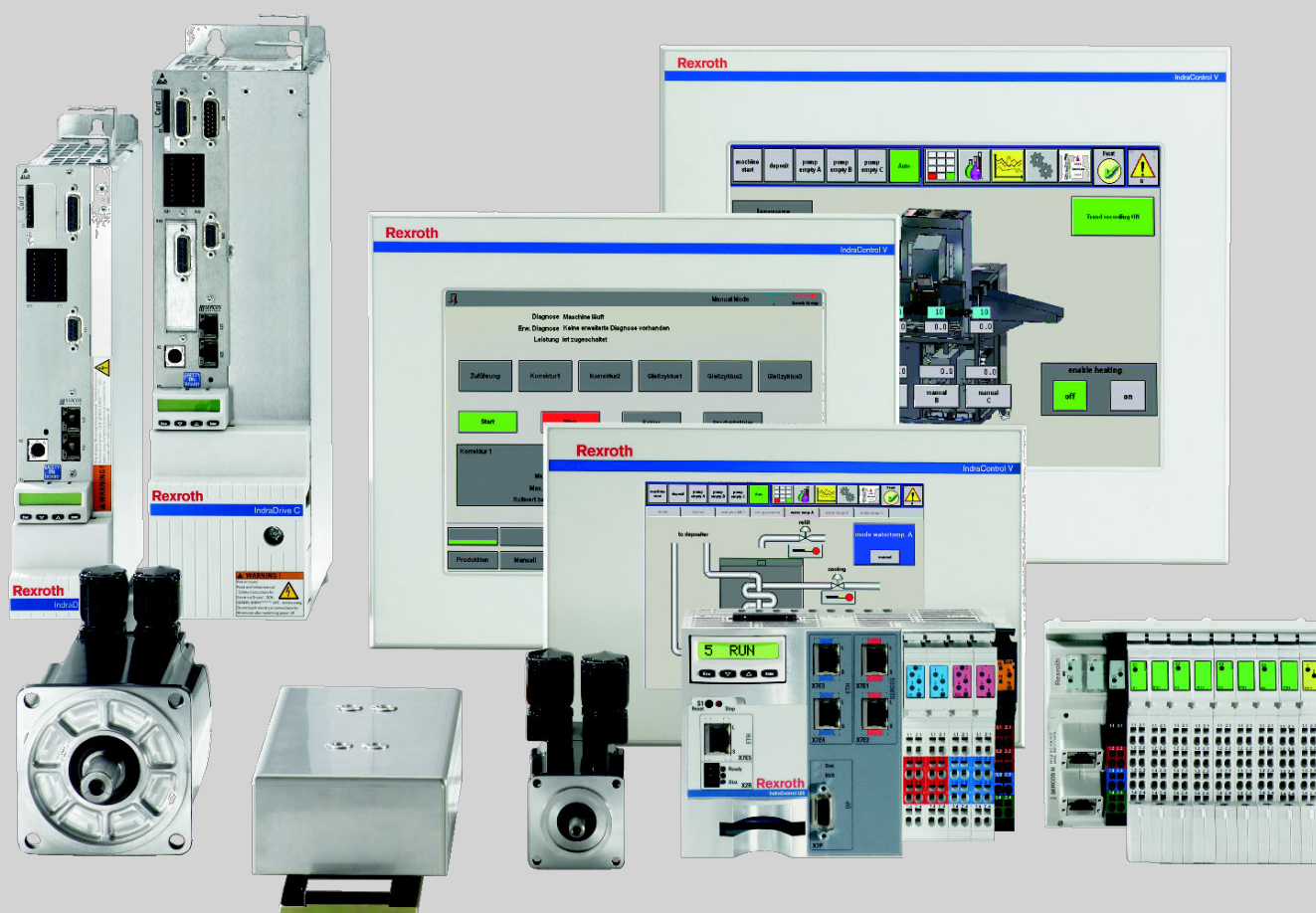


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1 About this documentation

Editions of this documentation

Edition	Release date	Notes
01	2014-10	First edition for MLC/XLC 14VRS, only online help Only Robot Control V2
02	2015-09	Update
03	2015-12	Update, F0220500 , F5300100 , F80B0186 , new Access export version
04	2016-04	New: A00C0005 , A00C0006 , update: F0160010 , F0160033 ; A00B0020 , F00C0006 , F2229296 , F9200017
05	2016-08	New: A0113002 , A0120001 , A0200036 , E0120001 , E0140001 , E02C0910 , F0160030 , F2120001 , F2299582 , F2299583 , F2299584 , F80B0186
06	2016-10	Extension of the diagnostic group "3B", user diagnostics New: F9200052
07	2017-01	New: F00C000D , F036001D , F036001E , F036001F , F0360020 , A0220050 , F0120001 , F0120002
08	2017-10	New: EtherCAT diagnostics, A00C0007 , A00C0008 , A00C0009 , A0200037 - A0200042 , F00E0001 , F00E0002 , F2111002 , F5111001 , F00A0014 , F0110050 , F0360021 - F0360028 Update: E02C00B7 , E02C00B8 , E02C08CF , F12C0410 , F12C041D , F12C041E , F12C0062 -> RCL removed
09	2018-05	New: F00D2012 , A00D0031 Update: F0140001 , F0ED005E , F20D2011 , mlc.wa.F039xxxx , mlc.wa.F03Axxxx
10	2020-02	New: A00C0010 , A0200046 , chapter " F0FC0001 , Function package "Technology" required for Function block xxx" on page 269 Update: E0200018 , F0ED000C , F0ED0084 , F0ED0104 , F0ED0105 , F0ED010B , F5113002 (Defdb00207354), F90C0000 , F90C0010 , F90C0011 , F9200060 , F9200061
11	2021-03	New: F00B0189 (Defdb00209550)

Tab. 1-1: Change Record

1.1 Validity of the documentation

This documentation describes messages, warnings, command errors and errors of the IndraLogic XLC / IndraMotion MLC in 14VRS.

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

Target group

This documentation is intended for

- System programmers and commissioners
- Technologists and process specialists
- Machine operators, maintenance technicians and service staff

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 to 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
- Operating and programming
- Maintenance
- Troubleshooting

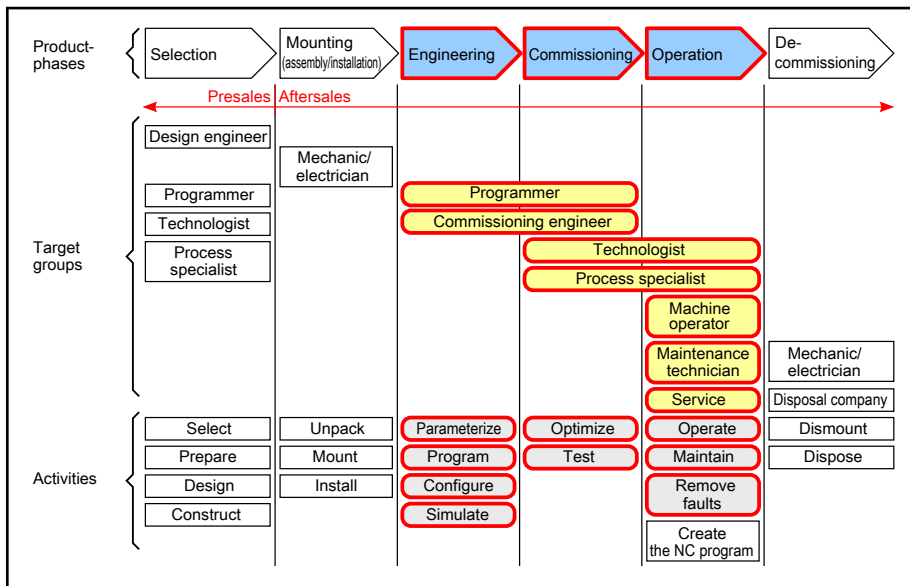


Fig. 1-1: Application phases

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, page 23,](#)
- [Messages, page 23,](#)
- [Warnings, page 58,](#)
- [Command errors, page 84,](#)
- [F0 errors, page 86,](#)
- [F1 errors, page 269,](#)
- [F2 errors, page 277,](#)
- [F5 errors, page 319,](#)
- [F8 errors, page 325 and](#)
- [F9 errors, page 329.](#)

Diagnostics on [Sercos errors, page 340,](#) supplement this documentation.

For information on the Bosch Rexroth customer service help desk, refer to [Service and support page 351,.](#)

1.3 Using safety instructions

1.3.1 Structure of the safety instructions

The safety instructions are structured as follows:

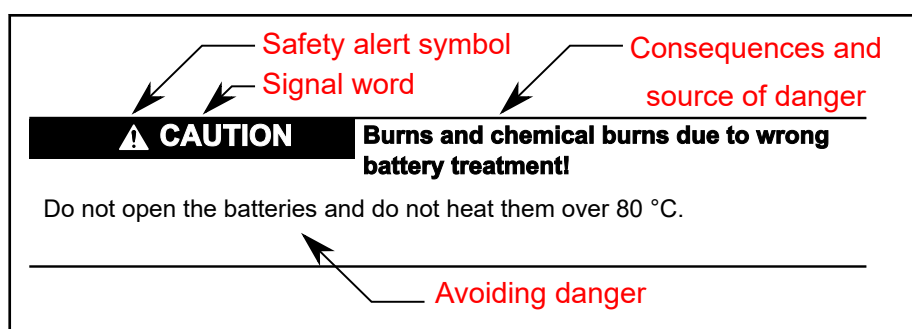


Fig. 1-2: Structure of the safety instructions

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 draws attention to the safety instruction and indicates the risk potential.

The safety alert symbol (triangular safety reflector with exclamation marks), preceding the signal words Danger, Warning, Caution indicates hazards for persons.

⚠ DANGER

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

⚠ WARNING

In case of non-compliance with this safety instruction, death or serious injury **can** occur.

⚠ CAUTION

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

NOTICE

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

1.3.3 Symbols used

Pointers are displayed as follows:



This is a note.

Tips are displayed as follows:



This is a tip.

1.3.4 Explaining the signal alert symbol on the device



If this symbol is on your device, you have to observe the documentation on the device. The respective documentation informs on the type of hazard as well as the steps required to avoid this hazard.

1.4 Required and supplementing documentation XLC/MLC

Documentation titles with type codes and part numbers

System overview
IndraLogic XLC IndraMotion MLC 14VRS System Overview DOK-XLCMLC-SYSTEM**V14-PRRS-EN-P, R911341504 This documentation provides an overview on the possible hardware/software components of the automation systems IndraLogic XLC and IndraMotion MLC of the mentioned version. The documentation facilitates assembling a system.

Tab. 1-2: XCL/MLC documentation overview - System overview

First steps
IndraMotion MLC 14VRS First Steps DOK-MLC***-F*STEP**V14-CORS-EN-P, R911341517 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.
IndraLogic XLC 14VRS First Steps DOK-XLC***-F*STEP**V14-CORS-EN-P, R911341489 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.
Rexroth IndraLogic XLC IndraMotion MLC 14VRS Project Conversion DOK-XLCMLC-PROCONV*V14-APRS-EN-P, R911341494 This documentation describes the project conversion of the IndraMotion MLC.

Tab. 1-3: XCL/MLC documentation overview - First steps

Engineering
IndraWorks 14VRS Software Installation DOK-IWORKS-SOFTINS*V14-CORS-EN-P, R911344286 This documentation describes the IndraWorks installation.
IndraWorks 14VRS Engineering DOK-IWORKS-ENGINEE*V14-APRS-EN-P, R911343566 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.
IndraLogic XLC IndraMotion MLC 14VRS Function Description DOK-XLCMLC-FUNC***V14-APRS-EN-P, R911341700 This documentation describes wizards, context menus, dialogs, control commissioning, device configuration and functionalities of the IndraMotion MLC.

Tab. 1-4: XCL/MLC documentation overview - Engineering

Diagnostics and service
IndraLogic XLC IndraMotion MLC 14VRS Diagnostics DOK-XLCMLC-DIAG***V14-RERS-EN-P, R911341481 This documentation includes all control diagnostics implemented in the control systems IndraLogic XLC and IndraMotion MLC.
IndraLogic XLC IndraMotion MLC 14VRS Parameters DOK-XLCMLC-PARAM***V14-RERS-EN-P, R911341479 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.
IndraLogic XLC IndraMotion MLC 14VRS Commissioning DOK-XLCMLC-STARTUP*V14-CORS-EN-P, R911341502 This documentation describes the steps to commission and service the IndraMotion MLC and IndraLogic XLC systems. It includes checklists for frequent tasks and a detailed description of the steps.
WebAssistant DOK-GENERL-WEB*ASSIST*-APRS-EN-P, R911381469 This documentation describes the WebAssistant. The WebAssistant is a webbased diagnostic tool used to access a control system via an Ethernet highspeed connection. The WebAssistant allows OEMs, end users and service engineers to access and to remotely diagnose a system. A PC with Internet Explorer version 11 or higher, Firefox version 45 or above or Google Chrome version 54 or above is required. The following control variants are supported: • IndraMotion MLC L45/L65/L75/XM21/XM22/XM42/VPx • IndraLogic XLC L45/L65/L75/VEP
IndraWorks IndraMotion Service Tool DOK-IWORKS-IMST*****-APRS-EN-P, R911341383 This documentation describes the IndraMotion Service Tool (IMST). IMST is a web-based diagnostic tool used to access a control system via an Ethernet high-speed connection. The IMST allows OEMs, end users and service engineers to access and remotely diagnose a system. The PC has to use at least Internet Explorer 8, Firefox 3.5 or a higher version. The following control variants are supported: • IndraMotion MLC L45/L65/L75/XM21/XM22/XM42/VPx • IndraLogic XLC L45/L65/L75

Tab. 1-5: XCL/MLC documentation overview - Diagnostics and service

Firmware
Rexroth IndraDrive MPx-20, Functions ¹⁾ DOK-INDRV*-MP*-20VRS**-AP01-EN-P, R911345608 This documentation describes all functional properties of the IndraDrive firmware in the variants MPB-20, MPM-20, MPC-20 and MPE-20.
Rexroth IndraDrive MPx-16 to MPx-20 und PSB, Parameters DOK-INDRV*-GEN1-PARA**-RERS-EN-P, R911328651 This documentation contains the descriptions of all parameters implemented in the firmware for drive controllers of the IndraDrive range. It supports the drive controller parameterization.
Rexroth IndraDrive MPx-16 to MPx-20 and PSB, Diagnostic Messages DOK-INDRV*-GEN1-DIAG**-RERS-EN-P, R911326738 This documentation contains the descriptions of all diagnostic messages implemented in the following firmware products: • Drive controller firmware variants MPx-16 to MPx-20 • PSB firmware variants for "HMU05" and "KMV03" type supply units • Firmware variants for "HMF01" type supply units It assists machine operators and installation programmers with troubleshooting.
Hardware
Rexroth IndraDrive Control Sections CSB02, CSE02, CSH02, CDB02 DOK-INDRV*-Cxx02*****-PRRS-EN-P, R911338962
Rexroth IndraDrive Cs Drive Systems with HCS01 DOK-INDRV*-HCS01*****-PRRS-EN-P, R911322210
Rexroth IndraDrive Mi Drive Systems with KCU02, KSM02, KMS02/03, KMV03 DOK-INDRV*-KCU02+KSM02-PRxx-EN-P, R911335703
Rexroth IndraDrive ML Drive Systems with HMU05 DOK-INDRV*-Hxx05*****-PRxx-EN-P, R911344279

1) In preparation
Tab. 1-6: Overview of documentations for drive controllers

PLC
IndraWorks 14VRS PLC Programming System IndraLogic 2G DOK-IWORKS-IL2GPRO*V14-APRS-EN-P, R911343571 This documentation describes the PLC programming tool IndraLogic 2G and its usage. It includes the basic use, first steps, visualization, menu items and editors.
IndraWorks 14VRS Basic Libraries IndraLogic 2G DOK-IL*2G*-BASLIB**V14-LIRS-EN-P, R911343920 This documentation describes the system-comprehensive PLC libraries.
IndraLogic XLC IndraMotion MLC 14VRS PLCopen Libraries DOK-XLCMLC-FUNLIB**V14-LIRS-EN-P, R911341491 This documentation describes the function blocks, functions and data types of the RIL_CommonTypes, ML_Base and ML_PLCopen libraries for the IndraLogic XLC/IndraMotion MLC. It also includes the error reactions of function blocks.

Tab. 1-7: XCL/MLC documentation overview - PLC

Field buses
IndraWorks 14VRS Field Buses DOK-IWORKS-FB*****V14-APRS-EN-P, R911341485 This documentation describes the field bus and local periphery connections supported by the IndraLogic XLC, IndraMotion MLC and IndraMotion MTX systems. The focus of this documentation is on the configuration, parameterization, commissioning and the diagnostics of the different periphery connections. This documentation is the basis for the online help.
IndraWorks 14VRS Field Buses Libraries DOK-IWORKS-FB*LIB**V14-LIRS-EN-P, R911343575 This documentation describes the field bus libraries: RIL_ProfibusDP_02, RIL_ProfibusDP Slave, RIL_ProfinetIO, RIL_ProfinetIODevice, RIL_EtherNetIPAdapter, RIL_MappingList, RIL_SERCOSIII, RIL_Inline including their diagnostics and error reactions of the function blocks.
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.
Sercos System Manual for I/O Devices DOK-CONTRL-ILS3*****-APxx-EN-P, R911333512 This documentation describes the configuration, parameterization, commissioning and diagnostics of I/O devices with a Sercos interface.

xx Corresponding edition
Tab. 1-8: XCL/MLC documentation overview - Field buses

HMI
IndraWorks 14VRS HMI DOK-IWORKS-HMI*****V14-APRS-EN-P, R911343569 This documentation describes the functions, configuration and operation of the user interfaces IndraWorks HMI Engineering and IndraWorks HMI Operation.
IndraWorks 14VRS WinStudio 7.4 DOK-IWORKS-WINSTUD*V14-APRS-EN-P, R911341585 This "User Manual and Technical Reference Book" facilitates working with the "Rexroth WinStudio" software for optimal results. This document provides technical information and step-by-step instructions to create web-enabled HMI/SCADA programs.
Rexroth IndraLogic XLC IndraMotion MLC 14VRS HMI Connection DOK-XLCMLC-HMI*****V14-APRS-EN-P, R911341497 This documentation describes the visualization systems supported by the IndraLogic XLC and IndraMotion MLC and their connection.

Tab. 1-9: XCL/MLC documentation overview - HMI

Technology
IndraLogic XLC IndraMotion MLC 14VRS Generic Application Template DOK-XLCMLC-TF*GAT**V14-APRS-EN-P, R911341487 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.
IndraMotion MLC 14VRS Technology Libraries DOK-MLC***-TF*LIB**V14-LIRS-EN-P, R911341511 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.
IndraWorks 14VRS Energy Efficiency Management DOK-IWORKS-4EE*****V14-APRS-EN-P, R911339229 This documentation describes the HMI connection of the energy management system and the function blocks, functions and data types of the "RIL_4EE " library. The documentation also includes the error reactions of the function blocks.
Rexroth IndraMotion MLC 14VRS RegisterControl (Library) DOK-MLC***-REGI*CO*V14-LIRS-EN-P, R911341509 This documentation describes the inputs and outputs of the individual function blocks and provides notes on their use.
IndraMotion MLC 14VRS RegisterControl (Application Description) DOK-MLC***-REGI*CO*V14-APRS-EN-P, R911341507 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.
Rexroth IndraMotion MLC 14VRS Winder Function Application DOK-MLC***-TF*WIND*V14-APRS-EN-P, R911341513 This application-related system documentation describes the application of the winder technology functions.
Rexroth IndraWorks CamBuilder 13VRS DOK-IWORKS-CAMBUIL*V13-APRS-EN-P, R911336291 This documentation describes the basic principles and operation of the CamBuilder, the cam editing tool.
IndraMotion MLC 14VRS Robot Control V2 DOK-MLC***-ROCO****V14-RERS-EN-P, R911341588 This documentation provides information about the Robot Control V2. The focus is on PLCopen programming. The program structure, variables, functions, motion statements and the required system parameters are described. This documentation also includes the description of the "ML_Robot" library. Robot Control V2 is supported by a kinematic interface. The components of this interface are described in the "ML_KinTech" library.

Tab. 1-10: XCL/MLC documentation overview - Technology

Open Core Engineering - OCE
IndraLogic XLC IndraMotion MLC 14VRS First Steps MLPI (online help) DOK-XLCMLC-MLPI****V14-CORS-EN-E, R911341033 This document describes the installation and the commissioning of the MLPI interface.
IndraLogic XLC IndraMotion MLC 14VRS Automation Interface (online help) DOK-XLCMLC-AUT*INT*V14-APRS-EN-E, R911341499 This documentation describes the script-based access to IndraWorks project data via the interface of the Automation Interface.

Tab. 1-11: XCL/MLC documentation overview - Open Core Engineering - OCE

SafeLogic
IndraWorks SafeLogic 14VRS First Steps DOK-IWORKS-SL*STEP*V14-CORS-EN-P, R911341520 This documentation describes the initial commissioning of the Safety function module and its external Safety periphery. Taking the example of a project, all required steps to commission a simple Safety application are executed.
IndraLogic XLC IndraMotion MLC 14VRS SafeLogic System Overview DOK-XLCMLC-SL**SYS*V14-PRRS-EN-P, R911341696 This documentation describes the project planning, configuration, creation and commissioning of safety-related devices.
IndraWorks 14VRS SafeLogic - Project Configuration, Version 1.2.0.0. DOK-IWORKS-SL**PRJ*V14-APRS-EN-P, R911341694 This documentation describes the configuration of Safety applications.
IndraControl CFL01.1-F1 Safety Function Module DOK-CTRL-SL**FM*****-ITRS-EN-P, R911336576 This documentation is provided with the hardware and describes the commissioning, the installation, the decommissioning and disposal of the hardware.

Tab. 1-12: XCL/MLC documentation overview - SafeLogic

Hardware
Rexroth IndraControl L45/L65/L85 Control DOK-CTRL-ICL45L65L85-PRxx-EN-P, R911332116 This documentation describes the IndraControl L45/L65/L85 controls.
Rexroth IndraControl Lxx 14VRS Function Modules DOK-CTRL-FM*LXX**V14-APRS-EN-P, R911341583 This documentation describes all function modules of the Lxx controls including engineering and diagnostics.
IndraControl XM21, XM22 Controls DOK-CTRL-IC*XM2*****-ITRS-EN-P, R911340667 This documentation describes the IndraControl XM21/XM22 controls.
IndraControl XM42 Controls DOK-CTRL-XM4X*CTRL**-ITRS-EN-P, R911345566 This documentation describes the IndraControl XM42 controls.
IndraControl XFE 01.1 Extension Modules Profibus, RT-Ethernet, Sercos, CAN DOK-CTRL-XFE**EXTMOD-ITRS-EN-P, R911345570 This documentation describes all extension modules of the XM controls.

xx Corresponding edition
Tab. 1-13: XCL/MLC documentation overview - Hardware

Hydraulics
Rexroth IndraMotion MLC 14VRS Hydraulic Functions DOK-MLC***-TF*HMOT*V14-LIRS-EN-P, R911341907 This documentation describes the function blocks, functions and data types of the MH_TechHydrBase and MH_TechHydrMotion libraries. The documentation also includes the error reactions of the function blocks.
Rexroth IndraLogic XLC IndraMotion MLC 14VRS Sequential Programming DOK-XLCMLC-SEQPROG*V14-LIRS-EN-P, R911341909 This documentation describes the sequential programming options, also when using GAT, and the MH_HydrControlProg library.

Tab. 1-14: XCL/MLC documentation overview - Hydraulics

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
Hydraulic-Drive	Hydraulic drive control section
SercosDrive	Drive control device with simplified parameter interface
Wizard	Wizard guiding through several dialogs for an ergonomic data input
IEC	International Electrotechnical Commission (Standardization platform for electrotechnical engineering)
OEM	Original Equipment Manufacturer
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. 1-15: Terms and abbreviations

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.

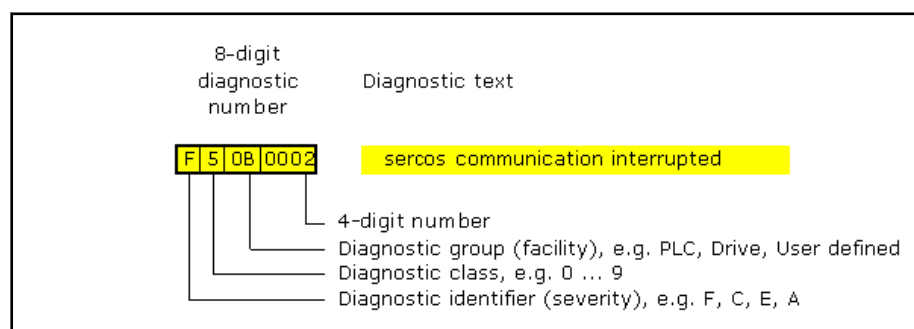


Fig. 2-1: Structure of a diagnostics

Diagnostic identifier

Currently, four different categories (severity) are supported:

- F - Error
- C - Command error (only C2C commands)
- 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. If it is acknowledged, the next most severe diagnostics is displayed.

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

Group	Cause/error table
00	IndraDrive/HydraulicDrive drive errors on page 17 , IndraDrive/HydraulicDrive drive warnings on page 18 / INDRV_TABLE
01...A9	MLC firmware, e.g. Virtual axis , error messages on page 18
2D	Sercos error messages on page 19 / SERCOS_TABLE
2E	SercosDrive, PackProfile , error messages on page 19
39	Messages of the 3S kernel
3A	Messages of BRC components
3B	User diagnostics; applying diagnostics from PLC program to Logbook on page 20
4C	Sercos command errors
AA	GAT internal error
AE	Application errors
B1..B9	Plugin "additional diagnostics"
FB	Function block error

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

There is no scaling between groups.

Number There is a number 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 state and display errors flashing as error number or alternating for drive errors with drive number.

Switch to the "Advanced Mode" by pressing <Esc> and <Enter> for eight seconds. 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:

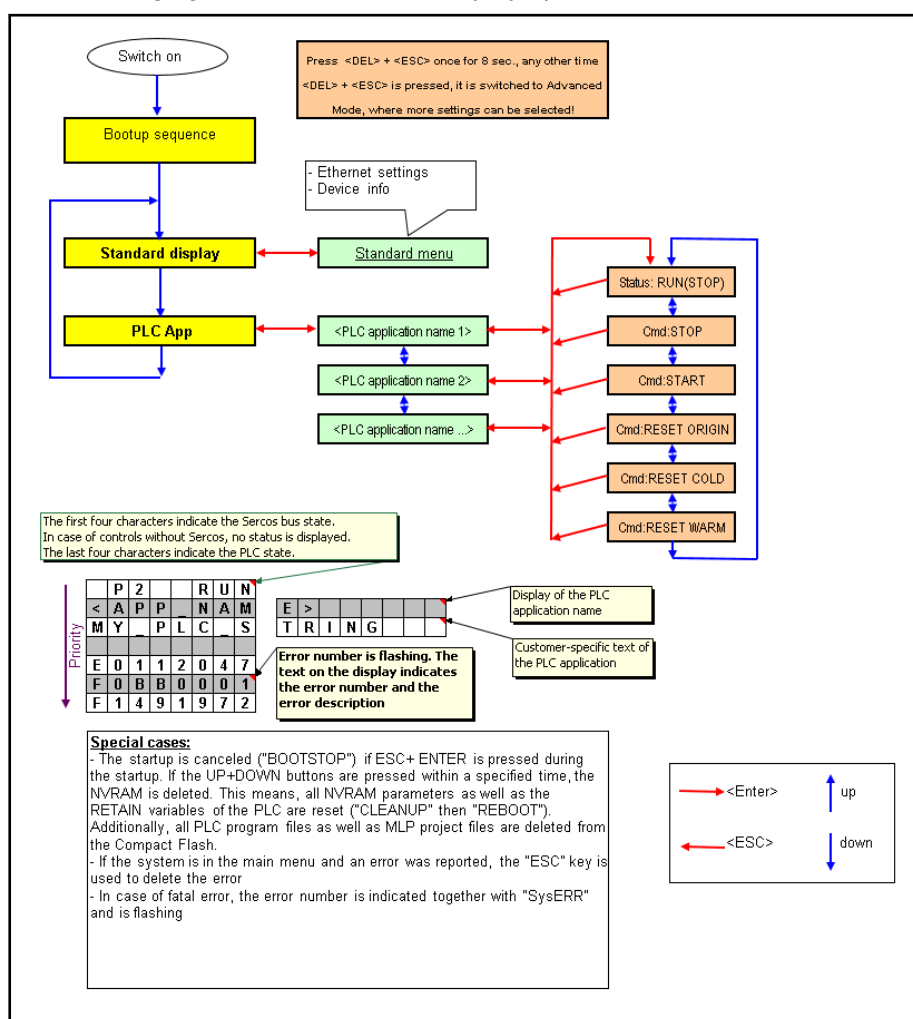


Fig. 2-2: Default display

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.

General information on the XLC/MLC diagnostic system

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 texts in the "error/diagnostics memory", IndraWorks MLC/XLC

The Error/diagnostic 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).

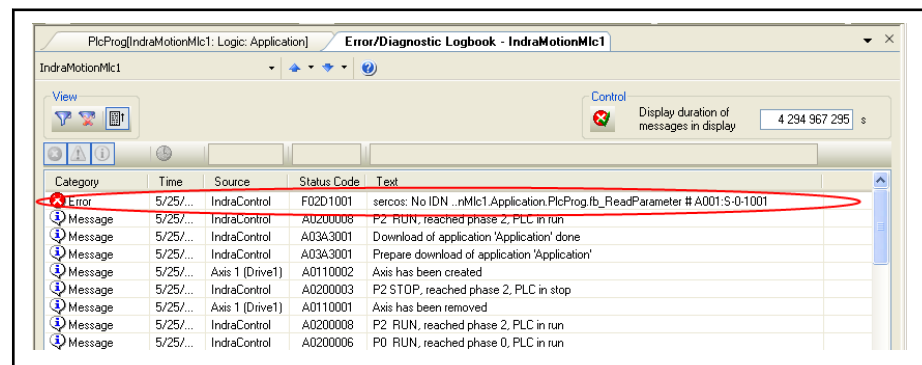


Fig. 2-3: Error/diagnostic memory dialog from the "Functional Description" on the IndraMotion MLC/XLC

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

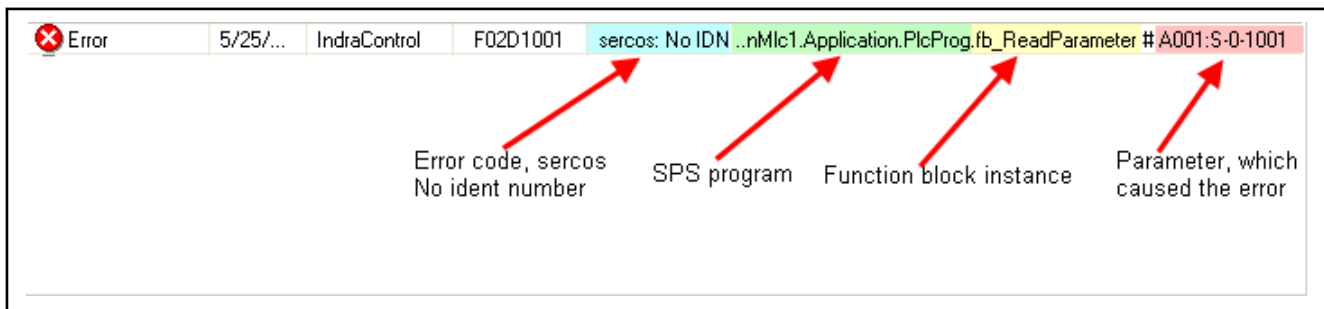


Fig. 2-4: Extended diagnostic line for error messages of PLC function block instances

- The source is **IndraControl** followed by an 8-digit error code.
In the example: "F02D1001, sercos: No IDN".
- 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 parameters (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"
- **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_ReadLog function block or the ML_GetDiagnosisLog function.

ML_ReadDiagLog

The function block ML_ReadDiagLog, ML_Base.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_Base.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 explains by an Enum text at the "ErrorID" output and provides a detailed description on the "ErrorIdent" output.

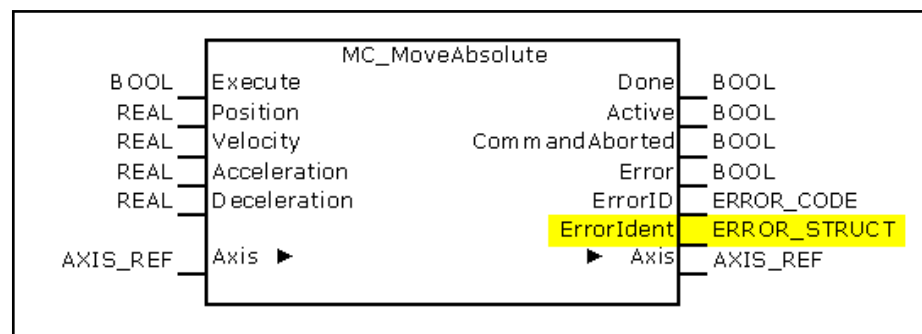


Fig. 2-5: Error management of the MC_MoveAbsolute function block
Program:

```
(* Structure to implement the diagnostics of the function block *)
TYPE ERROR_STRUCT :
STRUCT
    Table      : ERROR_TABLE; (* Additional diagnostic table *)
    Additional1 : DWORD;      (* Contains the actual error number (diagnostics) *)
    Additional2 : DWORD;      (* according to the table. *)
END_STRUCT
END_TYPE
(* Can contain additions to "Additional1" . *)
```

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 *)
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,
- Setting 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 error reaction is triggered by the control.

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

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,
- Setting axis set to standstill the best possible.

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

Display location	Message content
Drive message S-0-0390	Omitted
Axis diagnostic message A-0-0020	"F2229206"
Axis diagnostic message A-0-0023	F2229206
L25/L45/L65 display C-0-0626	Axis 2 F2229206
Error reaction	Class 2
IW text	Virtual axis "F2229206, Command rejected while 'Stopping'"
Help topic for IW_Text (double-click)	Diagnostics for MLC

Tab. 2-5: Example: Error of a virtual axis

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,
- Setting 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	Omitted
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 the 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 ⇒ F02D1001). 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 number 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 ⇒ C0280101). 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

Display location	Message content
IW text	"C0280101, C2C-C0100: incomplete/ invalid parameter set"
Help topic on IW_Text	Diagnostics for MLC

Tab. 2-8: Example: Command error message

2.6.7 User diagnostics; applying diagnostics from PLC program to Logbook

The following functions are available in the ML_Base 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 11](#), according to the error class.

Depending on the error class, the axis (drive) referenced via the "Axis" input is affected as follows:

Possible error classes

- 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 11](#), according to the error class.

Useful error classes

- 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:

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-0-0023, 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

General information on the XLC/MLC diagnostic system

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
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

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 on page 23](#). The firmware version on the CF card does not support this hardware
- [ERROR_IP on page 23](#), IP address already used in the network

Further diagnostics the support help 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:	Solution:
The IP of the Engineering interface is already in the network.	Change the IP address of the control ("C-0-0200, Engineering, IP address") 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

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 "0".

A00B0005, Drive message

Display: [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

One of the FPGAs is updated (e.g. system FPGA, Sercos FPGA, Safety FPGA, S20 FPGA, etc.).

CAUTION

The power supply of the control may not be switched off during the update.

Disconnecting the voltage supply can cause a hardware defect.

A PowerCycle is then required. Wait until either the control reboots or until PowerCycle is signaled. This can for example be seen in the "PWRCYCLE" display.

Cause: Either the firmware or the configuration require a different FPGA version.

This can occur if:

- firmware is updated
- hardware is exchanged

- configuration (e.g. Sercos master/slave) is changed

A00B0030, sercos: modul activated, cycletimes set to default

Display: [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 error

Display: [A00B0161](#)

System message

Error in cyclic data transfer.

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.

A00B0181, AT-Data not valid

Display: [A00B0181](#)

System message

No valid data of a Sercos III device was detected by the control in multiple subsequent drive telegrams (AT).

The number of permitted failures is specified in C-0-0507.

Cause:

- Ethernet cable not plugged in correctly or removed at runtime
- Ethernet cable defective
- Device defective

Solution: Check all Ethernet connections between control and devices.

Check Sercos transmission path on defective Sercos telegrams and ring interruptions via the IndraWorks dialog "Sercos Bus Diagnostics".

A00B0182, Producer Connection failure

Display: [A00B0182](#)

System message

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 malfunctions
- An internal firmware error occurred

Solution:

- Producer of the connection (control or another Sercos III slave) does not operate correctly

- Check all Ethernet connections between control and devices

A00B0183, Consumer connection failure

Display: [A00B0183](#)

System message

A Sercos III consumer connection of the control does not operate 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 malfunctions.
 - An internal firmware error occurred.
- Solution:**
- Producer of the connection (Sercos III slave) does not operate correctly.
 - Check all Ethernet connections between control and devices.

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.

A00C0005, Time of last regular shutdown (UTC):

Display: [A00C0005](#)

System message

This diagnostics contains (as UTC time specification) the point in time of the latest regular control switch-off, i.e. the control was in normal operating state when switched off.



The switch-off time cannot be displayed if either the error [F00C0005](#) or the error [F00C0006](#) occurred.

If the system was switched off again while booting, the displayed switch-off time corresponds to the switch-off time of the latest switch-off in normal operating mode.

In case of a fatal system error (F9xxxxxx), the point in time when the error occurred, is saved.

A00C0006, actual time of control (UTC):

Display: [A00C0006](#)

System message

This diagnostics contains the current time of the control, displayed a UTC time.

A00C0007, Sys-Error occurred

Display: [A00C0007](#)

System message

A fatal error (SysError) occurred on the control.

Upon the firmware startup, this diagnostics signals that a fatal error occurred before the control restart. Together with the diagnostics, the error number (only in case of an IndraLogic XLC/IndraMotion MLC system error) and the time when the error occurred were output.

A00C0008, Last backup time (UTC) of remanent data:

Display: [A00C0008](#)

System message

Due to an error, remanent data was not backed up upon the last control shut-down (for details, refer to the error description in [F00C0006](#)). As a consistent state of the remanent data was backed up upon the penultimate control shut-down and as this data is still present, this state was restored.

To judge whether this penultimate state of the remanent data can still be used, the backup time is displayed in this diagnostics (in UTC).

A00C0009, BOOT START, boot of system begins

Display: [A00C0009](#)

System message

This diagnostics is always output at the earliest possible during system start-up. At this point in time, the diagnostic system is executable on the control and the logbook can be written.

The diagnostics signals that the system was restarted.

A00C0010, Device information:

Display: [A00C0010](#)

System message

The device information of the control is displayed in the following format:

DeviceInformation: <TypeCode>, <SerialNumber>, <PartNumber>, <MaterialIndexNumber>

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.

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

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

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.

A00D0031, Denied start of boot application(s) due to C-0-0405

Display: [A00D0031](#)

System message

The PLC boot application(s) on the control was/were not started due to the settings of parameter C-0-0405.

This message occurs if bit 3 is set in parameter C-0-0405 and if an NvRam error occurred during the control startup. For more information, refer to the description of parameter C-0-0405.

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.

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 faultDisplay: [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.**A00D0100, Access on odd address**Display: [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.

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

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.

A00D07E4, Array lower bounds violation - RESET

Display: [A00D07E4](#)

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 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 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[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.

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

A00D07E7, Division (16bit) by zero - RESET

Display: [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 - RESET

Display: [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 - RESET

Display: [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.

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 - RESETDisplay: [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 - RESETDisplay: [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:
    i1 : INT (5...20);
Implementation:
    LD 1
    ST i1
```

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

A00D07ED, Upper range bounds (signed) violation - RESET

Display: [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 - RESET

Display: [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) - RESET

Display: [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) - RESET

Display: [A00D07F0](#)

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: 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 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: 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 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: 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.

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 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 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 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[200];
```

The index was corrected to the maximum permissible index.

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.

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.

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.

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

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 date 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 date 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

A00D1202, WriteParameter, data type not supported by POU

Display: [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 POU

Display: [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 POU

Display: [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:

	DINT	REAL	List of parameters
MB_WriteParameter	X		
MB_WriteRealParameter		X	
MB_WriteListParameter			X

A00D2EE4, Module error Inline bus goesDisplay: [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 baseDisplay: [A00E0001](#)

System message

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

Remedy: Please contact the service.

A00E0002, OKDisplay: [A00E0002](#)

System message

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

A0110001, Axis has been removedDisplay: [A0110001](#)

System message

The axis was removed by the control firmware.

A0110002, Axis has been createdDisplay: [A0110002](#)

System message

The axis was recreated by the control firmware.

A0110031, PM: Axis not in standstillDisplay: [A0110031](#)

System message

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

A0110032, PM: Axis not in power offDisplay: [A0110032](#)

System message

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

A0110033, PM: Parameterization level not supportedDisplay: [A0110033](#)

System message

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

A0110034, PM: Switching to parameterization level failedDisplay: [A0110034](#)

System message

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

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

System message

Due to an error, it was not switched to operating mode

A0110036, PM: Synchronization of parameterization level failedDisplay: [A0110036](#)

System message

When switching the control mode, the state of the parameterization level of the axes is synchronized to the one of the device.

This synchronization failed.

A0113002, Velocity too high for cycletimeDisplay: [A0113002](#)

System message

A maximum permitted velocity for interpolated axes on the control result from the defined cycle time.

This maximum permitted velocity was reached or exceeded in the chain action of the MotionControl. The actual required error reaction was disabled by enabling bit 8 in the parameter A-0-3009.



If the required error reaction and thus the setting of the complete system to a standstill is disabled, unintended axis motions can result.

A0120001, Ftp server is active (not encrypted)Display: [A0120001](#)

System message



The description of this diagnostic message is in preparation.

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.

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.

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.

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.

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.

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

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 configuration

Display: [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 configuration

Display: [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).

A0200036, Storage of remanent data possible

Display: [A0200036](#)

System message

Remanent data (parameters and PLC data) can be backed up starting from this diagnostics. Consequently, all changes made in parameters and/or PLC data are saved when the power supply of the control is switched off.

Technical background: The buffer capacitors of the control are charged and the routine detecting the voltage supply failure and then backing up data, is available.

A0200037, P0 RUN/STOP, reached phase 0, PLC in run/stop

Display: P0 R/S

System message

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

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, startup target mode of the control" or "C-0-0451, target mode of the control"). At least one application is in the "RUN" state and one in the "STOP" state.

Solution: Parameter "C-0-0451, target mode of the control" can be used for switching into other Motion modes. The individual applications can be started or stopped via IndraWorks.

A0200038, P1 RUN/STOP, reached phase 1, PLC in run/stop

Display: P1 R/S

System message

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

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, startup target mode of the control" or "C-0-0451, target mode of the control"). At least one application is in the "RUN" state and one in the "STOP" state.

Solution: Parameter "C-0-0451, target mode of the control" can be used for switching into other Motion modes. The individual applications can be started or stopped via IndraWorks.

A0200039, P2 RUN/STOP, reached phase 2, PLC in run/stop

Display: P2 R/S

System message

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

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, startup target mode of the control" or "C-0-0451, target mode of the control"). At least one application is in the "RUN" state and one in the "STOP" state.

Solution: Parameter "C-0-0451, target mode of the control" can be used for switching into other Motion modes. The individual applications can be started or stopped via IndraWorks.

A0200040, P3 RUN/STOP, reached phase 3, PLC in run/stop

Display: P3 R/S

System message

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

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, startup target mode of the control" or "C-0-0451, target mode of the control"). At least one application is in the "RUN" state and one in the "STOP" state.

Solution: Parameter "C-0-0451, target mode of the control" can be used for switching into other Motion modes. The individual applications can be started or stopped via IndraWorks.

A0200041, BB RUN/STOP, Motion ready, PLC in run/stop

Display: BB R/S

System message

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

Cause: The Motion was switched into this mode (e.g. by the parameter "C-0-0450, startup target mode of the control" or "C-0-0451, target mode of the control"). At least one application is in the "RUN" state and one in the "STOP" state.

Solution: Parameter "C-0-0451, target mode of the control" can be used for switching into other Motion modes. The individual applications can be started or stopped via IndraWorks.

A0200042, RUN/STOP, PLC in run/stop

Display: R/S

System message

The device is in the operating state RUN/STOP. At least one PLC application is in the RUN state and one in the STOP state.

A0200046, Rexroth UPS is not availableDisplay: [A0200046](#)

System message

General information

- If the voltage fails, information that is not backed up, such as retain data and data in open files might be lost, as they cannot be backed up or closed anymore.

XLC/MLC diagnostic system tables

- This does not apply to a device shutdown or restart (from the control or Windows). Data is saved.

Variant 1: Using a third-party UPS

A third-party UPS is connected to the system.

Cause:	Solution:
A third-party UPS cannot neither be detected nor integrated properly.	If the voltage fails, ensure that the third-party UPS shuts down the system correctly to ensure that all required data is backed up.

Variant 2: Using a Rexroth UPS

A Rexroth UPS is connected to the system, but a connection error is present.

Cause:	Solution:
The energy storage of the UPS is not sufficiently charged or defective.	Wait until the energy storage of the UPS is charged (refer to the LED display and the operating instructions of the UPS). Shut down the system to ensure that all required data is backed up before voltage failure. Restart the system. If the message occurs again, please contact the customer support.
The communication connection (USB connection) between the UPS and the system is interrupted or the connection is interfered.	Check the USB connection between the UPS and the system and exchange it if required.
The software instance (UPS service) monitoring the UPS failed or an error occurred.	Shut down the system to ensure that all required data is backed up before voltage failure. Restart the system. If the message occurs again, please contact the customer support.

Variant 3: Using a UPS

Neither a third-party nor a Rexroth UPS is connected to the system.

Cause:	Solution:
No UPS connected to the system.	Connect the UPS to the system to ensure that unsaved data is not lost in case of a voltage failure.

A0220050, Actual motion command:

Display: [A0220050](#)

System message

It is a group diagnostics entering all active motion commands issued on the control system IndraLogic XLC/IndraMotion MLC into the diagnostic logs. The diagnostic text is supplemented by the active motion command and shows the respective command history of an individual axis in the diagnostic log. The diagnostics can be enabled individually for each axis using bit 8 in the parameter "A-0-0651 Diagnostics, control word".

A0290001, Kinematics has been removed

Display: [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

A0370002, External trigger activatedDisplay: [A0370002](#) System message

At least one event was decoupled from the cyclic operation via the parameter "C-0-0430, External trigger, configuration".

A0370003, External trigger deactivatedDisplay: [A0370003](#) System message

All events previously decoupled from the cyclic operation were reset and applied again to the cyclic operation via the parameter "C-0-0430, External trigger, configuration".

A0370004, Startup of cycle time adapted to number of sercos devicesDisplay: [A0370004](#) System message

Due to the number of detected Sercos devices in phase 0, the Sercos cycle times from the phases 0 to 2 (parameter C-0-0402) are adjusted.

This ensures the acyclic communication to the connected Sercos devices.

A039**, PLC message from kernel**

Cause: The PLC kernel issues a message.

Solution: There is no further information available on this warning.

For detailed information, please refer to the error/diagnostic memory (context menu **<Control>** ► **Diagnostics** ► **Error/diagnostic memory**).

A03A**, PLC message from company-internal components**

Cause: One of the company-internal components issues a message.

Solution: There is no further information available on this warning.

For detailed information, please refer to the error/diagnostic memory (context menu **<Control>** ► **Diagnostics** ► **Error/diagnostic memory**).

A*3B****, user diagnostics; applying diagnostics from PLC program to Logbook

Cause: One of the functions ML_SetAxisDiagEntry or ML_SetDiagEntry of the PLC user program issues a message.

The function causes an entry in the control logbook. At the same time, the diagnostics is displayed on the control display.

3.1.3 Warnings

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 "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 the following into the IndraWorks online help:

- **Find** tab: E8034

For third-party drives, use the drive documentation.

Also refer to [IndraDrive/HydraulicDrive drive warnings](#) , page 18.

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
- 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 sta-

tuses 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.

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.

E00D0002, Operation Mode Switch in STOP: Can not start application

Display: [E00D0002](#)

Non-fatal warning

The application of the control could not be started.

Cause: The operation mode switch of the XM control platform is in STOP position (center).

Solution: To start the application, switch the operation mode switch to the RUN (up) position. The warning is deleted.

E00D0003, Operation Mode Switch in STOP: Can not load application

Display: [E00D0003](#)

Non-fatal warning

The boot application of the control could not be loaded after a successful control startup.

Cause: The operation mode switch of the XM control platform is in STOP position (center). Thus, loading the boot application is not possible.

Solution: To load and start the application, switch the operation mode switch to the RUN (up) position. The warning is deleted.

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

A PLC task was created in the user program via SysTaskCreate. When defining the priority, a value outside the range valid for the PLC was specified.

Valid value range:

TASKPRIO_REALTIME_END = 32 to

TASKPRIO_REALTIME_END = 63

When defining other priority values, the task is moved to the lowest system priority and the warning remains.

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 projected 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

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".

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):

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 warning

Display: [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.

E0112048, Acceleration of interpolation = 0Display: [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.

E0112057, Torque/force limit positive exceeded

Display: [E0112057](#)

Non-fatal warning

The positive force/torque is limited to the value parameterized either in "A-0-0039, Torque/force, positive" or "A-0-0038, Torque/force, bipolar".

Cause:	Solution:
Incorrect force/torque specification. The value specified in the program is too high.	Change the programmed force/torque to a possible value.
"A-0-0039, Torque/force limit value, positive" or "A-0-0038, Torque/force limit value, bipolar" are incorrectly parameterized.	Check the parameter content of "A-0-0039, Torque/force limit value, positive" or "A-0-0038, Torque/force limit value, bipolar".

E0112058, Torque/force fallen short of negative limit

Display: [E0112058](#)

Non-fatal warning

The negative force/torque is limited to the value parameterized either in "A-0-0040, Torque/force, negative" or "A-0-0038, Torque/force, bipolar".

Cause:	Solution:
Incorrect force/torque specification. The value specified in the program is too small.	Change the programmed force/torque to a possible value.
"A-0-0040, Torque/force limit value, negative" or "A-0-0038, Torque/force limit value, bipolar" are incorrectly parameterized.	Check the parameter content of "A-0-0040, Torque/force limit value, negative" or "A-0-0038, Torque/force limit value, bipolar".

E0112059, Commanded torque/force grather than positive Limit

Display: [E0112059](#)

Non-fatal warning

XLC/MLC diagnostic system tables

The positive force/torque value is limited to the value parameterized either in "A-0-0038, Torque/force limit value, bipolar" or "A-0-0039, Torque/force limit value, positive".

Cause:	Solution:
Incorrect force/torque specification. The value specified in the program is too high.	Change the programmed force/torque to a possible value.
"A-0-0038, Torque/force limit value, bipolar" or "A-0-0039, Torque/force limit value, positive" are incorrectly parameterized.	Check the parameter content of "A-0-0038, Torque/force limit value, bipolar" or "A-0-0039, Torque/force limit value, positive".

E0112060, Commanded torque/force fallen short of negative Limit

Display: [E0112060](#)

Non-fatal warning

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

Cause:	Solution:
Incorrect force/torque specification. The value specified in the program is too small.	Change the programmed force/torque to a possible value.
"A-0-0038, Torque/force limit value, bipolar" or "A-0-0040, Torque/force limit value, negative" are incorrectly parameterized.	Check the parameter content of "A-0-0038 Torque/force limit value, bipolar" or "A-0-0040, Torque/force limit value, negative".

E0112061, Commanded velocity greater than positive limit

Display: [E0112061](#)

Non-fatal warning

The positive command velocity is limited to the value either parameterized in "A-0-0032, Velocity limit value, positive" or "A-0-0035, Velocity limit value, bipolar".

Cause:	Solution:
Incorrect velocity specification. The value specified in the program is too high.	Change the programmed velocity to a possible value.
"A-0-0032, Velocity limit value, positive" or "A-0-0035, Velocity limit value, bipolar" are parameterized incorrectly.	Check the parameter content of either "A-0-0032, Velocity limit value, positive" or "A-0-0035, Velocity limit value, bipolar".



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 specification via the control and by considering the noise of the actual value encoder)

In this case, the limit values "A-0-0032 Velocity limit value, positive" and "A-0-0035 Velocity limit value, bipolar" have to be set to a higher value.

E0112062, Commanded velocity smaller than negative limit

Display: [E0112062](#)

Non-fatal warning

The negative command velocity is limited to the value either parameterized in "A-0-0033, Velocity limit value, negative" or "A-0-0035, Velocity limit value, bipolar".

Cause:	Solution:
Incorrect velocity specification. The value specified in the program is too high.	Change the programmed velocity to a possible value.
"A-0-0033, Velocity limit value, negative" or "A-0-0035, Velocity limit value, bipolar" are parameterized incorrectly.	Check the parameter content of either "A-0-0033, Velocity limit value, negative" or "A-0-0035, Velocity limit value, bipolar".



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 specification via the control and by considering the noise of the actual value encoder)

In this case, the limit values "A-0-0033 Velocity limit value, negative" and "A-0-0035 Velocity limit value, bipolar" have to be set to a higher value.

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".

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!

XLC/MLC diagnostic system tables

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".

E0112065, Slave Axis, velocity limit exceeded positive limitDisplay: [E0112065](#)

Non-fatal warning

An axis in the " Synchronized Motion" state exceeds "A-0-0032, Velocity limit value, positive" or "A-0-0035, Velocity limit value, bipolar".



No limit values are specified for a virtual axis.

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-0-0035, Velocity limit value, bipolar" are parameterized incorrectly.	Check the parameter content of either "A-0-0032, Velocity limit value, positive" or "A-0-0035, Velocity limit value, bipolar".

E0112066, Slave Axis, velocity falls short of negative limitDisplay: [E0112066](#)

Non-fatal warning

An axis in the " Synchronized Motion" state exceeds "A-0-0033, Velocity limit value, negative" or "A-0-0035, Velocity limit value, bipolar".



No limit values are specified for a virtual axis.

Cause:	Solution:
Velocity specification by the master axis is too high.	Change the programmed velocity to a lower value.
"A-0-0033, Velocity limit value, negative" or "A-0-0035, Velocity limit value, bipolar" are parameterized incorrectly.	Check the parameter content of either "A-0-0033, Velocity limit value, negative" or "A-0-0035, Velocity limit value, bipolar".

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 permitted velocity for interpolated axes on the control result from the defined cycle time (Shannon sampling theorem). This maximum velocity applies to all motion commands.

A velocity higher than or equal to the maximum velocity allowed was commanded from the user program. The velocity was limited by the control.

The following theoretical velocities result from certain cycle times and a modulo value of 360 degrees:

Cycle time in ms	Velocity in rpm
1	30000
2	15000
4	7500
8	3750
16	1875

To ensure a specific safety distance to these theoretical values, a safety factor is taken into consideration.

The following result for the factor 0.95:

- For 1 ms: 28,500 rpm
- For 2 ms: 14,250 rpm
- For 4 ms: 7,125 rpm
- For 8 ms: 3,563 rpm
- For 16 ms: 1,781 rpm

For further information on the use case of synchronous operation modes, refer to

- Rexroth IndraMotion MLC 14VRS, Functional Description, chapter Operation modes for synchronous motions with electronic gear function
- Boundary conditions for an axis velocity specification 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".

E0120001, Reboot necessary to activate new security-config

Display: [E0120001](#)

Non-fatal warning



The description of this diagnostic message is in preparation.

E0140001, Reboot of control necessary to activate new configuration

Display: [E0140001](#)

Non-fatal warning

To enable the new configuration for the Sercos function module from the parameter C-0-0701, restart the control.

Cause: The new configuration is only applied while booting the control.

Solution: To restart the control, shortly interrupt the voltage supply of the control and their components (e.g. function modules).

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.

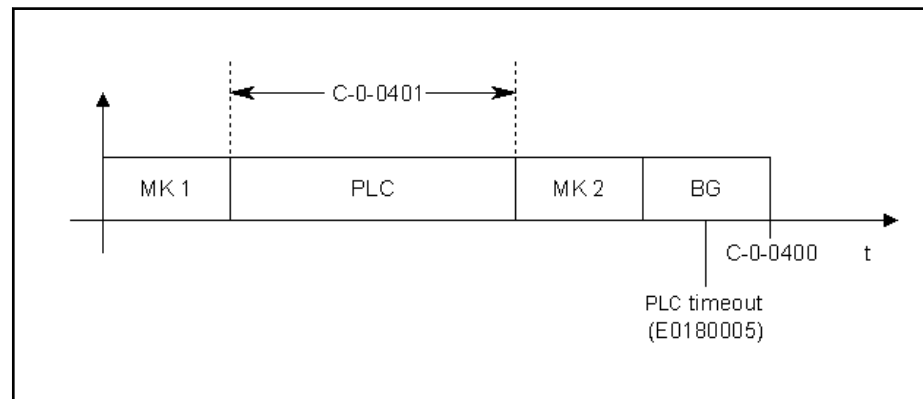


Fig. 3-1: Monolithically working control core

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".

E01D0000, Execution locked by C-0-0036

Display: E01D0000

Non-fatal warning

The action could not be executed, since it is blocked.

Cause: The action to be executed is blocked by the parameter C-0-0036. This includes actions blocked via bit 12 or bit 13 of the parameter.

Solution: either bit 12 or bit 13 of the parameter C-0-0036 has to be reset to execute the blocked actions again and to acknowledge the warning.

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.

Cause:	Remedy:
Too many, resp. too large projects are stored on the control (CompactFlash)	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)
XM21, XM22	100°C (212°F)

This warning is automatically deleted at 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)
XM21, XM22	95°C (203°F)

Also refer to the diagnostics "[F8200023](#), Critical temperature reached; processor is stopped"

- Cause:**
- The control was mounted to a position that does not ensure sufficient ventilation.
 - No fan is mounted to the control to a position with insufficient ventilation.

Solution: Provide adequate ventilation or mount a fan to 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).
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 minimum

Display: [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 minimum

Display: [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 minimum

Display: [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.

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.

XLC/MLC diagnostic system tables

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 FM, 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.



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

E0200010, Modif. nr of com. sercos FM, reboot may be necessary

Display: [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 FM

Display: **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.

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.

E0200014, Error in OEM-partition, check done

Display: [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 done

Display: [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 necessary

Display: [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.

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.

E0200017, Duplicate ip-address in network

Display: [E0200017](#)

Non-fatal warning

One IP address exists twice in the network.

E0200018, security mechanisms inactive for system mode debuggingDisplay: [E0200018](#)

Non-fatal warning

System mode "Debugging" was enabled.

The Motion kernel cycle time monitoring is disabled and impedes that IndraDrive drives switch to the Sercos phase P0 in case of single telegram failures.

The hardware watchdog of the control is additionally disabled and a ready relay is not closed.



Enabling this setting disables the safety mechanisms of the control. This allows the "Debugging" system mode of an OCI application with the OEM workbench. Note that this setting is only temporary and only to be enabled for debugging.

Entering the command "disableTargetDebugging()" in an SSH session of the workbench or an external tool, e.g. WinSCP, in a productive system requires that the system mode debugging is disabled and the safety mechanisms are enabled again.

Cause:	Solution:
In the OEM workbench, the system mode debugging was enabled for VxWorks 6.9 targets via an SSH connection and for VxWorks 6.3 targets via a telnet connection using the command "enableTargetDebugging()"	In the OEM workbench, the system mode debugging was enabled for VxWorks 6.9 targets via an SSH connection and for VxWorks 6.3 targets via a telnet connection using the command "enableTargetDebugging()" Restart to apply the changes

E0200019, security mechanisms inactive for task mode debuggingDisplay: [E0200019](#)

Non-fatal warning

Task mode "Debugging" was enabled.

The Motion kernel cycle time monitoring is disabled and impedes that IndraDrive drives switch to the Sercos phase P0 in case of single telegram failures.



Enabling this setting disables the safety mechanisms of the control. This allows the "Debugging" task mode of an OCI application with the OEM workbench. Note that this setting is only temporary and only to be enabled for debugging.

Entering the command "disableTargetDebugging()" in an SSH session of the workbench or an external tool, e.g. WinSCP, in a productive system requires that the task mode debugging is disabled and the safety mechanisms are enabled again.

Cause:	Solution:
In the OEM workbench, the task mode debugging was enabled for VxWorks 6.9 targets via an SSH connection and for VxWorks 6.3 targets via a telnet connection using the command "enableTargetDebugging()"	In the OEM workbench, the task mode debugging was enabled for VxWorks 6.9 targets via an SSH connection and for VxWorks 6.3 targets via a telnet connection using the command "enableTargetDebugging()" Restart to apply the changes

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

Non-fatal warning

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

The feed override factor is too high (refer to K-0-0240) or the point to be approached goes towards a singularity.

Solution: Adjust the specified values or increase the velocity limit value of the axis.

Causes in 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 traveled goes towards a singularity
- The feed override factor is too high (refer to K-0-0240)

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

Solution: 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.

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.

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

E02C08CE, Resulting path acceleration too highDisplay: [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 highDisplay: [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 or the feed override factor is too high (refer to K-0-0240).

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

E02C0900, Blending error: Interpolator

Display: [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 high

Display: [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.

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.

E02C0908, Blending error: Arc length of the spline invalid

Display: [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 invalid

Display: [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 interpolator

Display: [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 invalid

Display: [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.

E02C090F, Multiple De-/Synchronization not allowedDisplay: [E02C090F](#)

Non-fatal warning

This warning can be output for the function blocks ML_BeltDeSynchronisationWithLimits and ML_BeltSynchronisationWithLimits.

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.

E02C0910, Adaptive motion not possible for MoveJumpDisplay: [E02C0910](#)

Non-fatal warning

The warning can occur at the function block ML_RobotMoveJumpAbsolute.

Adaptive motion was enabled via the parameter K-0-0099, Kinematic configuration, bit 6. During a **MoveJump**, the target point was in front of the starting level when the motion started.

The warning is output until the target point is in front of the starting level.

E0370001, System overloadedDisplay: [E0370001](#)

Non-fatal warning

Not all system tasks have been processed during the time specified in parameter "C-0-0407, Communication watchdog".

Reason The available computation time is required for high-priority tasks. The time slot specified via parameter "C-0-0408, Time slot, communication" is not sufficient to process all system tasks. High-priority tasks causing this behavior can be PLC tasks as well as the task to calculate the motion.

Solution The time required to calculate the motion can be read out in the "Cycle times" dialog. The times of the configured PLC tasks can be read out via the "Task configuration".

Reason:	Solution:
The task required to calculate the motion consumes the entire computing time	Increase the motion cycle time "C-0-0400 MC cycle time (Tcyc) command value"
A cyclic PLC tasks consumes the entire computing time	Increase the cycle time of the PLC task
A non-cyclic PLC tasks consumes the entire computing time	Try to save program parts of the PLC task that consume a lot of time in cyclic PLC tasks whose cycle time is greater
The set time slot is not sufficient to process all system tasks	Increase the time slot "C-0-0408, Time slot, communication"
The watchdog time is insufficient	Increase the time "C-0-0407, Communication watchdog"

E0370002, External trigger active

Display: [E0370002](#)

Non-fatal warning

At least one event is decoupled from the cyclic operation.

Cause: At least one event was decoupled from the cyclic operation via the parameter "C-0-0430, External trigger, configuration".

Solution: Include events again into the cyclic operation or disable the warning via the parameter "C-0-0430, External trigger, configuration".

E03C0001, Check of integrity of XML configuration failed

Display: [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 plate

Display: [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.

For detailed information, please refer to the error/diagnostic memory (context menu <Control> ► Diagnostics ► Error/diagnostic memory).

E03A****, PLC Warnings from company-internal components

Cause: One of the company-internal components issues a warning.

Solution: There is no further information available on this warning.

For detailed information, please refer to the error/diagnostic memory (context menu **<Control> ► Diagnostics ► Error/diagnostic memory**).

E*3B****, user warnings; applying warnings from PLC program to the logbook

Cause: One of the functions ML_SetAxisDiagEntry or ML_SetDiagEntry of the PLC user program issues a warning.

The function causes an entry in the control logbook. At the same time, the warning is displayed on the control display.

3.1.4 C0 errors, non-fatal 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](#)).

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.

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 exceededDisplay: [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

Error reaction: Logbook entry is generated. Message is shown on the display.
No error reaction.

F0020001 to F0020009, RTOS errors (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.

F0020010, No socket available

- Display: **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 to F0050013, RTOS errors (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 changed

- Display: **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-0-0114

- Display: **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 opened

- Display: **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".

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 maximumDisplay: [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 formatDisplay: [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.

F00A0006, Import/Export: Command canceledDisplay: [F00A0006](#)

Non-fatal error, Communication_Error

The parameter "C-0-1011, command: Import parameters" or "C-0-1010, command: Export parameters" triggers a parameter import or export. It was canceled by the user.

F00A0007, Import/Export: too much errorsDisplay: [F00A0007](#)

Non-fatal error, Input_Range_Error

The parameter "C-0-1011, command: Import parameters" or "C-0-1010, command: Export parameters" triggers a parameter import or export. Too many errors occurred.

F00A0008, Import/Export: Errors during executionDisplay: [F00A0008](#)

Non-fatal error, Other_Error

The parameter "C-0-1011, command: Import parameters" or "C-0-1010, command: Export parameters" triggers a parameter import or export. Errors occurred.

F00A0009, Import/Export: parametertype invalidDisplay: [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.

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.

F00A0013, Export modus not supported for this device

Display: [F00A0013](#) Non-fatal error, Communication_Error

A parameter export was triggered.

The parameter to be exported could not be identified. No parameters were exported for the device

Cause: It was tried to export S-/P-parameters, even though the Sercos bus was in communication phase P0.

Solution: Switch the Sercos bus at least to phase 2.

Cause: It was tried to export S-/P-parameters. The device does not support the export mode.

- All parameters: Parameter list S-0-0017 could not be read
- Parameter to be backed up: Parameter list P-0-0013 could not be read
- Modified parameters: Parameter list S-0-0192 could not be read

Solution: Use another export mode for this device.

F00A0014, Changing the parameter C-0-0950 has no effect

Display: [F00A0014](#) Non-fatal error, Other_Error

Cause: Since the MLC firmware version 14V20, the OPC UA server is not enabled anymore for the controls XM2x, CML75 and VPx via the parameter C-0-0950.

Solution The OPC UA server is configured via the configuration of the communication protocols.

F00A8097, Device or instance does not exist

Display: [F00A8097](#)

Non-fatal error, Other_Error

The error occurs if

- a parameter is accessed and the respective device or instance containing the parameter is not configured.

If axis 1 is not configured for example and if the parameter A-0-0001 is retrieved from this axis, the error described above is output.

F00B0003, sercos bus not closed

Display: [F00B0003](#)

Non-fatal error, System_Error

After switching on the control, the Sercos ring was not closed.

Sercos II: The control cannot receive 10 consecutive phase 0 MDT telegrams.

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 of 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 devices in the Sercos interface ring is set incorrectly.	Adapt the optical transmitting power of all devices at the Sercos ring to the actual OWG length.
The power supply for the drives was first switched on after control startup.	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: The control detects a stable Sercos topology within 1,000 Sercos cycles in less than 100 subsequent cycles.

Cause:	Solution:
Ethernet cable not correctly connected.	Check link LEDs on the control and on the bus devices.
Defective Ethernet cable.	Check all Ethernet cables.
The power supply of the bus devices was first switched on after control startup.	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 device.	Replacement
Bus devices that do not meet the requirements of the Sercos III V1.1 specification are present on the Sercos bus.	Replacement

F00B0006, Progression to phase 3 not possible

Display: [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.

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 sercos devices exceeded

Display: [F00B0009](#)

Non-fatal error, System_Error

The number of sercos devices that can be operated on a control is limited according to the version (and selected cycle time).

Cause: The number of sercos 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 device was switched off by the firmware.

Cause: An internal firmware error occurred.

Solution: Please contact the customer support.

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.

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.

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.

Error Text	Description
Wrong Set ParamP2	Master reports errors when comparing the command/actual configuration. An error has occurred when writing application parameters to the slave.
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.

F00B0125, RTOS error (Real Time Operating System)

Display: [F00B0125](#)

Non-fatal error, System_Error

A non-fatal error occurred in the internal firmware.

Cause: An error occurred in the firmware.

Solution: Stop the machine manually as normal. Switch off and on the control. If the error is still reported, please contact the customer service.

F00B0130, sercos III: Connection configuration not read/writeable

Display: [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 writeable

Display: [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
- 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:

- S-0-1050.si.SE2 sercos III connection: Connection number

Cause for devices with function package +SCP_Sync:

- 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:

- S-0-1050.si.SE1 sercos III connection: Configuration

Cause for devices with function package +SCP_Sync or SCP_WD:

- 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:

- 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.

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.

F00B0145, sercos III: Max. number of connections exceeded

Display: [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 connections

Display: [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 error

Display: [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-0-0128

Display: [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-0-0127

Display: [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 stable

Display: [F00B0150](#)

Non-fatal error, Communication_Error

In CP0, no stable device configuration was detected at the bus.

Cause:

- 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 an invalid Sercos address were found or devices that do not exist, are configured in the cross communication configuration (CC).

Cause:

- Devices with Sercos addresses greater than 511 were found.
- Incorrect CC configuration, e.g. a CIP Safety on Sercos (CSoS) connection between a SafeLogicCompact Gateway and a drive with Sercos that does not exist (anymore).

Solution:

- Check Sercos addresses of all devices.
- Check the CC configuration, e.g. SafeLogicCompact Gateway. Do the Sercos addresses in the CC configuration match the existing devices? (saved in the parameter C-0-0519)
- Check the external connection configuration in the parameter C-0-0520. Do the Sercos addresses of all configured devices match?

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 CP2Display: [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 CP3Display: [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 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.

F00B0156, sercos III: Error in phaseswitch to CP3Display: [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 CP4Display: [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.

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.

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 addressDisplay: **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 usedDisplay: **F00B016B**

Non-fatal error, Input_Range_Error

Error during phase switching in the sercos III phase startup.

Cause:

- 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 usedDisplay: **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 validDisplay: **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 largeDisplay: **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 exceededDisplay: **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 exceededDisplay: **F00B0170**

Non-fatal error, INPUT_RANGE_ERROR

Error during phase switching in the sercos III phase startup.

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 valid

Display: [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 consumer

Display: [F00B0175](#)

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 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 exceededDisplay: [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 failedDisplay: [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.

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.

F00B0180, sercos III: UCC function restrictedDisplay: [F00B0180](#)

Non-fatal error, Communication_Error

Error during phase switching in the Sercos III phase startup.

Cause:

- The configured Sercos data requires the majority of the RAM in the Sercos FPGA. Thus, there is not sufficient RAM for long Ethernet packages. A correct IP data transfer cannot be ensured. However, the Sercos data transfer is not limited.

Solution:

- Reduce the total amount of configured Sercos data.

F00B0181, AT-Data not validDisplay: [F00B0181](#)

Non-fatal error, Device_Error

No valid data of a non-configured Sercos III device was detected by the control in multiple subsequent drive telegrams (AT).

The number of permitted failures is specified in C-0-0507.

Cause:

- Ethernet cable not plugged in correctly or removed at runtime
- Ethernet cable defective
- Device defective

Solution: Check all Ethernet connections between control and devices.

Check Sercos transmission path on defective Sercos telegrams and ring interruptions via the IndraWorks dialog "Sercos Bus Diagnostics".

F00B0182, Producer Connection failureDisplay: [F00B0182](#)

Non-fatal error, Device_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 malfunctions
- An internal firmware error occurred

Solution:

- Producer of the connection (control or another Sercos III slave) does not operate correctly
- Check all Ethernet connections between control and devices

F00B0183, Consumer connection failureDisplay: [F00B0183](#)

Non-fatal error, Device_Error

A Sercos III consumer connection of the control does not operate 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 malfunctions.
- An internal firmware error occurred.

Solution:

- Producer of the connection (Sercos III slave) does not operate correctly.
- Check all Ethernet connections between control and devices.

F00B0184, sercos address exists multiple timesDisplay: [F00B0184](#)

Non-fatal error, Other_Error

A Sercos address was detected multiple times at the Sercos node.

Each device at the Sercos bus requires a unique Sercos address.

If a Sercos address exists multiple times, it cannot be switched to phase 4.

Cause:	Solution:
A Sercos address was detected multiple times at the Sercos node.	Assign a unique Sercos address to each device. The Sercos addresses of all devices found at the Sercos bus can be retrieved and the topology position can be determined via the parameter C-0-0510, Sercos master, address configuration. The device can be identified due to the topology position via the parameter C-0-0516, Sercos master, slave identification. Thus, the devices with identical Sercos addresses can be detected fast.

F00B0185, sercos III: SWC not supportedDisplay: [F00B0185](#)

Non-fatal error, Device_Error

Error during phase switching in the Sercos III phase startup.

Cause:

- The configured SWC (Single Wire Coexistence) functionality is not supported by all connected Sercos devices.

Sending Sercos telegrams at the free port of the last Sercos device is not suppressed.

If other Ethernet devices are connected to the last Sercos device, these might be overloaded by the Sercos telegrams.

Solution:

- Use only Sercos devices supporting SWC.
- Disable the SWC function in C-0-0506.

F00B0189, sercos III: Calculated TSync does not match the C2C timing

Display: **F00B0189**

Non-fatal error, Other_Error

Error during phase switching in the Sercos III phase startup.

Cause:

- The internally computed TSync value is smaller than the value predefined for the synchronous C2C timing. Complying with the minimum time between the actual value detection and the beginning of the AT0 in the Sercos devices cannot be guaranteed.

Solution:

- In all controls involved in the C2C link, retrieve the parameter C-0-0508 after a successful drive bus startup. Apply the minimum value of all controls involved in the C2C link to C-0-0509.



After changes made in the configuration of individual C2C devices, it might be required to match the TSync values again.

F00B7010, Command already set

Display: **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 references

Display: **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 delay

Display: **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 mode

Display: **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 cleared

Display: **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.



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:**
- The control was switched off while booting
 - The control was in the boot menu (BOOTSTOP) and was aborted by switching off the control.
 - The error "F0200033 Backup of remanent data not possible" occurred before the control was switched off
 - 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 Control") to subsequently restore the complete project based on the project releases previously stored with IndraWorks for example.

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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.

F00C0008, BOOTSTOP: Failed to set the ethernet settings

Display: F00C0008

Non-fatal error, INPUT_RANGE_ERROR

An error occurred when setting the Ethernet settings in the menu item "CLEANUP with Reset of Ethernet Settings" which can be executed in the BOOTSTOP menu. This menu item is only available for XM controls.

Cause: The Ethernet settings (IP address, subnet mask and standard gateway) could not be successfully made.

Solution: Manually change/reset the Ethernet settings in the "config.txt" file on the USER partition. After the changes, restart the control.

F00C0009, BOOTSTOP: Failed to resetting the control (CLEANUP)

Display: **F00C0009** Non-fatal error, INPUT_RANGE_ERROR

Upon control reset via the BOOTSTOP menu (refer to the menu items "Reset Control" and "Reset Control and Ethernet Settings"), an error occurred.

Cause: Control reset was not successful.

Solution: If memory deletion fails multiple time, contact the customer service.

F00C000A, BOOTSTOP: Error when deleting PLC Apps and configuration

Display: **F00C000A** Non-fatal error, INPUT_RANGE_ERROR

If the context menu item "Delete PLC Application Files and Configuration files" of the BOOTSTOP menu could not be completed successfully, this error occurs.

Cause: PLC application and configuration files could not be deleted successfully on the OEM partition.

Solution: PLC application and configuration files can also be deleted manually in IndraWorks via the FTP Explorer.

If the control cannot be started due to a defective boot project and the application files could not be deleted, select the menu item "Impede Loading PLC Boot Application(s)" via the BOOTSTOP menu and delete the application files via the FTP Explorer when the control startup is completed.

F00C000B, Error while saving the folder ExcData

Display: **F00C000B** Non-fatal error, INPUT_RANGE_ERROR

Not all the relevant information could be reliably backed up in case of a SysError. If this error message occurs and the "ExcData" folder is given to the Bosch Rexroth support for a further SysError analysis, please report that this error message occurs.

Cause: One or multiple files could not be updated or copied for the "ExcData" data backup.

Solution: There is not solution.

F00C000C, Error when deleting folder \$Recycle.Bin

Display: **F00C000C** Non-fatal error, INPUT_RANGE_ERROR

The "\$Recycle.Bin" folder could not be deleted on all partitions of the memory medium. This folder is created for file operations with Windows 7. These folders can cause problems on the memory medium during FTP transfer.

Cause: An error occurred when deleting the folders. Deletion could thus not be completed successfully.

Solution: If this error message is displayed and the FTP transfer is disturbed, contact the customer service.

F00C000D, Unable to load control configuration

Display: **F00C000D** Non-fatal error, System_Error

Loading the control configuration during startup was not possible.

Cause: The control configuration file is either not available on the SYSTEM partition or it is corrupt.

Solution: Please contact the customer support.

F00C000E, Firmware version could not be written

Display: [F00C000E](#)

Non-fatal error, System_Error

Error while writing the current MLC firmware version. An incorrect firmware version is consequently displayed in the initial firmware.

Cause: It was written incorrectly on the configuration file on the OEM partition. This can result if no memory is available anymore on the OEM partition. The warning "[E0200006](#): Usable memory (OEM) near minimum" is an indicator.

Solution: Deleting unused files reduces the memory requirement on the OEM partition. If the error still results, please contact the customer service.

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.



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: --

F00D0305, Multiple error, fast IOs

Display: [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.

F00D1004, Cyclic velocity channel already openDisplay: [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 openDisplay: [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.

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 channelDisplay: [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, ReadParameterDisplay: [F00D102A](#)

Non-fatal error, Device_Error

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 channelDisplay: [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 numberDisplay: **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 numberDisplay: **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 ValueDisplay: **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 parameterDisplay: **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.

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 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.

F00D1227, Error while writing date

Display: **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 available

Display: **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 1

Display: [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 2

Display: [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 3

Display: [F00D2003](#)

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.

F00D2004, Access error, axis 4Display: **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 5Display: **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 6Display: **F00D2006**

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.

F00D2007, Access error, axis 7Display: **F00D2007**

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.

F00D2008, Access error, axis 8Display: [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 9Display: [F00D2009](#)

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.

F00D200A, Access error, axis 10Display: [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 11Display: [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 12Display: [F00D200C](#)

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.

F00D200D, Access error, axis 13Display: [F00D200D](#)

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.

F00D200E, Access error, axis 14Display: [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 15Display: [F00D200F](#)

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.

F00D2010, Access error, axis 16Display: [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.

F00D2012, Error on parsing of StopAxes configuration

Display: F00D2012

Non-fatal error, INPUT_RANGE_ERROR

Error during parsing of a "StopAxes" or "StopAxesCommon" configuration.

Cause: At least one configuration to stop the axes upon an application stop could not be interpreted correctly.

- "StopAxes" configuration in a Global Variable List "UserVarAppGlobal" of a user application
- "StopAxesCommon" configuration in the Global Variable List "UserVarGlobal" of the "DeviceApplication"

Solution: Check the initial content of the configurations "StopAxes" of of the "StopAxesCommon" configuration. The constant string variables must only contain a .csv list of individual logic axis addresses or of logic axis address ranges. The individual values and ranges of logic axis addresses of different configurations can intersect.

Examples:

- StopAxesCommon : STRING :='10-15,3,8';
- StopAxes : STRING :='1-4,9,12-22';

Optionally, the configuration "StopAxes" or "StopAxesCommon" can be commented out.

Examples:

- (* StopAxesCommon : STRING :='10-15,3,8'; *)
- (* StopAxes : STRING :='1-4,9,12-22'; *)



Notes on disabling configurations:

- In case the "StopAxes" configuration is disabled, all axes are stopped when stopping the user applications!
- In case the "StopAxesCommon" configuration is disabled, no axes configured in this list are stopped when stopping a user application!

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.

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.

F00D2EE1, Fatal error: Inline losDisplay: [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
- 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 occurredDisplay: [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 occurredDisplay: [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.

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

F00E0001, Maximum number of parallel diagnoses exceeded

Display: [F00E0001](#)

Non-fatal error, Resource_Error

Cause: For further processing, simultaneously detected errors of different Sercos device are processed parallelly. There is a maximum number of diagnostics that can be processed parallelly. The number was exceeded.

Solution: Check the frequency of output errors and warnings of Sercos devices and reduce them if possible.

If this is not possible or does not solve the problem, please contact the customer support.

F00E0002, Error while processing parallel diagnosesDisplay: [F00E0002](#)

Non-fatal error, Resource_Error

Cause: For further processing, simultaneously detected errors of different Sercos device are processed parallelly. An internal error occurred while processing these diagnostics.

Solution: Please contact the customer support.

F00F0001 to F00F0006, RTOS errors (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 turnedDisplay: [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 driveDisplay: [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.
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.

F0110050, Recalculation of scaling failedDisplay: **F0110050**

Non-fatal error, System_Error

A scaling parameter of the axis was changed and triggered a recomputation of the scaling-dependent parameters.

An error occurred during recompilation

Please check the scaling-dependent parameters.

Scaling type	Scaling-independent parameters:
Position scaling	• "A-0-0030, Position limit value, positive" • "A-0-0031, Position limit value, negative" • "A-0-0045, Modulo value" • "A-0-0046, Feed distance of the slave drive" • "A-0-0219, Positioning window for shortest distance" • "A-0-0622, Synchronization run window, position" • "A-0-2610, ELS, additive position command value, process controller" • "A-0-2792, ELS, synchronization run window for modulo format" • "A-0-2795, Positioning window"
Velocity scaling	• "A-0-0032, Velocity limit value, positive" • "A-0-0033, Velocity limit value, negative Velocity limit value, negative" • "A-0-0035, Velocity limit value, bipolar" • "A-0-0204, Velocity threshold, positioning in modulo format" • "A-0-0222, Standstill window" • "A-0-0223, Velocity window" • "A-0-0243, Position control, synchronization velocity" • "A-0-0623, Synchronization run window, velocity" • "A-0-2615, ELS, additive velocity command value, process controller" • "A-0-2790, ELS, synchronization velocity"
Acceleration scaling	• "A-0-0034, Acceleration limit value, bipolar" • "A-0-0036, Jerk limit value, bipolar" • "A-0-0216, Jerk" • "A-0-0224, Rapid stop deceleration" • "A-0-0225, Rapid stop jerk" • "A-0-0242, Position control, synchronization acceleration" • "A-0-2762, Slave axis, additive command velocity, acceleration" • "A-0-2791, ELS, synchronization acceleration"

F0110051, Recalculation failed:Display: **F0110051**

Non-fatal error, System_Error

This error message is a group diagnostics.

A scaling parameter of the axis was changed and triggered a recomputation of the scaling-dependent parameters. An error occurred during the recomputation of a parameter.

The diagnostic text is extended by the EIDNs of the failed parameter. Check the parameter value.

Possible error reason when recomputing the parameter value based on the scaling change made:

- The newly computed value is higher than the maximum value of the parameter
- The newly computed value is smaller than the minimum value of the parameter
- The newly calculated value is not a valid floating point number

F0120001, Security config was manipulated

Display: [F0120001](#)

Non-fatal error, Other_Error

Cause: The security configuration was manipulated by a third-party. The integrity of the control is not given anymore.

Solution: It is recommended to back up the data and to reset the device to its state upon delivery.

F0120002, The root cryptographic key was deleted or manipulated

Display: [F0120002](#)

Non-fatal error, Other_Error

Cause: The cryptographic master key was deleted or manipulated by a third-party. The integrity of the control is not given anymore.

Solution: It is recommended to back up the device data and to reset the device to its state upon delivery.

F0140001, Error in device configuration

Display: [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 configuration",
Die Sercos devices configured in parameter C-0-0478 are compared to the Sercos devices at 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 no device in the Sercos ring, the device either has to be added or disabled
• Are the Sercos device addresses correct as configured?	• If no, adjust addresses in device or in the project
• Rexroth IndraDrive: Is the device firmware version identical?	• If no, adjust device firmware in device or in the project
• Rexroth IndraDrive: If the function package identical?	• If no, adjust function package in device or in the project
If at least one of the checks has failed...,	then the device must be reconfigured in IndraWorks.



In IndraWorks, right-click on the Sercos node "Sercos configuration". In this dialog, the configured Sercos configuration is compared to the devices connected to the control.

F0140002, Deactivated axis physically presentDisplay: [F0140002](#)

Non-fatal error, Device_Error

The drive electronics of a disabled real axis is physically available. A drive motion is not possible.

Cause:

Even though the axis is disabled, the drive electronics is physically available.

Solution:

- Enable disabled axis
- Remove drive electronics from Sercos ring

F0140003, Double axis configuration inconsistentDisplay: [F0140003](#)

Non-fatal error, Device_Error

Cause:

The two axes of a double axis are not assigned to the same device in the project.

Solution:

- Adjust the configuration of the double axes in the project.

F0140100, Error while loading Device RepositoryDisplay: [F0140100](#)

Non-fatal error, Resource_Error

Upon control startup, an error occurred while loading the device repository.

Cause:

Some firmware components could not be loaded or are incorrect.

Solution:

Contact the Bosch Rexroth Support.

F0160001 to F0160002, RTOS errors (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.

F0160004, Error while changing to P0Display: [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 P2Display: [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 P2Display: [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 P3Display: [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 P3Display: [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),
- 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 P3Display: [F0160010](#)

Non-fatal error, System_Error

Switching to the desired Motion mode was aborted due to an error. For the incorrect parameter and the respective error code, refer to the extended diagnostic text.

Cause: Possible causes:

- It cannot be switched due to an error that might have occurred earlier (e.g. S-0-0095)
- The configuration Cyclic Sercos channel (A-0-0500 et seq. and A-0-0520 ff.) includes the invalid parameter
- The operation modes in the drive cannot be configured
- An internal firmware error occurred.

Solution: Access the diagnostics logbook, correct any errors and try switching again (see C-0-0451). If the cause cannot be eliminated, 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:

- 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 to F0160023, RTOS errors (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-parameters, an invalid combination, an invalid min./max. value, inconsistency between functionality and hardware or similar was detected.

Cause: Possible causes are:

- min./max. values were exceeded or not achieved,
- invalid parameter combinations were detected,
- functions/objects were parameterized/configured for which the hardware is not available. For instance, link axes for a control link were created, although no function module CFL01.01-Q2 is plugged in.

Solution: Call parameter C-0-0111 and check its parameters.

If the parameter C-0-0484 is executed in C-0-0111 and contains a link axis (element = 64), ensure that there is a functioning module CFL01.1-Q2 (see also C-0-0041).

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 to F0160029, RTOS errors (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 for cyclic transfer. Switching up the control mode was impeded.

Cause:	Solution:
The user configured a parameter multiple times for cyclic transfer.	Check the list of invalid parameters. Ensure that one parameter was only defined once in the user-defined containers (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 access (as configured 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 to the user has changed. Switching up the control mode was impeded.

Cause: The control firmware requires a broader band width for communication compared to a previous version. Thus, the number of data channels available to the user reduces.

Solution: Check the list of invalid parameters as well as the documentation on the cyclic Sercos data channel. Disable the data channel 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 compatibility, the parameters A-0-0510 and A-0-0511 remain.

Disable the command value container to switch again 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

Switching to the desired Motion mode was aborted due to an error. For the incorrect parameter and the respective error code, refer to the extended diagnostic text.

Cause:

Possible causes:

- Switching is not possible due to an error that might have occurred earlier

XLC/MLC diagnostic system tables

- The configuration "Cyclic Sercos channel" (A-0-0500 et seq. and A-0-0520 ff.) includes the invalid parameter
- The operation modes in the drive cannot be configured
- An internal firmware error occurred.

Solution: Access the diagnostics logbook, correct any errors and try switching again (see C-0-0451). If the cause cannot be eliminated, 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".

Cause:	Solution:
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".

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 communication

Display: **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 axes

Display: **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-parameters

Display: **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.

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 timeDisplay: **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.

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.

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.

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 client

Display: [F01B0011](#) Non-fatal error, Device_Error

The DHCP client could not be started.

F01B0012, Error while starting DHCP client

Display: [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.

F01B0020, Error remanent data; Loading flash data failedDisplay: [F01B0020](#)

Non-fatal error, Device_Error

An error occurred while restoring remanent data from the flash.

F01D0001 to F01D0014, RTOS errors (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.

F01D0016, No application found to loadDisplay: [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 failedDisplay: [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 failedDisplay: [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 failedDisplay: [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 failedDisplay: **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 failedDisplay: **F0200005**

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.

F0200006, Firmware download failedDisplay: **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 failedDisplay: **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 failedDisplay: **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 failedDisplay: **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 to F0200022, RTOS errors (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.

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.

F0200031, Error deleting files in OEM partition

Display: [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 partition

Display: [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 impossible

Display: [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 watchdog

Display: [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 watchdog

Display: [F0200037](#)

Non-fatal error, System_Error

An error occurred when triggering 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.

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.

F0200041, Reboot failed, power cycle necessary

Display: [F0200041](#)

Non-fatal error, INPUT_RANGE_ERROR

Control restart failed.

This restart is required to ensure unlimited control functionality.

Solution: Restart by switching off the supply voltage of the control for a short period.

F0200043, power failure (UPS active)

Display: [F0200043](#)

Non-fatal error, INPUT_RANGE_ERROR

The voltage supply of the control dropped. Thus, the UPS was enabled.

The operation of the control can only be ensured for the UPS buffer time.

The control automatically goes into a safe state (PLC is stopped) and the control is shut down.

Cause:	Solution:
Voltage supply failure	Ensure the voltage supply of the control

F0200044, Failure of UPS monitoring

Display: [F0200044](#)

Non-fatal error, INPUT_RANGE_ERROR

The UPS monitoring failed.

If the voltage fails, information that is not backed up, such as retain data and data in open files are lost, as they cannot be backed up or closed anymore.

Cause:	Solution:
The software instance (UPS service) monitoring the UPS failed or has an error.	Shut-down the control and the PC to ensure that this data/ these files are backed up before the voltage fails. Then, restart the PC and the control. If the error occurs again, please contact the customer support.

F0200045, Monitoring of additionally required operating system failed

Display: [F0200045](#)

Non-fatal error, INPUT_RANGE_ERROR

To correctly operate the control, another operating system (e.g. "Windows") and applications executed in that operating system (e.g. "IndraControl SysTray") are required, which can be monitored for correct operation at runtime.

This monitoring failed causing a possibly undetected failure of the services in this state shown below:

Services	Possible consequences
Failure of the complete additional operating system	E.g. Loss of data, as retain data or opened files cannot be saved anymore.
Failure of the software "IndraControl SysTray"	E.g. Loss of data, as retain data cannot be saved anymore

XLC/MLC diagnostic system tables

Monitoring the UPS	E.g. Loss of data in case of voltage failure, as retain data or opened files cannot be saved anymore.
Temperature monitoring	E.g. Loss of data due to sudden control switch-off due to overheating

Cause:	Solution:
An error in the firmware	Shut down the control and the PC to ensure that data/files are backed up. Then, restart the PC and the control. If the error occurs again, please contact the customer support.

F0200046, Failure in UPS connectionDisplay: **F0200046**

Non-fatal error, INPUT_RANGE_ERROR

There is an error in the UPS connection.

If the voltage fails, information that is not backed up, such as retain data and data in open files might be lost, as they cannot be backed up or closed anymore.

Cause:	Solution:
No UPS connected to the device.	Connect the UPS to the device to ensure that unsaved information is not lost in case of a voltage failure.
The energy storage of the UPS is not sufficiently charged or defective.	Wait until the energy storage of the UPS is charged (refer to the LED display and the operating instructions of the UPS). Shut-down the control and the PC to ensure that this data/ these files are backed up before the voltage fails. Then, restart the PC and the control. If the error occurs again, please contact the customer support.
The communication connection (USB connection) between the UPS and the device is interrupted or the connection is interfered.	Check the USB connection between the UPS and the device and exchange it if required.
The software instance (UPS service) monitoring the UPS failed or an error occurred.	Shut-down the control and the PC to ensure that this data/ these files are backed up before the voltage fails. Then, restart the PC and the control. If the error occurs again, please contact the customer support.

F0200062, Restore of a consistent archive not possibleDisplay: **F0200062**

Non-fatal error, INPUT_RANGE_ERROR

If the initial firmware is used to create a firmware archive, this archive has to meet certain requirements to ensure consistency when restoring it on the control.

This error indicates that the archive can be created, but not consistently be restored later on.

Cause: An error occurred in the firmware.**Solution:** Additional rights might be required for the following solution:

Before creating the archive, check that the file "updater-script_archive" exists in the folder "/OEM/ProjectDataProtected/META-INF". If this is not the case, copy this file manually from the "/SYSTEM" partition to the mentioned folder.

Contact the customer support if this problem occurs at each further control startup.

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.

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 is 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 powerDisplay: [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.

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 numberDisplay: [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.

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 available

Display: [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).

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").

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 minimalDisplay: [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 maximumDisplay: [F0220230](#)

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 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 numberDisplay: [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 numberDisplay: [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 IDDisplay: [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 minimumDisplay: [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 maximumDisplay: [F0220264](#)

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 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 minimumDisplay: [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 maximumDisplay: [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 minimumDisplay: [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".

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 valueDisplay: [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

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 referencedDisplay: [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 abortedDisplay: [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 errorDisplay: [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 changeDisplay: [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.

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 valueDisplay: [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 valueDisplay: [F0220283](#)

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 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 objectDisplay: [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 valueDisplay: [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 valueDisplay: [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 IDDisplay: [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 objectDisplay: [F0220291](#)

Non-fatal error, Access_Error

Either the function block MB_ChangeProfileSet or MB_ChangeProfileStep 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_ChangeProfileSet 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 valueDisplay: [F0220292](#)

Non-fatal error, Input_Range_Error

The function blocks MB_ChangeProfileSet or MB_ChangeProfileStep 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 valueDisplay: [F0220293](#)

Non-fatal error, Input_Range_Error

The function blocks MB_ChangeProfileSet or MB_ChangeProfileStep 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-protectedDisplay: [F0220294](#)

Non-fatal error, Access_Error

The function blocks MB_ChangeProfileSet or MB_ChangeProfileStep 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 StepNumberDisplay: [F0220295](#)

Non-fatal error, Access_Error

The function block MB_ChangeProfileStep 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 channelDisplay: [F0220300](#)

Non-fatal error, Access_Error

An invalid command channel is selected in the PLC program using the function module MB_OpenCyclic...

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,

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- 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,
- 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,
- 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 unknownDisplay: [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"

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 unknownDisplay: [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 negativeDisplay: [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"
- 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.

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

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"
- 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"
- 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 objectDisplay: [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-protectedDisplay: [F0220335](#)

Non-fatal error, Access_Error

The selected profile cannot be applied.

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-protectedDisplay: [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 inconsistentDisplay: [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.

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.

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"

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.

F0220500, Control hardware does not support touch probe functionality

Display: [F0220500](#)

Non-fatal error, Access_Error

The touch probe functionality is not supported by the control hardware (IndraControl XM2x und VPx).

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:

	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.

F0220506, ExpectWindowPosEdgeStart out of range

Display: [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 range

Display: [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 range

Display: [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.

Solution: Update the PLC program.

F0220512, MarkerFailureEnable out of rangeDisplay: [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 rangeDisplay: [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 rangeDisplay: [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.

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.

F0220524, MoveAbsTransitionMode out of range

Display: [F0220524](#)

Non-fatal error, INPUT_RANGE_ERROR

The value at the "MoveAbsTransitionMode" input of the function block MB_SetPositionControlMode is outside the valid range.

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.

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.

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 an point in world coordinates, or ML_RO-CO_JOINT_COORD for a point in axis coordinates.

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.

Remedy: Reload the PLC program (no online modifications!). If it fails again, please contact the customer support.

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.

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.

F0260053, ML_CtrlJobConnect, Watch dog - time outDisplay: [F0260053](#)

Non-fatal error, Access_Error



The description of this diagnostic message is in preparation.

F026005D, ML_CtrlJobConnect, Invalid state of I/O of POUDisplay: [F026005D](#)

Non-fatal error, System_Error



The description of this diagnostic message is in preparation.

F026005E, ML_CtrlJobConnect, Invalid state of state machine of POUDisplay: [F026005E](#)

Non-fatal error, State_Machine_Error



The description of this diagnostic message is in preparation.

F026005F, ML_CtrlJobConnect, Error during init of POU instanceDisplay: [F026005F](#)

Non-fatal error, System_Error



The description of this diagnostic message is in preparation.

F0260060, ML_ShowJobConnect, Invalid values of inputs of POUDisplay: [F0260060](#)

Non-fatal error, Input_Invalid_Error



The description of this diagnostic message is in preparation.

F0260061, ML_ShowJobConnect, Set of command into queue failedDisplay: [F0260061](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F0260062, ML_ShowJobConnect, Reject of inv. command or status errorDisplay: [F0260062](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F0260063, ML_ShowJobConnect, Watch dog - time outDisplay: [F0260063](#)

Non-fatal error, Access_Error



The description of this diagnostic message is in preparation.

F026006E, ML_ShowJobConnect, Invalid state of state machine of POUDisplay: [F026006E](#)

Non-fatal error, State_Machine_Error



The description of this diagnostic message is in preparation.

F026006F, ML_ShowJobConnect, 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.

F026008E, ML_RecvJobTlg, Invalid state of state machine of POUDisplay: [F026008E](#)

Non-fatal error, State_Machine_Error



The description of this diagnostic message is in preparation.

F026008F, ML_RecvJobTlg, Error during init of POU instanceDisplay: [F026008F](#)

Non-fatal error, System_Error



The description of this diagnostic message is in preparation.

F0260090, ML_SendRecvJobAss, Invalid values of inputs of POUDisplay: [F0260090](#)

Non-fatal error, Input_Invalid_Error



The description of this diagnostic message is in preparation.

F0260091, ML_SendRecvJobAss, Store of recieved job telegram failedDisplay: [F0260091](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F0260092, ML_SendRecvJobAss, Watch dog - time outDisplay: [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.

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 statusDisplay: [F02600A2](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F02600A3, ML_DebugJobConnect, Invalid command / getting statusDisplay: [F02600A3](#)

Non-fatal error, Device_Error



The description of this diagnostic message is in preparation.

F02600A4, ML_DebugJobConnect, Watch dog - time outDisplay: [F02600A4](#)

Non-fatal error, Access_Error



The description of this diagnostic message is in preparation.

F02600AE, ML_DebugJobConnect, Invalid state of state machine of POUDisplay: [F02600AE](#)

Non-fatal error, State_Machine_Error



The description of this diagnostic message is in preparation.

F02600AF, ML_DebugJobConnect, Error during init of POU instanceDisplay: [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.

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.

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.

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.

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.

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.

F0280034, Invalid configuration of C2C timingDisplay: [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 possibleDisplay: [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 synchronizationDisplay: [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

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.

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.

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.

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.

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.

- 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 internals 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:

- 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.

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

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

F0290402, Invalid kinematics number

Display: [F0290402](#)

Non-fatal error, Input_Range_Error

Cause: Invalid Kinematics Number

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).

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 indexDisplay: [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

Cause: An unsupported coordinate system was specified.**F0290518, Invalid Points**Display: [F0290518](#)

Non-fatal error, Input_Invalid_Error

Cause: A safe zone or a traversing range of the robotics was configured. The minimum point is bigger than the maximum point**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 longDisplay: [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 nameDisplay: [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 optionDisplay: [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, TeachIn: File corruptedDisplay: [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.

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 systemDisplay: [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 openedDisplay: [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 axesDisplay: [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 axesDisplay: [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 axesDisplay: [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 kinematicsDisplay: [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 existingDisplay: [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 activeDisplay: [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.

Solution: Trigger a manual mode command whose coordinate system matches the already active manual mode command.

F02B0029, Jog in same direction already activeDisplay: [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 existDisplay: [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 rangeDisplay: [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 transformationDisplay: [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 transformationDisplay: [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 transformationDisplay: [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 TransformationDisplay: [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.

F02C908A, Number of axes too small for the current robot typeDisplay: [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 singularDisplay: [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 standDisplay: [F02C947A](#)

Non-fatal error, System_Error

Cause: Scara transformation: Risk of collision.

Solution: Travel to the valid range in manual mode.

F02C9482, Invalid belt numberDisplay: [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-temperatureDisplay: [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.



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.

F0360000, MLPI: Success

Display: [F0360000](#)

Non-fatal error, INPUT_RANGE_ERROR

The MLPI call was executed successfully.

F0360001, MLPI: Common errorDisplay: [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 supportedDisplay: [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 argumentDisplay: [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 memoryDisplay: [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: TimeoutDisplay: [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 exceptionDisplay: [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.

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.

F036000D, MLPI: Watchdog warningDisplay: **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.

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

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.

F036001D, Private key file is broken or not existing

Display: [F036001D](#) Non-fatal error, Resource_Error

Cause To use the encrypted MLPIS protocol, a private key and a certificate are required. The system could either not find the private key or the key is invalid.

Solution Check the path to the key file or store a new file (incl. a new certificate).

F036001E, Certificate file is broken or not existing

Display: [F036001E](#) Non-fatal error, Resource_Error

Cause To use the encrypted MLPIS protocol, a private key and a certificate are required. The system could either not find the certificate or the certificate is invalid.

Solution Check the path to the certificate file or generate a new certificate and store it.

F036001F, Certificate does not match the given private key

Display: [F036001F](#) Non-fatal error, Resource_Error

Cause The encryption of the MLPIS connection is based on the TLS protocol. For this encryption procedure, a private key as well as a derived certificate are required. The certificate used does not match the private key used.

Solution Check in the paths whether the correct key file or the correct certificate file is used or generate a new certificate using a private key.

F0360020, TLS Handshake was not successful

Display: [F0360020](#) Non-fatal error, Communication_Error

Cause When establishing the MLPIS connection, the public keys are exchanged in the form of certificates. If there is a problem, the connection establishment is aborted to avoid an unencrypted communication.

Solution Retry to establish the connection, check the target address or use a newly generated key including a new certificate.

F0360021, General Access Control Error

Display: [F0360021](#) Non-fatal error, INPUT_RANGE_ERROR

Cause A general error occurred in the user management. It is possible that the error does not contain more details due to security reasons.

F0360022, A violation in the user policies occurred

Display: [F0360022](#) Non-fatal error, Input_Invalid_Error

Cause A user input was made that does not comply with the set guidelines for the user name and/or password.

Solution Change the input according to the guidelines set and try it again.

F0360023, The given username is already in use

Display: [F0360023](#) Non-fatal error, Input_Invalid_Error

Cause The entered user name is already used.

Solution Select another user name.

F0360024, The given groupname is already in use

Display: [F0360024](#) Non-fatal error, Input_Invalid_Error

Cause The entered group name is already used.

Solution Select another group name.

F0360025, User is already member of the group

Display: [F0360025](#) Non-fatal error, Input_Invalid_Error

Cause The entered user is already a member of the group.

F0360026, The given user does not exist on the control

Display: [F0360026](#) Non-fatal error, Input_Invalid_Error

Cause The entered user name does not exist. It was either deleted or never existed.

Solution The user can be created again. The user can also be restored via a backup.

F0360027, The group does not exist on the control

Display: [F0360027](#) Non-fatal error, Input_Invalid_Error

Cause The entered group name does not exist. It was either deleted or never existed.

Solution The group can be created again. The group can also be restored via a backup.

F0360028, The user is not member of the group

Display: [F0360028](#) Non-fatal error, Input_Invalid_Error

Cause The user is not a member of the group.

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 failedDisplay: [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 failedDisplay: [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 failedDisplay: [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.

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.

F039**, PLC error messages from kernel**

Cause: The PLC kernel issues an error.

For details, please refer to the short text in the diagnostic logbook

Component ID	Possible cause
F0390001	CmpMgr component manager, state machine error
F0390002	Retain data do not match. Possible causes: corrupt traces, PLC runtime problems or too many connected Inline I/Os (total sum of process data is too high) at a CMLxx control
F0390006	Problem in a component with communication
F0390007	Problem in a component with UDP communication
F039000A	A client tries to connect to the control with an online service with an invalid SessionID. Possible causes: PLCHandler, OPC, HMI, DataServer
F039000E	Connection problems when logging in with the PLC. Sporadically, it is tried to connect multiple times or connections have not been closed

XLC/MLC diagnostic system tables

F039000F	Problem with the gateway communication
F0390011	Exception PLC IEC task, check PLC application/task
F0390012	I/O hardware watchdog. Check PLC program. PLC reset, control restart. If the problem could not be resolved, contact the service or support
F0390017	Retain data error
F0390019	Occurs in connection with a PLC watchdog. Check diagnostics for more messages
F0390030	Communication problem Ethernet, network communication e.g. OPC, OPC-UA, IndraLogic, PLC
F0390070	PLC trace manager. Check PLC trace configuration
F0390073	Application breakpoint: Messages of this component handle errors when creating and deleting PLC breakpoints as well as problems in the internal management
F0390201	Error in a netX component in connection with Profibus, Profinet or Ethernet/IP
F0391001	Error in a netX component in connection with Profibus, Profinet or Ethernet/IP
F0391004	Check Profinet controller or connected device for diagnostics. Usually occurs with additional codes such as 0x800C0012, see General error codes bus master
F0391005	Profinet device diagnostics
F03910A2	Check Profinet diagnostics
F0391Fxx	Safety SL diagnostics, check Safety-relevant configuration/program
F0395F0A	Diagnostics when using the CAN communication. Dependence on function module CFL01.1-TC
F0393807	Error in a netX component in connection with Profibus, Profinet or Ethernet/IP or in connection with the use of Userdefs.cfg
F0399911	FPU error, NAN - not a number or infinity. Use the call list within the PLC in the Debug menu and debug the PLC program to identify the error position

Solution: There is no further information available on this error. If the problems in the PLC program cannot be identified, enable the PLC logger for more diagnostic details. When contacting the support or the service, export messages of the PLC logger and provide it to the service and support department.

Refer to the error/diagnostic memory, it contains detailed information (context menu **<control>** ► **diagnostics** ► **error/diagnostic memory**).

F03A****, PLC error messages from company-internal components

Cause: One of the company components issues an error.

For details, please refer to the short text in the diagnostic logbook

Component ID	Possible cause
F03A0201	Error in a netX component in connection with Profibus, Profinet or Ethernet/IP
F03A2000	Inline Onboard I/O of the CMLxx controls
F03A2001	Possible cause: Use of Safety Sercos I/O and no function module SL connected
F03A2002	Inline I/O of CMLxx controls. Check mechanics and contacting of the modules, check the PLC program and the module configuration
F03A2004	Sercos I/Os report a diagnostics or PLC program and check the Sercos I/O configuration. Can also be reported in connection with Sercos Safety
F03A2005	Function module fast I/O at a CMLxx control
F03A2006	Profibus DP slave with function module or CMLxx control reports diagnostics
F03A2007	Ethernet/IP adapter at Engineering port reports diagnostics
F03A2009	S20 IO local at an XM control. Apart from the PLC program and the configuration, check the diagnostics and diagnostic LED of the S20 modules depending on the error case.
F03A200A	S20 IO local at an XM control. Apart from the PLC program and the configuration, check the diagnostics and diagnostic LED of the S20 modules depending on the error case. When using the "S20IO Sercos synchronous" operating mode, there is a dependency on the Sercos phases and maybe the motion phases and the program
F03A200D	Ethercat reports a diagnostics or check the PLC program and the Ethercat configuration
F03A3001	Error in PLC runtime. Check PLC program and configuration
F03A3011	Profibus, Profinet or EtherNet/IP initialization returns diagnostics
F03A3012	Diagnostics when using the RIL_Inline library
F03A3102	CSos error HALC for cyclic I/O
F03A3106	CSos error with Safety I/O configuration, e.g. if "Use combined type" is ticked in the I/O image, the replacement image is not refreshed
F03A3108	CSos error in boot project on SafeLogic control or errors on the Safety function module
F03A3800	EIS, e.g. BRWS
F03A3801	BRWS, EISWS WebServer, check the number of communication connections or check the BRWS configuration. Refer to WinStudio communication

F03A3808	Possible causes: Hidden loop via switch, ring instead of line, check network cabling, Engineering port and field bus port connected via switch and in the same subnet connected to the same IP addresses. • Profibus • Profinet • EtherNet/IP
F03A600C	Occurs in connection with other errors as sequential error. PLC application gets lost and has to be reloaded. Check for more PLC diagnostics.

Solution: There is no further information available on this error. If the problems in the PLC program cannot be identified, enable the PLC logger for more diagnostic details. When contacting the support or the service, export messages of the PLC logger and provide it to the service and support department.

Refer to the error/diagnostic memory, it contains detailed information (context menu **<control> ► diagnostics ► error/diagnostic memory**).

F03B****, user errors; applying error messages from PLC program to the logbook

Cause: One of the functions ML_SetAxisDiagEntry or ML_SetDiagEntry of the PLC user program issues a warning.

The function causes an entry in the control logbook. At the same time, the warning is displayed on the control display.

NOTICE

Feedback effect on axes and control

Both functions can additionally affect the response of the axes and the control.

In this case: F0 error; logbook entry is generated; message is shown on the display; no error reaction.

F03F****, Lua error messages

Cause: An error generated when calling a Lua instruction or when processing a Lua file.

Solution: There is no further information available on this error.

Please refer to the error/diagnostic memory. It contains detailed information (context menu **<Control> ► Diagnostics ► Error/diagnostic memory**).

F04C0000, Sercos command error

An error occurred in a Sercos slave that cannot be further resolved while executing a command in a Sercos slave.

Cause:

The error number of the command error cannot be determined due to further active errors in the slave.

Solution:

- The error number of the command error can be determined by the diagnostic system of the slave.
- If the command is executed without an active error being pending in the slave, the command error number is entered into the MLC diagnostic system.

F04C**, Sercos command error**

An error occurred in a Sercos slave while executing a command in a Sercos slave.

Cause:

- While executing a command, an error with the error number C**** occurred.

Solution:

- The respective online help is available for self-made Sercos slaves. For the search, use the last five digits of the command error number.
- For third-party Sercos slaves, please use the documentation provided by the manufacturer.

Example:

MLC diagnostic message: F04C0170 => Command error of the slave: C0170

F0AA**, GAT and AxisInterface error**

Cause: GAT/AxisInterface reports an error.

Solution: The last four digits of the error code show the Additional1 error code of the F_RELATED_TABLE error table.

For a detailed description, refer to F_RELATED_TABLE error code range 16#1500...16#15FF

F0AE**, Application error from the PLC application**

Cause: Application error was reported in the PLC application via "mSetAppError".

Solution: Recover error cause for the application error and clear error. The location and the criterion to enter the error can be determined by searching for "mSetAppError" in the PLC application.

F0B**, GAT plugin error**

Cause: A GAT plugin reported an additional diagnostics.

Solution: The outputs "ErrorID" and "ErrorIdent" of the GAT status outputs and of the function block report the detailed diagnostics of the GAT plugin error.

Eliminate the displayed error cause and clear the error.

The location and the criterion to enter the error can be determined by searching for "mSetExternalDiag" in the PLC application.

F0EC0001, Ecat: General error

Display: [F0EC0001](#)

Non-fatal error

Cause: A general error occurred.

Solution: Please contact the customer support.

F0EC0002, Ecat: General error

Display: [F0EC0002](#)

Non-fatal error

Cause: A general error occurred.

Solution: Please contact the customer support.

F0EC0003, Ecat: General error

Display: [F0EC0003](#)

Non-fatal error

Cause: A general error occurred.

Solution: Please contact the customer support.

F0EC0004, Ecat: General errorDisplay: [F0EC0004](#)

Non-fatal error

Cause: A general error occurred.**Solution:** Please contact the customer support.**F0EC0005, Ecat: Out of memory**Display: [F0EC0005](#)

Non-fatal error

Cause: No free memory could be allocated (internal software error).**Solution:** Please contact the customer support.**F0EC0006, Ecat: Invalid handle**Display: [F0EC0006](#)

Non-fatal error

Cause: A function with an invalid handle was called.**Solution:** Check the handles used and compare them to the documentation of the interface.**F0EC0007, Ecat: Invalid argument**Display: [F0EC0007](#)

Non-fatal error

Cause: A function with one or multiple invalid argument(s) was called.**Solution:** Check the arguments/parameters used and compare them to the documentation of the interface.**F0EC0008, Ecat: Timeout**Display: [F0EC0008](#)

Non-fatal error

Cause: Timeout.**Solution:** Check the monitoring times used in the configuration or when calling the interface.**F0EC4001, Ecat: Invalid interface**Display: [F0EC4001](#)

Non-fatal error

Cause: It was tried to access an invalid (not configured) interface.**Solution:**

- Check the configuration of the interface. It has to be defined as EtherCAT interface in the project
- Check the (master) address used for the respective call
- Repeat the respective access

F0EC4011, Ecat: Configuration file not found (Ini)Display: [F0EC4011](#)

Non-fatal error

Cause: The specified configuration file (Ini) could not be found.**Solution:** Please contact the customer support.**F0EC4012, Ecat: Configuration file incorrect (Ini)**Display: [F0EC4012](#)

Non-fatal error

Cause: The specified configuration file (Ini) is faulty.**Solution:** Please contact the customer support.**F0EC4021, Ecat: Configuration file not found (Eni)**Display: [F0EC4021](#)

Non-fatal error

Cause: The specified configuration file (Eni) could not be found.

Solution: Please contact the customer support.

F0EC4022, Ecat: Configuration file incorrect (Eni)

Display: [F0EC4022](#) Non-fatal error

Cause: The specified configuration file (Eni) is faulty.

Solution: Please contact the customer support.

F0EC4051, Ecat: Error while cyclic processing

Display: [F0EC4051](#) Non-fatal error

Cause: An internal software error occurred during the cyclic processing.

Solution: Please contact the customer support.

F0EC4052, Ecat: Error while cyclic processing

Display: [F0EC4052](#) Non-fatal error

Cause: An internal software error occurred during the cyclic processing.

Solution: Please contact the customer support.

F0EC4053, Ecat: Error while cyclic processing

Display: [F0EC4053](#) Non-fatal error

Cause: An internal software error occurred during the cyclic processing.

Solution: Please contact the customer support.

F0EC4054, Ecat: Error while cyclic processing

Display: [F0EC4054](#) Non-fatal error

Cause: An internal software error occurred during the cyclic processing.

Solution: Please contact the customer support.

F0EC4055, Ecat: Error while cyclic processing

Display: [F0EC4055](#) Non-fatal error

Cause: An internal software error occurred during the cyclic processing.

Solution: Please contact the customer support.

F0EC4056, Ecat: Error while cyclic processing

Display: [F0EC4056](#) Non-fatal error

Cause: An internal software error occurred during the cyclic processing.

Solution: Please contact the customer support.

F0EC4057, Ecat: Error while cyclic processing

Display: [F0EC4057](#) Non-fatal error

Cause: An internal software error occurred during the cyclic processing.

Solution: Please contact the customer support.

F0EC4058, Ecat: Error while cyclic processing

Display: [F0EC4058](#) Non-fatal error

Cause: An internal software error occurred during the cyclic processing.

Solution: Please contact the customer support.

F0EC4059, Ecat: Error while cyclic processingDisplay: [F0EC4059](#)

Non-fatal error

Cause: An internal software error occurred during the cyclic processing.**Solution:** Please contact the customer support.**F0EC8000, Ecat RIL: Input invalid**Display: [F0EC8000](#)

Non-fatal error

Cause: One input at the function block is invalidly assigned.**Solution:** For details, refer to the functional description of the RIL_EtherCAT library ("IndraWorks 14VRS Field Bus Libraries", DOK-IWORKS-FB*LIB**V14-LIRS-EN-P).**F0EC8001, Ecat RIL: Provided buffer too small**Display: [F0EC8001](#)

Non-fatal error

Cause: The storage area provided at the function block is too small.**Solution:** For details, refer to the functional description of the RIL_EtherCAT library ("IndraWorks 14VRS Field Bus Libraries", DOK-IWORKS-FB*LIB**V14-LIRS-EN-P).**F0EC8002, Ecat RIL: Timeout Monitoring of the function block**Display: [F0EC8002](#)

Non-fatal error

Cause: The timeout monitoring of the function block detected an error.**Solution:** For details, refer to the functional description of the RIL_EtherCAT library ("IndraWorks 14VRS Field Bus Libraries", DOK-IWORKS-FB*LIB**V14-LIRS-EN-P).**F0EC8003, Ecat RIL: Invalid EtherCAT state of the slave device**Display: [F0EC8003](#)

Non-fatal error

Cause: The requested function cannot be executed in the current EtherCAT state of the slave device.**Solution:** For details, refer to the functional description of the RIL_EtherCAT library ("IndraWorks 14VRS Field Bus Libraries", DOK-IWORKS-FB*LIB**V14-LIRS-EN-P).**F0EC8010, Ecat RIL: Invalid data status**Display: [F0EC8010](#)

Non-fatal error

Cause: An invalid data status was detected.**Solution:** For details, refer to the functional description of the RIL_EtherCAT library ("IndraWorks 14VRS Field Bus Libraries", DOK-IWORKS-FB*LIB**V14-LIRS-EN-P).**F0EC8020, Ecat RIL: File Open Error, check FileName and Path**Display: [F0EC8020](#)

Non-fatal error

Cause: The specified file (including path) could not be opened for reading.**Solution:** For details, refer to the functional description of the RIL_EtherCAT library ("IndraWorks 14VRS Field Bus Libraries", DOK-IWORKS-FB*LIB**V14-LIRS-EN-P).**F0EC8021, Ecat RIL: File Read Error (internal error)**Display: [F0EC8021](#)

Non-fatal error

- Cause:** Error when reading the file.
- Solution:** For details, refer to the functional description of the RIL_EtherCAT library ("IndraWorks 14VRS Field Bus Libraries", DOK-IWORKS-FB*LIB**V14-LIRS-EN-P).

F0EC8022, Ecat RIL: File SetPos Error (internal error)

Display: [F0EC8022](#) Non-fatal error

- Cause:** Error when setting the position of the file.
- Solution:** For details, refer to the functional description of the RIL_EtherCAT library ("IndraWorks 14VRS Field Bus Libraries", DOK-IWORKS-FB*LIB**V14-LIRS-EN-P).

F0EC8023, Ecat RIL: XML Tag <DiagMessages> not found

Display: [F0EC8023](#) Non-fatal error

- Cause:** The XML tag <DiagMessages> was not found.
- Solution:** For details, refer to the functional description of the RIL_EtherCAT library ("IndraWorks 14VRS Field Bus Libraries", DOK-IWORKS-FB*LIB**V14-LIRS-EN-P).

F0ECFFFD, Ecat: Create error

Display: [F0ECFFFD](#) Non-fatal error

- Cause:** An internal initialization error occurred.
- Solution:** Please contact the customer support.

F0ECFFFE, Ecat: Unimplemented

Display: [F0ECFFFE](#) Non-fatal error

- Cause:** The requested functionality is not implemented.
- Solution:** Please contact the customer support.

F0ECFFFF, Ecat: Unsupported

Display: [F0ECFFFF](#) Non-fatal error

- Cause:** The requested functionality is not supported.
- Solution:** Please contact the customer support.

F0ED0001, Ecat: Feature not supported

Display: [F0ED0001](#) Non-fatal error

One feature is not supported by the EtherCAT master.

F0ED0002, Ecat: Invalid index

Display: [F0ED0002](#) Non-fatal error

An invalid index was transferred when calling the function.

F0ED0003, Ecat: Invalid offset

Display: [F0ED0003](#) Non-fatal error

An invalid offset was transferred when calling the function.

F0ED0005, Ecat: Invalid size

Display: [F0ED0005](#) Non-fatal error

An invalid length was transferred when calling the function.

F0ED0006, Ecat: Invalid dataDisplay: [F0ED0006](#)

Non-fatal error

Invalid data was transferred when calling the function.

F0ED0007, Ecat: Device not readyDisplay: [F0ED0007](#)

Non-fatal error

A device was accessed, but it was not ready for access (invalid state).

F0ED0008, Ecat: Device busyDisplay: [F0ED0008](#)

Non-fatal error

A device was accessed that is currently busy and can thus not process the request.

F0ED0009, Ecat: Cannot queue acyclic EtherCAT commandDisplay: [F0ED0009](#)

Non-fatal error

No acyclic EtherCAT command could be issued.

F0ED000A, Ecat: Out of memoryDisplay: [F0ED000A](#)

Non-fatal error

Cause: No free memory could be allocated (internal software error).**Solution:** Please contact the customer support.**F0ED000B, Ecat: Invalid parameter**Display: [F0ED000B](#)

Non-fatal error

Cause: A function with one or multiple invalid argument(s) was called.**Solution:** Check the arguments/parameters used and compare them to the documentation of the interface.**F0ED000C, Ecat: Element not found**Display: [F0ED000C](#)

Non-fatal error

Cause: The addressed device cannot be accessed.**Solution:** Check the following:

- Address used
- Addressing type used (auto increment or EtherCAT address)
- Cabling devices
- Configuring devices

F0ED000D, Ecat: Duplicate EtherCAT addressDisplay: [F0ED000D](#)

Non-fatal error

Cause: The multiple use of the same EtherCAT address (fixed address) was detected in the configuration.**Solution:** Please contact the customer support.**F0ED000E, Ecat: Invalid state**Display: [F0ED000E](#)

Non-fatal error

Cause: There was an access that was not permitted within the current state. It is for example not possible to access the bus devices in the Init state.**Solution:** Check the states of the control, the addressed master or the addressed bus device.

F0ED000F, Ecat: Resource error (timer)

Display: [F0ED000F](#) Non-fatal error

Cause: An internal resource (timer) is not available.

Solution: Please contact the customer support.

F0ED0010, Ecat: Timeout

Display: [F0ED0010](#) Non-fatal error

Cause: Timeout.

Solution: Check the monitoring times used in the configuration or when calling the interface.

F0ED0011, Ecat: Resource error

Display: [F0ED0011](#) Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0ED0012, Ecat: Resource error

Display: [F0ED0012](#) Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0ED0013, Ecat: Insert mailbox command error

Display: [F0ED0013](#) Non-fatal error

Cause: The number of simultaneous active mailbox commands is limited. No further command could be added.

Solution: Reduce the number of simultaneously active acyclic accesses.

F0ED0014, Ecat: Invalid mailbox command

Display: [F0ED0014](#) Non-fatal error

Cause: An invalid mailbox command was detected in the configuration.

Solution: Please contact the customer support.

F0ED0015, Ecat: Unknown mailbox protocol

Display: [F0ED0015](#) Non-fatal error

Cause: An invalid mailbox protocol was detected in the configuration.

Solution: Please contact the customer support.

F0ED0016, Ecat: Access denied

Display: [F0ED0016](#) Non-fatal error

Cause: It is not possible to access the addressed element (object or parameter) or to access via the interface used.

Solution: Please contact the customer support.

F0ED0017, Ecat: Identification failed

Display: [F0ED0017](#) Non-fatal error

Cause: An internal software error occurred.

Solution: Please contact the customer support.

F0ED001A, Ecat: Resource error (product key)Display: [F0ED001A](#)

Non-fatal error

Cause: An internal resource (product key) is not available.**Solution:** Please contact the customer support.**F0ED001B, Ecat: Wrong format of master XML file**Display: [F0ED001B](#)

Non-fatal error

Cause: The master configuration (EtherCAT Network Information - ENI) is faulty.**Solution:** Please contact the customer support.**F0ED001C, Ecat: Feature disabled**Display: [F0ED001C](#)

Non-fatal error

Cause: The desired functionality is not available.**Solution:** Refer to the documentation on your firmware version used and check whether this version supports the functionality. Please contact the customer support if required.**F0ED001D, Ecat: Resource error (shadow memory)**Display: [F0ED001D](#)

Non-fatal error

Cause: An internal resource (shadow storage) is not available.**Solution:** Please contact the customer support.**F0ED001E, Ecat: Bus configuration mismatch**Display: [F0ED001E](#)

Non-fatal error

Cause: The configured bus devices do not match the actually existing devices at the bus.**Solution:** Check the configuration or the devices connected to the control. Note possible cabling errors.**F0ED001F, Ecat: Error in reading config file**Display: [F0ED001F](#)

Non-fatal error

Cause: An error occurred while loading the configuration.**Solution:** Please contact the customer support.**F0ED0020, Ecat: Invalid state requested**Display: [F0ED0020](#)

Non-fatal error

Cause: The current configuration does not allow to switch to the requested state.**Solution:** Please contact the customer support.**F0ED0021, Ecat: Cyclic commands missing**Display: [F0ED0021](#)

Non-fatal error

Cause: The configuration does not contain any cyclic command.**Solution:** Please contact the customer support.**F0ED0022, Ecat: Command AL Status register read missing**Display: [F0ED0022](#)

Non-fatal error

Cause: The configuration does not contain any command to retrieve the AL status register (0x0130).**Solution:** Please contact the customer support.

F0ED0023, Ecat: Master state machine errorDisplay: [F0ED0023](#)

Non-fatal error

Cause: An error has occurred in the internal state machine of the master.**Solution:** Please contact the customer support.**F0ED0024, Ecat: Slave error**Display: [F0ED0024](#)

Non-fatal error

Cause: An error occurred while accessing a bus device.**Solution:** Please contact the customer support.**F0ED0025, Ecat: Frame lost**Display: [F0ED0025](#)

Non-fatal error

Cause: A sent EtherCAT frame could not be received again. The frame was "lost" during its way to all bus devices.**Solution:** If this error occurs often, check the cabling. When localizing the error location, the error counters of the individual devices (from ESC register 0x300) can be used as support.**F0ED0026, Ecat: Incomplete EtherCAT frame**Display: [F0ED0026](#)

Non-fatal error

Cause: A sent EtherCAT frame was not completely received.**Solution:** Check the error counters of the individual devices (register 0x0300 et seq.).**F0ED0027, Ecat: Cyclic command WKC error**Display: [F0ED0027](#)

Non-fatal error

Cause: A cyclic EtherCAT command was received with an unexpected working counter value.**Solution:**

- Check the configuration and compare them to the devices. To receive the correct working counter value, it is required that devices addressed is the respective command are present at the bus
- Check the individual bus devices and the type of the configured Sync managers. In case of simply buffered sync managers, these could be blocked by the application of the device. Simply buffered Sync managers are often used for "Servo Drive Profile over EtherCAT"
- Check the error counters of the individual devices (register 0x0300 ff.)

F0ED0028, Ecat: Resource error (DCL)Display: [F0ED0028](#)

Non-fatal error

Cause: An internal resource (DC Latching) is not available.**Solution:** Please contact the customer support.**F0ED0029, Ecat: Auto increment address mismatch (slave missing)**Display: [F0ED0029](#)

Non-fatal error

Cause: The bus configuration and the connected devices differ. A formerly existing device is not connected to the bus anymore.**Solution:**

- Compare the bus configuration to the connected devices.
- Check the cabling of the bus devices.

F0ED002A, Ecat: Slave in invalid stateDisplay: [F0ED002A](#)

Non-fatal error

Cause: It was tried to access the mailboxes of a bus device (acyclic command). However, the device is in a state in which no mailboxes can be accessed (e.g. Init).

Solution: Switch the affected bus devices to a state in which mailbox accesses are supported.

F0ED002B, Ecat: EtherCAT address lost or slave missingDisplay: [F0ED002B](#)

Non-fatal error

Cause: The EtherCAT address (fixed address) of the device is not set. Maybe the device was restarted (voltage failure).

Solution: Switch the master to Init and then restart it.

F0ED002C, Ecat: Too many cyclic commands in XML configuration file.Display: [F0ED002C](#)

Non-fatal error

Cause: The number of cyclic EtherCAT commands is limited. The configuration contains more cyclic EtherCAT commands than supported by the firmware.

Solution: Please contact the customer support.

F0ED002D, Ecat: Ethernet link cable disconnectedDisplay: [F0ED002D](#)

Non-fatal error

Cause: No device is connected to the interface of the EtherCAT master. No link was detected on Ethernet level.

Solution:

- Check the documentation of the control and compare whether the devices are connected to the correct interface
- Check the cabling between the master and the first device
- Check the link LEDs of the master and the first device

F0ED002E, Ecat: Resource errorDisplay: [F0ED002E](#)

Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0ED002F, Ecat CoE: Mailbox send WKC errorDisplay: [F0ED002F](#)

Non-fatal error

Cause: No new data could be written to the mailbox of the device. The mailbox might still be full as the application of the device has not yet retrieved existing data.

Solution: Wait until the mailbox is available again and repeat the access.

F0ED0030, Ecat CoE: Mailbox receive WKC errorDisplay: [F0ED0030](#)

Non-fatal error

Cause: No data could be read from the mailbox of the device. The mailbox might be blocked, as the application of the device is currently writing new data on the mailbox.

Solution: Wait until the mailbox is available again and repeat the access.

F0ED0031, Ecat: No mailbox supportDisplay: [F0ED0031](#)

Non-fatal error

Cause: The addressed device does not support any (acyclic) communication via the mailbox mechanism.

- Solution:**
- Compare the configuration between the connected devices
 - Check whether the correct device was addressed

F0ED0032, Ecat CoE: Protocol not supported

Display: [F0ED0032](#)

Non-fatal error

Cause: The addressed device does not support any communication via "CANopen over EtherCAT" (CoE).

- Solution:**
- Compare the configuration between the connected devices
 - Check whether the correct device was addressed

F0ED0033, Ecat EoE: Protocol not supported

Display: [F0ED0033](#)

Non-fatal error

Cause: The addressed device does not support any communication via "Ethernet over EtherCAT" (EoE).

- Solution:**
- Compare the configuration between the connected devices
 - Check whether the correct device was addressed

F0ED0034, Ecat FoE: Protocol not supported

Display: [F0ED0034](#)

Non-fatal error

Cause: The addressed device does not support any communication via "File Transfer over EtherCAT" (FoE).

- Solution:**
- Compare the configuration between the connected devices
 - Check whether the correct device was addressed

F0ED0035, Ecat SoE: Protocol not supported

Display: [F0ED0035](#)

Non-fatal error

Cause: The addressed device does not support any communication via "Servo Profile over EtherCAT" (SoE).

- Solution:**
- Compare the configuration between the connected devices
 - Check whether the correct device was addressed

F0ED0036, Ecat VoE: Protocol not supported

Display: [F0ED0036](#)

Non-fatal error

Cause: The addressed device does not support any communication via "Vendor Specific over EtherCAT" (VoE).

- Solution:**
- Compare the configuration between the connected devices
 - Check whether the correct device was addressed

F0ED0037, Ecat: Resource error

Display: [F0ED0037](#)

Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0ED0038, Ecat: Resource error

Display: [F0ED0038](#)

Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0ED0039, Ecat: Resource error

Display: [F0ED0039](#)

Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0ED0040, Ecat SDO: Toggle bit not alternated

Display: [F0ED0040](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0503 0000

SDO abort code	Description
0x0503 0000	Toggle bit not changed

Solution:

- Check the transfer arguments used for the respective access
- Check the device configuration
- Check the device documentation

F0ED0041, Ecat SDO: SDO protocol timeout

Display: [F0ED0041](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0504 0000

SDO abort code	Description
0x0504 0000	SDO protocol timeout

Solution:

- Check the transfer arguments used for the respective access
- Check the device configuration
- Check the device documentation

F0ED0042, Ecat SDO: Client/server command specifier not valid

Display: [F0ED0042](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0504 0001

SDO abort code	Description
0x0504 0001	Client/server command specifier not valid

Solution:

- Check the transfer arguments used for the respective access
- Check the device configuration
- Check the device documentation

F0ED0043, Ecat SDO: Invalid block size (block mode only)

Display: [F0ED0043](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0504 0002

SDO abort code	Description
0x0504 0002	Invalid block size (block mode only)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0044, Ecat SDO: Invalid sequence number (block mode only)

Display: [F0ED0044](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0504 0003

SDO abort code	Description
0x0504 0003	Invalid sequence number (block mode only)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0045, Ecat SDO: CRC error (block mode only)

Display: [F0ED0045](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0504 0004

SDO abort code	Description
0x0504 0004	CRC error (block mode only)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0046, Ecat SDO: Out of memory

Display: [F0ED0046](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0504 0005

SDO abort code	Description
0x0504 0005	Out of memory

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0047, Ecat SDO: Unsupported access to an object

Display: [F0ED0047](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0601 0000

SDO abort code	Description
0x0601 0000	Unsupported access to an object

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration

- Check the device documentation

F0ED0048, Ecat SDO: Attempt to read a write only object

Display: [F0ED0048](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0601 0001

SDO abort code	Description
0x0601 0001	Attempt to read a write only object

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0049, Ecat SDO: Attempt to write a read only object

Display: [F0ED0049](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0601 0002

SDO abort code	Description
0x0601 0002	Attempt to write a read only object

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED004A, Ecat SDO: Object does not exist in object dictionary

Display: [F0ED004A](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0602 0000

SDO abort code	Description
0x0602 0000	Object does not exist in object dictionary

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED004B, Ecat SDO: Object cannot be mapped to PDO

Display: [F0ED004B](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0604 0041

SDO abort code	Description
0x0604 0041	Object cannot be mapped to PDO

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED004C, Ecat SDO: PDO length exceededDisplay: [F0ED004C](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0604 0042

SDO abort code	Description
0x0604 0042	PDO length exceeded

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED004D, Ecat SDO: General incompatibility (parameter)Display: [F0ED004D](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0604 0043

SDO abort code	Description
0x0604 0043	General incompatibility (parameter)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED004E, Ecat SDO: General incompatibility (device internal)Display: [F0ED004E](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0604 0047

SDO abort code	Description
0x0604 0047	General incompatibility (device internal)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED004F, Ecat SDO: Access failed (hardware error)Display: [F0ED004F](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0606 0000

SDO abort code	Description
0x0606 0000	Access failed (hardware error)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0050, Ecat SDO: Data type and length code do not matchDisplay: [F0ED0050](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0607 0010

SDO abort code	Description
0x0607 0010	Data type and length code do not match

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0051, Ecat SDO: Wrong data type (parameter too long)

Display: [F0ED0051](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0607 0012

SDO abort code	Description
0x0607 0012	Wrong data type (parameter too long)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0052, Ecat SDO: Wrong data type (parameter too short)

Display: [F0ED0052](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0607 0013

SDO abort code	Description
0x0607 0013	Wrong data type (parameter too short)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0053, Ecat SDO: Subindex does not exist

Display: [F0ED0053](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0609 0011

SDO abort code	Description
0x0609 0011	Subindex does not exist

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0054, Ecat SDO: Parameter value out of range

Display: [F0ED0054](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0609 0030

SDO abort code	Description
0x0609 0030	Parameter value out of range

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0055, Ecat SDO: Parameter value out of high limit

Display: [F0ED0055](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0609 0031

SDO abort code	Description
0x0609 0031	Parameter value out of high limit

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0056, Ecat SDO: Parameter value out of low limit

Display: [F0ED0056](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0609 0032

SDO abort code	Description
0x0609 0032	Parameter value out of low limit

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0057, Ecat SDO: Maximum value less than minimum value

Display: [F0ED0057](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0609 0036

SDO abort code	Description
0x0609 0036	Maximum value less than minimum value

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0058, Ecat SDO: General error

Display: [F0ED0058](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0800 0000

SDO abort code	Description
0x0800 0000	General error

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0059, Ecat SDO: Data cannot be transferred or stored

Display: [F0ED0059](#)

Non-fatal error

- Cause:** When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0800 0020

SDO abort code	Description
0x0800 0020	Data cannot be transferred or stored

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED005A, Ecat SDO: Data cannot be transferred (local control)

Display: [F0ED005A](#)

Non-fatal error

- Cause:** When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0800 0021

SDO abort code	Description
0x0800 0021	Data cannot be transferred (local control)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED005B, Ecat SDO: Data cannot be transferred (device state)

Display: [F0ED005B](#)

Non-fatal error

- Cause:** When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0800 0022

SDO abort code	Description
0x0800 0022	Data cannot be transferred (device state)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED005C, Ecat SDO: Object dictionary does not exist

Display: [F0ED005C](#)

Non-fatal error

- Cause:** When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0800 0023

SDO abort code	Description
0x0800 0023	Object dictionary does not exist

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED005D, Ecat SDO: Unknown error code

Display: [F0ED005D](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of a device, an unknown CANopen SDD abort code was issued.

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation
 - It is possible that the device has an internal error. Separate it briefly from the control and restart it

F0ED005E, Ecat SDO: Module Ident List mismatch

Display: [F0ED005E](#)

Non-fatal error

Cause: Invalid module configuration

In case of a slave with modular device profile (MDP), the configured modules (0xF030) do not match the physical modules (0xF050).

SDO Abort Code	Description
0x0609 0033	Determined module ident list (0xF030) and the configured module ident list (0xF050) do not match

- Solution:**
- Check and compare the following CoE objects, if available:
 - 0xF020: Configured address list
 - 0xF030: Configured module ident list
 - 0xF040: Determined address list
 - 0xF050: Determined module ident list
 - Check if all modules are connected correctly
 - Check the device configuration

F0ED0060, Ecat FoE: Vendor specific FoE error

Display: [F0ED0060](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x8000

FoE error code	Description
0x8000	Vendor specific FoE error (not defined)

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0ED0061, Ecat FoE: Not found

Display: [F0ED0061](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x8001

FoE error code	Description
0x8001	Not found

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0ED0062, Ecat FoE: Access denied

Display: [F0ED0062](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x8002

FoE error code	Description
0x8002	Access denied

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0ED0063, Ecat FoE: Disk full

Display: [F0ED0063](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x8003

FoE error code	Description
0x8003	Disk full

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0ED0064, Ecat FoE: Illegal

Display: [F0ED0064](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x8004

FoE error code	Description
0x8004	Illegal

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0ED0065, Ecat FoE: Wrong packet number

Display: [F0ED0065](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x8005

FoE error code	Description
0x8005	Wrong packet number

- Solution:**
- Check the transfer arguments used for the respective transfer

- Check the device configuration
- Check the device documentation

F0ED0066, Ecat FoE: Already exists

Display: [F0ED0066](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x8006

FoE error code	Description
0x8006	Already exists

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0ED0067, Ecat FoE: User missing

Display: [F0ED0067](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x8007

FoE error code	Description
0x8007	User missing

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0ED0068, Ecat FoE: Bootstrap only

Display: [F0ED0068](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x8008

FoE error code	Description
0x8008	Bootstrap only

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0ED0069, Ecat FoE: File name not valid in Bootstrap

Display: [F0ED0069](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x8009

FoE error code	Description
0x8009	Downloaded file name is not valid in Bootstrap state

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0ED006A, Ecat FoE: No rights

Display: [F0ED006A](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x800A

FoE error code	Description
0x800A	No rights

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0ED006B, Ecat FoE: Program error

Display: [F0ED006B](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x800B

FoE error code	Description
0x800B	Program error

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0ED006C, Ecat FoE: Wrong checksum

Display: [F0ED006C](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x800C

FoE error code	Description
0x800C	Wrong checksum

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0ED006D, Ecat FoE: Firmware does not fit for Hardware

Display: [F0ED006D](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x800D

FoE error code	Description
0x800D	Firmware does not fit for Hardware

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0ED006F, Ecat FoE: File not found

Display: [F0ED006F](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x800F

FoE error code	Description
0x800F	File not found

- Solution:**
- Check the transfer arguments used for the respective transfer

- Check the device configuration
- Check the device documentation

F0ED0070, Ecat: Master configuration not found

Display: [F0ED0070](#) Non-fatal error

Cause: The master configuration could not be loaded.

Solution: Please contact the customer support.

F0ED0071, Ecat: Command error while EEPROM upload

Display: [F0ED0071](#) Non-fatal error

Cause: An error occurred during write access on the EEPROM device.

Solution: Please contact the customer support.

F0ED0072, Ecat: Command error while EEPROM download

Display: [F0ED0072](#) Non-fatal error

Cause: An error occurred during read access on the EEPROM device.

Solution: Please contact the customer support.

F0ED0073, Ecat: Cyclic command wrong size (too long)

Display: [F0ED0073](#) Non-fatal error

Cause: The configuration contains a cyclic command that is too long and not supported by the firmware.

Solution: Please contact the customer support.

F0ED0074, Ecat: Invalid input offset in cyc cmd

Display: [F0ED0074](#) Non-fatal error

Cause: The configuration contains a cyclic command with an incorrect offset for input data.

Solution: Please contact the customer support.

F0ED0075, Ecat: Invalid output offset in cyc cmd

Display: [F0ED0075](#) Non-fatal error

Cause: The configuration contains a cyclic command with an incorrect offset for output data.

Solution: Please contact the customer support.

F0ED0076, Ecat: Resource error (Port close)

Display: [F0ED0076](#) Non-fatal error

Cause: An internal resource (Port close) is not available.

Solution: Please contact the customer support.

F0ED0077, Ecat: Resource error (Port open)

Display: [F0ED0077](#) Non-fatal error

Cause: An internal resource (Port open) is not available.

Solution: Please contact the customer support.

F0ED0078, Ecat SoE: Invalid access to element 0

Display: [F0ED0078](#) Non-fatal error

Cause: If element 0 of a parameter is accessed asynchronously, an error occurred.

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0079, Ecat SoE: Does not exist

Display: [F0ED0079](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x1001

SoE error code	Description
0x1001	Does not exist

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED007A, Ecat SoE: Invalid access to element 1

Display: [F0ED007A](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x1009

SoE error code	Description
0x1009	Invalid access to element 1

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED007B, Ecat SoE: No name

Display: [F0ED007B](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x2001

SoE error code	Description
0x2001	No name

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED007C, Ecat SoE: Name transmission too short

Display: [F0ED007C](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x2002

SoE error code	Description
0x2002	Name transmission too short

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration

- Check the device documentation

F0ED007D, Ecat SoE: Name transmission too longDisplay: [F0ED007D](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x2003

SoE error code	Description
0x2003	Name transmission too long

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED007E, Ecat SoE: Name cannot be changed (read only)Display: [F0ED007E](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x2004

SoE error code	Description
0x2004	Name cannot be changed (read only)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED007F, Ecat SoE: Name is write-protected at this timeDisplay: [F0ED007F](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x2005

SoE error code	Description
0x2005	Name is write-protected at this time

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0080, Ecat SoE: Attribute transmission too shortDisplay: [F0ED0080](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x3002

SoE error code	Description
0x3002	Attribute transmission too short

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0081, Ecat SoE: Attribute transmission too longDisplay: [F0ED0081](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x3003

SoE error code	Description
0x3003	Attribute transmission too long

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0082, Ecat SoE: Attribute cannot be changed (read only)Display: [F0ED0082](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x3004

SoE error code	Description
0x3004	Attribute cannot be changed (read only)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0083, Ecat SoE: Attribute is write-protected at this timeDisplay: [F0ED0083](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x3005

SoE error code	Description
0x3005	Attribute is write-protected at this time

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0084, Ecat SoE: No unitsDisplay: [F0ED0084](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x4001

SoE error code	Description (English)
0x4001	No unit

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0085, Ecat SoE: Unit transmission too shortDisplay: [F0ED0085](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x4002

SoE error code	Description
0x4002	Unit transmission too short

Solution:

- Check the transfer arguments used for the respective access
- Check the device configuration
- Check the device documentation

F0ED0086, Ecat SoE: Unit transmission too long

Display: [F0ED0086](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x4003

SoE error code	Description
0x4003	Unit transmission too long

Solution:

- Check the transfer arguments used for the respective access
- Check the device configuration
- Check the device documentation

F0ED0087, Ecat SoE: Unit cannot be changed (read only)

Display: [F0ED0087](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x4004

SoE error code	Description
0x4004	Unit cannot be changed (read only)

Solution:

- Check the transfer arguments used for the respective access
- Check the device configuration
- Check the device documentation

F0ED0088, Ecat SoE: Unit currently write-protected

Display: [F0ED0088](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x4004

SoE error code	Description
0x4004	Unit currently write-protected

Solution:

- Check the transfer arguments used for the respective access
- Check the device configuration
- Check the device documentation

F0ED0089, Ecat SoE: No minimum input value

Display: [F0ED0089](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x5001

SoE error code	Description
0x5001	No minimum input value

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED008A, Ecat SoE: Min. input value transmission too short

Display: [F0ED008A](#) Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x5002

SoE error code	Description
0x5002	Min. input value transmission too short

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED008B, Ecat SoE: Min. input value transmission too long

Display: [F0ED008B](#) Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x5003

SoE error code	Description
0x5003	Min. input value transmission too long

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED008C, Ecat SoE: Min. input value cannot be changed (read only)

Display: [F0ED008C](#) Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x5004

SoE error code	Description
0x5004	Min. input value cannot be changed (read only)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED008D, Ecat SoE: Min. input value is write-protected at this time

Display: [F0ED008D](#) Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x5005

SoE error code	Description
0x5005	Min. input value is write-protected at this time

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED008E, Ecat SoE: No maximum input value

Display: [F0ED008E](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x6001

SoE error code	Description
0x6001	No maximum input value

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED008F, Ecat SoE: Max. input value transmission too short

Display: [F0ED008F](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x6002

SoE error code	Description
0x6002	Max. input value transmission too short

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0090, Ecat SoE: Max. input value transmission too long

Display: [F0ED0090](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x6003

SoE error code	Description
0x6003	Max. input value transmission too long

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0091, Ecat SoE: Max. input value cannot be changed (read only)

Display: [F0ED0091](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x6004

SoE error code	Description
0x6004	Max. input value cannot be changed (read only)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0092, Ecat SoE: Max. input value is write-protected at this time

Display: [F0ED0092](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x6005

SoE error code	Description
0x6005	Max. input value is write-protected at this time

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0093, Ecat SoE: No operation data

Display: [F0ED0093](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x7001

SoE error code	Description
0x7001	No operation data

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0094, Ecat SoE: Operation data transmission too short

Display: [F0ED0094](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x7002

SoE error code	Description
0x7002	Operation data transmission too short

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0095, Ecat SoE: Operation data transmission too long

Display: [F0ED0095](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x7003

SoE error code	Description
0x7003	Operation data transmission too long

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0096, Ecat SoE: Operation data cannot be changed (read only)

Display: [F0ED0096](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x7004

SoE error code	Description
0x7004	Operation data cannot be changed (read only)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0097, Ecat SoE: Operation data is write-protected at this time

Display: [F0ED0097](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x7005

SoE error code	Description
0x7005	Operation data is write-protected at this time

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0098, Ecat SoE: Operation data is smaller than the min value

Display: [F0ED0098](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x7006

SoE error code	Description
0x7006	Operation data is smaller than the min value

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0099, Ecat SoE: Operation data is greater than the max value

Display: [F0ED0099](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x7007

SoE error code	Description
0x7007	Operation data is greater than the max value

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED009A, Ecat SoE: Invalid operation data

Display: [F0ED009A](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x7008

SoE error code	Description
0x7008	Invalid operation data

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED009B, Ecat SoE: Operation data write-protected by a password

Display: [F0ED009B](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x7009

SoE error code	Description
0x7009	Operation data write-protected by a password

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED009C, Ecat SoE: Operation data is write-protected (cycl. conf)

Display: [F0ED009C](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x700A

SoE error code	Description
0x700A	Operation data is write-protected (cycl. conf)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED009D, Ecat SoE: Invalid indirect addr., (data container, list)

Display: [F0ED009D](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x700B

SoE error code	Description
0x700B	Invalid indirect addr., (data container, list)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED009E, Ecat SoE: Operation data is write-protected (other)

Display: [F0ED009E](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x700C

SoE error code	Description
0x700C	Operation data is write-protected (other)

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED009F, Ecat SoE: Procedure command already active

Display: [F0ED009F](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x7010

SoE error code	Description
0x7010	Procedure command already active

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0100, Ecat SoE: Procedure command not interruptible

Display: [F0ED0100](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x7011

SoE error code	Description
0x7011	Procedure command not interruptible

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0101, Ecat SoE: Procedure command at this time not executable

Display: [F0ED0101](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, the following SoE error code was issued: 0x7012

SoE error code	Description
0x7012	Procedure command at this time not executable

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0102, Ecat SoE: Procedure command not executable

Display: [F0ED0102](#)

Non-fatal error

- Cause:** If a parameter is accessed asynchronously, the following SoE error code was issued: 0x7013

SoE error code	Description
0x7013	Procedure command not executable

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0103, Ecat SoE: Response drive number mismatch

Display: [F0ED0103](#)

Non-fatal error

- Cause:** If a parameter is accessed asynchronously, an error occurred. The response of the drive contains an incorrect drive number.

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0104, Ecat SoE: Response IDN mismatch

Display: [F0ED0104](#)

Non-fatal error

- Cause:** An error occurred during parameter access to the addressed device. The addressed devices responded with an incorrect parameter IDN.

- Solution:**
- Check the transfer arguments used for the respective access and repeat the access
 - It is possible that the device has an internal error. Separate it briefly from the control and restart it
 - Please contact the manufacturer of the addressed device

F0ED0105, Ecat SoE: At least one fragment lost

Display: [F0ED0105](#)

Non-fatal error

- Cause:** Fragment the transfer due to the parameter size. An error occurred while sending an error. The master was not able to receive one fragment. Maybe the addressed device did not send the fragment or the fragment got lost during transmission.

- Solution:**
- Check the transfer arguments used for the respective access and repeat the access
 - Check the cabling
 - Check for possible EMC effects
 - It is possible that the device has an internal error. Separate it briefly from the control and restart it

- Please contact the manufacturer of the addressed device

F0ED0106, Ecat SoE: RX buffer fullDisplay: [F0ED0106](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, an error occurred.

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0107, Ecat SoE: No data stateDisplay: [F0ED0107](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, an error occurred.

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0108, Ecat SoE: No default valueDisplay: [F0ED0108](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, an error occurred.

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED0109, Ecat SoE: Default value transmission too longDisplay: [F0ED0109](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, an error occurred.

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED010A, Ecat SoE: Default value cannot be changedDisplay: [F0ED010A](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, an error occurred.

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED010B, Ecat SoE: Invalid drive numberDisplay: [F0ED010B](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, an error occurred.

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED010C, Ecat SoE: General errorDisplay: [F0ED010C](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, an error occurred.

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED010D, Ecat SoE: No element addressed

Display: [F0ED010D](#)

Non-fatal error

Cause: If a parameter is accessed asynchronously, an error occurred.

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0ED010E, Ecat: Slave not present on bus

Display: [F0ED010E](#)

Non-fatal error

Cause: The addressed device is not at the bus anymore.

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the cabling

F0ED010F, Ecat FoE: Protocol not supported in Bootstrap

Display: [F0ED010F](#)

Non-fatal error

Cause: The FoE protocol is not supported in the "Bootstrap" state.

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the current state of the bus device and correct it if required

F0ED0110, Ecat: Command error while EEPROM reload

Display: [F0ED0110](#)

Non-fatal error

Cause: An error occurred during the command "EEPROM reload".

- Solution:**
- Check the diagnostics of the device
 - Check the device documentation
 - Execute the command again
 - Please contact the manufacturer of the device

F0ED0111, Ecat: Command error while reset EtherCAT slave controller

Display: [F0ED0111](#)

Non-fatal error

Cause: An error occurred during the command "Reset EtherCAT slave controller".

- Solution:**
- Check the diagnostics of the device
 - Check the device documentation
 - Execute the command again
 - Please contact the manufacturer of the device

F0ED0112, Ecat: Resource error (System driver)

Display: [F0ED0112](#)

Non-fatal error

Cause: An internal resource (system driver) is not available.

Solution: Please contact the customer support.

F0ED011E, Ecat: Error while bus scan (topology change)

Display: [F0ED011E](#)

Non-fatal error

Cause: While the bus devices have been scanned, the topology changed. Scanning thus failed. To detect the devices or their topology, a stable topology state is required.

- Solution:**
- Avoid topology changes, e.g. by plugging in a device during the bus scan
 - Check the cabling of the devices
 - Execute the bus scan command again

F0ED011F, Ecat EoE: Mailbox WKC error

Display: [F0ED011F](#)

Non-fatal error

Cause: An EtherCAT EoE command was received with an unexpected working counter value.

- Solution:**
- Execute your prompt again
 - Check the error counters of the individual devices (register 0x0300 ff.)

F0ED0120, Ecat FoE: Mailbox WKC error

Display: [F0ED0120](#)

Non-fatal error

Cause: An EtherCAT FoE command was received with an unexpected working counter value.

- Solution:**
- Execute your prompt again
 - Check the error counters of the individual devices (register 0x0300 ff.)

F0ED0121, Ecat SoE: Mailbox WKC error

Display: [F0ED0121](#)

Non-fatal error

Cause: An EtherCAT SoE command was received with an unexpected working counter value.

- Solution:**
- Execute your prompt again
 - Check the error counters of the individual devices (register 0x0300 ff.)

F0ED0122, Ecat AoE: Mailbox WKC error

Display: [F0ED0122](#)

Non-fatal error

Cause: An EtherCAT AoE command was received with an unexpected working counter value.

- Solution:**
- Execute your prompt again
 - Check the error counters of the individual devices (register 0x0300 ff.)

F0ED0123, Ecat VoE: Mailbox WKC error

Display: [F0ED0123](#)

Non-fatal error

Cause: An EtherCAT VoE command was received with an unexpected working counter value.

- Solution:**
- Execute your prompt again
 - Check the error counters of the individual devices (register 0x0300 ff.)

F0ED0124, Ecat: EEPROM assignment failed

Display: [F0ED0124](#)

Non-fatal error

Cause: An error occurred during the command "EEPROM assignment".

- Solution:**
- Check the diagnostics of the device
 - Check the device documentation

- Execute the command again
- Please contact the manufacturer of the device

F0ED0125, Ecat: Unknown mailbox error

Display: [F0ED0125](#) Non-fatal error

Cause: An unknown error occurred during the mailbox communication.

- Solution:**
- Execute your prompt again
 - Check the error counters of the individual devices (register 0x0300 ff.)
 - Check the device documentation

F0ED0126, Ecat: Resource error (Red. line)

Display: [F0ED0126](#) Non-fatal error

Cause: An internal resource (red line) is not available.

Solution: Please contact the customer support.

F0ED0127, Ecat: Resource error

Display: [F0ED0127](#) Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0ED0128, Ecat: <PreviousPort>-tag missing

Display: [F0ED0128](#) Non-fatal error

Cause: An error was detected in the bus configuration (ENI file). One or multiple <PreviousPort> tags are missing in this file.

Solution: Please contact the customer support.

F0ED0129, Ecat: DC enabled and DC cyclic commands missing

Display: [F0ED0129](#) Non-fatal error

Cause: An error was detected in the bus configuration (ENI file). The use of Distributed Clocks was enabled, but no EtherCAT commands are available.

Solution: Please contact the customer support.

F0ED0130, Ecat: Resource error

Display: [F0ED0130](#) Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0ED0131, Ecat: Resource error

Display: [F0ED0131](#) Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0ED0132, Ecat: Resource error

Display: [F0ED0132](#) Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0ED0133, Ecat: Resource error

Display: [F0ED0133](#) Non-fatal error

Cause: An internal resource is not available.
Solution: Please contact the customer support.

F0ED0134, Ecat: Resource error

Display: [F0ED0134](#) Non-fatal error

Cause: An internal resource is not available.
Solution: Please contact the customer support.

F0ED0135, Ecat: Resource error

Display: [F0ED0135](#) Non-fatal error

Cause: An internal resource is not available.
Solution: Please contact the customer support.

F0ED0136, Ecat: Resource error

Display: [F0ED0136](#) Non-fatal error

Cause: An internal resource is not available.
Solution: Please contact the customer support.

F0ED0137, Ecat VoE: No VoE mailbox data received

Display: [F0ED0137](#) Non-fatal error

Cause: The master waits for VoE mailbox data of a bus device and could not (yet) receive it.
Solution:

- Check your application program
- Check the device documentation
- Please contact the manufacturer of the device

F0ED0138, Ecat: DC unit of reference clock disabled

Display: [F0ED0138](#) Non-fatal error

Cause: The DC unit of the bus device defined as reference device is disabled. It can thus not be used as reference clock.
Solution:

- Check the master configuration
- Check the configuration of the respective device
- Check the device documentation

F0ED0139, Ecat: DC reference clock not found

Display: [F0ED0139](#) Non-fatal error

Cause: The bus device with the DC reference clock could not be accessed.
Solution:

- Check the master configuration
- Check whether the device defined in the network as reference device is available
- Check the device documentation

F0ED013B, Ecat: Mailbox init command WKC error

Display: [F0ED013B](#) Non-fatal error

Cause: It was tried (multiple times) to execute an Init command. However, it failed.
Solution:

- Check the master configuration
- Check the configuration of the respective device

F0ED013C, Ecat AoE: Protocol not supportedDisplay: [F0ED013C](#)

Non-fatal error

Reserved for future use.

F0ED013D, Ecat AoE: Invalid AoE response receivedDisplay: [F0ED013D](#)

Non-fatal error

Reserved for future use.

F0ED013E, Ecat AoE: General errorDisplay: [F0ED013E](#)

Non-fatal error

Reserved for future use.

F0ED013F, Ecat AoE: Service not supported by serverDisplay: [F0ED013F](#)

Non-fatal error

Reserved for future use.

F0ED0140, Ecat AoE: Invalid index groupDisplay: [F0ED0140](#)

Non-fatal error

Reserved for future use.

F0ED0141, Ecat AoE: Invalid index offsetDisplay: [F0ED0141](#)

Non-fatal error

Reserved for future use.

F0ED0142, Ecat AoE: Reading/writing not permittedDisplay: [F0ED0142](#)

Non-fatal error

Reserved for future use.

F0ED0143, Ecat AoE: Parameter size not correctDisplay: [F0ED0143](#)

Non-fatal error

Reserved for future use.

F0ED0144, Ecat AoE: Invalid parameter value(s)Display: [F0ED0144](#)

Non-fatal error

Reserved for future use.

F0ED0145, Ecat AoE: Device not in a ready stateDisplay: [F0ED0145](#)

Non-fatal error

Reserved for future use.

F0ED0146, Ecat AoE: Device busyDisplay: [F0ED0146](#)

Non-fatal error

Reserved for future use.

F0ED0147, Ecat AoE: Invalid contextDisplay: [F0ED0147](#)

Non-fatal error

Reserved for future use.

F0ED0148, Ecat AoE: Out of memoryDisplay: [F0ED0148](#)

Non-fatal error

	Reserved for future use.	
F0ED0149, Ecat AoE: Invalid parameter value(s)		
	Display: F0ED0149	Non-fatal error
	Reserved for future use.	
F0ED014A, Ecat AoE: Element not found		
	Display: F0ED014A	Non-fatal error
	Reserved for future use.	
F0ED014B, Ecat AoE: Syntax error in comand or file		
	Display: F0ED014B	Non-fatal error
	Reserved for future use.	
F0ED014C, Ecat AoE: Objects do not match		
	Display: F0ED014C	Non-fatal error
	Reserved for future use.	
F0ED014D, Ecat AoE: Object already exists		
	Display: F0ED014D	Non-fatal error
	Reserved for future use.	
F0ED014E, Ecat AoE: Symbol not found		
	Display: F0ED014E	Non-fatal error
	Reserved for future use.	
F0ED014F, Ecat AoE: Symbol version invalid		
	Display: F0ED014F	Non-fatal error
	Reserved for future use.	
F0ED0150, Ecat AoE: Server in invalid state		
	Display: F0ED0150	Non-fatal error
	Reserved for future use.	
F0ED0151, Ecat AoE: AdsTransMode not supported		
	Display: F0ED0151	Non-fatal error
	Reserved for future use.	
F0ED0152, Ecat AoE: Resource error		
	Display: F0ED0152	Non-fatal error
	Reserved for future use.	
F0ED0153, Ecat AoE: Resource error		
	Display: F0ED0153	Non-fatal error
	Reserved for future use.	
F0ED0154, Ecat AoE: Resource error		
	Display: F0ED0154	Non-fatal error
	Reserved for future use.	

F0ED0155, Ecat AoE: Resource errorDisplay: [F0ED0155](#)

Non-fatal error

Reserved for future use.

F0ED0156, Ecat AoE: Resource errorDisplay: [F0ED0156](#)

Non-fatal error

Reserved for future use.

F0ED0157, Ecat AoE: Timeout (Device)Display: [F0ED0157](#)

Non-fatal error

Reserved for future use.

F0ED0158, Ecat AoE: Query interface failedDisplay: [F0ED0158](#)

Non-fatal error

Reserved for future use.

F0ED0159, Ecat AoE: Wrong interface requiredDisplay: [F0ED0159](#)

Non-fatal error

Reserved for future use.

F0ED015A, Ecat AoE: Class ID invalidDisplay: [F0ED015A](#)

Non-fatal error

Reserved for future use.

F0ED015B, Ecat AoE: Object ID invalidDisplay: [F0ED015B](#)

Non-fatal error

Reserved for future use.

F0ED015C, Ecat AoE: Request pendingDisplay: [F0ED015C](#)

Non-fatal error

Reserved for future use.

F0ED015D, Ecat AoE: Request abortedDisplay: [F0ED015D](#)

Non-fatal error

Reserved for future use.

F0ED015E, Ecat AoE: Signal warningDisplay: [F0ED015E](#)

Non-fatal error

Reserved for future use.

F0ED015F, Ecat AoE: Invalid array indexDisplay: [F0ED015F](#)

Non-fatal error

Reserved for future use.

F0ED0160, Ecat AoE: Symbol not activeDisplay: [F0ED0160](#)

Non-fatal error

Reserved for future use.

F0ED0161, Ecat AoE: Access deniedDisplay: [F0ED0161](#)

Non-fatal error

	Reserved for future use.	
F0ED0162, Ecat AoE: Internal error		
	Display: F0ED0162	Non-fatal error
	Reserved for future use.	
F0ED0163, Ecat AoE: Target port not found		
	Display: F0ED0163	Non-fatal error
	Reserved for future use.	
F0ED0164, Ecat AoE: Target machine not found		
	Display: F0ED0164	Non-fatal error
	Reserved for future use.	
F0ED0165, Ecat AoE: Unknown command ID		
	Display: F0ED0165	Non-fatal error
	Reserved for future use.	
F0ED0166, Ecat AoE: Port not connected		
	Display: F0ED0166	Non-fatal error
	Reserved for future use.	
F0ED0167, Ecat AoE: Invalid AMS length		
	Display: F0ED0167	Non-fatal error
	Reserved for future use.	
F0ED0168, Ecat AoE: Invalid AMS Net ID		
	Display: F0ED0168	Non-fatal error
	Reserved for future use.	
F0ED0169, Ecat AoE: Port disabled		
	Display: F0ED0169	Non-fatal error
	Reserved for future use.	
F0ED016A, Ecat AoE: Port already connected		
	Display: F0ED016A	Non-fatal error
	Reserved for future use.	
F0ED016B, Ecat AoE: Invalid AMS port		
	Display: F0ED016B	Non-fatal error
	Reserved for future use.	
F0ED016C, Ecat AoE: Out of memory		
	Display: F0ED016C	Non-fatal error
	Reserved for future use.	
F0ED016D, Ecat AoE: Vendor specific AoE device error		
	Display: F0ED016D	Non-fatal error
	Reserved for future use.	

F0ED016E, Ecat AoE: Invalid NetIDDisplay: [F0ED016E](#)

Non-fatal error

Reserved for future use.

F0ED016F, Ecat: Maximum number of bus slave has been exceededDisplay: [F0ED016F](#)

Non-fatal error

Cause: The maximum number of bus devices was exceeded.

- Solution:**
- Reduce the number of devices connected to the master
 - Reduce the number of configured devices

F0ED0170, Ecat Mailbox: Syntax of Mailbox header wrongDisplay: [F0ED0170](#)

Non-fatal error

Cause: An error occurred while accessing the mailbox of a bus device. The syntax of the received mailbox header is incorrect.

- Solution:**
- Check the documentation of the respective device
 - Check the cabling
 - Repeat the respective access

F0ED0171, Ecat Mailbox: Mailbox protocol not supportedDisplay: [F0ED0171](#)

Non-fatal error

Cause: An error occurred while accessing the mailbox of a bus device. The requested mailbox protocol is not supported.

- Solution:**
- Check the documentation of the respective device
 - Check the addressing
 - Repeat the respective access

F0ED0172, Ecat Mailbox: Field contains wrong valueDisplay: [F0ED0172](#)

Non-fatal error

Cause: An error occurred while accessing the mailbox of a bus device. The received response contains unexpected values.

- Solution:**
- Check the documentation of the respective device
 - Check the cabling
 - Repeat the respective access

F0ED0173, Ecat Mailbox: Service not supported (Mailbox protocol)Display: [F0ED0173](#)

Non-fatal error

Cause: An error occurred while accessing the mailbox of a bus device. The requested service is not supported.

- Solution:**
- Check the documentation of the respective device
 - Check the cabling
 - Repeat the respective access

F0ED0174, Ecat Mailbox: Protocol header wrongDisplay: [F0ED0174](#)

Non-fatal error

Cause: An error occurred while accessing the mailbox of a bus device. The received protocol header is faulty.

- Solution:**
- Check the documentation of the respective device

- Check the cabling
- Repeat the respective access

F0ED0175, Ecat Mailbox: Received data too shortDisplay: [F0ED0175](#)

Non-fatal error

Cause: An error occurred while accessing the mailbox of a bus device. The sum of the received data is too small.

- Solution:**
- Check the documentation of the respective device
 - Check the cabling
 - Repeat the respective access

F0ED0176, Ecat Mailbox: Resource errorDisplay: [F0ED0176](#)

Non-fatal error

Cause: An error occurred while accessing the mailbox of a bus device.

Solution: Please contact the customer support.

F0ED0177, Ecat Mailbox: Length of data inconsistentDisplay: [F0ED0177](#)

Non-fatal error

Cause: An error occurred while accessing the mailbox of a bus device. Inconsistencies were detected in the received response with regard to the data length.

- Solution:**
- Check the documentation of the respective device
 - Check the cabling
 - Repeat the respective access

F0ED0178, Ecat: Slaves with DC before reference clockDisplay: [F0ED0178](#)

Non-fatal error

Cause: There are devices using the DC functionality before the device defined as reference clock.

- Solution:**
- Check the network configuration
 - Check the cabling

F0ED0179, Ecat: Data type conversion failedDisplay: [F0ED0179](#)

Non-fatal error

Cause: The conversion into a data type failed.

- Solution:**
- Check the documentation of the respective device
 - Check the transfer arguments of the respective access
 - Repeat the respective access

F0ED017A, Ecat FoE: File bigger than max file sizeDisplay: [F0ED017A](#)

Non-fatal error

Cause: The selected file is bigger than permitted.

- Solution:**
- Check the transfer arguments used for the respective access

F0ED017B, Ecat: Line crossedDisplay: [F0ED017B](#)

Non-fatal error

Cause: One line is twisted at least one device.

- Solution:**
- Check the network configuration
 - Check the cabling

F0ED017C, Ecat: Line crossedDisplay: [F0ED017C](#)

Non-fatal error

Cause: One line is twisted at least one device.

- Solution:**
- Check the network configuration
 - Check the cabling

F0ED017D, Ecat: Socket disconnectedDisplay: [F0ED017D](#)

Non-fatal error

Cause: An IP connection was aborted. This might have triggered a time monitoring.

- Solution:**
- Check the devices involved in the communication
 - Check the set monitoring times
 - Check the cabling

F0ED017E, Ecat: ADO not supportedDisplay: [F0ED017E](#)

Non-fatal error

Cause: The addressed object is not supported.

- Solution:**
- Check the documentation of the respective device
 - Check the transfer arguments of the respective access
 - Repeat the respective access

F0ED017F, Ecat: Frameloss after SlaveDisplay: [F0ED017F](#)

Non-fatal error

Cause: Frames are lost behind a bus device. This is probably caused by an open port of the EtherCAT slave controller (ESC). It is possible that a device is connected there and that this device is not an EtherCAT device (e.g. a standard network card).

- Solution:**
- Check the cabling
 - Check the configuration of the master and of the individual devices
 - The your system

F0ED0180, Ecat RAS: General errorDisplay: [F0ED0180](#)

Non-fatal error

Cause: A general error occurred.**Solution:** Please contact the customer support.**F0ED0181, Ecat RAS: Resource error**Display: [F0ED0181](#)

Non-fatal error

Cause: An internal resource is not available.**Solution:** Please contact the customer support.**F0ED0183, Ecat RAS: Resource error**Display: [F0ED0183](#)

Non-fatal error

Cause: An internal resource is not available.**Solution:** Please contact the customer support.**F0ED0184, Ecat RAS: Resource error**Display: [F0ED0184](#)

Non-fatal error

Cause: An internal resource is not available.
Solution: Please contact the customer support.

F0ED0186, Ecat RAS: Resource error

Display: [F0ED0186](#) Non-fatal error

Cause: An internal resource is not available.
Solution: Please contact the customer support.

F0ED0187, Ecat RAS: Resource error

Display: [F0ED0187](#) Non-fatal error

Cause: An internal resource is not available.
Solution: Please contact the customer support.

F0ED0188, Ecat RAS: Resource error

Display: [F0ED0188](#) Non-fatal error

Cause: An internal resource is not available.
Solution: Please contact the customer support.

F0ED0189, Ecat RAS: Resource error

Display: [F0ED0189](#) Non-fatal error

Cause: An internal resource is not available.
Solution: Please contact the customer support.

F0ED0191, Ecat RAS: Resource error

Display: [F0ED0191](#) Non-fatal error

Cause: An internal resource is not available.
Solution: Please contact the customer support.

F0ED0192, Ecat RAS: Resource error

Display: [F0ED0192](#) Non-fatal error

Cause: An internal resource is not available.
Solution: Please contact the customer support.

F0ED0193, Ecat RAS: Resource error

Display: [F0ED0193](#) Non-fatal error

Cause: An internal resource is not available.
Solution: Please contact the customer support.

F0ED0194, Ecat RAS: Resource error

Display: [F0ED0194](#) Non-fatal error

Cause: An internal resource is not available.
Solution: Please contact the customer support.

F0ED0195, Ecat RAS: Resource error

Display: [F0ED0195](#) Non-fatal error

Cause: An internal resource is not available.
Solution: Please contact the customer support.

F0ED0196, Ecat RAS: Resource errorDisplay: [F0ED0196](#)

Non-fatal error

Cause: An internal resource is not available.**Solution:** Please contact the customer support.**F0ED0197, Ecat RAS: Resource error**Display: [F0ED0197](#)

Non-fatal error

Cause: An internal resource is not available.**Solution:** Please contact the customer support.**F0EE0001, Ecat FoE: File header missing**Display: [F0EE0001](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x8010

FoE error code	Description
0x8010	File header missing

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0EE0002, Ecat FoE: Flash problemDisplay: [F0EE0002](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x8011

FoE error code	Description
0x8011	Flash problem

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0EE0003, Ecat FoE: File incompatibelDisplay: [F0EE0003](#)

Non-fatal error

Cause: The following FoE error code occurred during a file transfer: 0x8012

FoE error code	Description
0x8012	File incompatible

- Solution:**
- Check the transfer arguments used for the respective transfer
 - Check the device configuration
 - Check the device documentation

F0EE0004, Ecat SDO: Subindex cannot be written, SI0 must be 0Display: [F0EE0004](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0601 0003

SDO abort code	Description
0x0601 0003	Subindex cannot be written, SIO must be 0

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0EE0005, Ecat SDO: Complete access not supported

Display: [F0EE0005](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0601 0004

SDO abort code	Description
0x0601 0004	Complete access not supported

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0EE0006, Ecat SDO: Object length exceeds mailbox size

Display: [F0EE0006](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0601 0005

SDO abort code	Description
0x0601 0005	Object length exceeds mailbox size

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0EE0007, Ecat SDO: Object mapped to RxPDO, SDO Download blocked

Display: [F0EE0007](#)

Non-fatal error

Cause: When asynchronously accessing an object directory of the device, the following CANopen SDD abort code was issued: 0x0601 0006

SDO abort code	Description
0x0601 0006	Object mapped to RxPDO, SDO Download blocked

- Solution:**
- Check the transfer arguments used for the respective access
 - Check the device configuration
 - Check the device documentation

F0EE0008, Ecat: Resource error

Display: [F0EE0008](#)

Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0EE0009, Ecat: Resource errorDisplay: [F0EE0009](#)

Non-fatal error

Cause: An internal resource is not available.**Solution:** Please contact the customer support.**F0EE000A, Ecat: Resource error**Display: [F0EE000A](#)

Non-fatal error

Cause: An internal resource is not available.**Solution:** Please contact the customer support.**F0EE000B, Ecat: Resource error**Display: [F0EE000B](#)

Non-fatal error

Cause: An internal resource is not available.**Solution:** Please contact the customer support.**F0EE000C, Ecat: Resource error**Display: [F0EE000C](#)

Non-fatal error

Cause: An internal resource is not available.**Solution:** Please contact the customer support.**F0EE000D, Ecat AoE: Resource error**Display: [F0EE000D](#)

Non-fatal error

Reserved for future use.

F0EE000E, Ecat AoE: Resource errorDisplay: [F0EE000E](#)

Non-fatal error

Reserved for future use.

F0EE000F, Ecat AoE: Resource errorDisplay: [F0EE000F](#)

Non-fatal error

Reserved for future use.

F0EE0010, Ecat AoE: Resource errorDisplay: [F0EE0010](#)

Non-fatal error

Reserved for future use.

F0EE0011, Ecat AoE: Bad task IDDisplay: [F0EE0011](#)

Non-fatal error

Reserved for future use.

F0EE0012, Ecat AoE: Resource errorDisplay: [F0EE0012](#)

Non-fatal error

Reserved for future use.

F0EE0013, Ecat AoE: Resource errorDisplay: [F0EE0013](#)

Non-fatal error

Reserved for future use.

F0EE0014, Ecat AoE: Resource errorDisplay: [F0EE0014](#)

Non-fatal error

Reserved for future use.

F0EE0015, Ecat AoE: Resource errorDisplay: [F0EE0015](#)

Non-fatal error

Reserved for future use.

F0EE0016, Ecat AoE: Resource errorDisplay: [F0EE0016](#)

Non-fatal error

Reserved for future use.

F0EE0017, Ecat AoE: Resource errorDisplay: [F0EE0017](#)

Non-fatal error

Reserved for future use.

F0EE0018, Ecat AoE: Resource errorDisplay: [F0EE0018](#)

Non-fatal error

Reserved for future use.

F0EE0019, Ecat AoE: Resource errorDisplay: [F0EE0019](#)

Non-fatal error

Reserved for future use.

F0EE001A, Ecat AoE: Resource errorDisplay: [F0EE001A](#)

Non-fatal error

Reserved for future use.

F0EE001B, Ecat AoE: Resource errorDisplay: [F0EE001B](#)

Non-fatal error

Reserved for future use.

F0EE001C, Ecat AoE: Host unreachableDisplay: [F0EE001C](#)

Non-fatal error

Reserved for future use.

F0EE001D, Ecat AoE: Invalid AMS fragmentDisplay: [F0EE001D](#)

Non-fatal error

Reserved for future use.

F0EE001E, Ecat AoE: Resource errorDisplay: [F0EE001E](#)

Non-fatal error

Reserved for future use.

F0EE001F, Ecat AoE: Mailbox fullDisplay: [F0EE001F](#)

Non-fatal error

Reserved for future use.

F0EF01C0, Ecat DC: General errorDisplay: [F0EF01C0](#)

Non-fatal error

Cause: A general error occurred when using Distributed Clocks.

Solution: Please contact the customer support.

F0EF01C1, Ecat DC: Not initialized

Display: [F0EF01C1](#) Non-fatal error

Cause: The Distributed Clocks functionality can currently not be used.

Solution: Please contact the customer support.

F0EF01C2, Ecat DC: Synchronisation out of limit

Display: [F0EF01C2](#) Non-fatal error

Cause: The deviation of the individual Distributed Clocks within the bus devices is beyond the limits permitted.

Solution:

- Reboot the master again. This again synchronizes the individual Distributed Clocks
- Check the documentation of the individual devices
- Please contact the customer support

F0EF01C3, Ecat DC: Out of memory

Display: [F0EF01C3](#) Non-fatal error

Cause: No free memory could be allocated (internal software error).

Solution: Please contact the customer support.

F0EF01C4, Ecat DC: Resource error

Display: [F0EF01C4](#) Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0EF01C5, Ecat DC: Resource error

Display: [F0EF01C5](#) Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0EF01C6, Ecat DC: Resource error

Display: [F0EF01C6](#) Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0EF01C7, Ecat DC: Resource error

Display: [F0EF01C7](#) Non-fatal error

Cause: An internal resource is not available.

Solution: Please contact the customer support.

F0EF01C8, Ecat DC: Invalid DC sync period length

Display: [F0EF01C8](#) Non-fatal error

Cause: An invalid DC cycle time was detected.

Solution:

- Check the configuration
- Please contact the customer support

F0EF01C9, Ecat DC: Resource errorDisplay: **F0EF01C9**

Non-fatal error

Cause: An internal resource is not available.**Solution:** Please contact the customer support.**F0EF01CA, Ecat DC: Drift error**Display: **F0EF01CA**

Non-fatal error

Cause: The drift of the individual Distributed Clocks within the bus devices is too high.

Solution:

- Reboot the master again. This again synchronizes the individual Distributed Clocks
- Check the documentation of the individual devices
- Please contact the customer support

F0EF01CB, Ecat DC: Error cycle timeDisplay: **F0EF01CB**

Non-fatal error

Cause: A faulty cycle time was detected.

Solution:

- Check the configuration
- Please contact the customer support

F0EF01CD, Ecat DC: Error DCM Controller - Invalid dataDisplay: **F0EF01CD**

Non-fatal error

Cause: The controller for DCM integrated into the master received invalid data.

Solution:

- The your system
- Please contact the customer support

F0FB0000, Function block error from the PLC application**Cause:** Function block error was reported in the PLC via "mSetFBError".

Solution: The outputs "ErrorID" and "ErrorIdent" of the GAT status outputs and of the function block report the detailed diagnostics of the function block error.

Eliminate the displayed error cause.

The location and the criterion to enter the error can be determined by searching for "mSetFBError" in the PLC application.

F0FC0001, Function package "Technology" required for "Function block xxx"**Cause:** A Technology function block was called, but the required function package "Technology" is not activated.

The name of the function block is written in the diagnostic text.

Solution: If there is no license, license the function package "Technology" (subject to a charge).

Use IndraWorks to activate the function package "Technology" in the "Properties" of the control.

3.1.6 F1 errors, axis group error**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
 - 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 exceededDisplay: [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

F12C0062, Passing factor (R_PTP) out of rangeDisplay: [F12C0062](#)

Axis group error, System_Error

An error occurred as the blending factor (R_PTP) was set.

- Cause:** The axis parameters A-0-0230 for the path and/or orientation axes are not correct.

Solution: 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 blending distance in parameter A-0-0230 for the axes involved

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.

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 exceeded

Display: [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.



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.

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.

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 via Motion function blocks.

Programming	Permitted values
<i>PLC function blocks:</i> • MC_MoveLinearAbsolute.Acceleration := x • MC_MoveLinearRelative.Acceleration := x • MC_MoveCircularAbsolute.Acceleration := x	$x \geq 1 \text{ mm/s}^2$
<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

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 via Motion function blocks.

Programming	Permitted values
<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	$1\% \leq x \leq 100\%$

Tab. 3-4: Permitted values for the velocity of a kinematics

F12C041E, Impermissible jerk

Display: [F12C041E](#)

Axis group error, System_Error

This error occurs if an invalid value was programmed for the jerk via Motion function blocks.

Programming	Permitted values
<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

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.

Solution: When selecting the points for the circle calculation, a bigger radius results.

F12C0462, Intermediate point 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 lineDisplay: [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.**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.**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.**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 PLCDisplay: [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

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).

Rexroth IndraMotion MLC 1xVRS, Robot-Control V2, Kap. Transformations-schemen, DOK-MLC***-ROCO****V1x-RE01-DE-P

F12C0601, Denormalized operand at PLC function callDisplay: [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 callDisplay: [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 callDisplay: [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 callDisplay: [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 callDisplay: [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 callDisplay: [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.

F12C0885, Workspace out of rangeDisplay: [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

F12C0F58, Path not definedDisplay: [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.

F13B****, user errors; applying error messages from PLC program to the logbook

Cause: One of the functions ML_SetAxisDiagEntry or ML_SetDiagEntry of the PLC user program issues an error message.

The function causes an entry in the control logbook. At the same time, the error message is displayed on the control display.

NOTICE**Feedback effect on axes and control**

Both functions can additionally affect the response of the axes and the control.

In this case: F1 errors, axis group error; 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.

3.1.7 F2 errors, axis 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 5-digit error/command error message to an 8-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.

Also refer to [IndraDrive/HydraulicDrive drive errors on page 17](#).

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

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.

F20B017D, AT-Data not valid

Display: [F20B017D](#)

Axis error, Device_Error

No valid data of a Sercos III device was detected in multiple subsequent drive telegrams (AT) by the control.

The number of permitted failures is specified in C-0-0507.

Cause:

- Ethernet cable not plugged in correctly or removed at runtime
- If there is a redundancy error (topology switching ring-> line), too many telegrams failed. The possible telegram failures increase with the number of Sercos devices.
- Ethernet cable defective
- Device defective

Solution:

- Check all Ethernet connections between the control and the devices.
- Check Sercos transmission path on defective Sercos telegrams and ring interruptions via the IndraWorks dialog "Sercos bus diagnostics".
- Increase the permitted number of telegram failures in the parameter C-0-0507 (dialog "Sercos settings").

However, an increase of permitted telegram failures causes a higher reaction time when a Sercos III slave fails completely

(additional reaction time = Telegram failures * Sercos cycle time).

F20B017E, Consumer connection failure

Display: [F20B017E](#)

Axis error, Device_Error

A Sercos III consumer connection of the control does not operate 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 malfunctions.
- If there is a redundancy error (topology switching ring-> line), too many telegrams failed. The possible telegram failures increase with the number of Sercos devices.
- An internal firmware error occurred.

Solution:

- Producer of the connection (Sercos III slave) does not operate correctly.
- Check all Ethernet connections between the control and the devices.
- Increase the permitted number of telegram failures in the parameter C-0-0507 (dialog "Sercos settings").

However, an increase of permitted telegram failures causes a higher reaction time when a Sercos III slave fails completely

(additional reaction time = Telegram failures * Sercos cycle time).

F20B017F, Producer Connection failure

Display: [F20B017F](#)

Axis error, Device_Error

A Sercos III slave reports an error in one Sercos III consumer connection.

Cause:

- The NewData bit of the Sercos III connection does not toggle in the specified cycle
- Too many telegrams are canceled due to malfunctions
- If there is a redundancy error (topology switching ring-> line), too many telegrams failed. The possible telegram failures increase with the number of Sercos devices.
- An internal firmware error occurred

Solution:

- Producer of the connection (control or another Sercos III slave) does not operate correctly
- Check all Ethernet connections between the control and the devices
- Increase the permitted number of telegram failures in the parameter C-0-0507 (dialog "Sercos settings").

However, an increase of permitted telegram failures causes a higher reaction time when a Sercos III slave fails completely

(additional reaction time = Telegram failures * Sercos cycle time).

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

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

A firmware error occurred.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F20D1025, Error while closing cyclic channel

Display: [F20D1025](#) Axis error, Communication_Error

A firmware error occurred.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F20D1029, Error opening cyclic channel

Display: [F20D1029](#) Axis error, Communication_Error

A firmware error occurred.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F20D102B, Error opening cyclic channel (READ-ACCESS)

Display: [F20D102B](#) Axis error, System_Error

A firmware error occurred.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

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

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.

F20D2011, Forced stop activated

Display: [F20D2011](#)

Axis error, System_Error

Fail safe was enabled for an axis .

Cause: The axis is assigned to a PLC user application and the PLC user application was stopped. It is not possible to continue operating active axes when the PLC user application is stopped. A fail safe shutdown is enabled for these axes.

Solution: Delete errors, restart PLC user application.

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 existDisplay: [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.

F2110005, Loss of encoder axis referenceDisplay: [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 configurationDisplay: [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".

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.

F2111002, Interpolator input value incorrect

Display: **F2111002**

Axis error, Input_Invalid_Error

Cause: The value transferred to the interpolator is incorrect.

Solution: Correct the transfer value.

F2112053, Target position out of travel range error

Display: **F2112053**

Axis error, System_Error

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 exceededDisplay: [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 exceededDisplay: [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 axisDisplay: [F2119001](#)

Axis error, System_Error

The device was switched off by the firmware.

Cause: An internal firmware error occurred.

Solution: Please contact the customer support.

F222017D, Invalid drive dataDisplay: [F222017D](#)

Axis error, Device_Error

In the user program, an action was triggered can cannot be executed due to invalid drive data.

Cause: No cyclic data is available for this axis.

Solution: Check whether the drive sends data cyclically. Check the current communication phase of the Sercos master (C-0-0514) as well as A-0-0021, bit 30, of the respective axis. Eliminate possible drive errors and/or communication problems.

F2220231, Invalid master axis dataDisplay: [F2220231](#)

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.

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 is not 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 or the command used is not supported by the axis.

Solution:

- Check the axis configuration of the axis (-> axis below the Motion node, right-click -> Properties)
 - Interpolation method: "Interpolation in the control", "Interpolation in the drive"
 - Encoder feedback, "Open Loop" "Closed Loop"
 - Extension package, e.g. "SNC"
 Or (see parameter "C-0-0484, Axis configuration")
- Check the function package in the respective drive (-> drive below the Sercos node, right-click -> Properties)
 - Or Parameter "P-0-2003, Selection of function packages"
- Load the Motion configuration again to the control. Update the PLC program.

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.

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 assigns 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

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.

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.

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

ted 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.

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 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.

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".

XLC/MLC diagnostic system tables

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 minimumDisplay: [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 maximumDisplay: [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 minimumDisplay: [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.

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).

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.

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.

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.

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.

- Possible causes:**
- An attempt was made to begin the FlexProfile with absolute start mode. In this case, the master axis position has to be between zero and the modulo value of the master axis.
 - The absolute synchronization is not possible in one Flex step.
 - However, the selected FlexProfile is shorter than the current master axis position. The access point cannot be determined.

Solution: 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 channelDisplay: [F2229300](#)

Axis error, Access_Error

An invalid command channel is selected in the PLC program using the function module MB_OpenCyclic...

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 stepDisplay: [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 positionDisplay: [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 startmodeDisplay: [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 offsetDisplay: [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.

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 possible

Display: [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.

F2229316, Invalid FlexProfile, Runtime check failed

Display: [F2229316](#) Axis error, Other_Error

The FlexProfile cannot be started, as an error was detected upon execution.

Cause:	Solution:
Even though the check was valid, it is tried to start a Flex-Profile, which does not use a valid cam table (C-0-2001 ... C-0-2099). The required cam table was deleted.	Check the cam tables to be used in the corresponding Flex-Profile for validity.

F2229335, FlexProfile: Set is write-protected

Display: [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 number

Display: [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 range

Display: [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 velocity

Display: [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 mode

Display: [F2229339](#) Axis error, Access_Error

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.
- 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 maximumDisplay: [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.

F2229359, FlexProfile: Invalid master axis offsetDisplay: [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.

Solution: Update the PLC program or change the configuration of the axis in the control (see parameter "C-0-0484, Axis configuration").

F2229363, MotionProfile invalidDisplay: [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 standstillDisplay: [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.

F2299401, Invalid control numberDisplay: [F2299401](#)

Axis error, State_Machine_Error

Cause: Invalid Control Number

F2299404, Command not supported by kinematicsDisplay: [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).

F2299409, Command not supported in this stateDisplay: [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).

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).

F2299503, Invalid motion command

Display: [F2299503](#)

Axis error, State_Machine_Error

Cause: An invalid kinematic Motion command was issued.

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 configuredDisplay: [F2299510](#)

Axis error, INPUT_RANGE_ERROR

Cause: A function block was used to configure a belt, even though the belt was not configured.

F2299514, Belt begin length invalidDisplay: [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 lengthDisplay: [F2299515](#)

Axis error, INPUT_RANGE_ERROR

Cause: A belt was configured and the belt starting specified is greater 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 modulo valueDisplay: [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).

F229953C, Cylindric belt not rotatoryDisplay: [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 differenceDisplay: [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 limitsDisplay: [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 limitsDisplay: [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 0Display: [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 1Display: [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**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.

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.

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 30Display: [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

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 10Display: [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.**F229956D, Path of movement through safe zone 13**Display: [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

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.

F2299581, Belt begin length greater modulo

Display: [F2299581](#)

Axis error, Input_Range_Error

Cause: A belt with a modulo value was configured and a value, higher than the modulo value, was selected as starting length of the belt (beginlength).

Solution: Enter a valid belt starting length.

F2299582, Error while spline calculationDisplay: [F2299582](#)

Axis error, Calculation_Error

During the spline calculation (blending with **CONT_SLOPE** or **MoveJump**), an error occurred while calculating the velocity.

F2299583, Velocity error exceeded while spline calculationDisplay: [F2299583](#)

Axis error, Calculation_Error

During the spline calculation (blending with **CONT_SLOPE** or **MoveJump**), an error occurred while calculating the velocity of the spline.

The velocity window for the calculation was exceeded.

Normally, this error occurs if a very low height - in proportion to the distance between starting point and target point - was commanded using the command **MoveJump**.

Refer to the motion type Jump

F2299584, Invalid heights at move jumpDisplay: [F2299584](#)

Axis error, Input_Range_Error

Invalid heights were specified for the motion type **Move jump**.

Refer to the motion type Jump

F22B0003, Kinematics does not existDisplay: [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.

F22B0020, Transformation does not existDisplay: [F22B0020](#)

Axis error, Input_Invalid_Error

Cause: An unsupported transformation was configured in the parameter K-0-0031.

F22B0021, Axis angles out of definition rangeDisplay: [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.

F22B0022, Point can not reached by transformationDisplay: [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 transformationDisplay: [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 transformationDisplay: [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.

F23B****, user errors; applying error messages from PLC program to the logbook

Cause: One of the functions ML_SetAxisDiagEntry or ML_SetDiagEntry of the PLC user program issues an error message.

The function causes an entry in the control logbook. At the same time, the error message is displayed on the control display.

NOTICE

Feedback effect on axes and control

Both functions can additionally affect the response of the axes and the control.

In this case: F2 errors, axis errors; axis (or drive) is decelerated the best possible (velocity to 0); all other axes are not affected.

F24C0000, Sercos command error

An error occurred in a Sercos slave that cannot be further resolved while executing a command in a Sercos slave.

Cause:

The error number of the command error cannot be determined due to further active errors in the slave.

Solution:

- The error number of the command error can be determined by the diagnostic system of the slave.

- If the command is executed without an active error being pending in the slave, the command error number is entered into the MLC diagnostic system.

F24C****, Sercos command error

An error occurred in a Sercos slave while executing a command in a Sercos slave.

Cause:

- While executing a command, an error with the error number C**** occurred.

Solution:

- The respective online help is available for self-made Sercos slaves. For the search, use the last five digits of the command error number.
- For third-party Sercos slaves, please use the documentation provided by the manufacturer.

Example:

MLC diagnostic message: F24C0170 => Command error of the slave: C0170

3.1.8 F5 errors, control errors

Error reaction: 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.

F50B017A, AT-Data not valid

Display: [F50B017A](#)

Controller error, Device_Error

No valid data of a Sercos III device was detected in multiple subsequent drive telegrams (AT) by the control.

The number of permitted failures is specified in C-0-0507.

Cause:

- Ethernet cable not plugged in correctly or removed at runtime
- If there is a redundancy error (topology switching ring-> line), too many telegrams failed. The possible telegram failures increase with the number of Sercos devices.
- Ethernet cable defective
- Defective device

Solution:

- Check all Ethernet connections between the control and the devices.
- Check the Sercos transmission path on defective Sercos telegrams and ring interruptions via the IndraWorks dialog "Sercos bus diagnostics".
- Increase the permitted number of telegram failures in the parameter C-0-0507 (dialog "Sercos settings").

However, an increase of permitted telegram failures causes a higher reaction time when a Sercos III slave fails completely

(additional reaction time = Telegram failures * Sercos cycle time).

F50B017B, Consumer connection failure

Display: **F50B017B**

Controller error, Device_Error

A Sercos III consumer connection of the control does not operate 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 malfunctions
- If there is a redundancy error (topology switching ring-> line), too many telegrams failed. The possible telegram failures increase with the number of Sercos devices.
- An internal firmware error occurred

Solution:

- Producer of the connection (Sercos III slave) does not operate correctly
- Check all Ethernet connections between the control and the devices
- Increase the permitted number of telegram failures in the parameter C-0-0507 (dialog "Sercos settings").

However, an increase of permitted telegram failures causes a higher reaction time when a Sercos III slave fails completely

(additional reaction time = Telegram failures * Sercos cycle time).

F50B017C, Producer Connection failure

Display: **F50B017C**

Controller error, Device_Error

A Sercos III slave reports an error in one Sercos III consumer connection.

Cause:

- The NewData bit of the Sercos III connection does not toggle in the specified cycle
- Too many telegrams are canceled due to malfunctions

- If there is a redundancy error (topology switching ring-> line), too many telegrams failed. The possible telegram failures increase with the number of Sercos devices.
 - An internal firmware error occurred
- Solution:**
- Producer of the connection (control or another Sercos III slave) does not operate correctly
 - Check all Ethernet connections between the control and the devices
 - Increase the permitted number of telegram failures in the parameter C-0-0507 (dialog "Sercos settings").
- However, an increase of permitted telegram failures causes a higher reaction time when a Sercos III slave fails completely
(additional reaction time = Telegram failures * Sercos cycle time).

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...

F5111001, Interpolator calculation incorrect

Display: **F5111001**

Controller error, Calculation_Error

Cause: The interpolation cannot be executed due to an incorrect computation.

Solution: Check the validity of the parameters for the interpolation (target position, velocity, acceleration,...).

If all parameters are valid, please contact the support.

F5113002, Velocity too high for cycletime

Display: **F5113002**

Controller error, Calculation_Error

A maximum permitted velocity for interpolated axes on the control result from the defined cycle time.

This maximum permitted velocity was reached or exceeded in the chain action of the MotionControl. An error response was triggered.

Cause: The following condition applies to an axis calculated in the control (axis with interpolation in the control, virtual axis, encoder axis, controller axis, link axis) and generating a velocity command value for a coupled axis (in PLCopen state "Synchronized Motion"):

The velocity specification must not exceed the following maximum value $n_{\max}$ (**Shannon sampling theorem**):

$$n_{\max} = 0.5 * \text{modulo value} / T_{\text{cyc}}$$

- with T_{cyc} Motion cycle time "C-0-0410, Motion, cycle time (T_{cyc}), actual value" in ms

- modulo value of the axis (A-0-0045, Modulo value)

The following applies to a module value of 360 degrees:

$$n_{\max} = (1000 \text{ rpm} * 0.5 * 60 \text{ ms}) / T_{\text{cyc}}$$

The following theoretical velocities result from certain cycle times:

Cycle time in ms	Velocity in rpm
1	30000
2	15000
4	7500
8	3750
16	1875

To ensure a specific safety distance to these theoretical values, a safety factor is taken into consideration.

The following values result for factor 0.95:

- for 1 ms: 28,500 rpm
- for 2 ms: 14,250 rpm
- for 4 ms: 7,125 rpm
- for 8 ms: 3,563 rpm
- for 16 ms: 1,781 rpm

The maximum velocity can also be achieved by specifying the command value to the master axis or by using gear and offset parameters between master axis/axes and slave axis/axes.

Example:

Two coupled virtual axes and one real coupled axis:

For T_{cyc} 4 ms, a command value of 80 rpm to a virtual master axis VA₁ and an electronic gear calculated on the control (parameter A-0-2720, ELS, master axis gear, input revolutions, A-0-2721, ELS, master axis gear, output revolutions, for an axis calculated on the control) on the virtual axis VA2 of 100 (-> command value 8,000 rpm for the coupled real axis), this condition is not complied with!

For MLC 13V12 and higher, the error "[F5113002](#), Velocity too high for cycletime" is generated when the velocity is exceeded!

All axes are decelerated!

- Solution:**
- Specify a lower command value or adjust the command value specification to the Motion cycle time
 - Reducing the Motion cycle time
 - Move the gears calculated in the control to the drive (for an axis with interpolation in the drive) if required

- Further information**
- MLC 14VRS, Functional Description, chapter
Operation modes for synchronous motions with electronic gear function
 - Boundary conditions for an axis velocity specification 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 commandos 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

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.

F5200047, Shutdown of additionally required operating system

Display: [F5200047](#)

Controller error, INPUT_RANGE_ERROR

To correctly operate the control, an additional operating system (e.g. "Windows") is required.

The operating system was switched off ("shut down"). Thus, a correct operation of the control cannot be ensured.

The control was stopped.

The complete system (control and additional operating system) has to be restarted.

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

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.

F53B****, user errors; applying error messages from PLC program to the logbook

Cause: One of the functions ML_SetAxisDiagEntry or ML_SetDiagEntry of the PLC user program issues an error message.

The function causes an entry in the control logbook. At the same time, the error message is displayed on the control display.

NOTICE

Feedback effect on axes and control

Both functions can additionally affect the response of the axes and the control.

In this case: F5 errors, control errors; **all** axes are decelerated the best possible.

3.1.9 F8 errors, fatal control error

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.

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 was detected in multiple subsequent drive telegrams (AT) by the control.

Cause:

- Ethernet cable not plugged in correctly or removed at runtime,
- If there is a redundancy error (topology switching ring-> line), too many telegrams failed. The possible telegram failures increase with the number of Sercos devices.
- Ethernet cable defective
- Defective device,

Solution:

- Check all Ethernet connections between the control and the devices.
- Increase the permitted number of telegram failures in the parameter C-0-0507 (dialog "Sercos settings").

However, an increase of permitted telegram failures causes a higher reaction time when a Sercos III slave fails completely

(additional reaction time = Telegram failures * Sercos cycle time).



The reaction on the communication error "Invalid AT data" is set to F8 error. That means that all axes and devices STOP and that the Sercos bus switches to P0.

By setting the reaction on communication errors on F2- or F5-errors, it can be avoided to stop all devices and the Sercos bus remains in P4. This setting also changes the behavior when switching from the parameterization mode to the operating mode. Even if the configuration does not match, it is tried to reach the operating mode. Refer to Sercos settings.

F80B0017, Consumer connection failure

Display: [F80B0017](#)

Fatal controller error, Communication_Error

A Sercos III consumer connection of the control does not operate 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 malfunctions
- If there is a redundancy error (topology switching ring-> line), too many telegrams failed. The possible telegram failures increase with the number of Sercos devices.
- An internal firmware error occurred

Solution:

- Producer of the connection (Sercos III slave) does not operate correctly
- Check all Ethernet connections between the control and the devices
- Increase the permitted number of telegram failures in the parameter C-0-0507 (dialog "Sercos settings").

However, an increase of permitted telegram failures causes a higher reaction time when a Sercos III slave fails completely

(additional reaction time = Telegram failures * Sercos cycle time).



The reaction on the communication error "Failure of consumer connection" is set to F8 error. That means that all axes and devices STOP and that the Sercos bus switches to P0.

By setting the reaction on communication errors on F2- or F5-errors, it can be avoided to stop all devices and the Sercos bus remains in P4. This setting also changes the behavior when switching from the parameterization mode to the operating mode. Even if the configuration does not match, it is tried to reach the operating mode. Refer to Sercos settings.

F80B0018, Producer Connection failure

Display: **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 malfunctions,
- If there is a redundancy error (topology switching ring-> line), too many telegrams failed. The possible telegram failures increase with the number of Sercos devices.
- An internal firmware error occurred.

Solution:

- Producer of the connection (control or another Sercos III slave) does not operate correctly.
- Check all Ethernet connections between the control and the devices.
- Increase the permitted number of telegram failures in the parameter C-0-0507 (dialog "Sercos settings").

However, an increase of permitted telegram failures causes a higher reaction time when a Sercos III slave fails completely

(additional reaction time = Telegram failures * Sercos cycle time).



The reaction on the communication error "Failure of producer connection" is set to F8 error. That means that all axes and devices STOP and that the Sercos bus switches to P0.

By setting the reaction on communication errors on F2- or F5-errors, it can be avoided to stop all devices and the Sercos bus remains in P4. This setting also changes the behavior when switching from the parameterization mode to the operating mode. Even if the configuration does not match, it is tried to reach the operating mode. Refer to Sercos settings.

F80B0019, Consumer connection timeout

Display: [F80B0019](#) Fatal controller error, Communication_Error

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.

F80B0186, sercos master, watchdog expired

Display: [F80B0186](#) Fatal controller error, Communication_Error

An internal firmware error occurred. The Sercos interface was disabled.

Cause:

- The time monitoring of the Sercos hardware reports an error.
- Sending of the Sercos telegrams is disabled.

Solution:

- Check task priorities and task runtimes.
- Check the contacts of the function modules.

F8200023, Critical temperatur reached, processor will stopDisplay: [F8200023](#)

Fatal controller error, Device_Error

The critical temperature was exceeded, the processor is stopped or the control hardware is shut down to prevent hardware damage.

CML25, CML45, CML65:

The control is put into sleep mode and "SLEEP" is shown on the display.

Remanent data is backed up.

VEP:

The control is shut down properly.

Remanent data is backed up.

XM21, XM22:

The control is put into sleep mode and the power supply LED for overtemperature becomes red.

Remanent data is backed up.

Critical temperatures of the controls

Control	Temperature
CML25	91°C (196°F)
CML45, CML65	74°C (165°F)
VEP	69°C (156°F)
XM21, XM22	102.5°C (217°F)

Also refer to the diagnostics "[E0200002](#), Temperature warning".

- Cause:**
- The control was mounted to a position that does not ensure sufficient ventilation.
 - No fan is mounted to the control to a position with insufficient ventilation.

Solution: Switch off the control and allow it to cool down.

Also provide adequate ventilation or mount a fan to the control hardware.

F83B**, user errors; applying error messages from PLC program to the logbook**

Cause: One of the functions ML_SetAxisDiagEntry or ML_SetDiagEntry of the PLC user program issues an error message.

The function causes an entry in the control logbook. At the same time, the error message is displayed on the control display.

NOTICE**Feedback effect on axes and control**

Both functions can additionally affect the response of the axes and the control.

In this case: F8 errors, fatal control error; **all** axes are decelerated the best possible.

3.1.10 F9 errors, fatal system error

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 IndraLogic XLC IndraMotion MLC 14VRS, Functional Description,
DOK-XLCMLC-FUNC****V14-APRS-EN-P,
R911341700

F9010001, Default object on wrong address

Display: [F9010001](#)

Fatal system error, Access_Error

The device was switched off by the firmware.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F9010002, Memory allocation error, no memory available

Display: [F9010002](#)

Fatal system error, Access_Error

The device was switched off by the firmware.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F9010003, Invalid function pointer

Display: [F9010003](#)

Fatal system error, Access_Error

The device was switched off by the firmware.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F90B0012, sercos interface watch dog occurred

Display: [F90B0012](#)

Fatal system error, System_Error

The device was switched off by the firmware.

Cause: An internal firmware error occurred.

Solution: Please contact the customer support.

F90B0020 to F90B0028, RTOS errors (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 "querdpl_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 to F90B0124, RTOS errors (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.

F90C0000, Shutdown of control failed

Display: [F90C0000](#) Fatal system error, System_Error

The firmware switched the device to a safe state, as the device could not shut down at its own. A shutdown is for example required if the device temperature is exceeded.

Cause: An internal firmware error occurred or the hardware is defective.

Solution: Switch off the device manually as fast as possible and contact the customer support.

F90C0010, RTOS error (Real Time Operating System)

Display: [F90C0010](#) Fatal system error, System_Error

The device was switched off by the firmware.

Cause: An internal firmware error occurred.

Solution: Please contact the customer support.

F90C0011, RTOS error (Real Time Operating System)

Display: [F90C0011](#) Fatal system error, System_Error

The device was switched off by the firmware.

Cause: An internal firmware error occurred.

Solution: Please contact the customer support.

F90D1021, Error ReadParameter, no memory available

Display: [F90D1021](#) Fatal system error, Device_Error

The device was switched off by the firmware.

Cause: An internal firmware error occurred.

Solution: Please contact the customer support.

F90D1023, Error WriteParameter

Display: [F90D1023](#) Fatal system error, Device_Error

The device was switched off by the firmware.

Cause: An internal firmware error occurred.

Solution: Please contact the customer support.

F90D1024, Error WriteParameter, no memory available

Display: [F90D1024](#) Fatal system error, Device_Error

The device was switched off by the firmware.

Cause: An internal firmware error occurred.

Solution: Please contact the customer support.

F90D1032, No access to axes (1)

Display: [F90D1032](#) Fatal system error, System_Error

An internal firmware error occurred. The device was switched off by the firmware.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F90D1033, No access to axes (2)

Display: [F90D1033](#)

Fatal system error, System_Error

An internal firmware error occurred. The device was switched off by the firmware.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F90D1038, Error getting MessageQueue

Display: [F90D1038](#)

Fatal system error, System_Error

The device was switched off by the firmware.

Cause: An internal firmware error occurred.

Solution: Please contact the customer support.

F90D1039, Thread could not be started

Display: [F90D1039](#)

Fatal system error, System_Error

The device was switched off by the firmware.

Cause: An internal firmware error occurred.

Solution: Please contact the customer support.

F90D103A, Left endless While-Loop

Display: [F90D103A](#)

Fatal system error, System_Error

The device was switched off by the firmware.

Cause: An internal firmware error occurred.

Solution: Please contact the customer support.

F90D103D, Error during initialization of PLC

Display: [F90D103D](#)

Fatal system error, IN-PUT_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

An internal firmware error occurred. The device was switched off by the firmware.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F90D1209, Error, no memory available

Display: [F90D1209](#)

Fatal system error, System_Error

An internal firmware error occurred. The device was switched off by the firmware.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F9180002, Maximum number of axes exceeded

Display: [F9180002](#)

Fatal system error, System_Error

An internal firmware error occurred. The device was switched off by the firmware.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F9180003, Axis registration invalid

Display: [F9180003](#)

Fatal system error, System_Error

An internal firmware error occurred. The device was switched off by the firmware.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F9180004, Invalid mode change requested

Display: [F9180004](#)

Fatal system error, System_Error

An internal firmware error occurred. The device was switched off by the firmware.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F9200016, PLC watchdog expired

Display: [F9200016](#)

Fatal system error, System_Error

An internal firmware error occurred. The device was switched off by the firmware.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F9200017, Hardware watchdog expired

Display: [F9200017](#)

Fatal system error, System_Error

An internal firmware error occurred. The device was switched off by the firmware.

Cause: An error occurred in the firmware.

Solution: Please contact customer support.

F9200020, MK1 watchdog expired

Display: [F9200020](#)

Fatal system error, System_Error

An internal firmware error occurred. The device was switched off by the firmware.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

F9200021, MK2 watchdog expired

Display: [F9200021](#)

Fatal system error, System_Error

An internal firmware error occurred. The device was switched off by the firmware.

Cause: An error occurred in the firmware.

Solution: Please contact the customer support.

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.

F9200035, No free remanent memory (NVRAM) available

Display: [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.

F9200042, Additionally required operating system inoperable

Display: [F9200042](#)

Fatal system error, INPUT_RANGE_ERROR

To correctly operate the control, another operating system (e.g. "Windows") and an application executed in that operating system (e.g. "IndraControl SysTray") is required.

Operating system or application can currently not be operated. Thus, a correct operation of the control cannot be ensured.

The control was stopped.

A backup of remanent data cannot totally be ensured in this error case, as the functional, additional operating system as well as the application are required.

After this error occurred, the complete system (control and additional operating system) has to be restarted, irrespective of the cause.

Cause:	Solution:
Error in the additional operating system (e.g. "BlueScreen" (BSOD))	Logbook, event display or similar instances of the additional operating system are analyzed for errors with regard to functional failure/system crash
The application "IndraControl SysTray" was either deleted manually or due an error	Do not close the application manually under Windows (e.g. via the Task Manager). If the application was not closed manually, analyze the event display of the applications for events of the "IndraControl.SysTray" under Windows. If there are no errors, this application is only started upon Windows startup and closed again at shutdown.

F9200050, Error on FPGA update for main unit

Display: [F9200050](#)

Fatal system error, System_Error

An error occurred while updating the onboard FPGA.

Cause:	Solution:
After updating the FPGA, no correct "PowerCycle" was performed.	Restart the control. The system tries to update the FPGA again.
An error occurred while the FPGA was loaded.	A PowerCycle is then required. This can be seen, as "PWRCYCLE" is for example shown in the display. Separate the control from the power supply and connect it again. Please contact customer support if the error occurs again upon next boot.
A hardware problem is present.	Please contact customer support.

F9200051, Error on FPGA update for safety module

Display: [F9200051](#)

Fatal system error, System_Error

An error occurred when updating the Safety module FPGA.

Cause:	Solution:
After updating the FPGA, no correct "PowerCycle" was performed.	Restart the control. The system tries to update the FPGA again.
An error occurred while the FPGA was loaded.	A PowerCycle is then required. This can be seen, as "PWRCYCLE" is for example shown in the display. Separate the control from the power supply and connect it again. Please contact customer support if the error occurs again upon next boot.
A hardware problem is present.	Please contact customer support.

F9200052, Error on FPGA update for CAN moduleDisplay: [F9200052](#)

Fatal system error, System_Error

An error occurred while updating the CAN module FPGA.

Cause:	Solution:
After updating the FPGA, no correct "PowerCycle" was performed.	Restart the control. The system tries to update the FPGA again.
An error occurred while the FPGA was loaded.	CML series: • A PowerCycle is then required. This can be seen, as "PWRCYCLE" is for example shown in the display. • Separate the control from the power supply and connect it again. XM series: • The required "PowerCycle" is executed automatically. Please contact customer support if the error occurs again upon next boot.
A hardware problem is present.	Please contact customer support.

F9200060, Reboot failedDisplay: [F9200060](#)

Fatal system error, System_Error

The firmware switched the device to a safe state, as the device could not be restarted.

Cause: An internal firmware error occurred or the hardware is defective.**Solution:** Please contact the customer support.**F9200061, Reboot to initial mode failed**Display: [F9200061](#)

Fatal system error, System_Error

The firmware switched the device to a safe state, as the device could not be restarted in the initial firmware.

Cause: An internal firmware error occurred or the hardware is defective.**Solution:** Please contact the customer support.**F9220001, Invalid error reaction**Display: [F9220001](#)

Fatal system error, Access_Error

The device was switched off by the firmware.

Cause: An internal firmware error occurred.**Solution:** Please contact the customer support.**F9220002, Error in the axis state machine**Display: [F9220002](#)

Fatal system error, System_Error

The device was switched off by the firmware.

Cause: An internal firmware error occurred.**Solution:** Please contact the customer support.**F9240001, Exception, Divide Error**Display: [F9240001](#)

Fatal system error, System_Error

The device was switched off by the firmware.

Cause: An internal firmware error occurred.
Solution: Please contact the customer support.

F9240002, Exception, Invalid Opcode

Display: [F9240002](#) Fatal system error, System_Error
The device was switched off by the firmware.

Cause: An internal firmware error occurred.
Solution: Please contact the customer support.

F9240003, Exception, Stack Fault

Display: [F9240003](#) Fatal system error, System_Error
The device was switched off by the firmware.

Cause: An internal firmware error occurred.
Solution: Please contact the customer support.

F9240004, Exception, General Protection Fault

Display: [F9240004](#) Fatal system error, System_Error
The device was switched off by the firmware.

Cause: An internal firmware error occurred.
Solution: Please contact the customer support.

F9240005, Exception, Page Fault

Display: [F9240005](#) Fatal system error, System_Error
The device was switched off by the firmware.

Cause: An internal firmware error occurred.
Solution: Please contact the customer support.

F9240006, Exception, Coprocessor Error

Display: [F9240006](#) Fatal system error, System_Error
The device was switched off by the firmware.

Cause: An internal firmware error occurred.
Solution: Please contact the customer support.

F9240007, Exception, Unknown Exception

Display: [F9240007](#) Fatal system error, System_Error
The device was switched off by the firmware.

Cause: An internal firmware error occurred.
Solution: Please contact the customer support.

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.

F9240023, No free buffer space to receive a message

Display: [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 queue

Display: [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 queue

Display: [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 possible

Display: [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 set

Display: [F9299519](#)

Fatal system error, System_Error

Cause: Transformation error: JCS was not set internally.

Remedy: Inform customer service.

F929951A, BCS not set

Display: [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 set**Display: [F929951C](#) Fatal system error, System_Error**Cause:** Transformation error: PCS was not set internally.**Remedy:** Inform customer service.**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.**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"**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.**F92C007D, Invalid init mode**Display: [F92C007D](#) Fatal system error, System_Error**Cause:** Fatal error during controller startup.

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.

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

Error reaction: The error of ERROR_TABLE "SERCOS_TABLE" are 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 (Sercos error message).

3.2.1 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...

F02D00A0, sercos: Parameter service channel is not open

Display: **F02D00A0**

Non-fatal error, Access_Error

- Cause:**
- The service channel is not available during phase switching (Sercos phase 0 / 1).
 - No acyclic communication is possible to the corresponding device.
 - During phase switching (Sercos phase 0/1), it is tried to write to or to read the drive parameters using the parameter function blocks.
 - A parameter of a configured device not participating in the Sercos bus communication, is accessed.
- E.g. a device is configured with the Sercos address 5, but does not exist physically. It is now tried to read an S- or P-parameter of this device.
- Solution:**
- The C-parameter "C-0-0452, Motion, current mode" indicates those phases that allow to retrieve the drive parameters with errors.
 - If no error should occur when a parameter of a non-existing device is written or read, disable the respective device.

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	Madatory

Tab. 3-6: 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 IDNDisplay: [F02D1001](#)

Non-fatal error, Access_Error

The error occurs if:

- a parameter that does not exist is accessed or
- drive parameters are read by the PLC before the Sercos bus is running.

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 14](#),.

F02D1009, sercos: Invalid access to element 1Display: [F02D1009](#)

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

F02D4002, sercos: Unit transmission too shortDisplay: [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 14](#),.

F02D4003, sercos: Unit transmission too longDisplay: [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 14](#),.

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 14](#),.

F02D4005, sercos: Unit is write-protected at this timeDisplay: [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 14](#),.

F02D5001, sercos: No minimum input valueDisplay: [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 14](#),.

F02D5002, sercos: Min. input value transmission too shortDisplay: [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 14](#),.

F02D5003, sercos: Min. input value transmission too longDisplay: [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 14](#),.

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 14](#),.

F02D5005, sercos: Min. input value is write-protected at this timeDisplay: [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 14](#),.

F02D6001, sercos: No maximum input valueDisplay: [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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

F02D7007, sercos: Operation data is greater than the max input valueDisplay: [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 14](#),.

F02D7008, sercos: Invalid operation dataDisplay: [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 14](#),.

F02D7009, sercos: Operation data write-protected by a passwordDisplay: [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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

F02D700D, sercos: Invalid floating point numberDisplay: [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 14](#),.

F02D700E, sercos: ReservedDisplay: [F02D700E](#)

Non-fatal error, Access_Error

Reserved

F02D700F, sercos: Operation data is write-protected at OMDisplay: [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 14](#),.

F02D7010, sercos: Procedure command already activeDisplay: [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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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 14](#),.

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

The 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 retrieved from this axis, the error described above is output.
- A parameter is accessed and the respective device with the parameter is configured, but not participating in the Sercos bus communication.
E.g. a device is configured with the Sercos address 5, but does not exist physically. It is now tried to read an S- or P-parameter of this device.
The error also occurs if an axis is configured for this device and an A-parameter affecting an S- or P-parameter is written.
If no error should occur when a parameter of a non-existing device is written or read, disable the respective device.

F02D8100, sercos: Element not supported

Display: **F02D8100** Non-fatal error, Communication_Error
Error in the Sercos service channel.

Cause:

- An element was requested that is not supported by the parameter.

Solution: Request supported element.

F02DE001, M_Busy-Bit not set

Display: **F02DE001** Non-fatal error, Device_Error
Error in the Sercos service channel.

Cause:

- An error occurred in the internal processing of the service channel. For the parameter number and the respective error code, refer to the short text.

Solution: Restart transfer via the service channel. If the cause cannot be eliminated, please contact the customer service.

F02DE002, SVC: Protocol error

Display: **F02DE002** Non-fatal error, Device_Error
Error in the Sercos service channel. For the parameter number and the respective error code, refer to the short text.

Cause:

- The Sercos service channels handshake bits AHS and MHS are different and the bit BUSY_AT is set.

Solution: Restart transfer via the service channel. Check the connected Sercos devices. If the cause cannot be eliminated, please contact the customer service.

F02DE003, SVC: Handshake Timeout

Display: **F02DE003** Non-fatal error, State_Machine_Error
Error in the Sercos service channel. For the parameter number and the respective error code, refer to the short text.

Cause:

- The triggered Sercos device did not acknowledge its AHS bit in the status word after 10 communication cycles.

Solution: Restart transfer via the service channel. Check the connected Sercos devices. If the cause cannot be eliminated, please contact the customer service.

F02DE004, SVC: Busy Timeout

Display: [F02DE004](#)

Non-fatal error, Device_Error

Error in the Sercos service channel. For the parameter number and the respective error code, refer to the short text.

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.

Solution: C-0-0504 Sercos III: Increase SVC busy timeout.

Check the connected Sercos devices. If the cause cannot be eliminated, please contact the customer service.

F02DE005, SVC: Internal error

Display: [F02DE005](#)

Non-fatal error, Device_Error

Error in the Sercos service channel. For the parameter number and the respective error code, refer to the short text.

Cause:

- An error occurred in the internal processing of the service channel.

Solution: Restart transfer via the service channel. If the cause cannot be eliminated, please contact the customer service.

F02DE006, SVC in use

Display: [F02DE006](#)

Non-fatal error, Device_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.

Solution: Restart transfer via the service channel. If the cause cannot be eliminated, please contact the customer service.

F02DE007, SVC: Request canceled

Display: [F02DE007](#)

Non-fatal error, Device_Error

Error in the Sercos service channel. For the parameter number and the respective error code, refer to the short text.

Cause:

- The current transfer was aborted by a transfer with a higher priority

Solution: Restart transfer via the service channel. If the cause cannot be eliminated, please contact the customer service.

F02DE008, SVC internal request pending

Display: [F02DE008](#)

Non-fatal error, Device_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.

Solution: Restart transfer via the service channel. If the cause cannot be eliminated, please contact the customer service.

F02DE009, SVC: Error message without SVC errorcodeDisplay: **F02DE009**

Non-fatal error, Device_Error

Error in the Sercos service channel. For the parameter number and the respective error code, refer to the short text.

Cause:

- An error occurred in the internal processing of the service channel.

Solution:

Restart transfer via the service channel. If the cause cannot be eliminated, please contact the customer service.

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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