

Display: [F0350111](#) Non-fatal error, Other_Error

Cause: The compiler expects the SUBROUTINE keyword.

F0350112, RCL Compiler: REPEAT_END expected

Display: [F0350112](#) Non-fatal error, Other_Error

Cause: The REPEAT_END loop is expected.

F0350113, RCL Compiler: Type not defined

Display: [F0350113](#) Non-fatal error, Other_Error

Cause: The data type is not defined.

F0350114, RCL Compiler: Const., symbol or expres. as factor exp.

Display: [F0350114](#) Non-fatal error, Other_Error

Cause: The compiler expects a constant, symbol or an expression as a factor.

F0350115, RCL Compiler: End of file expected

Display: [F0350115](#) Non-fatal error, Other_Error

Cause: The compiler expects an End of File.

XLC/MLC diagnostic system tables

F0350116, RCL Compiler: Invalid symbolDisplay: [F0350116](#)

Non-fatal error, Other_Error

Cause: The compiler encountered an incorrect symbol.**F0350117, RCL Compiler: Instruction expected**Display: [F0350117](#)

Non-fatal error, Other_Error

Cause: The compiler expects an instruction.**F0350118, RCL Compiler: Output variable expected**Display: [F0350118](#)

Non-fatal error, Other_Error

Cause: The compiler expects an output variable.**F0350119, RCL Compiler: Output not permitted**Display: [F0350119](#)

Non-fatal error, Other_Error

Cause: The output is not permitted.**F035011A, RCL Compiler: BINARY expected**Display: [F035011A](#)

Non-fatal error, Other_Error

Cause: The compiler expects the BINARY keyword.**F035011B, RCL Compiler: REAL expected**Display: [F035011B](#)

Non-fatal error, Other_Error

Cause: The compiler expects the REAL keyword.**F035011C, RCL Compiler: Input variable expected**Display: [F035011C](#)

Non-fatal error, Other_Error

Cause: The compiler expects an input variable.**F035011D, RCL Compiler: Input not permitted**Display: [F035011D](#)

Non-fatal error, Other_Error

Cause: The input is not permitted.**F035011E, RCL Compiler: Program and file name do not fit**Display: [F035011E](#)

Non-fatal error, Other_Error

Cause: The program name does not match the filename.**F035011F, RCL Compiler: Invalid number of elements**Display: [F035011F](#)

Non-fatal error, Other_Error

Cause: The number of elements is not permitted.**F0350120, RCL Compiler: Array expected**Display: [F0350120](#)

Non-fatal error, Other_Error

Cause: The compiler expects a field variable.**F0350121, RCL Compiler: Function name expected**Display: [F0350121](#)

Non-fatal error, Other_Error

Cause: The compiler expects a function name.**F0350122, RCL Compiler: INTEGER expected**Display: [F0350122](#)

Non-fatal error, Other_Error

XLC/MLC diagnostic system tables

Cause: The compiler expects the INTEGER keyword.		
F0350123, RCL Compiler: INTEGER too large		
Display:	F0350123	Non-fatal error, Other_Error
Cause: The integer value is too large.		
F0350124, RCL Compiler: Read access not permitted		
Display:	F0350124	Non-fatal error, Other_Error
Cause: Read access is not permitted.		
F0350125, RCL Compiler: Label already defined		
Display:	F0350125	Non-fatal error, Other_Error
Cause: The label is already defined.		
F0350126, RCL Compiler: Label expected		
Display:	F0350126	Non-fatal error, Other_Error
Cause: The compiler expects a label.		
F0350127, RCL Compiler: Label not defined		
Display:	F0350127	Non-fatal error, Other_Error
Cause: The label was not defined.		
F0350128, RCL Compiler: JC-Point expected		
Display:	F0350128	Non-fatal error, Other_Error
Cause: JC Point (in axis coordinate) expected.		
F0350129, RCL Compiler: @ - character not permitted		
Display:	F0350129	Non-fatal error, Other_Error
Cause: The compiler encountered the @ character that is not permitted.		
F035012A, RCL Compiler: @ - character expected		
Display:	F035012A	Non-fatal error, Other_Error
Cause: The compiler expects the @ character.		
F035012B, RCL Compiler: Symbol already exists		
Display:	F035012B	Non-fatal error, Other_Error
Cause: The symbol already exists.		
F035012C, RCL Compiler: Label for structure element expected		
Display:	F035012C	Non-fatal error, Other_Error
Cause: The compiler expects a label for the structure element.		
F035012D, RCL Compiler: Name not defined		
Display:	F035012D	Non-fatal error, Other_Error
Cause: The name is not defined.		
F035012E, RCL Compiler: Point or point variable expected		
Display:	F035012E	Non-fatal error, Other_Error
Cause: The compiler expects a point or point variable.		

XLC/MLC diagnostic system tables

F035012F, RCL Compiler: Pair of points expectedDisplay: [F035012F](#)

Non-fatal error, Other_Error

Cause: The compiler expects two points.**F0350130, RCL Compiler: Jump back only permitted in subroutine**Display: [F0350130](#)

Non-fatal error, Other_Error

Cause: The return is only permitted within the subroutine.**F0350131, RCL Compiler: Write access not permitted**Display: [F0350131](#)

Non-fatal error, Other_Error

Cause: Read access is not permitted.**F0350132, RCL Compiler: Jump not permitted**Display: [F0350132](#)

Non-fatal error, Other_Error

Cause: The jump is not permitted.**F0350134, RCL Compiler: Type conflict**Display: [F0350134](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Type Conflict**F0350135, RCL Compiler: Lower limit exceeds upper limit**Display: [F0350135](#)

Non-fatal error, Other_Error

Cause: The lower limit exceeds upper limit.**F0350136, RCL Compiler: Type incorrect**Display: [F0350136](#)

Non-fatal error, Other_Error

Cause: The Type is incorrect.**F0350137, RCL Compiler: Invalid axis number**Display: [F0350137](#)

Non-fatal error, Other_Error

Cause: The axis number is incorrect.**F0350138, RCL Compiler: Subroutine name expected**Display: [F0350138](#)

Non-fatal error, Other_Error

Cause: The compiler expects the name for the subroutine.**F0350139, RCL Compiler: Variable expected**Display: [F0350139](#)

Non-fatal error, Other_Error

Cause: The compiler expects a variable.**F035013A, RCL Compiler: Record variable expected**Display: [F035013A](#)

Non-fatal error, Other_Error

Cause: The compiler expects a record variable.**F035013B, RCL Compiler: Point expected**Display: [F035013B](#)

Non-fatal error, Other_Error

Cause: The compiler expects a point.**F035013C, RCL Compiler: Invalid extension**Display: [F035013C](#)

Non-fatal error, Other_Error

XLC/MLC diagnostic system tables

Cause: The extension is incorrect.		
F035013D, RCL Compiler: Too many arguments	Display: F035013D	Non-fatal error, Other_Error
Cause: Too many arguments were found.		
F035013E, RCL Compiler: Too less arguments	Display: F035013E	Non-fatal error, Other_Error
Cause: Too few arguments were found.		
F035013F, RCL Compiler: Not implemented	Display: F035013F	Non-fatal error, Other_Error
Cause: Instruction is not implemented.		
F0350140, RCL Compiler: Compiler error	Display: F0350140	Non-fatal error, Other_Error
Cause: The compiler has issued an error.		
F0350142, RCL Compiler: QLL file not present	Display: F0350142	Non-fatal error, Other_Error
Cause: The QLL file is not present.		
F0350143, RCL Compiler: Error, file not found	Display: F0350143	Non-fatal error, Other_Error
Cause: The Error file is not present.		
F0350144, RCL Compiler: File only accepted in main program	Display: F0350144	Non-fatal error, Other_Error
Cause: The file is only permitted in the main program.		
F0350146, RCL Compiler: Error during compilation	Display: F0350146	Non-fatal error, Other_Error
Cause: The file is only permitted in the main program.		
F0350147, RCL Compiler: Out of memory	Display: F0350147	Non-fatal error, Other_Error
Cause: Not enough available memory.		
F0350148, RCL Compiler: IRD file error	Display: F0350148	Non-fatal error, Other_Error
Cause: The IRD file is incorrect.		
F0350149, RCL Compiler: Symbol file error	Display: F0350149	Non-fatal error, Other_Error
Cause: The symbol file is incorrect.		
F035014A, RCL Compiler: Point file error	Display: F035014A	Non-fatal error, Other_Error
Cause: The point file is incorrect.		

XLC/MLC diagnostic system tables

F035014B, RCL Compiler: Error in error fileDisplay: [F035014B](#)

Non-fatal error, Other_Error

Cause: The error file is incorrect.**F035014D, RCL Compiler: Keyword DEF incorrect**Display: [F035014D](#)

Non-fatal error, Other_Error

Cause: The Keyword DEF is incorrect.**F035014E, RCL Compiler: Include file not present**Display: [F035014E](#)

Non-fatal error, Other_Error

Cause: The Include file is missing.**F0350150, RCL Compiler: Axis name incorrect**Display: [F0350150](#)

Non-fatal error, Other_Error

Cause: The axis name is not permitted.**F0350151, RCL Compiler: Index error**Display: [F0350151](#)

Non-fatal error, Other_Error

Cause: The compiler encountered an index error.**F0350152, RCL Compiler: invalid program parameter**Display: [F0350152](#)

Non-fatal error, Other_Error

Cause: Invalid program parameters were set.**F0350153, RCL Compiler: Keyword instead of label**Display: [F0350153](#)

Non-fatal error, Other_Error

Cause: A label was encountered instead of a keyword.**F0350155, RCL Compiler: Comma expected**Display: [F0350155](#)

Non-fatal error, Other_Error

Cause: The compiler expects a comma.**F0350156, RCL Compiler: SUB_END expected**Display: [F0350156](#)

Non-fatal error, Other_Error

Cause: The compiler expects the SUB_END keyword.**F0350157, RCL Compiler: PROGRAM_END expected**Display: [F0350157](#)

Non-fatal error, Other_Error

Cause: The compiler expects the PROGRAM_END keyword.**F0350158, RCL Compiler: Too many axes**Display: [F0350158](#)

Non-fatal error, Other_Error

Cause: The maximum number of axes for the Kinematics is reached.**F035015A, RCL Compiler: Number exists twice**Display: [F035015A](#)

Non-fatal error, Other_Error

Cause: A double number was recognized.**F035015B, RCL Compiler: Cannot add point on kinematics**Display: [F035015B](#)

Non-fatal error, Other_Error

XLC/MLC diagnostic system tables

Cause: The point can't be added to Kinematics.

F035015C, RCL Compiler: Kinematics name expected

Display: [F035015C](#) Non-fatal error, Other_Error

Cause: The compiler expects a name for the Kinematics.

F035015D, RCL Compiler: Cannot add belt on kinematics

Display: [F035015D](#) Non-fatal error, Other_Error

Cause: The belt cannot be assigned to the Kinematics.

F035015E, RCL Compiler: External program expected

Display: [F035015E](#) Non-fatal error, Other_Error

Cause: The compiler expects an external program.

F035015F, RCL Compiler: INPUT/OUTPUT only permitted in decl.

Display: [F035015F](#) Non-fatal error, Other_Error

Cause: Input/Output is only permitted in the declaration section.

F0350160, RCL Compiler: Address for INPUT/OUTPUT expected

Display: [F0350160](#) Non-fatal error, Other_Error

Cause: The compiler expects an address for the Input/Output.

F0350161, RCL Compiler: Out of array

Display: [F0350161](#) Non-fatal error, Other_Error

Cause: The field limit was exceeded.

F0350162, RCL Compiler: Wrong type in array

Display: [F0350162](#) Non-fatal error, Other_Error

Cause: Wrong Type in Array

F0350163, RCL Compiler: Input/Output

Display: [F0350163](#) Non-fatal error, Other_Error

Cause: Input/Output only component method allowed.

F0350164, RCL Compiler: Invalid channel address

Display: [F0350164](#) Non-fatal error, Other_Error

Cause: The channel address is incorrect.

F0350165, RCL Compiler: Coordinate expected

Display: [F0350165](#) Non-fatal error, Other_Error

Cause: The compiler expects a Coordinate.

F0350166, RCL Compiler: Invalid kinematics instruction

Display: [F0350166](#) Non-fatal error, Other_Error

Cause: The Kinematics instruction is not allowed.

F0350167, RCL Compiler: BEGIN expected

Display: [F0350167](#) Non-fatal error, Other_Error

Cause: The compiler expects the BEGIN keyword.

XLC/MLC diagnostic system tables

F0350168, RCL Compiler: Keyword conflictDisplay: [F0350168](#)

Non-fatal error, Other_Error

Cause: There is a keyword conflict.**F035016F, RCL Compiler: PKT file read / write error**Display: [F035016F](#)

Non-fatal error, Other_Error

Cause: An error occurred during the reading / writing of a point file.**F0350179, RCL Compiler: Wrong compiler version**Display: [F0350179](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Wrong compiler version.**F035017C, RCL Compiler: Maximum table entry exceeded**Display: [F035017C](#)

Non-fatal error, Other_Error

Cause: Maximum number of variable names exceeded.**F035017E, RCL Compiler: Maximum error count reached**Display: [F035017E](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Maximum error count reached. See compiler instruction MAX-ERRORS.**F0350185, RCL Compiler: Double INCLUDE - statement**Display: [F0350185](#)

Non-fatal error, Access_Error

Cause: RCL-Compiler: Double INCLUDE - statement.**F0350186, RCL Compiler: EXTERN only permitted in main program**Display: [F0350186](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: EXTERN is only permitted in the main program.**F0350188, RCL Compiler: Only one EXPORT program permitted**Display: [F0350188](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Only one EXPORT program permitted.**F0350189, RCL Compiler: Pointvariable not found**Display: [F0350189](#)

Non-fatal error, Other_Error

Cause: The points could not be found in the point table.**F035018A, RCL Compiler: Different CID**Display: [F035018A](#)

Non-fatal error, Other_Error

Cause: The Comm ID differs during program export.**F035018C, RCL Compiler: No EXPORT variable found**Display: [F035018C](#)

Non-fatal error, Other_Error

Cause: No EXPORT variable could be found for the specified IMPORT variable.**F035018D, RCL Compiler: Different axis count of the kinematics**Display: [F035018D](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: The axis count differs in the Kinematics.

XLC/MLC diagnostic system tables

F035018E, RCL Compiler: Not defined kinematics

Display: [F035018E](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: The Kinematics is not defined.

F03501AC, RCL Compiler: Identifier expected

Display: [F03501AC](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Identifier expected.

F03501AD, RCL Compiler: Type expected

Display: [F03501AD](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Type expected.

F03501AE, RCL Compiler: RECORD expected

Display: [F03501AE](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: RECORD expected.

F03501AF, RCL Compiler: RECORD_END expected

Display: [F03501AF](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: RECORD_END expected.

F03501B0, RCL Compiler: IF expected

Display: [F03501B0](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: IF expected.

F0350200, RCL Compiler: File name too long

Display: [F0350200](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Filename too long.

F0350212, RCL Compiler: Type name expected

Display: [F0350212](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Type name expected.

F0350213, RCL Compiler: Identifier already defined

Display: [F0350213](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Identifier already defined.

F0350214, RCL Compiler: Keyword here not permitted

Display: [F0350214](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Keyword not permitted here.

F0350216, RCL Compiler: Recursive data types not permitted

Display: [F0350216](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Recursive data types not permitted.

F0350217, RCL Compiler: Write/read from this data type not possible

Display: [F0350217](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Write/Read from this data type is not possible.

F0350218, RCL Compiler: Compare operator expected

Display: [F0350218](#)

Non-fatal error, Other_Error

XLC/MLC diagnostic system tables

Cause: RCL-Compiler: Compare operator expected.

F0350219, RCL Compiler: Illegal INPUT type

Display: [F0350219](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Illegal INPUT type.

F035021A, RCL Compiler: Illegal OUTPUT type

Display: [F035021A](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Illegal OUTPUT type.

F035021B, RCL Compiler: Illegal CASE konstant

Display: [F035021B](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Illegal CASE constant.

F035021E, RCL Compiler: Illegal INPUT ARRAY

Display: [F035021E](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Illegal INPUT ARRAY.

F035021F, RCL Compiler: Illegal OUTPUT ARRAY

Display: [F035021F](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Illegal OUTPUT ARRAY.

F0350220, RCL Compiler: Wrong type during parameter transfer

Display: [F0350220](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Wrong type during parameter transfer.

F0350221, RCL Compiler: File only accepted in main program

Display: [F0350221](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: File is only permitted in main program.

F0350222, RCL Compiler: INPUT/OUTPUT only permitted in main program

Display: [F0350222](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: INPUT/OUTPUT is only permitted in main program.

F0350223, RCL Compiler: Data type FILE in RECORD not permitted

Display: [F0350223](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: FILE data type not permitted in RECORD.

F0350224, RCL Compiler: Kinematics konflikt

Display: [F0350224](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Kinematics conflict.

F0350227, RCL Compiler: Wrong format for export file

Display: [F0350227](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Wrong format for export file.

F0350228, RCL Compiler: No values assumed

Display: [F0350228](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: No values assumed.

XLC/MLC diagnostic system tables

F035022B, RCL Compiler: Equal or greater than expected

Display: [F035022B](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Equal or greater than expected.

F035022C, RCL Compiler: Constant expected

Display: [F035022C](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Constant expected.

F035022D, RCL Compiler: IF_END expected

Display: [F035022D](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: END_IF expected.

F035022E, RCL Compiler: Two points expected

Display: [F035022E](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Two points expected.

F035022F, RCL Compiler: LABEL incompatible

Display: [F035022F](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: LABEL incompatible.

F0350230, RCL Compiler: Wrong data type in CASE structure

Display: [F0350230](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Wrong data type in CASE structure.

F0350232, RCL Compiler: Multiple LABEL definition

Display: [F0350232](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Multiple LABEL definitions.

F0350233, RCL Compiler: CASE table overflow

Display: [F0350233](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: CASE table overflow.

F0350234, RCL Compiler: Division by zero

Display: [F0350234](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Division by zero.

F0350235, RCL Compiler: Positive number expected

Display: [F0350235](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Positive digit expected.

F035023A, RCL Compiler: Translation aborted

Display: [F035023A](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Translation aborted.

F035023B, RCL Compiler: Error during memory approval

Display: [F035023B](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Error During Memory Approval

F035023C, RCL Compiler: End of PKT-file reached

Display: [F035023C](#)

Non-fatal error, Other_Error

XLC/MLC diagnostic system tables

Cause: RCL-Compiler: End of PKT file reached.

F035023D, RCL Compiler: Error, cannot create point in PKT-File

Display: [F035023D](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Error while placing a point in the PKT file.

F035023F, RCL Compiler: Keyword T expected

Display: [F035023F](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Keyword T expected.

F0350242, RCL Compiler: Variable or expression expected

Display: [F0350242](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Variable or expression expected.

F0350243, RCL Compiler: Program name expected

Display: [F0350243](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Program name expected.

F0350244, RCL Compiler: Program start expected

Display: [F0350244](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Program start expected.

F0350245, RCL Compiler: Illegal program name

Display: [F0350245](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Illegal program name.

F0350247, RCL Compiler: Alignment unequal four

Display: [F0350247](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Alignment not four.

F0350249, RCL Compiler: Illegal kinematics name

Display: [F0350249](#)

Non-fatal error, Other_Error

The Kinematics name (K-0-0002, Kinematics designation) is illegal.

Cause: Please check:

- the length of the name (12 characters max.),
- the characters used regarding their permissibility (A...Z, a...z, 0..9, '_'),
- the first character (first character has to be a letter)
- and the multiple use of the name.



The compiler is case sensitive.

"Robi_1" is identical to "ROBI_1"

F0350484, RCL Compiler: Illegal kinematics number

Display: [F0350484](#)

Non-fatal error, Other_Error

Cause: RCL-Compiler: Illegal Kinematics number.

F0360000, MLPI: Success

Display: [F0360000](#)

Non-fatal error, INPUT_RANGE_ERROR

The MLPI call was executed successfully.

XLC/MLC diagnostic system tables

F0360001, MLPI: Common error

Display: [F0360001](#) Non-fatal error, INPUT_RANGE_ERROR

The MLPI call was aborted with a general error.

Cause: The cause was not specified in detail. Check the diagnostic logbook for further errors which might have be linked causally to the MLPI call.

Solution: Correct the MLPI call.

F0360002, MLPI: Not supported

Display: [F0360002](#) Non-fatal error, INPUT_RANGE_ERROR

The executed MLPI call was aborted since the requested action is not supported by the function.

Cause: The cause was not specified in detail. Check the diagnostic logbook for further errors which might have be linked causally to the MLPI call.

Solution: Correct the MLPI call.

F0360003, MLPI: Invalid argument

Display: [F0360003](#) Non-fatal error, INPUT_RANGE_ERROR

The executed MLPI call was aborted since one of the transferred arguments was invalid.

Cause: The cause was not specified in detail. Check the diagnostic logbook for further errors which might have be linked causally to the MLPI call.

Solution: Correct the MLPI call.

F0360004, MLPI: Out of memory

Display: [F0360004](#) Non-fatal error, INPUT_RANGE_ERROR

The executed MLPI call was aborted since the memory for the requested action was insufficient.

Cause: The cause was not specified in detail. Check the diagnostic logbook for further errors which could be linked causally to the MLPI call.

Solution: Correct the MLPI call.

F0360005, MLPI: Timeout

Display: [F0360005](#) Non-fatal error, INPUT_RANGE_ERROR

The executed MLPI call was aborted since the given monitoring time has been exceeded.

Cause: The cause was not specified in detail. Check the diagnostic logbook for further errors which could be linked causally to the MLPI call.

There might be an interference in the network connection between the PC and the control.

Solution: Correct the MLPI call.

F0360006, MLPI: Server exception

Display: [F0360006](#) Non-fatal error, INPUT_RANGE_ERROR

The executed MLPI call was aborted since an exception occurred at the server.

Cause: The cause was not specified in detail. Check the diagnostic logbook for further errors which could be linked causally to the MLPI call.

Solution: Please contact customer service.

XLC/MLC diagnostic system tables

F0360007, MLPI: Connection failedDisplay: [F0360007](#)

Non-fatal error, INPUT_RANGE_ERROR

The executed MLPI call was aborted since the target participant was not reached.

Cause: There is an interference in the network connection between the PC and the control or the target address is incorrect.

Remedy: Correct the MLPI call.

F0360008, MLPI: Create errorDisplay: [F0360008](#)

Non-fatal error, INPUT_RANGE_ERROR

The executed MLPI call was aborted since the requested object could not be created.

Cause: The cause was not specified in detail. Check the diagnostic logbook for further errors which could be linked causally to the MLPI call.

Solution: Correct the MLPI call.

F0360009, MLPI: System errorDisplay: [F0360009](#)

Non-fatal error, INPUT_RANGE_ERROR

The executed MLPI call was aborted since an internal system error occurred.

Cause: The cause was not specified in detail. Check the diagnostic logbook for further errors which might have be linked causally to the MLPI call.

Solution: Please contact the customer service.

F036000A, MLPI: Buffer too shortDisplay: [F036000A](#)

Non-fatal error, INPUT_RANGE_ERROR

The executed MLPI call was aborted since the transferred data buffer was too small.

Cause: The cause was not specified in detail.

Check the diagnostic logbook for further errors which might be linked causally to the MLPI call or transfer a bigger buffer to the MLPI call.

Solution: Correct the MLPI call.

F036000B, MLPI: Invalid signatureDisplay: [F036000B](#)

Non-fatal error, INPUT_RANGE_ERROR

The executed MLPI call was aborted since the function signature was incorrect.

Cause: The cause was not specified in detail. Check the diagnostic logbook for further errors which could be linked causally to the MLPI call.

Solution: Correct the MLPI call.

F036000C, MLPI: Start errorDisplay: [F036000C](#)

Non-fatal error, INPUT_RANGE_ERROR

The executed MLPI call was aborted since the requested action could not be started.

Cause: The cause was not specified in detail. Check the diagnostic logbook for further errors which could be linked causally to the MLPI call.

Solution: Correct the MLPI call.

XLC/MLC diagnostic system tables

F036000D, MLPI: Watchdog warning

Display: [F036000D](#) Non-fatal error, INPUT_RANGE_ERROR

An MLPI watchdog elapsed and has triggered a warning.

Cause: An MLPI task did not reset the watchdog within the configured time slot.

Solution: Correct the MLPI call and check the watchdog settings.

F036000F, MLPI: Not implemented

Display: [F036000F](#) Non-fatal error, INPUT_RANGE_ERROR

The called MLPI function is not available on the control.

Cause: An MLPI function was called. This function is not supported by the control.

Solution: Correct the MLPI call and ensure that the correct control is connected.

F0360010, MLPI: Minimum limit exceeded

Display: [F0360010](#) Non-fatal error, INPUT_RANGE_ERROR

The executed MLPI call was aborted, since a value was transferred too small.

Cause: A value that is too small was transferred as argument to an MLPI function.

Solution: Correct the MLPI call.

F0360011, MLPI: Maximum limit exceeded

Display: [F0360011](#) Non-fatal error, INPUT_RANGE_ERROR

The executed MLPI call was aborted, since a value was transferred too high.

Cause: A value that is too high was transferred as argument to an MLPI function.

Solution: Correct the MLPI call.

F0360012, MLPI: Version conflict

Display: [F0360012](#) Non-fatal error, INPUT_RANGE_ERROR

Version conflict when calling an MLPI function.

Cause: The MLPI call was rejected due to a version conflict between an MLPI application and the control.

Solution: Correct the MLPI call and check the version of the control as well as the MLPI application. An update of the MLPI program might be required.

F0360013, MLPI: Deprecated

Display: [F0360013](#) Non-fatal error, INPUT_RANGE_ERROR

An MLPI call was actively rejected by the control.

Cause: An MLPI call was rejected by the control, since it is not supported or up to date anymore.

Solution: Correct the MLPI call and check the version of the control as well as the MLPI application. An update of the MLPI program might be required.

F0360014, MLPI: Permission error

Display: [F0360014](#) Non-fatal error, INPUT_RANGE_ERROR

An MLPI call was rejected, since it is not provided with the required access permissions.

Cause: The MLPI connection had insufficient permissions to perform the desired function.

Solution: Check the assignment of permissions. You might not be provided with the permission for the action or you logged into the control as wrong user.

XLC/MLC diagnostic system tables

F0360015, MLPI: Type mismatchDisplay: [F0360015](#)

Non-fatal error, INPUT_RANGE_ERROR

The MLPI call was canceled, since the transferred type does not match the expected type.

Cause: An MLPI function call transferred a data type as argument. This data type does not match the data type expected by the control.

Solution: Correct the MLPI call.

F0360016, MLPI: Size mismatchDisplay: [F0360016](#)

Non-fatal error, INPUT_RANGE_ERROR

The MLPI call was canceled, since the transferred data length does not match the expected data length.

Cause: An MLPI function call transferred a data length as argument. This length type does not match the data length expected by the control.

Solution: Correct the MLPI call.

F0360017, MLPI: Invalid handleDisplay: [F0360017](#)

Non-fatal error, INPUT_RANGE_ERROR

The reference to an MLPI object is invalid.

Cause: An invalid reference (handle) was transferred to an MLPI function.

Solution: Correct the MLPI call. Has the correct reference already been initialized or destroyed?

F0360018, MLPI: No connectionDisplay: [F0360018](#)

Non-fatal error, INPUT_RANGE_ERROR

The MLPI call was aborted, since no connection to the control has yet been established.

Cause: Before executing an MLPI function, establish a connection.

Solution: Correct the MLPI call and ensure that there is a connection to the control or that the connection was not canceled.

F0360019, MLPI: ReadWrite protectedDisplay: [F0360019](#)

Non-fatal error, INPUT_RANGE_ERROR

The MLPI call was aborted, since a resource is currently read- or write-protected.

Cause: An MLPI function tries to access a resource that is read- or write-protected.

Solution: Correct the MLPI call or try it again at a later point in time.

F036001A, MLPI: Invalid floating point numberDisplay: [F036001A](#)

Non-fatal error, INPUT_RANGE_ERROR

The executed MLPI call was aborted, since at least one of the transmitted arguments is an invalid floating point number.

Cause: An MLPI function call transmitted at least one argument which has an invalid floating point number (NaN). In case of an enabled trace, more information is available as MLPI trace entry.

Solution: Correct the MLPI call.

F036001B, MLPI: Object not initializedDisplay: [F036001B](#)

Non-fatal error, Resource_Error

XLC/MLC diagnostic system tables

The executed MLPI call was aborted since an internal object has not been initialized.

Cause: The cause was not specified in detail. Check the diagnostic logbook for further errors which might have be linked causally to the MLPI call.

Solution: Please contact the customer service.

F036001C, MLPI: Data stream out of synchronization

Display: [F036001C](#) Non-fatal error, Communication_Error

The executed MLPI call was aborted since an internal synchronization error occurred.

Cause: The cause was not specified in detail. Check the diagnostic logbook for further errors which might have be linked causally to the MLPI call.

Solution: Please contact the customer service.

F0370010, TaskViewer record already started

Display: [F0370010](#) Non-fatal error, Other_Error

Cause: The TaskViewer trace was already started.

Solution: The TaskViewer trace must first be stopped before it can be restarted.
The trace can be stopped using the command C-0-1042 in the TaskViewer dialog window.

F0370011, TaskViewer record not started

Display: [F0370011](#) Non-fatal error, Other_Error

Cause: The TaskViewer trace has not yet been started.

Solution: The TaskViewer trace must first be started before it can be stopped.
The trace can be started using the command C-0-1041 in the TaskViewer dialog window.

F0370012, Create of TaskViewer file failed

Display: [F0370012](#) Non-fatal error, Other_Error

Cause: An error occurred when generating the TaskViewer file on the Compact Flash card. For this reason, the TaskViewer trace could not be executed successfully.

Solution: Repeat the TaskViewer trace. If the error continues to occur, please contact customer service.

F0370013, Start of TaskViewer record failed

Display: [F0370013](#) Non-fatal error, Other_Error

Cause: An error occurred when starting the TaskViewer trace and the trace could not be started correctly.

Solution: Start the TaskViewer trace again. If the error continues to occur, please contact customer service.

F0370014, TaskViewer record failed

Display: [F0370014](#) Non-fatal error, Other_Error

Cause: An error occurred during the TaskViewer trace and the trace could not be executed correctly.

Solution: Repeat the TaskViewer trace. If the error continues to occur, please contact customer service.

XLC/MLC diagnostic system tables

F0370015, Setting of TaskViewer buffer not possibleDisplay: [F0370015](#)

Non-fatal error, Other_Error

Cause: When the size of the TaskViewer buffer was set (C-0-0425), an error occurred and the size could not be modified.

Remedy: Reset the buffer size. If the error continues to occur, please contact customer service.

F03A2002, Inline bus errorsDisplay: [F03A2002](#)

Non-fatal error, Resource_Error

Common message: Error caused by modules of the Inline bus.

Cause: At least one module of the Inline bus has caused an error. The precise position and type of error should be taken from the short text.

Solution: Check the arrangement accordingly.

F039**, PLC error messages from kernel**

Cause: The PLC kernel issues an error.

Solution: There is no further information available on this error.

Check the IndraLogic online error list or contact the customer support.

F03A**, PLC error messages from company components**

Cause: One of the company components issues an error.

Solution: There is no further information available on this error.

Contact customer support.

3.1.6 F1 Errors, Axis Group Error**F1 Errors, Error Reaction**

Logbook entry is generated; message is shown on the display.

If an error of severity F2 "Disengage the axis" is issued by an axis belonging to a group, this axis is currently lost to the group. The group reacts with an F1 error, "Set all axes in the group to standstill".

F10B0001, External synchron clock is missingDisplay: [F10B0001](#)

Axis group error, System_Error

The communication of the sercos interface bus is synchronized with the cross communication module,

however the cross communication module does not synchronize the control.

Cause:

- The cross communication module was operated incorrectly,
- the cross communication module is defective.

Solution: Replace the module, correct commissioning.

F1299535, Beltarea within execution exceededDisplay: [F1299535](#)

Axis group error, System_Error

The defined belt-synchronous operating range has been exceeded during processing.

Cause: The belt-synchronous target position is not in the belt area anymore. I.e., the commanded end point of the synchronous motion left the belt area during processing.

Solution:

- Check required processing time

XLC/MLC diagnostic system tables

- If required, enlarge belt area (see "TotalLength")
- Reduce dwell time in belt-synchronous range, if required
- Reduce belt velocity, if required
- Start earlier with desynchronization motion, if required



Diagnostics only for RobotControl V2

F1299536, Beginlength within execution exceeded

Display: [F1299536](#)

Axis group error, System_Error

The defined belt-synchronous starting distance (BeginLength) has been exceeded during processing.

Cause: The belt-synchronous target position exceeded the starting distance (BeginLength) during synchronization. I.e., the commanded end point of the synchronous motion has missed the latest point in time to synchronize during processing.

Solution:

- Check required processing time
- If required, delay latest begin (see "BeginLength")
- Reduce belt velocity, if required
- Check execution/traversing times between point definition and start of the synchronization command
- Correlate the programmed point before executing the synchronization command with the current belt value



Diagnostics only for Robot Control V2

F12C0041, Protocol length file I/O too long

Display: [F12C0041](#)

Axis group error, Access_Error

Cause: Protocol length for I/O file exceeded.

Remedy: Please contact customer service.

F12C0042, Unknown function data I/O

Display: [F12C0042](#)

Axis group error, Access_Error

Cause: Unknown function in I/O data.

Remedy: Please contact customer service.

F12C0062, Passing factor (R_PTP) out of range

Display: [F12C0062](#)

Axis group error, System_Error

An error occurred as the passing factor (R_PTP) was set.

Cause: The passing factor R_PTP in the RCL program is too large (>100% or >1.0) or negative.

The axis parameters A-0-0230 for the path and/or orientation axes are not correct.

Remedy: Check the R_PTP value in the RCL program.

Check the parameters A-0-0230 for the path and orientation axes.



In PTP interpolation, R_PTP is analogous to V_PTP as a factor and refers to the passing distance in parameter A-0-0230 for the axes involved.

XLC/MLC diagnostic system tables

F12C0063, PTP with ContSlope not allowedDisplay: [F12C0063](#)

Axis group error, Input_Invalid_Error

Cause: PTP motions are not permitted together with CONT_SLOPE.**Remedy:** Check RCL program.

Check the inputs of the kinematic PLCOpen function blocks.

F12C006C, Error during RoCo system startup no. 3Display: [F12C006C](#)

Axis group error, Access_Error

Cause: An error occurred during the system startup of the RobotControl.**Remedy:** Please contact customer service.**F12C0074, Positioning limits of an axis was exceeded**Display: [F12C0074](#)

Axis group error, System_Error

Cause: The actual position of an axis exceeded the limit values set in the parameters "A-0-0030, Position limit value, positive" or "A-0-0031, Position limit value, negative".**Solution:** Move axis to the valid range. Check the set position limit values if necessary.**F12C007A, Tensor-Interpolation: Angles not in main area**Display: [F12C007A](#)

Axis group error, System_Error

Cause: Tensor-Interpolation: The Eulerangles cannot be transformed into the main region.**Remedy:** Change path (Orientation).**F12C007B, Tensor-Interpolation: Angles not calculably**Display: [F12C007B](#)

Axis group error, System_Error

Cause: Tensor-Interpolation: The Eulerangles cannot be calculated.**Remedy:** Change path (Orientation).**F12C007E, WC move not possible without reference points**Display: [F12C007E](#)

Axis group error, System_Error

Cause: A kinematic is to be moved in the RCL process which has not yet travelled to the reference points.**Remedy:** Via PHG-Mode 7.3.2, the line in the BAPS program and with that the kinematic to be referenced can be found.**F12C007F, No feed-allow-signal within belt synchronisation**Display: [F12C007F](#)

Axis group error, System_Error

Cause: The belt synchronous kinematics is prevented from moving by RC input signals of the PLC (e.g. feed allow).**Remedy:** Error in PLC program (e.g. limit switches, light barriers).**F12C0083, Error during RoCo system startup no. 5**Display: [F12C0083](#)

Axis group error, Access_Error

Cause: An error occurred during the system startup of the RobotControl.**Remedy:** Please contact customer service.**F12C0084, Error during RoCo system startup no. 7**Display: [F12C0084](#)

Axis group error, Access_Error

XLC/MLC diagnostic system tables

Cause: An error occurred during the system startup of the RobotControl.
Remedy: Please contact customer service.

F12C0085, Error during RoCo system startup no. 9

Display: [F12C0085](#) Axis group error, Access_Error

Cause: An error occurred during the system startup of the RobotControl.
Remedy: Please contact customer service.

F12C0086, Error during RoCo system startup no. 11

Display: [F12C0086](#) Axis group error, Access_Error

Cause: An error occurred during the system startup of the RobotControl.
Remedy: Please contact customer service.

F12C0087, Error during RoCo system startup no. 13

Display: [F12C0087](#) Axis group error, Access_Error

Cause: An error occurred during the system startup of the RobotControl.
Remedy: Please contact customer service.

F12C0088, Error during RoCo system startup no. 15

Display: [F12C0088](#) Axis group error, Access_Error

Cause: An error occurred during the system startup of the RobotControl.
Remedy: Please contact customer service.

F12C0089, Axis list is not correct

Display: [F12C0089](#) Axis group error, Access_Error

Cause: Axis list is not correct.
Remedy: Please contact customer service.

F12C008A, Transformation parameter does not fit to robot type

Display: [F12C008A](#) Axis group error, System_Error

Cause: The transformation parameters of a created kinematics do not fit into the transformation schema of the robot type set.

Solution: The transformation parameters of all created kinematics have to be adjusted.

- The number and type of the created axes (K-0-0008, axis configuration list)
- The axis lengths set (K-0-0040, Transformation, lengths of the mechanics)
- The axis couplings set (K-0-0041, Transformation, factors)

The specifications for the transformation parameters can be found in the documentation for the set robot type (K-0-0031, Transformation schema).

To adjust the parameters, switch to phase 2.

F12C008B, Transformation error: Singular system of equation

Display: [F12C008B](#) Axis group error, System_Error

Cause: The equation system that appears in the coordinate transformation for oblique portals is singular, therefore the inverse position kinematics cannot be calculated.

Solution: Modify angle deviations, inform customer service, only relevant with robot types 14, 15, 16, 17.

XLC/MLC diagnostic system tables

F12C008C, MODE does not turn to -1Display: [F12C008C](#)

Axis group error, System_Error

Cause: *Fatal error in start-up of control.*

- Parameter error, e.g. CLOCK START TIME, is not consistent with the digital drives.
- Drives have no voltage,
- Transmission via CAN bus is faulty,

Solution: Inform customer service.**F12C0099, Beltsync: Endpoint not reachable**Display: [F12C0099](#)

Axis group error, System_Error

The defined starting distance (BeginLength) has been exceeded.

Cause: The belt-synchronous synchronization position (first motion command after SYNCHRON) exceeds the latest begin length (BeginLength)

- Solution:**
- Check required processing time,
 - If required, delay latest start (see "BeginLength")
 - reduce belt velocity if required,
 - Check execution/traversing time between point definition and start of SYNCHRON command
 - Correlate the programmed point before executing the SYNCHRON command with the current belt value



The behavior differs from RobotControl V1 to RobotControl V2. For RobotControl V2, the diagnostics is triggered in the block preparation. In the block preparation, a static check of the end points commanded by the user takes place. If the end point commanded by the user lies behind the "BeginLength" (starting distance), this diagnostic message is triggered.

If the end point commanded with RobotControl V2 misses the latest point in time for synchronization during the processing, the diagnostics "[F1299536](#)" is triggered.

F12C009A, Beltsync: Limit of beltcounter exceededDisplay: [F12C009A](#)

Axis group error, System_Error

The defined belt-synchronous working range has been exceeded.

Cause: The belt-synchronous target position is not within the belt range.

- Solution:**
- Check required processing time,
 - If required, enlarge belt area (see "FullLength")
 - reduce dwell time in belt-synchronous range if required,
 - reduce belt velocity if required,
 - start earlier with desynchronization motion if required.

XLC/MLC diagnostic system tables



The behavior differs from RobotControl V1 to RobotControl V2. For RobotControl V2, the diagnostics is triggered in the block preparation. In the block preparation, a static check of the end points commanded by the user takes place. If the end point commanded by the user lies outside belt area, this diagnostic message is triggered.

If the end point commanded with RobotControl V2 leaves the belt area during the processing, the diagnostics "F1299535" is triggered.

F12C009B, Transformation length is 0

Display: **F12C009B**

Axis group error, Access_Error

Cause: One of the transformation lengths in parameter "K-0-0040, Transformation, lengths of the mechanics" is 0.

Solution: Switch to phase 2 and adjust the values in K-0-0040 in accordance with the transformation documentation.

F12C00A3, Interpolation type not specified

Display: **F12C00A3**

Axis group error, Access_Error

Cause: Interpolation type for traveling motion not specified.

Remedy: Please contact customer service.

F12C00A6, Watchdog expired

Display: **F12C00A6**

Axis group error, Access_Error

The device was switched off by the firmware.

Cause: The firmware issued an error.

Remedy: Please contact the customer service.

F12C00AA, Beltsync: Kinematics in singular position

Display: **F12C00AA**

Axis group error, System_Error

Cause: Kinematics is in singular position.

Remedy: Move kinematics to valid range in manual mode.
Check programmed points and belt position.

F12C00AB, Kinematics in singular position

Display: **F12C00AB**

Axis group error, System_Error

Cause: Kinematics is in singular position.

Remedy: Move kinematics into valid range in Manual.
Check programmed points.

F12C00AD, Travel range limit JC reached

Display: **F12C00AD**

Axis group error, System_Error

Cause: Axis has reached the software limit switches defined in machine parameters P204, P205.

Remedy: Move kinematic into valid range in Manual.
Check programmed points.

F12C00AE, Beltsync: Travel block activated too late

Display: **F12C00AE**

Axis group error, System_Error

XLC/MLC diagnostic system tables

Cause: A belt-synchronous block has only been activated after the belt has exceeded the belt value of the preceding belt synchronous travel block. This occurs when the travel block is activated too late.

Remedy: Input queries delay the block preparation any computations, loops.
Higher priority processes, many equal priority processes.
Access to occupied resources, e.g. kinematics, devices.
Insufficient time for block preparation, P5.

F12C00AF, Resulting axis velocity limit exceeded

Display: [F12C00AF](#)

Axis group error, System_Error

Cause: The axis velocity exceeds the limit values defined for a linear motion in parameters "A-0-0032 Velocity limit value, positive", "A-0-0033 Velocity limit value, negative" or "A-0-0034 Acceleration limit value, bipolar".

Solution: Reduce the programmed velocity of the linear motion. Check the set axis limit values if necessary.

F12C00B0, Ambiguity with beltsynchronisation

Display: [F12C00B0](#)

Axis group error, System_Error

Cause: Programmed point and interpolation direction do not agree.

Remedy: Check belt position.

F12C00B1, Interpolation in wrong direction

Display: [F12C00B1](#)

Axis group error, System_Error

Cause: Programmed point and interpolation direction do not correspond.

Remedy: Check RCL program.

F12C00B2, AUTO/MANUAL change not allowed

Display: [F12C00B2](#)

Axis group error, System_Error

Cause: During travel the corresponding kinematic has been switched to Manual.

Remedy: First stop active programs; then switch to Manual.

F12C00B4, Beltsync: 1. BS-Travel block activated too late

Display: [F12C00B4](#)

Axis group error, System_Error

Cause: The 1st belt-synchronous block has been activated only after the belt had exceeded the belt value defined in the last travel block before belt-synchronous.

Remedy: Program is started too late.
Travel movements take longer because axes are not in position.
Travel distance longer because of end point of last program.
Belt runs too fast.

F12C00B5, RoCo Watchdog 2 - Error

Display: [F12C00B5](#)

Axis group error, Access_Error

Cause: RoCo Watchdog 2 - Error.

Remedy: Please contact customer service.

F12C00B6, Beltsync: Block end reached too late

Display: [F12C00B6](#)

Axis group error, System_Error

Cause: The end of a belt-synchronous block has only been reached when the belt had already exceeded the belt value defined in this travel block.

XLC/MLC diagnostic system tables

Remedy: Too steep geometry.
Acceleration resp. deceleration values programmed too low.
Too long jerk limit times for sin 2 slope.
Too short point sequence.
During the check at the block start, the tolerance time, e.g. by retriggering, was still active.

F12C0100, RoCo watchdog error

Display: [F12C0100](#) Axis group error, System_Error
Cause: RoCo Watchdog error.
Remedy: Please contact customer service.

F12C0316, File open for read

Display: [F12C0316](#) Axis group error, System_Error
Cause: File is already open for read.
Remedy: Check up your program.

F12C0317, File open for write

Display: [F12C0317](#) Axis group error, System_Error
Cause: File is already open for write.
Remedy: Check up your program.

F12C031A, Block not initialized

Display: [F12C031A](#) Axis group error, System_Error
Cause: Block not initialized.
Remedy: Inform after-sales service.

F12C031D, Block not connected

Display: [F12C031D](#) Axis group error, System_Error
Cause: Block not connected.
Remedy: Inform after-sales service.

F12C0406, Invalid SPC_FCT

Display: [F12C0406](#) Axis group error, System_Error
Cause: A SPC_FCT was called, which is not longer supported.
Remedy: Check the declaration number of the SPC_FCT.

F12C0407, SPC_FCT 53 was called with wrong parameters

Display: [F12C0407](#) Axis group error, System_Error
This error occurs if processing took place with an incorrect belt in the RCL program or via Motion function blocks of a kinematics.
The error message is caused by the following when using RCL programs:

- Belt type 4 with the keyword SYNCHRONOUS was used in the RCL program without calling special function 53 before.
- When calling special function 53, a value smaller than or equal to 0 was programmed as the total length of the belt-synchronous workspace.
- When calling special function 53, a value smaller than or equal to 0 was programmed as starting length.

XLC/MLC diagnostic system tables

- When calling special function 53, a value greater than the total length was programmed as starting length.
- Special function 53 was called while the kinematics travels synchronously to a belt.

The error message is caused by the following when using PLC Motion function blocks of the kinematics:

- A Motion function block with a belt value was called without using the function block ML_SetBeltParameter before.
- A value smaller than or equal to 0 was specified as FullLength at the function block.
- A value smaller than or equal to 0 was specified as BeginLength at the function block.
- A value greater than the value specified at FullLength was specified as BeginLength at the function block ML_SetBeltParameter.
- The ML_SetBeltParameter function block was used even though the kinematics travels synchronously to a belt.

The error message has the following general causes:

- There are points in the belt-synchronous workspace that cannot be transformed between spatial and machine coordinates.

F12C0408, Error at the last beltsynchronous movement block

Display: [F12C0408](#)

Axis group error, System_Error

Cause: At the detection of the last beltsynchronous movement block an error occurs.

Remedy: *Error position SYNCHRON_END:*

- No last movement block was detected.

Error position movement block:

- A second last movement block was detected.

F12C0410, Acceleration not allowed

Display: [F12C0410](#)

Axis group error, System_Error

Cause: This error occurs if an invalid value was programmed for the deceleration or acceleration in the RCL program or via Motion function blocks.

Programming	Permitted values
RCL: A = x	$x \geq 1 \text{ mm/s}^2$
RCL: AFACTOR = x	$0.0001 \leq x \leq 1.2$
RCL: DFACTOR = x	$0.0001 \leq x \leq 1.2$
<i>PLC function blocks</i> • MC_MoveLinearAbsolute.Acceleration := x • MC_MoveLinearRelative.Acceleration := x • MC_MoveCircularAbsolute.Acceleration := x	$x \geq 1 \text{ mm/s}^2$

XLC/MLC diagnostic system tables

Programming	Permitted values
<i>PLC function blocks</i> - MC_MoveLinearAbsolute.Deceleration := x - MC_MoveLinearRelative.Deceleration := x - MC_MoveCircularAbsolute.Deceleration := x	$0.0001 \leq (x/\text{Acceleration}) \leq 1.2$
<i>PLC function blocks</i> - MC_MoveDirectAbsolute.Acceleration := x - MC_MoveDirectAbsolute.Deceleration := x	$0.01\% \leq x \leq 120\%$

Tab. 3-3: Permitted values for the acceleration or deceleration of a kinematics

F12C041A, Process error

Display: [F12C041A](#)

Axis group error, System_Error

Cause: Process error.

Remedy: Inform after-sales service.

F12C041B, Process already exists

Display: [F12C041B](#)

Axis group error, System_Error

Cause: An already existing process is started for a second time.

Remedy: Check RCL program.

F12C041C, Invalid travel time

Display: [F12C041C](#)

Axis group error, System_Error

Cause: The programmed travel time T is negative or equals zero.

Remedy: Check RCL program.

F12C041D, Velocity not allowed

Display: [F12C041D](#)

Axis group error, System_Error

This error occurs if an invalid value was programmed for the velocity in the RCL program or via Motion function blocks.

Programming	Permitted values
RCL: V = x	$x \geq 1 \text{ mm/s}$
RCL: V_PTP = x	$0\% \leq x \leq 100\%$
RCL: VFACTOR = x	$0.0001 \leq x \leq 6.0000$
<i>PLC function blocks</i> - MC_MoveLinearAbsolute.Velocity := x - MC_MoveLinearRelative.Velocity := x - MC_MoveCircularAbsolute.Velocity := x	$x \geq 1 \text{ mm/s}$
<i>PLC function blocks</i> MC_MoveDirectAbsolute.Velocity := x	$0\% \leq x \leq 100\%$

Tab. 3-4: Permitted values for the velocity of a kinematics

F12C041E, Impermissible jerk

Display: [F12C041E](#)

Axis group error, System_Error

XLC/MLC diagnostic system tables

This error occurs if an invalid value was programmed for the jerk in the RCL program or via Motion function blocks.

Programming	Permitted values
RCL: J = x	$x > 0 \text{ mm/s}^3$
<i>PLC function blocks</i> - MC_MoveLinearAbsolute.Jerk := x - MC_MoveLinearRelative.Jerk := x - MC_MoveCircularAbsolute.Jerk := x	$x > 0 \text{ mm/s}^3$

Tab. 3-5: Permitted values for the jerk of a kinematics

F12C041F, User memory overflow

Display: [F12C041F](#) Axis group error, System_Error

Cause: No place in user memory.

Remedy: Delete not necessary file from the memory.

F12C0420, WRITE_BEGIN expected

Display: [F12C0420](#) Axis group error, System_Error

Cause: A WRITE command has been pro-grammed, without opening the file by WRITE_BEGIN before.

Remedy: Check RCL program.

F12C0421, File repeated opened

Display: [F12C0421](#) Axis group error, System_Error

Cause: File has been opened for reading for more than 127 times.

Remedy: Check RCL program and/or preceding operation.

F12C0422, File already opened

Display: [F12C0422](#) Axis group error, System_Error

Cause: Is also used if in RCL/file-I/O a file opened for reading is to be written. In this case, the file must be closed with the CLOSE command.

Remedy: Check RCL program and/or pre-ceeding operation.

F12C0423, Invalid file name

Display: [F12C0423](#) Axis group error, System_Error

Cause: File name in an ASSIGN statement is longer than 8 characters or contains unauthorized characters.

Solution: Check ASSIGN statement in the RCL program.

F12C0424, End of file reached while READ

Display: [F12C0424](#) Axis group error, System_Error

Cause: Is read too often.

Remedy: Check RCL program.
Use END_OF_FILE command.

F12C0426, Missing DAT-File

Display: [F12C0426](#) Axis group error, System_Error

Cause: Selected file is not available, wrong name.

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Remedy: Check RCL program.
Check memory contents.

F12C0427, Read access to a file which is opened for write

Display: [F12C0427](#) Axis group error, System_Error

Cause: Read access to a file opened for writing.

Remedy: Check RCL program.

F12C0428, READ_BEGIN expected

Display: [F12C0428](#) Axis group error, System_Error

Cause: A READ-command has been programmed, without opening the file with READ_BEGIN before.

Remedy: Check RCL program.

F12C042A, Missing WCSYST/TOOLS.DAT

Display: [F12C042A](#) Axis group error, System_Error

Cause: No workpiece file "WCSYST.DAT" or no tool file "TOOLS.DAT" is present in the memory.

Solution: The files have not yet been transferred to the control. They are located in the IndraWorks project under the "Robot" node in the "Global Data" directory and can be stored on the MLC.

F12C042B, WCSYST/TOOLS name missing

Display: [F12C042B](#) Axis group error, System_Error

A coordinate system is enabled which is either not defined in WCSYST.DAT or TOOLS.DAT or the name is misspelled in the user program.

The "DAT" files to be checked are located in the IndraWorks project under the "Robot" node in the "Global Data" directory.

F12C042D, Wrong parameters for external subroutine

Display: [F12C042D](#) Axis group error, System_Error

Cause: The transfer parameters do not correspond with the declared place holders of the external sub-routine.

Remedy: Check RCL program.

F12C042E, Wrong number of parameters for external subroutine

Display: [F12C042E](#) Axis group error, System_Error

Cause: The transfer parameters do not correspond with the declared place holders of the external sub-routine.

Remedy: Check RCL program.

F12C042F, Wrong type of parameters for external subroutine

Display: [F12C042F](#) Axis group error, System_Error

Cause: The transferred parameter is of another type as the place holder in the external subroutine.

Remedy: Check RCL program.

F12C0430, Wrong declaration of parameters for ext. subroutine

Display: [F12C0430](#) Axis group error, System_Error

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Cause: The parameter declaration in the main program and the subroutine (value/variable) do not agree.

Remedy: Check RCL program.

F12C0431, Program includes parameters

Display: [F12C0431](#)

Axis group error, System_Error

Cause: An external subroutine (with parameters) has been started as main program.

Remedy: Check RCL program.

F12C0432, INTEGER overflow

Display: [F12C0432](#)

Axis group error, System_Error

Cause: Conversion result does not correspond to the permissible format for INTEGER variable [-2^{31} to $+2^{31}-1$].

Remedy: Check RCL program.

F12C0433, Workspace violation

Display: [F12C0433](#)

Axis group error, System_Error

Cause: A traversing instruction violates the configured safe zones.

Solution: Check the traversing instructions and the configuration of the safe zones in the parameters K-0-0155, K-0-0156/ K-0-0157 to K-0-0219.

F12C0435, Illegal parameter for external subroutine

Display: [F12C0435](#)

Axis group error, System_Error

Cause: In the RCL program, a file variable, an array or an I/O-variable has been transferred as parameter to an external program.

Remedy: Check RCL program.

F12C0436, Format error in DAT-file

Display: [F12C0436](#)

Axis group error, System_Error

Cause: Type of the variable to be read does not correspond with the format in the file.

Remedy: Check RCL program and dat. file.

F12C0437, SUB-Process stops its own mainprocess

Display: [F12C0437](#)

Axis group error, System_Error

Cause: A main process has started a subroutine (PARALLEL, ALSO, PARALLEL_END). In this process, the main process is tried to be stopped with STOP.

Remedy: Check RCL program(s).

F12C0438, Division by zero in RCL program

Display: [F12C0438](#)

Axis group error, System_Error

Cause: e.g. a not preset RCL variable.

Remedy: Check RCL program.

F12C0439, Square root with negative argument in RCL program

Display: [F12C0439](#)

Axis group error, System_Error

Cause: In the RCL program, the root is taken from a negative number.

Remedy: Check RCL program.

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F12C043A, PTP within belt synchronous movement

Display: [F12C043A](#)

Axis group error, System_Error

Cause: PTP movement has been programmed with active BELT-SYNCHRON.

Remedy: Check RCL program.

F12C043C, Point not reachable

Display: [F12C043C](#)

Axis group error, System_Error

Cause: Point cannot be travelled to with the currently used robot arm direction.

Remedy: Check RCL program.

F12C043D, Wrong PKT file

Display: [F12C043D](#)

Axis group error, System_Error

Cause: Pnt-file and ird-file do not agree.

Remedy: It is possible that during conversion and renewed loading, only the ird-file has been loaded, i.e. pnt-file and ird-file have a different date (file identification).

F12C043F, Invalid output

Display: [F12C043F](#)

Axis group error, System_Error

Cause: Channel No. of the programmed output is not permissible.

Remedy: Check RCL program.

F12C0440, Invalid input

Display: [F12C0440](#)

Axis group error, System_Error

Cause: Channel No. of the programmed input is not permissible.

Remedy: Check RCL program.

F12C0441, Reserved

Display: [F12C0441](#)

Axis group error, System_Error

This diagnostics number is reserved.

F12C0442, Transformation of this point is not possible

Display: [F12C0442](#)

Axis group error, System_Error

Cause: In the RCL program, a JC-point is to be transferred into a POINT or vice versa. It cannot be transferred..

Remedy: Check RCL program.

F12C0444, File does not exist

Display: [F12C0444](#)

Axis group error, System_Error

Cause: File(s) not in memory, error of compilation.

Remedy: Check RCL program.

F12C0445, Negative delaytime

Display: [F12C0445](#)

Axis group error, System_Error

Cause: RCL variable not correctly determined.

Remedy: Check RCL program.

F12C0447, Error in IRD program

Display: [F12C0447](#)

Axis group error, System_Error

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Cause: Incorrect IRDATA code by error in compiler, safety monitoring.
Remedy: Inform after-sales service.

F12C0448, IRD stack overflow

Display: [F12C0448](#) Axis group error, System_Error
Cause: e.g. recursive subroutine calls .
Remedy: Check subroutine packing in RCL program.

F12C0449, IRD stack underflow

Display: [F12C0449](#) Axis group error, System_Error
Cause: System error, safety monitoring.
Remedy: Inform after-sales service.

F12C044A, Invalid number of axes

Display: [F12C044A](#) Axis group error, System_Error
Cause: An invalid axes number was specified in the RCL program.
Remedy: Check the RCL program. Additionally, the content of the parameter "K-0-0008, Axes configuration list" is to be checked.

F12C044B, Array index out of range

Display: [F12C044B](#) Axis group error, System_Error
Cause: Index computation incorrect or indices not preset.
Remedy: Check RCL program.

F12C044C, Program name too long

Display: [F12C044C](#) Axis group error, System_Error
Cause: File names or program names used in the RCL program are too long or contain inadmissible characters.
Remedy: Check RCL program.

F12C044D, IRD option not activ

Display: [F12C044D](#) Axis group error, System_Error
Cause: A not allowed RCL function has been used.
Remedy: Check RCL program. Determine permitted options.

F12C044E, Missing PKT file

Display: [F12C044E](#) Axis group error, System_Error
Cause: Point file not loaded or deleted.
Remedy: List current memory contents.

F12C044F, Point is not defined

Display: [F12C044F](#) Axis group error, System_Error
Cause: A not defined point is addressed.
Remedy: Check point file, define / teach point.

F12C0451, No points in PKT file

Display: [F12C0451](#) Axis group error, System_Error
Cause: PKT file is empty.
Remedy: Checkup PKT file.

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F12C0453, Braekpoint not allowed because of belt synchr.

Display: [F12C0453](#) Axis group error, System_Error

Cause: A breakpoint in the RCL plus testsystem was reached during a belt synchronization was active.

Remedy: Set no interruptions in a SYNCHRON section or use the interface signal BELT_SIM_RCI (Belt simulation).

F12C0454, Reserved

Display: [F12C0454](#) Axis group error, System_Error

This diagnostics number is reserved.

F12C0455, Beltsynchronisation can not be activated

Display: [F12C0455](#) Axis group error, System_Error

Cause: At the preparation time of the SYNCHRON command the belt counter was not reset by the corresponding interface signal BELTxxRES_RCI or the belt-counter is outside the range defined in machine parameter P505.

Remedy: Reset belt counter. Increase positive flank or range or switch off the monitoring with min=0, max=0.

F12C0457, Invalid float value

Display: [F12C0457](#) Axis group error, System_Error

Cause: Number is not in permissible range, $1.175 \cdot 10^{-38}$ to $3.403 \cdot 10^{38}$.

Remedy: Check RCL program.

F12C0458, File sequentialisation not possible

Display: [F12C0458](#) Axis group error, System_Error

Cause: Not enough place in memory.

Remedy: Delete files which are possibly not required in memory or remove gaps by reset.

F12C045A, Wrong version of the RCL compiler

Display: [F12C045A](#) Axis group error, System_Error

Cause: Current compilers in control and PG are different .

Remedy: Compile again the available programs.

F12C045C, Starting point too near the intermediate point

Display: [F12C045C](#) Axis group error, System_Error

Cause: The programmed start point is too close to intermediate point in circular interpolation.

Remedy: Program correction, check circle points.

F12C045D, Starting point too near the endpoint

Display: [F12C045D](#) Axis group error, System_Error

Cause: The programmed start point is too close to end point in circular interpolation.

Remedy: Check circle points in program.

F12C045E, Radius of a circle too small

Display: [F12C045E](#) Axis group error, Other_Error

Cause: The radius to calculate a circle is too small.

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Solution: When selecting the points for the circle calculation, a bigger radius results.

F12C045F, Only positive velocity allowed

Display: [F12C045F](#)

Axis group error, System_Error

Cause: Negative speed of circular interpolation.

Remedy: Check RCL program.

F12C0460, No belt option

Display: [F12C0460](#)

Axis group error, System_Error

Cause: The incremental input is not enabled, option.

Solution: Monetary value option,
can be enabled by customer service.

F12C0462, Intermediate poin too near the endpoint

Display: [F12C0462](#)

Axis group error, System_Error

Cause: The intermediate point is too close at end point in circular interpolation.

Remedy: Check circle points in program.

F12C0463, Start, intermediate and end point on a straight line

Display: [F12C0463](#)

Axis group error, System_Error

Cause: Start and intermediate point must not form a straight line with the end point.

Remedy: Check circle points in program.

F12C0464, Start, intermediate and end point too close

Display: [F12C0464](#)

Axis group error, System_Error

Cause: Points are too close in intermediate interpolation.

Remedy: Check circle points in program.

F12C0466, Invalid kinematics number

Display: [F12C0466](#)

Axis group error, System_Error

Cause: Invalid kinematics number was specified in the RCL program.

Remedy: Check the RCL program.

F12C0467, GLOBAL-File does not exist

Display: [F12C0467](#)

Axis group error, System_Error

Cause: Global variables are used in the program. The respective QLL file is not present.

Solution: Reload GLOBAL file.

F12C0468, GLOBAL COMMON ID

Display: [F12C0468](#)

Axis group error, System_Error

Cause: The GLOBAL file was compiled at a later time to the file to be imported.

Solution: First compile the GLOBAL file and then all of the files to be imported.

F12C0469, Two GLOBAL-Files

Display: [F12C0469](#)

Axis group error, System_Error

Cause: Global variables from two GLOBAL files are used.

Solution: Export all global data in a file.

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F12C046A, BNR file does not exist

Display: [F12C046A](#)

Axis group error, System_Error

The binary file on which the read or write command was executed does not exist (no longer exists).

F12C046C, Option GLOBAL-File is not active

Display: [F12C046C](#)

Axis group error, System_Error

Cause: The 'Global data' expansion stage is not enabled, option.

Solution: Monetary value option,
can be enabled by customer service.

F12C046D, MOVE FILE: Wrong version

Display: [F12C046D](#)

Axis group error, System_Error

Cause: Parameter 5 in the header is incorrect.

Solution: Inform customer service, see notes at the beginning of the chapter.

F12C046E, MOVE FILE: Wrong number of axes

Display: [F12C046E](#)

Axis group error, System_Error

Cause: Parameter 4 in the header is incorrect.

Solution: Number of axes in the MPP is not consistent with the number of axes in the file.

F12C046F, MOVE FILE: Reading pointer

Display: [F12C046F](#)

Axis group error, System_Error

Cause: The read marker of the bnr-file has not been correctly positioned in the read-begin command.

Remedy: Check READ_BEGIN.

F12C0470, MOVE FILE: Time base

Display: [F12C0470](#)

Axis group error, System_Error

Cause: Parameter 3 in file header is incorrect.

Remedy: The interpolation time (clock time) set in P5 does not agree with the time base of the bnr-file.

F12C0471, MOVE FILE: IP-LR base

Display: [F12C0471](#)

Axis group error, System_Error

Cause: Incorrect file header of parameter 2.

Remedy: The special function parameter BASE of SPC_FCT 45 (MOVE_FILE) does not correspond with the IP-LR-base of the bnr-file.

F12C0472, MOVE FILE: Format fault

Display: [F12C0472](#)

Axis group error, System_Error

Cause: The read marker of the bnr-file shows to a value which represents no floating point number in the IEEE format.

Remedy: Check READ_BEGIN-command, check bnr-file.

F12C0473, MOVE FILE: MODULO_FLAG not occupied

Display: [F12C0473](#)

Axis group error, System_Error

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Cause: The special function parameter @MODULO_FLAG has not been occupied in the RCL program.

Remedy: Before calling SPC_FCT 45 the parameter @MODULO_FLAG must be pre-set in the RCL program.

F12C0474, Reserved

Display: [F12C0474](#)

Axis group error, System_Error

This diagnostics number is reserved.

F12C0475, No positioning axes defined

Display: [F12C0475](#)

Axis group error, System_Error

Cause: No positioning axis was defined.

Solution: Check the axis/kinematic assignment in the kinematic wizard. This applies in particular if it is a user-defined kinematics.

Additionally, the content of the parameter "K-0-0008, Axis configuration list" is to be checked.

In connection with the usage of the workpiece coordinate system, ensure that the content of the parameter "K-0-0043, Assignment list of workpiece coordinates" is correct.

F12C0476, Reserved

Display: [F12C0476](#)

Axis group error, System_Error

This diagnostics number is reserved.

F12C0477, Invalid axes configuration

Display: [F12C0477](#)

Axis group error, System_Error

Cause: The axis configuration contains invalid values.

Remedy: Check "K-0-0008 Axes configuration list".

F12C0478, Raised/extended arm

Display: [F12C0478](#)

Axis group error, System_Error

Cause: Scara-transformation: the arm is completely retracted, resp.extended.

Remedy: Travel into valid range in manual mode.

F12C0479, WC zero position is singular

Display: [F12C0479](#)

Axis group error, System_Error

Ursache: Ein Punkt kann durch die Transformation nicht eindeutig transformiert werden (Singularität).

Lösung: Überprüfen Sie das Bewegungsprogramm und passen Sie es ggfs. an.

F12C047A, Too close to stand

Display: [F12C047A](#)

Axis group error, System_Error

Cause: Scara-transformation: Collision danger.

Remedy: Travel into valid range in manual mode.

F12C047C, Invalid TOOL value

Display: [F12C047C](#)

Axis group error, System_Error

Cause: Only for RTYP = 2, when the master/slave coupling factor is modified via the BAPS command 'Tool'.

Remedy: The slave number coded via 'Tool' is wrong. Check RCL program.

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F12C047D, Wrong belt direction programed

Display: [F12C047D](#)

Axis group error, System_Error

Cause: The belt value programmed in SPC_FCT 21 (belt_type) does not correspond to the predefined direction.

Remedy: Check RCL program.

F12C047E, Invalid kind of belt/tolerance of belt

Display: [F12C047E](#)

Axis group error, System_Error

Cause: When calling SPC_FCT 21 an inadmissible belt type or an inadmissible belt tolerance has been programmed.

Remedy: Check RCL program.

F12C047F, Belt distance is zero

Display: [F12C047F](#)

Axis group error, System_Error

Cause: In belt synchronization without belt parallel travel possibility (belt type 2) the belt coordinate of two successive travel points is identical.

Remedy: Program a belt distance unequal to zero.

F12C0480, Invalid point

Display: [F12C0480](#)

Axis group error, System_Error

Cause: With SPC_FCT 31, reading of set values from the ring memory, a buffer is accessed which has no valid point yet.

Remedy: In SPC_FCT 30, switch off storing of set values, the parameter NUM_POINTS supplies the number of points stored up to now.
Select a corresponding index for SPC_FCT 31.

F12C0481, Invalid measuring system

Display: [F12C0481](#)

Axis group error, System_Error

Cause: In SPC_FCT 29 (=switch on storing of set values) a wrong measuring system number has been programmed.

Remedy: The maximum permissible measuring system number results from $MS\_NO\_max = \text{number of all axes} + \text{number of all belts}$.

F12C0482, Invalid belt number

Display: [F12C0482](#)

Axis group error, System_Error

Cause: A belt with the number defined in SPC_FCT 15, 21, 28, 51, 52, 54 or 55 is not available.

Remedy: Check RCL program.

F12C0483, In WC not allowed

Display: [F12C0483](#)

Axis group error, System_Error

Cause: When calling SPC_FCT 27 (JC_main range) the corresponding kinematic is not in JC.

Remedy: Check RCL program.

F12C0484, Invalid kinematics number

Display: [F12C0484](#)

Axis group error, System_Error

Cause: Incorrect kinematic parameter in SPC_FCT 3, 27, 29.

Remedy: Check parameters of SPC_FCT in RCL program.

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F12C0485, PPO/IOL: Invalid function numberDisplay: [F12C0485](#)

Axis group error, System_Error

Cause: For SPC_FCT 1 or 2 (PPO-IO-logic) an inadmissible function number has been programmed.

Permitted are values from 1 to 16.

Remedy: Check transfer parameters of SPC_FCT 1 or 2 in RCL program, see RCL3 programming instructions.

F12C0486, SPC_FCT 1, Invalid kinematics numberDisplay: [F12C0486](#)

Axis group error, System_Error

Cause: When programming the SPC_FCT 1, Accurate position switching of the digital outputs on the path, an invalid kinematics number was transferred.

Remedy: Check transfer parameters of the SPC_FCT 1 in the RCL program (refer to the RCL Programming Instruction).

F12C0487, PPO/IOL: Invalid coordinateDisplay: [F12C0487](#)

Axis group error, System_Error

Cause: For SPC_FCT 1 or 2 (PPO-IO-logic) an inadmissible kinematics number has been programmed.

Remedy: Check transfer parameters of SPC_FCT 1 or 2 in RCL program, see RCL programming instructions.

F12C0488, PPO: Invalid parameter valueDisplay: [F12C0488](#)

Axis group error, System_Error

Cause: Incorrect parameter value in SPC_FCT 2, permissible values from 0 to 255.

Remedy: Check RCL program.

F12C048F, PPO/IOL: Invalid function numberDisplay: [F12C048F](#)

Axis group error, System_Error

Cause: Inadmissible function number programmed for SPC_FCT 1 or 2.

Remedy: Check RCL program.

F12C0490, Function numberDisplay: [F12C0490](#)

Axis group error, System_Error

Cause: Empty error message.

Remedy: Empty error message.

F12C0492, Invalid SPS process numberDisplay: [F12C0492](#)

Axis group error, System_Error

Cause: In the RCL program, the standard subroutine PLC_PROCESS (proc_No), resp. PLC_TIME (task_No) has been called with an inadmissible proc_No (task_No).

Remedy: Permissible proc_No: 1 to 128, PLC program module.

Permissible task_No 1 to 8, PLC time module.

F12C0493, Invalid time valueDisplay: [F12C0493](#)

Axis group error, System_Error

Cause: Incorrect time value programmed in function START_PLC_TIME.

Valid range: 0.01 to 655.35.

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Remedy: Check RCL program.

F12C0494, Min. value greater than max. value

Display: [F12C0494](#) Axis group error, System_Error

Cause: Value of the transfer parameter 2 or 3 of the SPC_FCT 52.
BELT_PTP_FAC is wrong.

Remedy: Check transfer parameters 2 and 3 of the SPC_FCT 52
BELT_PTP_FAC in the RCL program.

F12C0495, Error by exception process start

Display: [F12C0495](#) Axis group error, System_Error

Cause: Error by exception process start.
The exception process defined in Special function 47 (EXC_DE-FINE) could not be started.

Remedy: Exception handling error:
Error addition "EXC-No:" specifies the number (1..32) of the exception, which could not be processed.
Possible reasons for example are:

- IRD-file of the exception process was not loaded into the rho4
- Typing error in filename (parameter EXC_PR_NAME in Spc_Fct EXC_DEFINE)
- etc.

F12C0497, Workspace number

Display: [F12C0497](#) Axis group error, System_Error

Cause: Workspace number.

Remedy: Empty error message.

F12C0498, Transformation in PLC has not been registered

Display: [F12C0498](#) Axis group error, System_Error

Cause: The transformation functions in the PLC are not known to the firmware.

Solution: Execute the MC_SetKinTransform function block to register the user-defined transformation in the system.
Also see interface MC_KIN_REF.

F12C0499, User defined transformation error in PLC

Display: [F12C0499](#) Axis group error, System_Error

Cause: One of the transformation functions in the PLC return a negative value.

Remedy: Check transformations in the PLC program (also refer to the description "Transformation in PLC").

F12C049A, Internal error due to transformation in PLC

Display: [F12C049A](#) Axis group error, System_Error

Cause: An internal error has occurred.

Remedy: Inform customer service.

F12C0600, Invalid operation at PLC function call

Display: [F12C0600](#) Axis group error, System_Error

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Ursache: In einer Transformationsfunktion in der SPS wurde eine ungültige Operation durchgeführt.

Lösung: Transformation im SPS-Programm überprüfen (siehe auch Benutzerdefinierte Transformation bzw. Erweiterte benutzerdefinierte Transformation).

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F12C0601, Denormalized operand at PLC function call

Display: [F12C0601](#)

Axis group error, System_Error

Cause: In a transformation function in the PLC, it was calculated with a denormalized number.

Remedy: Check transformations in the PLC program (also refer to the description "Transformation in PLC").

F12C0602, Zero division at PLC function call

Display: [F12C0602](#)

Axis group error, System_Error

Cause: In a transformation function in the PLC, it was divided by zero.

Remedy: Check transformations in the PLC program (also refer to the description "Transformation in PLC").

F12C0603, Overflow at PLC function call

Display: [F12C0603](#)

Axis group error, System_Error

Cause: In a transformation function in the PLC, an overflow was caused.

Remedy: Check transformations in the PLC program (also refer to the description "Transformation in PLC").

F12C0604, Underflow at PLC function call

Display: [F12C0604](#)

Axis group error, System_Error

Cause: In a transformation function in the PLC, an underflow was caused.

Solution: Check transformations in the PLC program (also refer to the description "Transformation in the PLC").

F12C0605, Precision error at PLC function call

Display: [F12C0605](#)

Axis group error, System_Error

Cause: An accuracy occurred in a transformation function in the PLC.

Solution: Check transformations in the PLC program (also refer to the description "Transformation in PLC").

F12C0606, NAN at PLC function call

Display: [F12C0606](#)

Axis group error, System_Error

Cause: NAN was returned as result of the forward or inverse position kinematics of a transformation in the PLC

Solution: Check the transformation.

F12C0822, Axis not referenced while jogging

Display: [F12C0822](#)

Axis group error, INPUT_RANGE_ERROR

Cause: It is tried to traverse a kinematics via jogging. One axis of the kinematics is not referenced.

Solution: Reference all axes of the kinematics.

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F12C0876, Transformation mathematical undefined

Display: [F12C0876](#) Axis group error, System_Error

Cause: The transformation cannot be solved mathematically.

Solution: Check the parameterization of the kinematics.

F12C0877, Hand axis traversing range exceeded

Display: [F12C0877](#) Axis group error, System_Error

Cause: The travel range of the manual axes specified in the belt coupling factors is exceeded.

Solution: Check the parameterization of the kinematics.

F12C0878, Orientation axis traversing range exceeded

Display: [F12C0878](#) Axis group error, System_Error

Cause: The travel range of the orientation axes is exceeded.

Solution: Check the parameterization of the kinematics.

F12C0879, Mathematical workspace exceeded

Display: [F12C0879](#) Axis group error, System_Error

Cause: The mathematical workspace is exceeded.

Solution: Check the parameterization of the kinematics.

F12C087A, Singularity of kinematics

Display: [F12C087A](#) Axis group error, System_Error

Cause: Singularity of the kinematics

Solution: Check the parameterization of the kinematics.

F12C087B, Mathematical workspace exceeded

Display: [F12C087B](#) Axis group error, System_Error

Cause: The mathematical workspace is exceeded.

Solution: Check the parameterization of the kinematics.

F12C087C, Iteration divergent

Display: [F12C087C](#) Axis group error, System_Error

Cause: The iteration is divergent.

Solution: Check the parameterization of the kinematics.

F12C087D, COS singular

Display: [F12C087D](#) Axis group error, System_Error

Cause: The mathematical workspace is exceeded.

Solution: Check the parameterization of the kinematics.

F12C0881, Illegal 'Drives ON'

Display: [F12C0881](#) Axis group error, Other_Error

Cause: "Drive On" is not allowed.

F12C0883, Kinematics axis lost power

Display: [F12C0883](#) Axis group error, Other_Error

XLC/MLC diagnostic system tables

- Cause:** Whilst the kinematic system is operating, at least one of the kinematic axes is now without power.
- Effect:** The kinematic system switches to "Errorstop" status.
- Remedy:**
1. Eliminate the causes of the errors.
 2. Reset the error status.
 3. Add the failed kinematic axes.

F12C0885, Workspace out of range

- Display: [F12C0885](#) Axis group error, Other_Error
- Ursache:** Eine Verfahrenweisung verletzt die konfigurierten Software-Endschalter für die Maschinen-Koordinaten.
- Lösung:** Überprüfen Sie die Verfahrenweisung und die Konfiguration der Software-Endschalter für Maschinen-Koordinaten in den Parametern K-0-0005 und K-0-0006 bzw. im Dialog Bewegungsgrenzwerte.
- Rexroth IndraMotion MLC 1xVRS, Robot-Control V2, Kap. Oberflächenfunktionen/ Kinematik - Dialoge/ Bewegungsgrenzwerte , DOK-MLC***-RO-CO****V1x-RE01-DE-P

F12C08A7, Data transfer error

- Display: [F12C08A7](#) Axis group error, Other_Error
- Cause:** Data transfer error.

F12C08BA, Data transfer error

- Display: [F12C08BA](#) Axis group error, Other_Error
- Cause:** Data transfer error.

F12C08C7, Switch to manual operation not permitted

- Display: [F12C08C7](#) Axis group error, Other_Error
- Cause:** Switch to manual operation not permitted.

F12C0EB4, Memory dump error

- Display: [F12C0EB4](#) Axis group error, Other_Error
- Cause:** Memory dump error.

F12C0EB5, Memory dump error

- Display: [F12C0EB5](#) Axis group error, Other_Error
- Cause:** Memory dump error.

F12C0EB6, Memory dump error

- Display: [F12C0EB6](#) Axis group error, Other_Error
- Cause:** Memory dump error.

F12C0EB7, Memory dump error

- Display: [F12C0EB7](#) Axis group error, Other_Error
- Cause:** Memory dump error.

F12C0EB8, Memory dump error

- Display: [F12C0EB8](#) Axis group error, Other_Error
- Cause:** Memory dump error.

XLC/MLC diagnostic system tables

F12C0EB9, Memory dump error

Display: [F12C0EB9](#)

Axis group error, Other_Error

Cause: Memory dump error.

F12C0F58, Path not defined

Display: [F12C0F58](#)

Axis group error, Other_Error

Cause: The path is not defined due to an incorrect path calculation.

Solution: Contact customer support.

F12C0F59, Position not on the path

Display: [F12C0F59](#)

Axis group error, Other_Error

Cause: A position - not defined on the path - is queried.

Solution: Contact customer support.

F12C0F5A, Path distance to be shortened is too long

Display: [F12C0F5A](#)

Axis group error, Other_Error

Cause: The distance to be shortened exceeds the path distance of the traversing command.

Solution: Contact customer support.

F12C0F70, Parameter length of the spline invalid

Display: [F12C0F70](#)

Axis group error, Other_Error

Cause: The parameter length of the spline could not be determined.

Solution: Contact customer support.

F12C0F71, Spline function invalid

Display: [F12C0F71](#)

Axis group error, Other_Error

Cause: The spline function could not be determined.

Solution: Contact customer support.

F12C0F72, Lengths for spline definition invalid

Display: [F12C0F72](#)

Axis group error, Other_Error

Cause: The length for the spindle definition is close to 0.

Solution: Check the distances between starting point and intermediate point and end point and intermediate point.

F12C0F73, Spline is a straight line

Display: [F12C0F73](#)

Axis group error, Other_Error

Cause: The path through starting point, intermediate point and end point is a straight line.

Solution: Select the points that are not located on a straight line or use the traversing command LINEAR.

F12C0F74, Spline is a line with reversal of direction

Display: [F12C0F74](#)

Axis group error, Other_Error

Cause: The path through starting point, intermediate point and end point is a straight line with reversal of direction.

Solution: Select the points that are not located on a straight line or use the traversing command LINEAR.

XLC/MLC diagnostic system tables

F1350C12, Negative time calculated in movement preparationDisplay: [F1350C12](#)

Axis group error, Other_Error

Cause: Negative time calculated in movement preparation.**3.1.7 F2 errors, axis errors****F2 errors, error reaction**

Logbook entry is generated; message is shown on the display.

Axis (or drive) is decelerated the best possible; all other axes are not affected.

F200**, Drive and command error with error number F******

An error occurred in the drive or while executing a command.

- Cause:**
- At least one drive reports an error with the error number F****.
 - While executing a command, an error with the error number C**** occurred.

Solution: The respective online help is available for self-manufactured drives. Supplement the five-digit error/command error message to an eight-digit MLC error number:

Example:

- F6042 Both travel range limit switches actuated <=> F2006042
- C0126 parameterization of optional encoder incorrect (hardware) <=> Plain text message

For third-party drives, use the drive documentation.

See also: [IndraDrive/HydraulicDrive drive errors](#) , page 57**F20B0005, Drive error**Display: [F20B0005](#)

Axis error, System_Error

If other manufacturers' devices or IndraDrive devices are used as drives in the Pack Profile, then the drive diagnostics cannot be managed by this diagnostic system.

An error is detected in "C-0-0650, Diagnostics, status word, bit 2" and "C-0-0023, System status, bit 26", the error bit is always set.



If IndraDrives are operated as PackProfiles, they do not display an error message on the control.

Cause: At least one drive reports an error of error class 1.**Solution:** Contact the drive manufacturer or take the appropriate measures from the drive documentation.**F20B0172, sercos III: Error format S-0-0390 incompatible**Display: [F20B0172](#)

Axis error, Device_Error

The format of the parameters S-0-0390 is incompatible with the error code processing of the MLC.

Cause:

One of the following incompatible combinations have been detected in bit 31-30 of the parameter S-0-0390:

- 01: Completely manufacturer-specific error code
- 10: Reserved

XLC/MLC diagnostic system tables

A defined error reaction is not possible. The drive is stopped.

Solution:

- Using a drive firmware. The parameter S-0-0390 has to be sercos-compliant in the bits 29-16.

F20BE001, M_Busy-Bit not set

Display: **F20BE001**

Axis error, Communication_Error

Error in the sercos service channel.

Cause:

- An error occurred in the internal processing of the service channel. Refer to the short text for the parameter number and the corresponding error code.

Solution: Start transfer via the service channel again. If the error cannot be corrected, please contact the customer service.

F20BE002, SVC: Protocol error

Display: **F20BE002**

Axis error, Communication_Error

Error in the sercos service channel. Refer to the short text for the parameter number and the corresponding error code.

Cause:

- The sercos service channels Handshake Bits AHS and MHS are different and the bit BUSY_AT is set.

Solution: Start transfer via the service channel again. Check the connected sercos device. If the error cannot be corrected, please contact the customer service.

F20BE003, SVC: Handshake Timeout

Display: **F20BE003**

Axis error, Communication_Error

Error in the sercos service channel. Refer to the short text for the parameter number and the corresponding error code.

Cause:

- The triggered sercos device did not acknowledge its AHS bit after 10 communication cycles in the status word.

Solution: Start transfer via the service channel again. Check the connected sercos device. If the error cannot be corrected, please contact the customer service.

F20BE004, SVC: Busy Timeout

Display: **F20BE004**

Axis error, Communication_Error

Error in the sercos service channel. Refer to the short text for the parameter number and the corresponding error code.

Cause:

- The triggered device accepted the transmission request. The handshake bits AHS and MHS are identical and the BUSY_AT bit is still set after the timeout had elapsed.

Solution: C-0-0504 sercos III: Increase SVC busy timeout.
Check the connected sercos device. If the error cannot be corrected, please contact the customer service.

F20BE005, SVC: Internal error

Display: **F20BE005**

Axis error, Communication_Error

XLC/MLC diagnostic system tables

Error in the sercos service channel. Refer to the short text for the parameter number and the corresponding error code.

Cause:

- An error occurred in the internal processing of the service channel.

Solution: Start transfer via the service channel again. If the error cannot be corrected, please contact the customer service.

F20BE006, SVC in use

Display: **F20BE006** Axis error, Communication_Error

Error in the sercos service channel.

Cause:

- The service channel is still internally assigned. An internal assignment of the SVC is made when setting the command S-0-0127 for example.

Remedy: Start transfer via the service channel again. If the error cannot be corrected, please contact the customer service.

F20BE007, SVC: Request canceled

Display: **F20BE007** Axis error, Communication_Error

Error in the sercos service channel. Refer to the short text for the parameter number and the corresponding error code.

Cause:

- The current transfer was aborted by a transfer with a higher priority

Solution: Start transfer via the service channel again. If the error cannot be corrected, please contact the customer service.

F20BE008, SVC internal request pending

Display: **F20BE008** Axis error, Communication_Error

Error in the sercos service channel.

Cause:

- The service channel is still internally assigned. An internal assignment of the SVC is made when setting the command S-0-0127 for example.

Remedy: Start transfer via the service channel again. If the error cannot be corrected, please contact the customer service.

F20BE009, SVC: Error message without SVC errorcode

Display: **F20BE009** Axis error, Communication_Error

Error in the sercos service channel. Refer to the short text for the parameter number and the corresponding error code.

Cause:

- An error occurred in the internal processing of the service channel.

Solution: Start transfer via the service channel again. If the error cannot be corrected, please contact the customer service.

F20D1015, Error while closing cyclic channel

Display: **F20D1015** Axis error, Access_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

XLC/MLC diagnostic system tables

F20D1025, Error while closing cyclic channel

Display: [F20D1025](#)

Axis error, Communication_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F20D1029, Error opening cyclic channel

Display: [F20D1029](#)

Axis error, Communication_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F20D102B, Error opening cyclic channel (READ-ACCESS)

Display: [F20D102B](#)

Axis error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F20D102C, Error reading access (DirectReadReal)

Display: [F20D102C](#)

Axis error, System_Error

An error occurred in the firmware during reading access to user defined actual data. The value 0.0 returns.

Cause: An error occurred in the firmware.

Remedy: Please contact our service department.

F20D102D, Error reading access (DirectReadWord)

Display: [F20D102D](#)

Axis error, System_Error

An error occurred in the firmware during reading access to user defined actual data. The value 0 returns.

Cause: An error occurred in the firmware.

Remedy: Please contact our service department.

F20D102E, Error reading access (DirectReadDword)

Display: [F20D102E](#)

Axis error, System_Error

An error occurred in the firmware during reading access to user defined actual data. The value 0 returns.

Cause: An error occurred in the firmware.

Remedy: Please contact our service department.

F20D1034, Error write access (DirectWriteWord)

Display: [F20D1034](#)

Axis error, System_Error

An error occurred in the firmware during writing access to user defined commanded data. The value 0 returns to the user interface.

Cause: An error occurred in the firmware.

Remedy: Please contact our service department.

F20D1036, Axis has not been found (ML_AXISDATA)

Display: [F20D1036](#)

Axis error, System_Error

XLC/MLC diagnostic system tables

Axes data are to be read/write whose appropriate axis has not been found. Value 0 is returned to the programming interface (status display).

Cause: There is an access to axis data in the PLC-User program whose axis has not been configured.

Remedy: Perform only access to configured axes.

F20D1037, Invalid write/read access to ML_AXISDATA

Display: [F20D1037](#)

Axis error, System_Error

Axes data are to be read/write whose appropriate parameters has not been found. Value 0 is returned to the programming interface (status display).

Cause: There is an access to axis data in the PLC-User program whose parameters has not been found.

Remedy: Actualize the PLC-Program by the IndraWorks-Project.

F2110002, Axis is not homed

Display: [F2110002](#)

Axis error, Access_Error

A homed axis is needed to execute the required function block.

Cause: The function block MB_Home was not executed.

The current status of the axis can be checked in parameter "A-0-0021, Axis status, bit10".

Solution: Execute the function block MB_Home again.

F2110003, Drive of axis does not exist

Display: [F2110003](#)

Axis error, Resource_Error

The control's axes are defined in parameter "C-0-0484, Axes configuration list". The parameterized drive must be preset in the sercos ring for a real axis to be created.

Cause: A real axis configured in parameters C-0-0484 could not find the assigned drive in the sercos ring.

Solution:

- Set the sercos address on the drive correctly, switch the control off and on again.
- Adapt the configuration of the real axes in parameter C-0-0484 to the existing drives.

F2110004, Synchronization A to S/P-Parameter failed (A-0-0014)

Display: [F2110004](#)

Axis error, System_Error

The A parameters are synchronized with the S/P parameters of the drive during phase start-up.

At least one parameter in the drive could not be written here.

Cause:	Solution:
The parameter is not present in the drive (drive firmware not supported by the control).	Only use drive versions supported by the control firmware.
The parameter is not write protected in the drive (drive firmware not supported by the control).	Only use drive versions supported by the control firmware.
The value of the A parameter is outside of the valid value range.	Write the parameter with a valid value.

XLC/MLC diagnostic system tables

F2110005, Loss of encoder axis reference

Display: [F2110005](#)

Axis error, System_Error

If an encoder axis is parameterized in the control, the current actual position is stored in the control when switching off the control and when switching from phase 4 to phase 2.

When the control is switched on again or switched from phase 2 to phase 2, the current position of the drive is compared with the stored position in the control and the actual position is recalculated. The new actual position could not be calculated with a loss of reference.

Cause:	Solution:
The drive's encoder has lost its reference.	Re-reference drive encoder and encoder axis.
The encoder axis gear was changed.	Re-reference encoder axis.
A single turn encoder was used with a gear ratio that cannot be clearly shown.	No solution available.
An unknown drive firmware was used.	Only use approved drive firmware.

F2110006, Invalid axis configuration

Display: [F2110006](#)

Axis error, System_Error

Operating modes are set in the drive during phase start-up that are dependent on the configuration set in parameter "A-0-0007, Axis configuration".

These could not be written as the configuration in A-0-0007 is incorrect.

Cause: Faulty parameterization in "A-0-0007, Axis configuration".

Solution: Write the parameter with a valid value.

F2110007, Power lost on axis

Display: [F2110007](#)

Axis error, Device_Error

A loss of performance has occurred at the drive and no error was reported from the drive.

Please search in the drive logbook for reasons for the loss of performance.

F2110029, Positive travel limit exceeded

Display: [F2110029](#)

Axis error, Device_Error

The drive provides a function to monitor a permitted travel range by means of parameterizable software end switches.



Monitoring of the travel range must be enabled and parameterized via parameters "A-0-0030, Position limit value, positive", "A-0-0031, Position limit value, negative" and "A-0-0029, Position polarities".

The drive's reaction (warning or error) to an infringement of a travel range must be parameterized in "A-0-0028, Travel range limit".

XLC/MLC diagnostic system tables

Cause:	Solution:
A command value was specified for the axis, which leads to an axis position outside of the positive travel range/position/limit value, "A-0-0030, Position limit value, positive".	1. Clear error 2. Specify a command value that leads again into the permitted travel range. 3. Contact the machine manufacturer to clarify the cause of the faulty command value.
Incorrect parameterization of the positive travel range / position limit value	Check and possibly correct parameterization of "A-0-0030, Position limit value, positive"



Parameter "A-0-2795, Position window" is used to execute a hysteresis function when evaluating the position limit values.

F2110030, Negative travel limit exceeded

Display: [F2110030](#)

Axis error, Device_Error

The drive provides a function to monitor a permitted travel range by means of parameterizable software end switches.



Monitoring of the travel range must be enabled and parameterized via parameters "A-0-0030, Position limit value, positive", "A-0-0031, Position limit value, negative" and "A-0-0029, Position polarities".

The drive's reaction (warning or error) to an infringement of a travel range must be parameterized in "A-0-0028, Travel range limit".

Cause:	Solution:
A command value was specified for the axis, which leads to an axis position outside of the negative travel range/position/limit value "A-0-0031, Position limit value, negative".	1. Clear error 2. Specify a command value that leads again into the permitted travel range. 3. Contact the machine manufacturer to clarify the cause of the faulty command value.
Incorrect parameterization of the negative travel range / position limit value	Check and possibly correct parameterization of "A-0-0031, Position limit value, negative".



Parameter "A-0-2795, Position window" is used to execute a hysteresis function when evaluating the position limit values.

F2110100, Control axis in error

Display: [F2110100](#)

Axis error, Device_Error

An error has occurred in the controller that was set from the PLC. The axis was subsequently stopped.

A precise error code was not issued in "A-0-0627 Controller axis, diagnostic number".

Cause: During the execution of the PLC program, the control axis issued an error.

Solution: Correct the error in the control and acknowledge the error in the axis.

F2112053, Target position out of travel range error

Display: [F2112053](#)

Axis error, System_Error

XLC/MLC diagnostic system tables

A check is made with discrete motion, before a movement is executed, to ascertain whether the specified target position is in the permitted travel range of the axis.

Cause:	Solution:
Incorrectly parameterized position limit values: "A-0-0030, Position limit value, positive" and "A-0-0031, Position limit value, negative".	Check the parameterization of the position limit values and adjust according to the required travel range. "A-0-0030, Position limit value, positive" must be greater than "A-0-0031, Position limit value, negative".
Position limit value monitoring is enabled although it is not needed.	Disable position limit value monitoring if it is not needed (for instance in Modulo mode).
With relative motion, the travel distance was set too large or several travel distances that have to be added together lead to the effective target position (cf. "A-0-2201, Commanded target position") lying outside of the position limits.	Check the specified travel distance (cf. "A-0-2201, Commanded target position") and adjust in the control program if necessary.
With absolute interpolation, the target position was specified incorrectly.	Check the specified target position and adjust in the control program if necessary (enter target position only within the position limit values).

F2116029, Positive travel limit exceeded

Display: [F2116029](#)

Axis error, Input_Range_Error

The axis provides a function to monitor a permitted travel range by means of parameterizable software end switches.

Cause:	Solution:
	Clear error and connect power.
A command value was specified for the axis, which leads to an axis position outside of "A-0-0030, Position limit value, positive".	Specify a command value that leads again into the permitted travel range.
Incorrect parameterization of "A-0-0030, Position limit value, positive".	Check and possibly correct incorrect parameterization of "A-0-0030, Position limit value, positive".

F2116030, Negative travel limit exceeded

Display: [F2116030](#)

Axis error, Input_Range_Error

The axis provides a function to monitor a permitted travel range by means of parameterizable software end switches.

Cause:	Solution:
	Clear error and connect power.
A command value was specified for the axis, which leads to an axis position outside of "A-0-0031, Position limit value, negative".	Specify a command value that leads again into the permitted travel range.
Incorrect parameterization of "A-0-0031, Position limit value, negative".	Check and possibly correct incorrect parameterization of "A-0-0031, Position limit value, negative".

F2119001, RTOS error, illegal master axis

Display: [F2119001](#)

Axis error, System_Error

The drive was switched off by the firmware.

XLC/MLC diagnostic system tables

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F2220231, Invalid master axis data

Display: F0220231

Axis error, Other_Error

When synchronizing an axis to a master axis and during the synchronization operation, a check is run to see if the master axis provides valid data. The status of the master axis data is made available in A-0-0021, bit 30.

If the master axis data is invalid, the error "F2220231, Invalid master axis data" is generated.

Invalid master axis data can occur both locally at an individual control and in the control link.

Cause:	Remedy:
Local control - The phase of the drive ring is less than P4 - The axis is disabled/parked and the command value decoupling is also disabled	Make sure that - the control is in operation mode - the configuration of the axes and the command value decoupling is feasible
Control link - The phase of the drive ring in the producing control is less than P4 - The phase of the link ring is less than P4 - The axis is disabled/parked - The command value decoupling is enabled	Make sure that - the producing control is in operation mode - the control link started up successfully - the axis is enabled - the command value decoupling is disabled

F2220356, Invalid filter time const., additive master position

Display: F2220356

Axis error, Access_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The requested filter time constant in the parameter "A-0-2601, ELS, Filter time constant, additive master axis position" is invalid.

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2220357, Invalid filter time const., angle offset begin of profile

Display: F2220357

Axis error, Access_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The requested filter time constant in parameter "A-0-2621, ELS, filter constant, phase offset of table" is invalid.

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2220358, Invalid filter time const., additive slave position

Display: F2220358

Axis error, Access_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

XLC/MLC diagnostic system tables

The requested filter time constant in parameter "A-0-2611, ELS, filter time constant, additive position command value" is invalid.

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2220610, Invalid master axis

Display: [F2220610](#) Axis error, Input_Invalid_Error

The selected axis cannot be used as master axis for the command.

Cause: The selected axis does not provide any ELS position. It is possible that the axis was configured for an operation without encoder.

Axes not returning any actual position values to the control system could exclusively be used as slave axes.

Solution: Check whether the selected master axis is provided with a position encoder and is configured correspondingly.

F2229200, General drive error

Display: [F2229200](#) Axis error, Other_Error

In the PLC-Program a movement command was generated, which is aborted during execution by an error in the addressed axis. The addressed real axis is connected to a drive. This drive reports an error.

Cause: In the PLC-Program a movement command for a real axis was generated. The drive of the real axis has detected an error during execution.

Remedy: Correct the error in the drive and quit the error in the axis. Subsequently activate the desired movement command again.

F2229203, Invalid command type

Display: [F2229203](#) Axis error, State_Machine_Error

In the PLC-Program an unknown command is generated.

Cause: In the PLC-Program an unknown command was generated.

Remedy: Actualize the PLC-Program.

F2229204, Command not supported by axis

Display: [F2229204](#) Axis error, State_Machine_Error

A command that cannot be supported by the addressed axis is generated in the PLC program.

When configuring the axis, an axis type is selected that does not support the desired command (see status diagram of the axis type).

Cause: An illegal command was generated for the addressed axis in the PLC program.

Solution: Update the PLC program or change the configuration of the axis in the control (see parameter "C-0-0484, Axes configuration list").

F2229205, Command rejected, no power

Display: [F2229205](#) Axis error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

No power or torque is currently switched on for the axis.

Cause: A motion command is generated for an axis in the PLC program without power being enabled.

XLC/MLC diagnostic system tables

Solution: Switch on the power or torque of the axis using function block MC_Power.

F2229206, Command rejected while 'Stopping'

Display: [F2229206](#)

Axis error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis was switched to "Stopping" state using a function block MC_Stop. The function block MC_Stop is still active and has priority over other function blocks or motion commands (see Axis type status diagram).

Cause: In the PLC program, an unauthorized motion command was generated for an axis in the "Stopping" state.

Solution: Switch the axis to "Standstill" state using the MC_Stop function block. Then enable the desired motion command.

F2229207, Command rejected while 'Homing'

Display: [F2229207](#)

Axis error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis was switched to "Homing" state using a function block MB_Home. The function block MB_Home is still active and has priority over other function blocks or motion commands (see Axis type status diagram).

Cause: In the PLC program, a motion command was generated for an axis in the "Homing" state.

Solution: Wait until the function block MB_Home has been processed by the control or use function block MC_Stop to switch the axis to "Standstill" state. Then enable the desired motion command.

F2229208, Invalid command number

Display: [F2229208](#)

Axis error, State_Machine_Error

A movement command is generated in the PLC-Program by a function block. When generating the command, the function block obtains a command number from the control kernel. When reading the command status, the function block assign the command number as reference to the command. The assigned command number is invalid, resp. obsolete.

Cause: In the PLC-Program the status of a movement command was prompted by a function block. The assigned command number is invalid, resp. obsolete.

Remedy: Actualize the PLC-Program.

F2229209, Command 'Homing' rejected

Display: [F2229209](#)

Axis error, Device_Error

A motion command is generated by the user program. This motion command can currently not be executed by the addressed axis.

Cause: In the PLC program, the MB_Home function block was executed for an axis. A preceding referencing using MB_Home is not fully completed. Thus, the function block cannot be restarted again.

Remedy: The second referencing using MB_Home is to be started in a later task cycle of the user program.

F2229210, Reset still 'ErrorStop'

Display: [F2229210](#)

Axis error, State_Machine_Error

XLC/MLC diagnostic system tables

The function block MC_Reset is used to generate the command "Error deletion" in the PLC program.

The pending error cannot be deleted.

Cause: The function block MC_Reset is used to generate the command "Error deletion" in the PLC program. The pending error could not be deleted.

Solution: Eliminate the cause of the error. Then acknowledge the error.

F2229211, Command rejected while 'Discrete Motion'

Display: [F2229211](#) Axis error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis is in "Discrete Motion" state. The requested motion command and the enabled function block are not permitted in "Discrete Motion" state (see the Axis type status diagram).

Cause: An unauthorized motion command was generated for an axis in the "Discrete Motion" state in the PLC program.

Solution: Enable the desired motion command after the control has executed the current Motion command and the axis has been switched to "Standstill" state or switch the axis to "Standstill" state using function block MC_Stop. Then enable the desired motion command.

F2229212, Command rejected while 'Continuous Motion'

Display: [F2229212](#) Axis error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis is in "Continuous Motion" state. The requested motion command and the enabled function block are not permitted in "Continuous Motion" state (see the Axis type status diagram).

Cause: An unauthorized motion command is generated for an axis in the "Continuous Motion" state in the PLC program.

Solution: Using function block MC_Stop, switch the axis to "Standstill" state and then enable the desired motion command.

F2229213, Command rejected while 'Synchronized Motion'

Display: [F2229213](#) Axis error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis is in "Synchronized Motion" state. The requested motion command and the enabled block are not permitted in "Synchronized Motion" state (see the Axis type status diagram).

Cause: An unauthorized motion command was generated for an axis in the "Synchronized Motion" state in the PLC program.

Solution: Using function blocks MC_GearOut, MC_CamOut or MC_Stop, switch the axis to "Continuous Motion" or "Standstill" state. Then enable the desired motion command.

F2229214, Command rejected while 'ErrorStop'

Display: [F2229214](#) Axis error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

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The axis has detected an error and switched to "Errorstop" state. The requested motion command and the enabled function block are not permitted in "Errorstop" state (see the Axis type status diagram).

Cause: An unauthorized motion command was generated for an axis in "Errorstop" state in the PLC program.

Solution: Delete the pending axis error or, using function block MC_Reset, switch the axis to "Standstill" state. Then enable the desired motion command.

F2229216, No power available

Display: [F2229216](#) Axis error, State_Machine_Error

A command that cannot be executed by the addressed axis is generated in the PLC program.

The axis torque cannot be switched on by the function block MC_Power. Power is not connected to the drive controller (see Drive documentation).

Cause: Power is not connected to the drive controller.

Solution: Check the drive controller or its power supply (see Drive documentation).

F2229217, Command rejected while 'StandStill' and 'PowerOn'

Display: [F2229217](#) Axis error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis is in "Standstill" / "PowerOn" state. The requested motion command or the enabled function block are not permitted in "Standstill" state (for instances MC_CamOut, MC_GearOut).

Cause: An unauthorized motion command was generated for an axis in the "Standstill" / "PowerOn" state in the PLC program.

Solution: Update the PLC program.

F2229218, Command rejected while 'StandStill'

Display: [F2229218](#) Axis error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis is in "Standstill" state. The requested motion command or the enabled function block are not permitted in "Standstill" state (see the Axis type status diagram).

Cause: An unauthorized motion command was generated for an axis in the "Standstill" state in the PLC program.

Solution: Update the PLC program.

F2229221, Targetposition above maximum

Display: [F2229221](#) Axis error, INPUT_RANGE_ERROR

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The target position for the requested motion command or the enabled function block is greater than the permitted maximum value in parameter "A-0-2201, target position".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

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F2229222, Targetposition below minimum

Display: [F2229222](#)

Axis error, INPUT_RANGE_ERROR

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The target position for the requested motion command or the enabled function block is smaller than the permitted minimum value in parameter "A-0-2201, target position".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2229223, Velocity below minimum

Display: [F2229223](#)

Axis error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The velocity for the required movement command, resp. the activated function block is less than the permitted minimum value in parameter commanded velocity (see parameter "A-0-2202, Commanded velocity").

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Actualize the PLC-Program.

F2229224, Velocity above maximum

Display: [F2229224](#)

Axis error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The velocity for the required movement command, resp. the activated function block is greater than the permitted maximum value in parameter commanded velocity (see parameter "A-0-2202, Commanded velocity").

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Actualize the PLC-Program.

F2229225, Acceleration below minimum

Display: [F2229225](#)

Axis error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The acceleration for the required movement command, resp. the activated function block is less than the permitted minimum value in parameter commanded acceleration (see parameter "A-0-2203, Commanded acceleration").

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Actualize the PLC-Program.

F2229226, Acceleration above maximum

Display: [F2229226](#)

Axis error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The acceleration for the required movement command, resp. the activated function block is greater than the permitted maximum value in parameter commanded acceleration (see parameter "A-0-2203, Commanded acceleration").

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Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Actualize the PLC-Program.

F2229227, Deceleration below minimum

Display: [F2229227](#)

Axis error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The deceleration for the required movement command, resp. the activated function block is less than the permitted minimum value in parameter commanded deceleration (see parameter "A-0-2204, Commanded deceleration").

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Actualize the PLC-Program.

F2229228, Deceleration above maximum

Display: [F2229228](#)

Axis error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The deceleration for the required movement command, resp. the activated function block is greater than the permitted maximum value in parameter commanded deceleration (see parameter "A-0-2204, Commanded deceleration").

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Actualize the PLC-Program.

F2229229, Jerk below minimum

Display: [F2229229](#)

Axis error, INPUT_RANGE_ERROR

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The jerk (A-0-0216) for the required movement command or the activated function block is less than the allowable minimum value.

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Remedy: Update the PLC program.

F2229230, Jerk above maximum

Display: [F2229230](#)

Axis error, INPUT_RANGE_ERROR

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The jerk (A-0-0216) for the required movement command or the activated function block is greater than the allowable maximum value.

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Remedy: Update the PLC program.

F2229231, Invalid direction

Display: [F2229231](#)

Axis error, Input_Range_Error

If "A-0-0059, Position data scaling type" was set in such a way that the position data of the axis are to be processed in modulo format and positive or

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negative rotational direction was selected in "A-0-0203, Direction", a command value in the wrong direction causes error [F2229231](#) to be generated.

Cause: Rotational direction of "modulo axis" incorrectly parameterized for drive-controlled positioning procedures.

Remedy: Check command value mode that was set.

F2229232, Invalid master control number

Display: [F2229232](#) Axis error, Resource_Error

A variable of the type AXIS_REF is used in the PLC program that addresses a master axis in a remote control.

This present firmware version only supports access to local control axes.

Cause: A master axis of a remote control was addressed in the PLC program.

Solution: Update the PLC program.

F2229233, Invalid master axis number

Display: [F2229233](#) Axis error, Resource_Error

A variable of the type AXIS_REF is used in the PLC program that addresses a master axis unknown in the control.

Cause: An unknown axis was addressed in the PLC program.

Solution: Update the PLC program or configure the missing axis in the control (see parameter "C-0-0484, Axes configuration list").

F2229234, Invalid CamTable ID

Display: [F2229234](#) Axis error, Resource_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The required cam (CAMTableID) is unknown (refer to Description of data type MC_CAM_ID and parameter "A-0-2740, ELS, CamIn, cam table preselection").

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program, load the required cam into the drive if necessary.

F2229235, Error in MotionProfile

Display: [F2229235](#) Axis error, System_Error

The control checks whether the defined MotionProfiles (16 single motion steps max.) are plausible in themselves during the activation of the electronic MotionProfile. The error is generated if the plausibility checks failed. Depending on whether the error is in block 1 or block 2, a number is displayed in parameter "A-0-2902, MotionProfile 0, diagnostics" or "A-0-2903, MotionProfile 1, diagnostics".



Even if the MotionProfile contains several errors, the diagnostic message is only generated once and not for each error in the profile.

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Cause:	Solution:
1: The master axis initial positions of the motion steps used do not increase	Check list "A-0-2912, MotionProfile 0, list of initial master axis positions" or "A-0-2922, MotionProfile 1, list of initial master axis positions".
2: With an absolute MotionProfile, the sum of the individual distances is not "0" or a multiple of "A-0-0045, Modulo value"	Check list "A-0-2914, MotionProfile 0, list of distances" and "A-0-2924, MotionProfile 1, list of distances".
3: With a relative MotionProfile, the number of motion steps is less than "2"	Check parameter "A-0-2910, MotionProfile 0, number of motion steps" and "A-0-2920, MotionProfile 1, list of motion steps".
201...216: The checked motion step is "Rest-in-Velocity" or "Velocity-in-Velocity". The following step consists of a profile that is not "Velocity-in-Rest" or "Rest-in-Velocity". The number of the checked motion step can be taken from the second or third place of the diagnostic number	Check list "A-0-2913, MotionProfile 0, list of motion laws" and "A-0-2923, MotionProfile 1, list of motion laws".
301...316: The checked motion step is "Rest-in-Velocity" or "Velocity-in-Velocity". The following step consists of a profile that is either "Velocity-in-Rest" or "Rest-in-Velocity". The velocity of the checked step and the velocity of the following step do not correspond. The number of the checked motion step can be taken from the second or third place of the diagnostic number	Check list "A-0-2915, MotionProfile 0, list of slave axis velocities" and "A-0-2925, MotionProfile 1, list of slave axis velocities".
401...416: The checked motion step is "Velocity-in-Rest" or "Velocity-in-Velocity". The previous step consists of a profile that is not "Rest-in-Velocity" or "Velocity-in-Velocity". The number of the checked motion step can be taken from the second or third place of the diagnostic number	Check list "A-0-2913, MotionProfile 0, list of motion laws" and "A-0-2923, MotionProfile 1, list of motion laws".
501...516: The checked motion step is "Velocity-in-Rest" or "Velocity-in-Velocity". The previous step consists of a profile that is either "Velocity-in-Rest" or "Rest-in-Velocity". The velocity of the step checked and the velocity of the previous step do not correspond. The number of the checked motion step can be taken from the second or third place of the diagnostic number	Check list "A-0-2915, MotionProfile 0, list of slave axis velocities" and "A-0-2925, MotionProfile 1, list of slave axis velocities".
601...699: The 1st table element of the cam table used is not equal to zero or the cam table is invalid. The number of the checked motion step can be taken from the second or third place of the diagnostic number	Check list "A-0-2913, MotionProfile 0, list of motion laws" and "A-0-2923, MotionProfile 1, list of motion laws".
701...716: The checked motion step is "Velocity-in-Rest", "Velocity-in-Velocity" or "Rest-in-Velocity". The distance of the motion step is "0", an unauthorized number. The number of the checked motion step can be taken from the second or third place of the diagnostic number	Check list "A-0-2914, MotionProfile 0, list of distances" and "A-0-2924, MotionProfile 1, list of distances".

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Cause:	Solution:
801...816: The checked motion step is "constant velocity". The following step consists of a profile that is either "Velocity-in-Rest" or "Rest-in-Velocity". The velocity of the checked step and the velocity of the following step do not correspond. The number of the checked motion step can be taken from the second or third place of the diagnostic number	Check list "A-0-2915, MotionProfile 0, list of slave axis velocities" and "A-0-2925, MotionProfile 1, list of slave axis velocities".
901...916: The checked motion step is "Rest-in-Velocity" or "Velocity-in-Velocity". The following step consists of a profile with "constant velocity". The velocity of the checked step and the velocity of the following step do not correspond. The number of the checked motion step can be taken from the second or third place of the diagnostic number	Check list "A-0-2915, MotionProfile 0, list of slave axis velocities" and "A-0-2925, MotionProfile 1, list of slave axis velocities".

F2229263, RatioNumerator below minimum

Display: [F2229263](#)

Axis error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The master drive gear input revolutions (RatioNumerator) for the requested motion command or the enabled function block are less than the permitted minimum value in parameter "A-0-2720, ELS, master axis gear, input revolutions".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2229264, RatioNumerator above maximum

Display: [F2229264](#)

Axis error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The master drive gear input revolutions (RatioNumerator) for the requested motion command or the enabled function block are greater than the permitted maximum value in parameter "A-0-2720, ELS, master axis gear, input revolutions".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2229265, RatioDenominator below minimum

Display: [F2229265](#)

Axis error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The master drive gear output revolutions (RatioDenominator) for the requested motion command or the enabled function block are less than the permitted minimum value in parameter "A-0-2721, ELS, master axis gear, output revolutions".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

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F2229266, RatioDenominator above maximumDisplay: [F2229266](#)

Axis error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The master drive gear output revolutions (RatioDenominator) for the requested motion command or the enabled function block are greater than the permitted maximum value in parameter "A-0-2721, ELS, master axis gear, output revolutions".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2229267, MasterFineAdjust below minimumDisplay: [F2229267](#)

Axis error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The gear ratio fine adjust (MasterFineadjust) for the requested motion command or the enabled function block is less than the permitted minimum value in parameter "A02722, ELS, gear ratio fine adjust".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2229268, MasterFineAdjust above maximumDisplay: [F2229268](#)

Axis error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The gear ratio fine adjust (MasterFineadjust) for the requested motion command or the enabled function block is greater than the permitted maximum value in parameter "A02722, ELS, gear ratio fine adjust".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2229269, Invalid SyncModeDisplay: [F2229269](#)

Axis error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The required synchronization direction (SyncMode) is unknown (refer to Description of data type MC_SYNC_DIRECTION).

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2229270, Invalid StartModeDisplay: [F2229270](#)

Axis error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The required type of synchronization (StartMode) is unknown (refer to Description of data type MC_START_MODE).

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Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2229271, Cam distance below minimum value

Display: [F2229271](#)

Axis error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The cam distance (CamShaftDistance) for the requested motion command or the enabled function block is less than the permitted minimum value in parameter "A02741, ELS, CamIn, cam distance".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2229272, Cam distance above maximum value

Display: [F2229272](#)

Axis error, Input_Range_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The cam distance (CamShaftDistance) for the requested motion command or the enabled function block is greater than the permitted maximum value in parameter "A02741, ELS, CamIn, cam distance".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2229273, Command rejected while 'Parameter Mode'

Display: [F2229273](#)

Axis error, Other_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The control and all axes are in parameter mode. In parameter mode no movement commands are executable.

Cause: In the PLC-Program a movement command was generated, although the control is in parameter mode.

Remedy: Switch the control to operating mode and subsequently activate the desired movement command.

F2229274, Axis not referenced

Display: [F2229274](#)

Axis error, Other_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program. The axis is not homed and can only be moved relatively.

Cause: A motion command was generated in the PLC program for an axis without position reference that requests the position reference of the axis.

Solution: Home the axis using function block MB_Home or parameter "A-0-2807, Command: Set absolute measuring" and then enable the required motion command.

F2229275, Command aborted

Display: [F2229275](#)

Axis error, Other_Error

In the PLC-Program a movement command is generated and aborted during execution. This command must not be aborted.

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Cause: In the PLC-Program a movement command is generated and aborted during execution. This command must not be aborted.

Remedy: Actualize the PLC-Program.

F2229276, Control error

Display: [F2229276](#)

Axis error, System_Error

The axis is stopped because of a control error. An ongoing motion command in the PLC - program will be aborted. The control doesn't accept any further motion command.

Remedy: Correct and quit the error of the control. Subsequently activate the desired movement command again.

F2229277, Direct master axis change

Display: [F2229277](#)

Axis error, Other_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The command requests the axis to follow a master axis (e.g. MC_CamIn or MC_GearIn). The axis is already following another master axis. The direct switchover to a new master axis is not supported in this firmware version.

Cause: A motion command was generated in the PLC program that requires a direct change of master axis from the axis.

Solution: Disconnect the axis from the original master axis (for instance using MC_CamOut or MC_GearOut). Then enable the desired motion command.

F2229278, Disabled axis

Display: [F2229278](#)

Axis error, System_Error

The axis was switched to "disabled" state using parameter "A-0-0024, Axis condition". A disabled axis cannot execute motion commands.

Cause: A motion command for a disabled axis was generated in the PLC program.

Solution: Switch the control to parameterization mode (parameter C-0-0451, Motion, target mode) and enable the axis (parameter A-0-0024, Axis condition). Then restart the desired motion command.

F2229279, Command 'parking axis' active

Display: [F2229279](#)

Axis error, System_Error

The axis was switched to "parked" state using parameter "A-0-0024, Axis condition". A parked axis cannot execute motion commands.

Cause: A motion command for a parked axis was generated in the PLC program.

Solution: Switch the control to parameterization mode (parameter C-0-0451, Motion, target mode) and enable the axis (parameter A-0-0024, Axis condition). Then restart the desired motion command.

F2229280, Command rejected while 'Coordinated Motion'

Display: [F2229280](#)

Axis error, System_Error

Following the successful call of MC_AddAxisToGroup, the axis is in the "Coordinated Motion" state.

The following function modules can be used in this state:

- all kinematics function blocks
- MC_Reset

All other FBs result in the error described above.

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Cause: An unauthorized motion command was generated for an axis in the "Coordinated Motion" state in the PLC program.

Solution: Update the PLC program.

F2229281, Invalid float data

Display: [F2229281](#) Axis error, System_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis.

At least one input parameter of a function block contains an invalid floating point value.

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Actualize the PLC-Program.

F2229282, MotionProfile, SetSelection below minimum value

Display: [F2229282](#) Axis error, System_Error

A motion command "MotionProfile" that cannot be executed by the addressed axis is generated in the PLC program.

Cause: The input value "SetSelection" was assigned a value of less than the minimum value (currently 0).

Remedy: Update the PLC program.

F2229283, MotionProfile, SetSelection above maximum value

Display: [F2229283](#) Axis error, System_Error

A motion command "MotionProfile" that cannot be executed by the addressed axis is generated in the PLC program.

Cause: The input value "SetSelection" was assigned a value of greater than 1.

Remedy: Update the PLC program.

F2229284, Cam table is write-protected

Display: [F2229284](#) Axis error, System_Error

The active cam table could not be changed by MB_ChangeProfileSet or MB_ChangeProfileStep.

Cause: The cam table changed by MB_ChangeProfileSet or MB_ChangeProfileStep is active.

Remedy: -

F2229285, CAM table, usage counter out of range

Display: [F2229285](#) Axis error, System_Error

A motion command "MotionProfile" that cannot be executed by the addressed axis is generated in the PLC program.

Cause: The input value "SetSelection" was assigned a value of greater than 1.

Remedy: Update the PLC program.

F2229286, Choice relative positioning above max. value

Display: [F2229286](#) Axis error, System_Error

A motion command "MotionProfile" that cannot be executed by the addressed axis is generated in the PLC program.

Cause: The input value "SetSelection" was assigned a value of greater than 1.

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Remedy: Update the PLC program.

F2229287, Can not assign axis to kinematics

Display: [F2229287](#)

Axis error, Other_Error

The function block MC_AddAxisToGroup attempts to assign an axis to a kinematic in the PLC program.

Cause:	Solution:
The axis does not belong to the kinematics	Only assign axes to the kinematic using "MC_AddAxisToGroup" that have previously been configured to the kinematic.
The axis does not belong to the kinematic but is a belt axis.	Only assign axes to the kinematic using "MC_AddAxisToGroup" that have previously been configured to the kinematic and are not belt axes.

F2229296, Absolute entry point in FlexProfile not found

Display: [F2229296](#)

Axis error, System_Error

The specified access position is not available in the FlexProfile.

As the start position cannot be found, the profile cannot be started, i.e. the master axis is located in a position in which the resulting slave axis position cannot be definitively determined.

Cause: An attempt was made to begin the FlexProfile with absolute start mode.

However, the selected FlexProfile is shorter than the current master axis position. The access point cannot be determined.

Remedy: Ensure that the FlexProfile is correct.

Position the master axis in such a way that a valid access point into the profile can be determined or select another start mode.

F2229297, Absolute entry in FlexProfile not possible

Display: [F2229297](#)

Axis error, System_Error

The specified access position into the FlexProfile is not clear.

Cause: Different masters are used in the selected FlexProfile.

An absolute access into such a profile can only take place up to the first change of master as, after this time, the access point can no longer be definitively determined.

Remedy: Position the master axis in such a way that a valid access point into the profile can be determined or select another start mode.

F2229298, Master velocity of FlexProfile is negative

Display: [F2229298](#)

Axis error, System_Error

The current master axis velocity is negative.

Cause: The selected FlexProfile contains either conditions or time-master axes.

Such Profiles can only be operated with positively rotating master axes.

Remedy: Update the PLC program.

F2229300, Invalid command channel

Display: [F2229300](#)

Axis error, Access_Error

An invalid command channel is selected in the PLC program using the function module MB_Open Cyclic... .

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Cause: Firmware version and PLC library (ML_PLCOpen.lib, MLBase.lib) do not match.

Remedy: Use the corresponding PLC library version for the firmware.

F2229301, Command rejected while 'Controlled Motion'

Display: [F2229301](#)

Axis error, Access_Error

After the successful call of ML_ControlOn, the axis is in the "Controlled Motion" state.

The following function modules can be used in this state:

- ML_OpenCyclicPositionChannelCtrl,
- ML_OpenCyclicVelocityChannelCtrl,
- ML_OpenCyclicTorqueChannelCtrl,
- ML_OpenCyclicAnalogChannelCtrl,
- ML_ControlOff.

All other FBs result in the error described above.

Cause: An unauthorized motion command was generated in the PLC program for an axis in the "Controlled Motion" state.

Solution: Update the PLC program.

F2229310, Error in calculation of FlexProfile step

Display: [F2229310](#)

Axis error, Access_Error

This category of error leads to the axis being switched off by the firmware. Differentiation between several numbers helps to better locate the cause of the error.

Cause: An error has occurred in the firmware when calculating the motion laws.

Remedy: Please contact customer service.

F2229311, FlexProfile: Invalid switching position

Display: [F2229311](#)

Axis error, Access_Error

A motion command "FlexProfile" that cannot be executed by the addressed axis is generated in the PLC program.

Cause: The input value "SwitchingPosition" was assigned an incorrect value.

Remedy: Update the PLC program.

F2229312, FlexProfile: Invalid FlexProfile startmode

Display: [F2229312](#)

Axis error, Access_Error

A motion command "FlexProfile" that cannot be executed by the addressed axis is generated in the PLC program.

Cause: The input value "ProfileEntry" was assigned an incorrect value.

Remedy: Update the PLC program.

F2229313, FlexProfile: Invalid FlexProfile slave axis offset

Display: [F2229313](#)

Axis error, Access_Error

A motion command "FlexProfile" that cannot be executed by the addressed axis is generated in the PLC program.

Cause: The input value "SlaveOffset" was assigned an incorrect value.

Remedy: Update the PLC program.

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F2229314, Sum of dist. not 0 or mod. value, cyclic exec. not pos.Display: [F2229314](#)

Axis error, Access_Error

A motion command "FlexProfile" that cannot be executed by the addressed axis is generated in the PLC program.

Cause: With the FlexProfile, the sum of the distances for a cyclic operation, must correspond to 0 or to the Modulo value of the slave axis (should this be rotatory).

Remedy: Update the configuration of the FlexProfile.

F2229315, Invalid FlexProfile: Execution not possibleDisplay: [F2229315](#)

Axis error, Access_Error

The FlexProfile cannot be started as it is still invalid.

Cause: The selected FlexProfile was not yet checked or the check failed.

Remedy: Update the configuration of the FlexProfile. Start the check of the FlexProfile via the corresponding parameter.

F2229335, FlexProfile: Set is write-protectedDisplay: [F2229335](#)

Axis error, Access_Error

The selected profile cannot be applied.

Cause: The selected MotionProfile is currently active and cannot therefore be overwritten.

Remedy: Disable the selected MotionProfile before carrying out the update.

F2229336, FlexProfile: Invalid step numberDisplay: [F2229336](#)

Axis error, Access_Error

The function block "MB_ChangeFlexStep" is used in the PLC program to initiate a change of a FlexProfile that cannot be executed by the addressed axis.

Cause: The input value "StepNumber" was assigned a value that is greater than the maximum or the current number of motion steps of the selected FlexProfile.

Remedy: Update the PLC program.

F2229337, FlexProfile: Set number out of rangeDisplay: [F2229337](#)

Axis error, Access_Error

The function block "MB_ChangeFlexSet" or "MB_ChangeFlexSet" is used in the PLC program to initiate a change of a FlexProfile that cannot be executed by the addressed axis.

Cause: The input value "SetNumber" was assigned a value of greater than 3.

Remedy: Update the PLC program.

F2229338, ChangeFlexProfile: Invalid nominal master velocityDisplay: [F2229338](#)

Axis error, Access_Error

The function block "MB_ChangeFlexSet" in the PLC program has specified an invalid nominal master axis velocity.

Cause: The input value "MasterAxisVelocity" was assigned an incorrect value.

Remedy: Update the PLC program.

F2229339, ChangeFlexProfile: invalid operation modeDisplay: [F2229339](#)

Axis error, Access_Error

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The function block "MB_ChangeFlexStep" in the PLC program is specifying an operation mode for profile processing.

Cause: The input value "OperationMode" was assigned an incorrect value.

Remedy: Update the PLC program.

F2229341, FlexEvent: Set is write-protected

Display: [F2229341](#) Axis error, Access_Error

A change in the event definitions of a FlexProfile MotionProfile that cannot be executed by the addressed axis is initiated in the PLC program using the function block MB_ChangeFlexEventSet.

Cause: The selected MotionProfile is currently active and cannot therefore be overwritten.

Remedy: Disable the selected MotionProfile before carrying out the update.

F2229342, FlexEvent: Set number out of range

Display: [F2229342](#) Axis error, Access_Error

The function block MB_ChangeFlexEventSet is used in the PLC program to initiate a change of a MotionProfile block that cannot be executed by the addressed axis.

Cause: The input value "uiSetNumber" was assigned a value that is greater than the maximum number of motion steps.

Remedy: Update the PLC program.

F2229347, FlexProfile: Invalid. Single execution not possible

Display: [F2229347](#) Axis error, Access_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The FlexProfile MotionProfile that was started with function block ML_FlexProfile cannot be executed "singly" but only "cyclically".

Cause: The motion command "FlexProfile" was started for an axis in the PLC program using parameters "EXECUTE_SINGLE" although the selected MotionProfile cannot be started in this mode.

Possible reasons:

- The last motion step of the selected MotionProfile is a "Flex" step.

Solution: Update the PLC program and/or correct the selected MotionProfile.

F2229348, FlexProfile: Invalid. Cyclic execution not possible

Display: [F2229348](#) Axis error, Access_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The FlexProfile MotionProfile that was started with function block ML_FlexProfile cannot be executed "cyclically" but only "singly".

Cause: The motion command "FlexProfile" was started for an axis in the PLC program using parameter "EXECUTE_CYCLIC" although the selected MotionProfile cannot be started in this mode.

Possible reasons:

- The starting velocity of the first motion step is not consistent with the end velocity of the last motion step.

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- The starting acceleration of the first motion step is not consistent with the end acceleration of the last motion step.
- The starting jerk of the first motion step is not consistent with the end jerk of the last motion step.

Solution: Update the PLC program and/or correct the selected MotionProfile.

F2229351, Synchronisation velocity below minimum

Display: [F2229351](#)

Axis error, Access_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The synchronization velocity for the requested motion command or the enabled function block is less than the permitted minimum value in parameter "A-0-2790, ELS, synchronization velocity".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2229352, Synchronisation velocity above maximum

Display: [F2229352](#)

Axis error, Access_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The synchronization velocity for the requested motion command or the enabled function block is greater than the permitted maximum value in parameter "A-0-2790, ELS, synchronization velocity".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2229353, Synchronisation acceleration below minimum

Display: [F2229353](#)

Axis error, Access_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The synchronization velocity for the requested motion command or the enabled function block is less than the permitted minimum value in parameter "A-0-2790, ELS, synchronization velocity".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

F2229354, Synchronisation acceleration above maximum

Display: [F2229354](#)

Axis error, Access_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The synchronization velocity for the requested motion command or the enabled function block is greater than the permitted maximum value in parameter "A-0-2790, ELS, synchronization velocity".

Cause: In the PLC program, a motion command with invalid parameters was generated for an axis.

Solution: Update the PLC program.

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F2229359, FlexProfile: Invalid master axis offset

Display: [F2229359](#) Axis error, Access_Error

A motion command "FlexProfile", which cannot be executed by the addressed axis, is generated in the PLC program.

Cause: An incorrect value was assigned to the input value "MasterOffset".

Negative values for the "MasterOffset" are not permitted.

A "MasterOffset" unequal to 0 is not permitted for the start modes "SLAVE_CURRENT_MASTER_ORIGIN", "SLAVE_CURRENT_MASTER_CURRENT" and "SLAVE_RELATIV_MASTER_ORIGIN".

Solution: Update the PLC program.

F2229360, Command rejected while 'Controlled Motion'

Display: [F2229360](#) Axis error, State_Machine_Error

A motion command that cannot be executed by the addressed axis is generated in the PLC program.

The axis is in the "Controlled Motion" state. The requested motion command and the enabled function block are not permitted in the "Controlled Motion" state (see the Axis type status diagram).

Cause: An unauthorized motion command was generated in the PLC program for an axis in the "Controlled Motion" state.

Solution: Enable the desired motion command after the control has executed the current motion command and the axes have been switched to "Standstill" state or switch the axis to "Standstill" state using the MC_Stop state. Then enable the desired motion command.

F2229361, Command not supported by axis (Configuration)

Display: [F2229361](#) Axis error, State_Machine_Error

A command that is not supported by the addressed axis is generated in the PLC program.

When configuring the axis, a setting was selected that does not support the desired command.

Example: The function block MC_Torque cannot be executed if its operation mode configuration is deactivated via the parameter A-0-0007. The diagnostic message described is generated during the attempt.

Cause: An illegal command was generated for the addressed axis in the PLC program.

Solution: Update the PLC program or change the configuration of the axis in the control (see parameter "C-0-0484, Axis configuration" and "A-0-0007, Axis configuration").

F2229362, Command not supported by axis (Functional Package)

Display: [F2229362](#) Axis error, State_Machine_Error

A command that is not supported by the addressed axis is generated in the PLC program.

When configuring the axis, a basic or function package was selected that does not support the desired command.

Example: The function block MC_MoveAbsolute cannot be executed if the axis was created for OpenLoop operation.

Cause: An illegal command was generated for the addressed axis in the PLC program.

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Solution: Update the PLC program or change the configuration of the axis in the control (see parameter "C-0-0484, Axis configuration").

F2229363, MotionProfile invalid

Display: [F2229363](#)

Axis error, Input_Invalid_Error

The MotionProfile is invalid.

Cause: The MotionProfile contains one or several steps with a length of 0.

Remedy: Set the step length to a value higher than 0 or remove that step from the profile.

F2229364, Axis not in standstill

Display: [F2229364](#)

Axis error, State_Machine_Error

The kinematic axis is not in standstill.

Cause: The axis is traversed by an active command (e.g. motion command, belt-synchronous).

Solution: Close all commands that can influence the axis.

F2299400, General kinematics error

Display: [F2299400](#)

Axis error, State_Machine_Error

Cause: General Kinematics Error

F2299401, Invalid control number

Display: [F2299401](#)

Axis error, State_Machine_Error

Cause: Invalid Control Number

F2299402, Invalid kinematics number

Display: [F2299402](#)

Axis error, State_Machine_Error

Cause: Invalid Kinematics Number

F2299403, Invalid command type

Display: [F2299403](#)

Axis error, State_Machine_Error

Cause: Invalid Command Type

F2299404, Command not supported by kinematics

Display: [F2299404](#)

Axis error, State_Machine_Error

Cause: Command Not Supported by Kinematics

F2299405, Command rejected while 'StandStill Incomplete'

Display: [F2299405](#)

Axis error, State_Machine_Error

Cause: The kinematics state machine is in the "Standstill Incomplete" state. An attempt was made to send an invalid command.

Solution: Refer to the description of "K-0-0022, Extended kinematic status" (state machine).

F2299406, Command rejected while 'Program Stopping'

Display: [F2299406](#)

Axis error, State_Machine_Error

Cause: The kinematics state machine is in the "PM (Programmed Motion), Program Stopping" state. An attempt was made to send an invalid command.

Solution: Refer to the description of "K-0-0022, Extended kinematic status" (state machine).

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F2299407, Command rejected while 'StandStill Complete'

Display: [F2299407](#) Axis error, State_Machine_Error

Cause: The kinematics state machine is in the "Standstill Complete" state. An attempt was made to send an invalid command.

Solution: Refer to the description of "K-0-0022, Extended kinematic status" (state machine).

F2299408, Invalid command number

Display: [F2299408](#) Axis error, State_Machine_Error

Cause: Invalid Kinematics Command Number

F2299409, Command not supported in this state

Display: [F2299409](#) Axis error, State_Machine_Error

Cause: Command Not Supported in this State

F229940A, Command rejected while 'Group Moving'

Display: [F229940A](#) Axis error, State_Machine_Error

Cause: The kinematics state machine is in state "Group Moving". An attempt was made to send an invalid command.

Solution: Refer to the description of K-0-0022, Extended kinematics status (state machine).

F229940B, Command rejected while 'Configuration'

Display: [F229940B](#) Axis error, State_Machine_Error

Cause: The kinematics state machine is in state "Configuration". An attempt was made to send an invalid command.

Solution: Refer to the description of K-0-0022, Extended kinematics status (state machine).

F229940C, Command rejected while 'Stopping'

Display: [F229940C](#) Axis error, State_Machine_Error

Cause: The kinematics state machine is in state "Stopping". An attempt was made to send an invalid command.

Solution: Refer to the description of K-0-0022, Extended kinematics status (state machine).

F2299410, Reset still 'ErrorStop'

Display: [F2299410](#) Axis error, State_Machine_Error

Cause: Reset while Error-Stop active

F2299411, Command rejected while 'Program Running'

Display: [F2299411](#) Axis error, State_Machine_Error

Cause: The kinematics state machine is in the "PM (Programmed Motion), Program Running" state. An attempt was made to send an invalid command.

Solution: Refer to the description of "K-0-0022, Extended kinematic status" (state machine).

The "Programmed Motion" state is described with all its substates. The permitted commands can be seen here.

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F2299412, Error while selecting RCL programDisplay: [F2299412](#)

Axis error, State_Machine_Error

Cause: Error while selecting RCL program.**F2299413, Command rejected while 'Parameter Mode'**Display: [F2299413](#)

Axis error, State_Machine_Error

Cause: FBs were called in the parameterization mode (P2) via the PLC program. The FBs are only supported in the operating mode (P4).**F2299414, Command rejected while 'ErrorStop'**Display: [F2299414](#)

Axis error, State_Machine_Error

Cause: The kinematics state machine is in the "Errorstop" state. An attempt was made to send an invalid command.**Solution:** Refer to the description of "K-0-0022, Extended kinematic status" (state machine).**F2299415, Command aborted**Display: [F2299415](#)

Axis error, State_Machine_Error

Cause: Command was aborted.**F2299416, Switching to 'StandStill' not possible**Display: [F2299416](#)

Axis error, State_Machine_Error

Cause: The kinematics state machine is not ready for switch to "Standstill".**Solution:** Refer to the description of "K-0-0022, Extended kinematic status" (state machine).**F2299417, RCL process does not exist**Display: [F2299417](#)

Axis error, State_Machine_Error

Cause: RCL process does not exist.**F2299501, Two PLC-MotionCommands per motion cycle not allowed**Display: [F2299501](#)

Axis error, State_Machine_Error

Cause: Two kinematic Motion commands were issued in one Motion cycle for one kinematics. This is not permitted.**Solution:** Use the "InBuffer" output of the function block to start the next function block.**F2299502, Command rejected - buffer full**Display: [F2299502](#)

Axis error, State_Machine_Error

Cause: The buffer for the kinematic Motion command is full. New motion commands can only be issued after a motion has been completed.**F2299503, Invalid motion command**Display: [F2299503](#)

Axis error, State_Machine_Error

Cause: An invalid kinematic Motion command was issued.**F2299505, Synchronisation to more than one belt not possible**Display: [F2299505](#)

Axis error, Input_Invalid_Error

Cause: A kinematic Motion command was issued that should synchronize to more than one belt.

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- Solution:** Issue only kinematic Motion commands traveling synchronously to one belt maximum.
- Cause:** A kinematic Motion command was issued that should synchronize to a second belt without being desynchronized from the first belt before.
- Solution:** Issue a kinematic Motion command that should desynchronize from the first belt before.

F2299506, Slope type is not supported

Display: [F2299506](#) Axis error, Input_Invalid_Error

- Cause:** A kinematic motion command was issued specifying an unsupported blending method.

F2299507, Invalid set mode

Display: [F2299507](#) Axis error, Input_Invalid_Error

- Cause:** A kinematic motion command was issued specifying an unsupported blending mode.

F2299508, Invalid coordinate system

Display: [F2299508](#) Axis error, Input_Invalid_Error

- Cause:** A kinematic motion command was issued specifying an unsupported coordinate system.

F2299509, Belt config not allowed temporary

Display: [F2299509](#) Axis error, INPUT_RANGE_ERROR

- Cause:** A function block was used to configure the belt, even though it is being traversed synchronously to this belt.

F2299510, Belt not configured

Display: [F2299510](#) Axis error, INPUT_RANGE_ERROR

- Cause:** A function block was used to configure a belt, even though the belt was not configured.

F2299511, Belt synchronization error

Display: [F2299511](#) Axis error, INPUT_RANGE_ERROR

- Cause:** Internal belt synchronization error.

F2299512, Invalid belt synchronisation mode

Display: [F2299512](#) Axis error, INPUT_RANGE_ERROR

- Cause:** An unsupported belt synchronization error type was configured.

F2299513, Bad belt error reaction mode

Display: [F2299513](#) Axis error, INPUT_RANGE_ERROR

- Cause:** An unsupported belt synchronization error reaction type was configured.

F2299514, Belt begin length invalid

Display: [F2299514](#) Axis error, INPUT_RANGE_ERROR

- Cause:** A belt was configured and a negative belt starting length specified. This is invalid.

F2299515, Belt begin length greater total length

Display: [F2299515](#) Axis error, INPUT_RANGE_ERROR

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Cause: A belt was configured and the belt starting specified is shorter than the total length of the belt-synchronous workspace. This is invalid.

F2299516, Wrong PCS indexDisplay: [F2299516](#)

Axis error, INPUT_RANGE_ERROR

Cause: An unsupported product coordinate system index was specified.

F2299517, Wrong CS selectedDisplay: [F2299517](#)

Axis error, INPUT_RANGE_ERROR

Cause: An unsupported coordinate system was specified.

F2299518, The TCP is not within belt working areaDisplay: [F2299518](#)

Axis error, INPUT_RANGE_ERROR

Cause: The tool center point is not located in the belt workspace. The issued command requires that the tool center point is located in the belt-synchronous workspace. This prerequisite is not met.

F2299532, Values for relative desynchronisation invalidDisplay: [F2299532](#)

Axis error, Input_Invalid_Error

Cause: Invalid values have been specified for the configuration of relative desynchronization.

Solution: Enter valid values.

F2299533, Command buffer fullDisplay: [F2299533](#)

Axis error, Resource_Error

Cause: More commands are used in the command buffer than in parameter K-0-0097.

Solution: Increase the value of parameter K-0-0097.

Wait for the InBuffer signal of the command before commanding the next command.

F2299534, Transformation did not supported freedom degreeDisplay: [F2299534](#)

Axis error, Input_Invalid_Error

Cause: A rotation by one axis has been specified in parameter K-0-0042 that does not support the transformation as degrees of freedom.

Solution: Change K-0-0042 to only specify rotations by axes that support the transformation as degree of freedom.

F2299537, Invalid modulovalueDisplay: [F2299537](#)

Axis error, Input_Range_Error

An invalid modulo value has been specified for the kinematics by the user. Modulo values can only be specified in a positive value range.

Cause: A negative modulo value has been specified for a kinematic axis.

Solution: Check the modulo values of the individual axes.

F229953B, Linear belt not translatoryDisplay: [F229953B](#)

Axis error, Input_Invalid_Error

Cause: A linear belt has been configured with an axis that is not scaled linearly.

Solution: Configure a linear belt with a configured axis (linear).

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F229953C, Cylindric belt not rotatory

Display: [F229953C](#)

Axis error, Input_Invalid_Error

Cause: A circular disk has been configured with an axis that is not rotarily scaled.

Solution: Configure a circular disk with a rotarily configured axis.

F229953D, Kinematic excessive position command difference

Display: [F229953D](#)

Axis error, Device_Error

Cause: A command velocity that is too large has been commanded via the cyclic command value channel of the kinematics.

Either by directly specifying a velocity or indirectly by an absolute actual position value which resulted in a velocity that was too high.

The velocity limit value of the cyclic command value channel in the MCS is parameter K-0-0003. The velocity limit values are determined from the limit values of the single axes A-0-0032 / A-0-0033 for the cyclic command value channel in the ACS. If the resulting axis velocity exceeds the velocity limit value determined for this axis, this error is generated for the cyclic axis in the ACS.

Solution: Check the values for K-0-0003 or A-0-0032/A-0-0033 depending on which cyclic channel is used.

Solution: Check the command values of the kinematics.

F229953E, Target point of movement outside ACS travel limits

Display: [F229953E](#)

Axis error, Input_Range_Error

Cause: An end point outside the traversing range of the axes was commanded.

Solution: Command only the points within the traversing range of the axes.

F229953F, Target point of movement outside MCS travel limits

Display: [F229953F](#)

Axis error, Input_Range_Error

Cause: An end point outside the traversing range of the software end limit switches K-0-0005 and K-0-0006 was commanded.

Solution: Command only the points within the traversing range of the axes.

F2299540, Target point of movement in safe zone 0

Display: [F2299540](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299541, Target point of movement in safe zone 1

Display: [F2299541](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299542, Target point of movement in safe zone 2

Display: [F2299542](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299543, Target point of movement in safe zone 3

Display: [F2299543](#)

Axis error, Input_Range_Error

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Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299544, Target point of movement in safe zone 4

Display: [F2299544](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299545, Target point of movement in safe zone 5

Display: [F2299545](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299546, Target point of movement in safe zone 6

Display: [F2299546](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299547, Target point of movement in safe zone 7

Display: [F2299547](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299548, Target point of movement in safe zone 8

Display: [F2299548](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299549, Target point of movement in safe zone 9

Display: [F2299549](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F229954A, Target point of movement in safe zone 10

Display: [F229954A](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F229954B, Target point of movement in safe zone 11

Display: [F229954B](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F229954C, Target point of movement in safe zone 12

Display: [F229954C](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

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F229954D, Target point of movement in safe zone 13

Display: [F229954D](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F229954E, Target point of movement in safe zone 14

Display: [F229954E](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F229954F, Target point of movement in safe zone 15

Display: [F229954F](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299550, Target point of movement in safe zone 16

Display: [F2299550](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299551, Target point of movement in safe zone 17

Display: [F2299551](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299552, Target point of movement in safe zone 18

Display: [F2299552](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299553, Target point of movement in safe zone 19

Display: [F2299553](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299554, Target point of movement in safe zone 20

Display: [F2299554](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299555, Target point of movement in safe zone 21

Display: [F2299555](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299556, Target point of movement in safe zone 22

Display: [F2299556](#)

Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

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Solution: Command only the points not located in the safe zone.

F2299557, Target point of movement in safe zone 23

Display: [F2299557](#) Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299558, Target point of movement in safe zone 24

Display: [F2299558](#) Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299559, Target point of movement in safe zone 25

Display: [F2299559](#) Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F229955A, Target point of movement in safe zone 26

Display: [F229955A](#) Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F229955B, Target point of movement in safe zone 27

Display: [F229955B](#) Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F229955C, Target point of movement in safe zone 28

Display: [F229955C](#) Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F229955D, Target point of movement in safe zone 29

Display: [F229955D](#) Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F229955E, Target point of movement in safe zone 30

Display: [F229955E](#) Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F229955F, Target point of movement in safe zone 31

Display: [F229955F](#) Axis error, Input_Range_Error

Cause: An end point located in the safe zone was commanded.

Solution: Command only the points not located in the safe zone.

F2299560, Path of movement through safe zone 0

Display: [F2299560](#) Axis error, Input_Range_Error

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Cause: An end point whose motion path crosses the safe zone was commanded.

F2299561, Path of movement through safe zone 1

Display: [F2299561](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F2299562, Path of movement through safe zone 2

Display: [F2299562](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F2299563, Path of movement through safe zone 3

Display: [F2299563](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F2299564, Path of movement through safe zone 4

Display: [F2299564](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F2299565, Path of movement through safe zone 5

Display: [F2299565](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F2299566, Path of movement through safe zone 6

Display: [F2299566](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F2299567, Path of movement through safe zone 7

Display: [F2299567](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F2299568, Path of movement through safe zone 8

Display: [F2299568](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F2299569, Path of movement through safe zone 9

Display: [F2299569](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F229956A, Path of movement through safe zone 10

Display: [F229956A](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F229956B, Path of movement through safe zone 11

Display: [F229956B](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F229956C, Path of movement through safe zone 12

Display: [F229956C](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

XLC/MLC diagnostic system tables

F229956D, Path of movement through safe zone 13Display: [F229956D](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.**F229956E, Path of movement through safe zone 14**Display: [F229956E](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.**F229956F, Path of movement through safe zone 15**Display: [F229956F](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.**F2299570, Path of movement through safe zone 16**Display: [F2299570](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.**F2299571, Path of movement through safe zone 17**Display: [F2299571](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.**F2299572, Path of movement through safe zone 18**Display: [F2299572](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.**F2299573, Path of movement through safe zone 19**Display: [F2299573](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.**F2299574, Path of movement through safe zone 20**Display: [F2299574](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.**F2299575, Path of movement through safe zone 21**Display: [F2299575](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.**F2299576, Path of movement through safe zone 22**Display: [F2299576](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.**F2299577, Path of movement through safe zone 23**Display: [F2299577](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.**F2299578, Path of movement through safe zone 24**Display: [F2299578](#)

Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.**F2299579, Path of movement through safe zone 25**Display: [F2299579](#)

Axis error, Input_Range_Error

XLC/MLC diagnostic system tables

Cause: An end point whose motion path crosses the safe zone was commanded.

F229957A, Path of movement through safe zone 26

Display: [F229957A](#) Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F229957B, Path of movement through safe zone 27

Display: [F229957B](#) Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F229957C, Path of movement through safe zone 28

Display: [F229957C](#) Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F229957D, Path of movement through safe zone 29

Display: [F229957D](#) Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F229957E, Path of movement through safe zone 20

Display: [F229957E](#) Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F229957F, Path of movement through safe zone 31

Display: [F229957F](#) Axis error, Input_Range_Error

Cause: An end point whose motion path crosses the safe zone was commanded.

F2299580, Invalid error reaction

Display: [F2299580](#) Axis error, Input_Invalid_Error

Cause: A kinematic command was issued specifying an invalid error response of the belt.

Solution: Specify a valid error response of the belt.

F22B0003, Kinematics does not exist

Display: [F22B0003](#) Axis error, State_Machine_Error

Cause: When calling the function block MC_AddAxisToGroup or MC_RemoveAxis-FromGroup, a kinematics was specified that does not exist.

Solution: Check the inputs of the kinematic PLCOpen function blocks.

F22B0010, Error while internal converting RoCo Parameter

Display: [F22B0010](#) Axis error, System_Error

Cause: An error occurred while processing the K-Parameters:

- Number of the kinematics not OK (see C-0-2484),
- Number or type of the axes in the kinematics not correct (see K-0-0008),
- Acceleration factor of one/several axes incorrect,
- Velocity factor of one/several axes incorrect,
- Position factor of one/several axes incorrect,
- Access or indexing on the axes incorrect,
- Internal memory of the RoCo not available,
- Internal default parameters not correct.

XLC/MLC diagnostic system tables

Remedy: Checkup the listed errors, please.

F22B0011, Error while int. conv. RoCo Parameter in conv. phase 0

Display: [F22B0011](#) Axis error, System_Error

Cause: General parameters of all kinematics incorrect
(see C-0-2840, C-0-0400, C-0-0001).

Remedy: Checkup the listed parameters, please.

F22B0012, Error while int. conv. RoCo Parameter in conv. phase 1

Display: [F22B0012](#) Axis error, System_Error

Velocity parameters in the kinematics are incorrect:
(refer to K-0-0003, A-0-0032, A-0-0033, A-0-0056, A-0-0057, A-0-0058)

F22B0013, Error while int. conv. RoCo Parameter in conv. phase 2

Display: [F22B0013](#) Axis error, System_Error

Position parameters in the kinematics are incorrect:
(refer to A-0-0034 scaled with A-0-00053, A-0-00054, A-0-00055).

F22B0014, Error while int. conv. RoCo Parameter in conv. phase 3

Display: [F22B0014](#) Axis error, System_Error

Cause: General parameters of a kinematics incorrect
(see K-0-0002, K-0-0007, K-0-0008, A-0-0059, A-0-0002, K-0-0021 ..
K-0-0036, K-0-0040, K-0-0041)

Remedy: Checkup the listed parameters, please.

F22B0015, Error while int. conv. RoCo Parameter in conv. phase 4

Display: [F22B0015](#) Axis error, System_Error

Measuring system parameters are incorrect in the kinematics.

Cause	Solution
An axis of the kinematics is modulo-scaled and the modulo value is too high	Reduce the modulo value of the axis in the parameter A-0-0045

Tab. 3-6: Error cause and solution

F22B0016, Error while int. conv. RoCo Parameter in conv. phase 5

Display: [F22B0016](#) Axis error, System_Error

Cause: Belt parameters incorrect (see K-0-0070 .. K-0-0074).

Remedy: Checkup the listed parameters, please.

F22B0020, Transformation does not exist

Display: [F22B0020](#) Axis error, Input_Invalid_Error

Cause: An unsupported transformation was configured in the parameter K-0-0031.

F22B0021, Axis angles out of definition range

Display: [F22B0021](#) Axis error, INPUT_RANGE_ERROR

Cause: The specified/calculated axis angles are not in the defined area of the transformation specified in the parameter K-0-0031. Check the commanded points or the path motion.

XLC/MLC diagnostic system tables

F22B0022, Point can not reached by transformation

Display: [F22B0022](#)

Axis error, Input_Range_Error

Cause: The specified/calculated point cannot be reached by the transformation specified in the parameter K-0-0031. Check the commanded points or the path motion.

F22B0023, In saved range of transformation

Display: [F22B0023](#)

Axis error, Input_Range_Error

Cause: A safe zone was configured for the transformation specified in the parameter K-0-0031. The specified/calculated point is in the safe zone. Check the commanded points or the path motion.

F22B0024, Axis has wrong scaling for transformation

Display: [F22B0024](#)

Axis error, Input_Invalid_Error

Cause: A transformation specifying a scaling of at least one axis was written to the parameter K-0-0031. The scaling of an axis for the transformation is incorrect. Check the axis scalings of all axes using the transformation description.

F22B0025, Too less axes for Transformation

Display: [F22B0025](#)

Axis error, Input_Invalid_Error

Cause: An axis group with the transformation scheme was created in the parameter K-0-0031. This axis group requires more axes than specified in the parameter K-0-0008.

Check the axis configuration or the transformation scheme.

F22B0026, Safe zone did not exist

Display: [F22B0026](#)

Axis error, INPUT_RANGE_ERROR

The specified zone of protection does not exist.

Cause: An invalid zone of protection number has been selected.

Solution: Select a value zone of protection number.

F22B0027, Type of safe zone did not exist

Display: [F22B0027](#)

Axis error, INPUT_RANGE_ERROR

The specified zone of protection type does not exist.

Cause: An invalid zone of protection type has been selected.

Solution: Select a valid zone of protection type.

F22E0000, Drive error (generic axis)

Display: [F22E0000](#)

Axis error, Device_Error

The diagnosis of generic axes/ drives cannot be detected. For a special diagnosis the user must use the diagnosis tool of the drive manufacturer.

F2350066, Axis list in K-0-0008 not completed

Display: [F2350066](#)

Axis error, Access_Error

Cause: Axis list in K-0-0008 is incomplete

F2350071, Gantry-Error: Maximum lag exceeded

Display: [F2350071](#)

Axis error, Access_Error

Cause: Gantry Error: Maximum lag reached.

XLC/MLC diagnostic system tables

3.1.8 F5 Errors, Control Errors

F5 Errors, Error Reaction

A logbook entry is generated; a message is shown on the control display.

All axes are decelerated the best possible.

F50B0002, sercos communication interrupted

Display: [F50B0002](#)

Controller error, System_Error

The OWL ring was interrupted after it was detected that it was closed.

- Cause:**
- Defective fiber optic cable ring,
 - Defective drive,
 - The optical transmitting power of the control "C-0-0502, sercos master, OWG length " or that of one of the participants in the sercos interface ring are set incorrectly.

Solution: Check all fiber optic cables.

Adapt the optical transmitting power of all participants on the sercos ring to the actual OWG length.

F50B0010, Hardware failure

Display: [F50B0010](#)

Controller error, Device_Error

The system clock can not be switched on the external clock of the sercos function module.

Cause: The function module does not produce the clock signal, so the controller can not relay the clock signal.

Remedy: Please, take contact with the customer service.

F50B0011, sercos device not compatible

Display: [F50B0011](#)

Controller error, Device_Error

Cause: sercos device not compatible.

F50D2000, Forced stop activated

Display: [F50D2000](#)

Controller error, System_Error

Although there are active axes in the project (real axes with at least 'Power-On', enabled virtual axes), the PLC has stopped (in IndraWorks via PLC symbol bar or in IndraLogic e.g. via the context menu point Online⇒Stop).

Cause: It is not possible to continue operating active axes when the PLC is stopped. A fail safe shutdown is enabled for these axes.

Solution: Clear error, restart PLC...

F5113002, Velocity too high for cycletime

Display: [F5113002](#)

Controller error, Calculation_Error

A maximum permissible velocity for axes interpolated on the control results from the defined cycle time.

This maximum permissible velocity has been reached or exceeded within the MotionControl functional chain. An error reaction has been triggered.

For more information, refer to

- Rexroth IndraMotion MLC 13VRS, Functional Description, chapter Operating modes for synchronous motions with electronic gear function

XLC/MLC diagnostic system tables

- Boundary conditions for the velocity specifications to an axis in the PLCopen state "Synchronized Motion"

F5180001, Invalid master axes combination

Display: [F5180001](#)

Controller error, Other_Error

In the PLC-Program movements commands for synchronized movements are generated. These commands cannot be executed by the control kernel at the same time. The required master axes combination is recursive. By the axes it is indirectly required to follow itself. Example: The first axis follows the second axis, this axis follows the third. If the third axis requires to follow the first, the control kernel generates the error "Invalid master axes combination".

Cause: In the PLC-Program movement commands for synchronized movements are generated, which cannot be executed by the control kernel at the same time. A recursive master axes combination is not supported by the control kernel.

Remedy: Actualize the PLC-Program.

F5180005, Motion kernel exceeded control cycle time

Display: [F5180005](#)

Controller error, System_Error

The cycle time of the control is defined in parameter "C-0-0400, Motion, cycle time, command value". The control core must be processed within the defined cycle.

The Motion kernel primarily fulfills two tasks. Topics:

Actual value detection

Command value generation

If the second part of the Motion kernel, the command value generation, cannot be completely processed within the set Motion cycle, an error reaction is executed.

If the number of these failures (C-0-0422) is greater than the value set via parameter "C-0-0420 Motion, watchdog sensitivity", error "F0180005: Timeout cycle time Motion kernel" is issued.

To check the times, the time needed to calculate the Motion can be read in the "Cycle times" dialog box. The times of the configured PLC task can be read from the "Task configuration".

Also see Task system

Cause:	Solution:
The time the Motion kernel requires is longer than one Motion cycle.	Increase the Motion cycle time "C-0-0400, Motion, cycle time, command value".
The Motion kernel has been displaced by one or more higher priority tasks.	• Check the runtimes of the tasks that have higher priority than the Motion kernel. Try to transfer program parts of this task that require a lot of time to tasks that have a lower priority than the Motion kernel. • Check if it is necessary that these tasks have higher priority than the Motion kernel. If necessary, reduce the priority of this task or increase the priority of the Motion kernel.

F5180006, Calculation of actual values exceeded cycle time

Display: [F5180006](#)

Controller error, System_Error

XLC/MLC diagnostic system tables

The cycle time of the control is defined in parameter "C-0-0400, Motion, cycle time, command value". The control core must be processed within the defined cycle.

The Motion kernel essentially fulfills two tasks. Topics:

Actual value detection

Command value generation

If the first part of the Motion kernel, the actual value measurement, cannot be completely processed within the set Motion cycle, error "F5180006: Cycle time exceeded for actual value measurement" is issued.

To check the times, the time needed to calculate the Motion can be read in the "Cycle times" dialog box. The times of the configured PLC task can be read from the "Task configuration".

Also see Task system

Cause:	Solution:
The time the Motion kernel requires for the actual value measurement the longer than for one Motion cycle.	Increase the Motion cycle time "C-0-0400, Motion, cycle time, command value".
The Motion kernel has been displaced by one or more higher priority tasks.	- Check the runtimes of the tasks that have higher priority than the Motion kernel. Try to transfer program parts of this task that require a lot of time to tasks that have a lower priority than the Motion kernel. - Check if it is necessary that these tasks have higher priority than the Motion kernel. If necessary, reduce the priority of this task or increase the priority of the Motion kernel.

F5300001, Over-temperature

Display: [F5300001](#)

Controller error, System_Error

The output monitoring of the PLS module is enabled with error class 'F5' in parameter "C-0-0300, PLS No.1, control word".

The temperature of at least one output driver at plugs 'X201' or 'X202' of the function module is too high. There can be several reasons for this:

- Short circuit in the connected cabling,
- Defect in the connected device,
- Overloading of an output,
- Inadequate ventilation of the function module.



The output driver independently switches off the outputs. The error reaction of the output drivers cannot be influenced.



Output monitoring can be switched off in parameter C-0-0300 or the error class reduced.

Cause: Excess temperature of output drivers at plugs 'X201' and 'X202' of the programmable limit switch.

Solution: Check the cabling to the connected devices or the devices themselves.

F5300002, Power failure

Display: [F5300002](#)

Controller error, System_Error

XLC/MLC diagnostic system tables

Voltage monitoring of the programmable limit switch is enabled with error class 'F5' in parameter "C-0-0300, PLS No.1, control word". The voltage at plug 'X1S' of the function module is inadequate.



Voltage monitoring can be switched off in parameter C-0-0300 or the error class reduced.

Cause: Undervoltage at plug 'X1S' of the programmable limit switch.
Solution: Check the voltage supply to the function module.

F5300100, RTOS error on PLS FM

Display: **F5300100** Controller error, System_Error
The cam switching device was switched off by the firmware.

Cause: An internal firmware error has appeared in the cam switching device.
Remedy: Please, take contact with the customer service.

F536000E, MLPI: Watchdog error

Display: **F536000E** Controller error, Other_Error
An MLPI watchdog elapsed and triggered an error.

Cause: An MLPI task did not reset the watchdog within the configured time slot.
Remedy: Correct the MLPI call and check the watchdog settings.

3.1.9 F8 Errors, Fatal Control Error

F8 Errors, Error Reaction

Logbook entry is generated; message is shown on the display.
All axes are decelerated the best possible.

F80B0004, Double AT missing

Display: **F80B0004** Fatal controller error, System_Error
Two consecutive drive telegrams (AT) from a drive or two consecutive Master Data Telegrams (MDT) from the control are not received.

Cause: **sercos II master communication:**

- Fiber optic cable not correctly screwed on,
- Defective fiber optic cable ring,
- Defective drive,
- The optical transmitting power of the control "C-0-0502, sercos master, OWG length " or that of a participant in the sercos interface ring are set incorrectly.

sercos III master communication:

- Ethernet cable is not plugged in correctly or removed at runtime,
- Defective Ethernet cable,
- Defective drive.

Solution: **sercos II master communication:**

Check all fiber optic cables.

Adjust the optical transmission power of all participants on the sercos ring to the actual OWG length and swap any defective participants if necessary.

sercos III master communication:

Check all Ethernet connections between the control and the drives.

XLC/MLC diagnostic system tables

F80B0015, RTOS error (Real Time Operating System)Display: [F80B0015](#)

Fatal controller error, System_Error

The device was switched off by the firmware.

Cause: An internal firmware error occurred.**Solution:** Please contact customer service.**F80B0016, AT-Data not valid**Display: [F80B0016](#)

Fatal controller error, Communication_Error

No valid data of a sercos III device from a control was detected in two consecutive drive telegrams (AT).

Cause:

- Ethernet cable is not plugged in correctly or removed at runtime,
- Defective Ethernet cable,
- Defective device,

Solution: Check all Ethernet connections between the control and the devices.**F80B0017, Consumer connection failure**Display: [F80B0017](#)

Fatal controller error, Communication_Error

A sercos III consumer connection of the control does not work cycle-synchronously.

Cause:

- The NewData bit of the sercos III connection does not toggle in the specified cycle,
- too many telegrams are canceled due to failures.
- An internal firmware error occurred.

Solution:

- Producer of the connection (sercos III slave) does not work correctly.
- Check all Ethernet connections between the control and the devices.

F80B0018, Producer Connection failureDisplay: [F80B0018](#)

Fatal controller error, Communication_Error

A sercos III slave reports an error in one of the sercos III consumer connections.

Cause:

- The NewData bit of the sercos III connection does not toggle in the specified cycle,
- too many telegrams are canceled due to failures.
- An internal firmware error occurred.

Solution:

- Producer of the connection (control or another sercos III slave) does not work correctly.
- Check all Ethernet connections between the control and the devices.

F80B0019, Consumer connection timeoutDisplay: [F80B0019](#)

Fatal controller error, Communication_Error

XLC/MLC diagnostic system tables

A cycle-synchronous sercos III consumer connection does not start in CP4 with the valid data produced within the timeout period.

Cause:

- Device not yet ready,
- Timeout period too small,
- An internal firmware error occurred.

Solution:

- Check device,
- Increase timeout period (C-0-0505).

F80B0162, Internal control error

Display: [F80B0162](#)

Fatal controller error, Communication_Error

Error in the cyclic data transfer.

Cause:

- Data transfer from sercos III FPGA failed

Solution:

Please contact customer service.

F80B0163, Internal control error

Display: [F80B0163](#)

Fatal controller error, Communication_Error

Error in the cyclic data transfer.

Cause:

- Data transfer in the sercos III FPGA failed

Solution:

Please contact customer service.

F8200023, Critical temperatur reached, processor will stop

Display: [F8200023](#)

Fatal controller error, Device_Error

The critical temperature was exceeded, the processor is stopped or the control hardware is shut down to prevent damage to the hardware.

CML25, CML45, CML65:

The control is put into Sleep mode and "SLEEP" appears on the display.

The remanent data can no longer be stored.

VEP:

The control is powered down properly.

The remanent data can still be stored.

Critical temperatures for the controls

Control	Temperature
CML25	91°C (196°F)
CML45, CML65	74°C (165°F)
VEP	69°C (156°F)

See also diagnostics "[E0200002](#), Temperature warning".

Cause:

- The control was mounted in a position that does not ensure sufficient ventilation.

XLC/MLC diagnostic system tables

- No fan is mounted on the control when it is in a position that does not ensure sufficient ventilation.

Solution: Switch off the control and allow it to cool down.

Also provide adequate ventilation or mount a fan on the control hardware.

3.1.10 F9 errors, fatal system error

F9 errors, error reaction

Logbook entry is generated; a message is shown on the control display.

Firmware is no longer operating; call of FatalSystemErrorHandler(),

No error reaction to the drive; torque enabled.



Also refer to

- Error categories
- Procedure in Case of SysError

Rexroth IndraMotion MTX 13VRS, Functional Description, DOK-MLC***-FUNC****V13-APRS-EN-P, R911336295

Rexroth IndraMotion XLC 13VRS, Functional Description, DOK-MLC***-FUNC****V13-APRS-EN-P, R911336352

F9010001, Default object on wrong address

Display: [F9010001](#)

Fatal system error, Access_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F9010002, Memory allocation error, no memory available

Display: [F9010002](#)

Fatal system error, Access_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F9010003, Invalid function pointer

Display: [F9010003](#)

Fatal system error, Access_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F90B0012, sercos interface watch dog occurred

Display: [F90B0012](#)

Fatal system error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F90B0020 up to F90B0028, RTOS Error (Real Time Operating System)

The device was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F90B0029, DRI, upload of firmware into des CFL01.1-Q2-FPGA failed

Display: [F90B0029](#)

Fatal system error, System_Error

The CrossCom module (CFL01.1-Q2) should be used as a sercos II interface for the drive ring. However, the required firmware cannot be loaded into the FPGA of the module.

The control was switched off by the firmware.

- Cause:**
- The CrossCom module (CFL01.1-Q2) is defective,
 - an unsupported CrossCom module (CFL01.1-Q2) is connected,
 - the firmware file "querdpll_fpga.bin" was not found on the Compact Flash card.

Solution: Perform a firmware download via IndraWorks.

If the error persists, the function module is defective. It must be exchanged.

F90B0030 up to F90B0124, RTOS Error (Real Time Operating System)

The device was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F90D1021, Error ReadParameter, no memory available

Display: [F90D1021](#)

Fatal system error, Device_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F90D1023, Error WriteParameter

Display: [F90D1023](#)

Fatal system error, Device_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F90D1024, Error WriteParameter, no memory available

Display: [F90D1024](#)

Fatal system error, Device_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F90D1032, No access to axes (1)

Display: [F90D1032](#)

Fatal system error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F90D1033, No access to axes (2)

Display: [F90D1033](#)

Fatal system error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

XLC/MLC diagnostic system tables

F90D1038, Error getting MessageQueueDisplay: [F90D1038](#) Fatal system error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).**Remedy:** Please contact our service department.**F90D1039, Thread could not be started**Display: [F90D1039](#) Fatal system error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).**Remedy:** Please contact our service department.**F90D103A, Left endless While-Loop**Display: [F90D103A](#) Fatal system error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).**Remedy:** Please contact our service department.**F90D103D, Error during initialization of PLC**Display: [F90D103D](#) Fatal system error, INPUT_RANGE_ERROR

An error occurred during the basic initialization of the PLC. Thus, the control cannot be commissioned.

Cause: An error occurred in the firmware.**Remedy:** Contact the customer support if this problem occurs at each further control startup.**F90D1204, Error, no memory available**Display: [F90D1204](#) Fatal system error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).**Remedy:** Please contact our service department.**F90D1209, Error, no memory available**Display: [F90D1209](#) Fatal system error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).**Remedy:** Please contact our service department.**F9180002, Maximum number of axes exceeded**Display: [F9180002](#) Fatal system error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).**Remedy:** Please contact our service department.**F9180003, Axis registration invalid**Display: [F9180003](#) Fatal system error, System_Error

The drive was switched off by the firmware.

XLC/MLC diagnostic system tables

Cause: An error occurred in the firmware (general software error).
Remedy: Please contact our service department.

F9180004, Invalid mode change requested

Display: [F9180004](#) Fatal system error, System_Error
The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).
Remedy: Please contact our service department.

F9200016, PLC watchdog expired

Display: [F9200016](#) Fatal system error, System_Error
The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).
Remedy: Please contact our service department.

F9200017, Hardware watchdog expired

Display: [F9200017](#) Fatal system error, System_Error
The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).
Remedy: Please contact our service department.

F9200020, MK1 watchdog expired

Display: [F9200020](#) Fatal system error, System_Error
The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).
Remedy: Please contact our service department.

F9200021, MK2 watchdog expired

Display: [F9200021](#) Fatal system error, System_Error
The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).
Remedy: Please contact our service department.

F9200034, No free memory (RAM) available

Display: [F9200034](#) Fatal system error, System_Error
There is no more free working memory (RAM) available.
This has led to a critical system condition because other system procedures that require memory may no longer be able to be executed.
For example, communication to the drives is not possible.
See also the associated warning.

Cause:	Remedy:
An error in the PLC user program that continues to reserve memory, but does not release it.	Check the PLC user program for errors of this type. Switch the control off and back on again and recheck it afterward.
An error in the firmware.	If, after careful investigation, the error is still occurs, please contact customer service.

XLC/MLC diagnostic system tables

F9200035, No free remanent memory (NVRAM) availableDisplay: [F9200035](#)

Fatal system error, System_Error

There is no more free remanent memory available for the control system (NVRAM).

This has led to a critical system state because other system procedures that require remanent memory may no longer be able to be executed.

See also the associated warning.



This error message does not concern the area of PLC Retain data.

Cause:	Solution:
The user has reserved too much remanent memory. This may be the case if too many objects have already been created that require remanent data (e.g. axes, certain parameters) and now another axis is to be created, for example.	Switch off the control and switch it back on. If the error persists, the control's remanent memory must be cleared, that is to say the control must be restored to its delivery condition. See also: Clear memory
An error in the firmware.	If, after careful investigation, the error is still displayed, please contact customer service.

F9220001, Invalid error reactionDisplay: [F9220001](#)

Fatal system error, Access_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F9220002, Error in the axis state machineDisplay: [F9220002](#)

Fatal system error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F9240001, Exception, Divide ErrorDisplay: [F9240001](#)

Fatal system error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F9240002, Exception, Invalid OpcodeDisplay: [F9240002](#)

Fatal system error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F9240003, Exception, Stack FaultDisplay: [F9240003](#)

Fatal system error, System_Error

The drive was switched off by the firmware.

XLC/MLC diagnostic system tables

Cause: An error occurred in the firmware (general software error).
Remedy: Please contact our service department.

F9240004, Exception, General Protection Fault

Display: [F9240004](#) Fatal system error, System_Error
The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).
Remedy: Please contact our service department.

F9240005, Exception, Page Fault

Display: [F9240005](#) Fatal system error, System_Error
The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).
Remedy: Please contact our service department.

F9240006, Exception, Coprocessor Error

Display: [F9240006](#) Fatal system error, System_Error
The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).
Remedy: Please contact our service department.

F9240007, Exception, Unknown Exception

Display: [F9240007](#) Fatal system error, System_Error
The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).
Remedy: Please contact our service department.

F9240020, Timeout while sending the message queue

Display: [F9240020](#) Fatal system error, System_Error
An internal firmware error occurred. The device was switched off by the firmware.

Cause: The firmware issued an error.
Remedy: Please contact the customer service.

F9240021, Timeout while receiving the message queue

Display: [F9240021](#) Fatal system error, System_Error
An internal firmware error occurred. The device was switched off by the firmware.

Cause: The firmware issued an error.
Remedy: Please contact the customer service.

F9240022, No free buffer space to send a message

Display: [F9240022](#) Fatal system error, System_Error
An internal firmware error occurred. The device was switched off by the firmware.

Cause: The firmware issued an error.
Remedy: Please contact the customer service.

XLC/MLC diagnostic system tables

F9240023, No free buffer space to receive a messageDisplay: [F9240023](#)

Fatal system error, System_Error

An internal firmware error occurred. The device was switched off by the firmware.

Cause: The firmware issued an error.

Remedy: Please contact the customer service.

F9240024, Error while sending the message queueDisplay: [F9240024](#)

Fatal system error, System_Error

An internal firmware error occurred. The device was switched off by the firmware.

Cause: The firmware issued an error.

Remedy: Please contact the customer service.

F9240025, Error while receiving the message queueDisplay: [F9240025](#)

Fatal system error, System_Error

An internal firmware error occurred. The device was switched off by the firmware.

Cause: The firmware issued an error.

Remedy: Please contact the customer service.

F9240026, Error response not possibleDisplay: [F9240026](#)

Fatal system error, System_Error

An internal firmware error occurred. The device was switched off by the firmware.

Cause: The firmware issued an error.

Remedy: Please contact the customer service.

F9299519, JCS not setDisplay: [F9299519](#)

Fatal system error, System_Error

Cause: Transformation error: JCS was not set internally.

Remedy: Inform customer service.

F929951A, BCS not setDisplay: [F929951A](#)

Fatal system error, System_Error

Cause: Transformation error: BCS was not set internally.

Remedy: Inform customer service.

F929951B, WCS not setDisplay: [F929951B](#)

Fatal system error, System_Error

Cause: Transformation error: WCS was not set internally.

Remedy: Inform customer service.

F929951C, PCS not setDisplay: [F929951C](#)

Fatal system error, System_Error

Cause: Transformation error: PCS was not set internally.

Remedy: Inform customer service.

XLC/MLC diagnostic system tables

F929951D, Trafo manager not set

Display: [F929951D](#)

Fatal system error, System_Error

Cause: Transformation error: Transformation manager was not set internally.

Remedy: Inform customer service.

F929951E, Preshape execute error

Display: [F929951E](#)

Fatal system error, System_Error

Cause: Error in "PreShape execute"

Remedy: Inform customer service.

F929951F, Shape execute error

Display: [F929951F](#)

Fatal system error, System_Error

Cause: Error in "Shape execute"

Remedy: Inform customer service.

F9299520, Postshape execute error

Display: [F9299520](#)

Fatal system error, System_Error

Cause: Error in "PostShape execute"

Remedy: Inform customer service.

F9299521, Move not allowed for this cmd

Display: [F9299521](#)

Fatal system error, System_Error

Cause: Internal error when issuing a command

Remedy: Inform customer service.

F9299522, No robot set

Display: [F9299522](#)

Fatal system error, System_Error

Cause: Robot was not set internally.

Remedy: Inform customer service.

F9299523, Belt no time set

Display: [F9299523](#)

Fatal system error, System_Error

Cause: Internal error. Time was not set

Remedy: Inform customer service.

F9299524, Desync init failed

Display: [F9299524](#)

Fatal system error, System_Error

Cause: Internal error when initializing the desynchronizing motion

Remedy: Inform customer service.

F9299525, Ipo cycle time zero

Display: [F9299525](#)

Fatal system error, System_Error

Cause: Internal error: Cycle time of the IPO was not set

Remedy: Inform customer service.

F9299526, Ipo distance below zero

Display: [F9299526](#)

Fatal system error, System_Error

Cause: Internal error: IPO distance less than "0"

XLC/MLC diagnostic system tables

Remedy: Inform customer service.

F9299527, Ipo too much elements

Display: [F9299527](#)

Fatal system error, System_Error

Cause: Internal error: IPO obtains too many elements

Remedy: Inform customer service.

F92C0003, Fatal transformation error

Display: [F92C0003](#)

Fatal system error, System_Error

Cause: FPU trap in transformation.

Remedy: E.g. division by zero in transformation

Inform after-sales service.

F92C0007, Inadmissible change of coordinate system

Display: [F92C0007](#)

Fatal system error, System_Error

Cause: Coordinate changeover from PC to WC that the control has not recognized correctly.

Solution: Incorrect software, notify customer service.

F92C0023, HEAP-Overflow

Display: [F92C0023](#)

Fatal system error, System_Error

Cause: System heap limit reached.

Remedy: Check system heap limit.

F92C0028, Invalid interpolation type

Display: [F92C0028](#)

Fatal system error, System_Error

Cause: Inadmissible interpolation type in block preparation.

Remedy: Inform after-sales service.

F92C0079, Invalid Robot Control configuration

Display: [F92C0079](#)

Fatal system error, System_Error

Cause: Invalid Robot Control configuration

F92C007D, Invalid init mode

Display: [F92C007D](#)

Fatal system error, System_Error

Cause: Fatal error during controller startup.

Remedy: Inform after-sales service.

F92C00CC, Error in task suspend

Display: [F92C00CC](#)

Fatal system error, System_Error

Cause: Error in 'suspending' a user process which had a runtime error.

Remedy: Inform after-sales service.

F92C00CD, Error in usertask suspend

Display: [F92C00CD](#)

Fatal system error, System_Error

Cause: Error in 'suspending' a user output process after a runtime error has occurred.

Remedy: Inform after-sales service.

XLC/MLC diagnostic system tables

F92C00D4, Error in PARALLEL_END

Display: [F92C00D4](#) Fatal system error, System_Error

Cause: Sub-process Counter with PARALLEL_END not equal zero.

Remedy: Inform after-sales service.

F92C00DD, Device-I/O: Exclusive access could not be secured

Display: [F92C00DD](#) Fatal system error, System_Error

Cause: For WRITE devices the exclusive access could not be secured.

Remedy: Inform after-sales service.

F92C00DE, Device-I/O: Error in exclusive access

Display: [F92C00DE](#) Fatal system error, System_Error

Cause: After a WRITE device or after abort of a WRITE device, an error in the exclusive access has been detected.

Remedy: Inform after-sales service.

F92C00E0, File chain not sequential

Display: [F92C00E0](#) Fatal system error, System_Error

Cause: File chain not sequential. Error is detected during run-up (CHECK_USMEM). User memory is reorganized, loss of all data.

Remedy: Inform after-sales service.

F92C00E1, Error in file management

Display: [F92C00E1](#) Fatal system error, System_Error

Cause: Error in file management.

Remedy: Inform after-sales service.

F92C00E2, File management error in file-I/O

Display: [F92C00E2](#) Fatal system error, System_Error

Cause: Error in file management.

Remedy: Inform after-sales service.

F92C00E3, File management error in organization block

Display: [F92C00E3](#) Fatal system error, System_Error

Cause: File management error in the organization part of the user memory.

Might be too low SRAM battery voltage.

Might be corrupt data structure.

Remedy: Check battery voltage.

Inform customer service.

F92C00E4, File management error in file chain

Display: [F92C00E4](#) Fatal system error, System_Error

Cause: File management error in organization block. Error is detected during power up, reset or restore. User memory is reorganized, loss of all files.

Solution: Inform customer service.

F92C00E7, Invalid write access (end of file)

Display: [F92C00E7](#) Fatal system error, System_Error

XLC/MLC diagnostic system tables

Cause: Write access with inadmissible destination address (file end).

Remedy: Inform after-sales service.

F92C00E8, Invalid write access (destination address too large)

Display: [F92C00E8](#)

Fatal system error, System_Error

Cause: Write access with inadmissible destination address (file end).

Remedy: Inform after-sales service.

F92C00E9, End of file exceeded

Display: [F92C00E9](#)

Fatal system error, System_Error

Cause: End of file exceeded!

Remedy: Inform after-sales service.

F92C00EB, Invalid file read mode

Display: [F92C00EB](#)

Fatal system error, System_Error

Cause: Inadmissible file read mode.

Remedy: Inform after-sales service.

F92C00EC, Invalid file open mode

Display: [F92C00EC](#)

Fatal system error, System_Error

Cause: Inadmissible file read mode.

Remedy: Inform after-sales service.

F92C00ED, Allocation error

Display: [F92C00ED](#)

Fatal system error, System_Error

Cause: Allocation error.

Remedy: Inform after-sales service.

F92C00EE, Wrong file open mode for Allocation

Display: [F92C00EE](#)

Fatal system error, System_Error

Cause: Allocation error.

Remedy: Inform after-sales service.

F92C00F0, Wrong control mode for file list

Display: [F92C00F0](#)

Fatal system error, System_Error

Cause: Incorrect control mode of Dir.

Remedy: Inform after-sales service.

F92C00F1, Wrong control mode for file close

Display: [F92C00F1](#)

Fatal system error, System_Error

Cause: Wrong control mode for file close.

Remedy: Inform after-sales service.

F92C00F4, File chain not sequential

Display: [F92C00F4](#)

Fatal system error, System_Error

Cause: File chain not sequential.

Remedy: Inform after-sales service.

XLC/MLC diagnostic system tables

F92C0314, File management error in organization block

Display: [F92C0314](#) Fatal system error, System_Error

Cause: File management error in organisation part. Error is detected during run-up, CHECK_USMEM.

User memory is reorganized, loss of all data.

Remedy: Inform after-sales service.

F92C0318, Wrong block status of file

Display: [F92C0318](#) Fatal system error, System_Error

Cause: Fatal file management error.

Remedy: Inform after-sales service, see notice at beginning of this chapter.

F92C0319, File not sequential

Display: [F92C0319](#) Fatal system error, System_Error

Cause: File management error in organisation part. Error is detected during run-up, CHECK_USMEM.

User memory is reorganized, loss of all data

Remedy: Inform after-sales service, see notice at beginning of this chapter.

F92C043E, Wrong absolute address in IRD-programm

Display: [F92C043E](#) Fatal system error, System_Error

Cause: Error of system, safety control .

Remedy: Inform after-sales service.

F92C0456, Fatal error: In PKT file

Display: [F92C0456](#) Fatal system error, System_Error

Cause: Unexpected management data in PNT-file.

Remedy: Determine origin of pnt-file. Send file to after-sales service, if necessary.
Inform after-sales service.

F92C0ED8, Fatal file administration error: File not open

Display: [F92C0ED8](#) Fatal system error, System_Error

Cause: File administration error:
Access to a closed file.

Remedy: Inform after-sales service.

F92C0ED9, Fatal file administration error: File not open

Display: [F92C0ED9](#) Fatal system error, System_Error

Cause: File administration error:
Access to a closed file.

Remedy: Inform after-sales service.

F92C0EDA, Fatal file administration error: File not open

Display: [F92C0EDA](#) Fatal system error, System_Error

Cause: File administration error:
Access to a closed file.

Remedy: Inform after-sales service.

XLC/MLC diagnostic system tables

F92C0EDB, Fatal file administration error: File not open

	Display: F92C0EDB	Fatal system error, System_Error
Cause:	File administration error: Access to a closed file.	
Remedy:	Inform after-sales service.	

F92C0EDC, Fatal file administration error: File not open

	Display: F92C0EDC	Fatal system error, System_Error
Cause:	File administration error: Access to a closed file.	
Remedy:	Inform after-sales service.	

F92C0EDD, Fatal file administration error: File not open

	Display: F92C0EDD	Fatal system error, System_Error
Cause:	File administration error: Access to a closed file.	
Remedy:	Inform after-sales service.	

F92C0EDE, Fatal file administration error: File not open

	Display: F92C0EDE	Fatal system error, System_Error
Cause:	File administration error: Access to a closed file.	
Remedy:	Inform after-sales service.	

F92C0EDF, Fatal file administration error: File not open

	Display: F92C0EDF	Fatal system error, System_Error
Cause:	File administration error: Access to a closed file.	
Remedy:	Inform after-sales service.	

F92C0EE0, Fatal file administration error: File compressing

	Display: F92C0EE0	Fatal system error, System_Error
Cause:	File administration error: Error in file compressing.	
Remedy:	Inform after-sales service.	

F92C0EE1, Fatal file administration error: Search file

	Display: F92C0EE1	Fatal system error, System_Error
Cause:	File administration error: Error in searching a file.	
Remedy:	Inform after-sales service.	

F92C0EE2, Fatal file administration error: Wrong file attribute

	Display: F92C0EE2	Fatal system error, System_Error
Cause:	File administration error: File has an invalid attribute.	
Remedy:	Inform after-sales service.	

XLC/MLC diagnostic system tables

F92C0EE3, Fatal file administration error: Illegal block

Display: [F92C0EE3](#)

Fatal system error, System_Error

Cause: File administration error:
The file management has an invalid data block.

Remedy: Inform after-sales service.

F92C0EE4, Fatal file administration error: File search

Display: [F92C0EE4](#)

Fatal system error, System_Error

Cause: File administration error:
Error in searching a file.

Remedy: Inform after-sales service.

F92C0EE5, Fatal file administration error: File open

Display: [F92C0EE5](#)

Fatal system error, System_Error

Cause: File administration error:
Error in opening a file.

Remedy: Inform after-sales service.

F92C0EE6, Fatal file administration error: File search

Display: [F92C0EE6](#)

Fatal system error, System_Error

Cause: File administration error:
Error in searching a file.

Remedy: Inform after-sales service.

F92C0EE7, Fatal file administration error: File read

Display: [F92C0EE7](#)

Fatal system error, System_Error

Cause: File administration error:
Error in reading a file.

Remedy: Inform after-sales service.

F92C0EE8, Fatal file administration error: File open

Display: [F92C0EE8](#)

Fatal system error, System_Error

Cause: File administration error:
Error in opening a file.

Remedy: Inform after-sales service.

F92C0EE9, Fatal file administration error

Display: [F92C0EE9](#)

Fatal system error, System_Error

Cause: File administration error:

Remedy: Inform after-sales service:

F9301000, Error while loading the PLS-Firmware

Display: [F9301000](#)

Fatal system error, Device_Error

The programmable limit switch firmware could not be loaded on the PLS-Module (CFL01.1-N1).

Cause:

- Defective PLS-Module attached.
- Not supported PLS-Module attached.

XLC/MLC diagnostic system tables

Remedy: Remove the PLS-Module at the MLC.

F93C0001, Exception at parsing of XML configuration

Display: [F93C0001](#)

Fatal system error, System_Error

The parsing of the XML configuration was ended with an unrecoverable exception error.

Cause: The XML configuration file is loaded and parsed while the control is starting up. An unrecoverable exception error has occurred here.

Solution: The correct functioning of the control cannot be guaranteed. Contact the Service department for replacement of firmware, i.e. replacement of the CF.

3.2 sercos Errors of the XLC/MLC**3.2.1 General Information on sercos Errors**

This chapter includes the errors of the ERROR_TABLE "SERCOS_TABLE".

The errors are evaluated as errors of category "F0" - errors without error reaction.

The uniform group number, identifier for sercos errors is "2D"; the known 4-digit sercos error number follows (the sercos error message).

3.2.2 F0 Errors, Non-Fatal Errors**F02D0000, sercos: No error in the service channel**

Display: [F02D0000](#)

Non-fatal error, Access_Error

Original sercos error...

F02D0001, sercos: Service channel not open

Display: [F02D0001](#)

Non-fatal error, Access_Error

Original sercos error...

F02D0003, Max. count of parallel parameter requests exceeded

Display: [F02D0003](#)

Non-fatal error, INPUT_RANGE_ERROR

Parameter data queries exceed maximum possible parallel number.

Remedy: Reduce simultaneous parameter queries or start reading/writing of parameters sequentially.

F02D0007, Parameter access to remote control not allowed

Display: [F02D0007](#)

Non-fatal error, Input_Invalid_Error

Parameter access to a remote control is not allowed. The parameter C-0-0211 is without any function.

F02D0008, DSH-Message Index out of Range

Display: [F02D0008](#)

Non-fatal error, Input_Range_Error

The transmitted index of the diagnostic message is outside the valid range

The possible indexes are generated from parameter "C-0-0624, Diagnostics, absolute indices".

F02D0009, sercos: Invalid access to closing the service channel

Display: [F02D0009](#)

Non-fatal error, Access_Error

Original sercos error...

XLC/MLC diagnostic system tables

F02D00A0, sercos: Parameter service channel is not open

Display: **F02D00A0**

Non-fatal error, Access_Error

The service channel is not available during the phase switching (sercos phase 0 / 1).

Cause: During the phase switching (sercos phase 0 / 1), it is tried to write or to read on the drive parameters by means of the parameter function blocks.

Remedy: The C parameter "C-0-0452, Motion, current mode" shows the phase that allows a correct reading of the drive parameters.

F02D00B0, sercos: Parameter element does not exist

Display: **F02D00B0**

Non-fatal error, Access_Error

The selected parameter element is not available.

Cause: No valid parameter element was selected. A maximum of 7 parameter elements are available .

Parameters - Elements

Element 1	Identification number	Mandatory
Element 2	Name	Optional
Element 3	Attribute	Mandatory
Element 4	Unit	Optional
Element 5	Minimum input value	Optional
Element 6	Maximum input value	Optional
Element 7	Operating date	Mandatory

Tab. 3-7: Table for parameters - Elements

Remedy: A valid element is to be chosen for the selected parameter.

F02D00C0, sercos: Selected drive does not exist

Display: **F02D00C0**

Non-fatal error, Access_Error

There is an invalid drive number on the parameter function block.

Cause: A drive that is not configured is accessed using a parameter function block.

Remedy: Configure the drive additionally or set a valid drive number on the function block.

F02D1001, sercos: No IDN

Display: **F02D1001**

Non-fatal error, Access_Error

An error occurs if

- a parameter that does not exist is accessed or
- drive parameters are read by the PLC before the sercos bus runs.

After switching on the XLC/MLC, it takes for example some seconds for the sercos bus to start up in P2, but the PLC program is already running and tries to read the S-parameters or P-parameters. The error described above is now output.

For more information on this error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#).

F02D1009, sercos: Invalid access to element 1

Display: **F02D1009**

Non-fatal error, Access_Error

XLC/MLC diagnostic system tables

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D2001, sercos: No nameDisplay: [F02D2001](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D2002, sercos: Name transmission too shortDisplay: [F02D2002](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D2003, sercos: Name transmission too longDisplay: [F02D2003](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D2004, sercos: Name cannot be changed (read only)Display: [F02D2004](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D2005, sercos: Name is write-protected at this timeDisplay: [F02D2005](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D3002, sercos: Attribute transmission too shortDisplay: [F02D3002](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D3003, sercos: Attribute transmission too longDisplay: [F02D3003](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D3004, sercos: Attribute cannot be changed (read only)Display: [F02D3004](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D3005, sercos: Attribute is write-protected at this timeDisplay: [F02D3005](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D4001, sercos: No unitsDisplay: [F02D4001](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

XLC/MLC diagnostic system tables

F02D4002, sercos: Unit transmission too short

Display: [F02D4002](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D4003, sercos: Unit transmission too long

Display: [F02D4003](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D4004, sercos: Unit cannot be changed (read only)

Display: [F02D4004](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D4005, sercos: Unit is write-protected at this time

Display: [F02D4005](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D5001, sercos: No minimum input value

Display: [F02D5001](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D5002, sercos: Min. input value transmission too short

Display: [F02D5002](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D5003, sercos: Min. input value transmission too long

Display: [F02D5003](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D5004, sercos: Min. input value cannot be changed (read only)

Display: [F02D5004](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D5005, sercos: Min. input value is write-protected at this time

Display: [F02D5005](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D6001, sercos: No maximum input value

Display: [F02D6001](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

XLC/MLC diagnostic system tables

F02D6002, sercos: Max. input value transmission too shortDisplay: [F02D6002](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#).

F02D6003, sercos: Max. input value transmission too longDisplay: [F02D6003](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#).

F02D6004, sercos: Max. input value cannot be changed (read only)Display: [F02D6004](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#).

F02D6005, sercos: Max. input value is write-protected at this timeDisplay: [F02D6005](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#).

F02D7001, sercos: No operation dataDisplay: [F02D7001](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#).

F02D7002, sercos: Operation data transmission too shortDisplay: [F02D7002](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#).

F02D7003, sercos: Operation data transmission too longDisplay: [F02D7003](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#).

F02D7004, sercos: Operation data cannot be changed (read only)Display: [F02D7004](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#).

F02D7005, sercos: Operation data is write-protected at this timeDisplay: [F02D7005](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#).

F02D7006, sercos: Operation data is smaller than the min input valueDisplay: [F02D7006](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#).

XLC/MLC diagnostic system tables

F02D7007, sercos: Operation data is greater than the max input value

Display: [F02D7007](#) Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D7008, sercos: Invalid operation data

Display: [F02D7008](#) Non-fatal error, Access_Error

The configured ID number is not supported; invalid bit number or bit combination

For more information on this error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D7009, sercos: Operation data write-protected by a password

Display: [F02D7009](#) Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D700A, sercos: Operation data is write-protected (cycl. conf)

Display: [F02D700A](#) Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D700B, sercos: Invalid indirect addr., (data container, list)

Display: [F02D700B](#) Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D700C, sercos: Operation data is write-protected (other settings)

Display: [F02D700C](#) Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D700D, sercos: Invalid floating point number

Display: [F02D700D](#) Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D700E, sercos: Reserved

Display: [F02D700E](#) Non-fatal error, Access_Error

Reserved

F02D700F, sercos: Operation data is write-protected at OM

Display: [F02D700F](#) Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D7010, sercos: Procedure command already active

Display: [F02D7010](#) Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

XLC/MLC diagnostic system tables

F02D7011, sercos: Procedure command not interruptibleDisplay: [F02D7011](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D7012, sercos: Procedure command at this time not executableDisplay: [F02D7012](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D7013, sercos: Procedure command not executableDisplay: [F02D7013](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D710C, sercos: Data exceed maximal rangeDisplay: [F02D710C](#)

Non-fatal error, Access_Error

For more information on the sercos error message, refer to the "Text" column in the [error/diagnostic memory of the control, page 53](#),.

F02D8001, sercos: Access temporary not possibleDisplay: [F02D8001](#)

Non-fatal error, Access_Error

Original sercos error...

F02D8096, sercos: Device deactivatedDisplay: [F02D8096](#)

Non-fatal error, Access_Error

An error occurs if

- a parameter is accessed and the respective device with the parameter is deactivated.

Real axis 1 is for example "deactivated" (A-0-0024, Axis state = 2) or "active with command value calculation, drive is deactivated" (A-0-0024, Axis state = 6) and if the parameter S-0-0001.0.0 should be read from the drive, the error described above is output.

F02D8097, sercos: Device does not existDisplay: [F02D8097](#)

Non-fatal error, INPUT_RANGE_ERROR

An error occurs if

- a parameter is accessed and the respective device with the parameter is not configured.

If axis 1 is not configured for example and if the parameter A-0-0001 is read from this axis, the error described above is output.

4 Service and support

Our worldwide service network provides an optimized and efficient support. Our experts offer you advice and assistance should you have any queries. You can contact us **24/7**.

Service Germany

Our technology-oriented Competence Center in Lohr, Germany, is responsible for all your service-related queries for electric drive and controls.

Contact the **Service Hotline** and **Service Helpdesk** under:

Phone: **+49 9352 40 5060**
Fax: **+49 9352 18 4941**
E-mail: service.svc@boschrexroth.de
Internet: <http://www.boschrexroth.com/>

Additional information on service, repair (e.g. delivery addresses) and training can be found on our internet sites.

Service worldwide

Outside Germany, please contact your local service office first. For hotline numbers, refer to the sales office addresses on the internet.

Preparing information

To be able to help you more quickly and efficiently, please have the following information ready:

- Detailed description of malfunction and circumstances
- Type plate specifications of the affected products, in particular type codes and serial numbers
- Your contact data (phone and fax number as well as your e-mail address)

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R911336358