Electric Drives and Controls | Hydraulics | Linear Motion and Assembly Technologies | Pneumatics | Service

Rexroth Bosch Group

Rexroth IndraMotion MLC02VRS Diagnostics

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Troubleshooting Guide

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Rexroth IndraMotion MLC02VRS

Diagnostics

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Purpose of Documentation This document is designed to assist maintenance personnel in identifying errors with IndraMotion MLC.

It serves to:

- help in understanding error messages
- help in finding the cause of errors
- describe the steps for trouble shooting.

Record of Revisions

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1 Important Directions for Use

1.1 Appropriate Use

Introduction

Rexroth products represent state-of-the-art developments and manufacturing. They are tested prior to delivery to ensure operating safety and reliability.

The products may only be used in the manner that is defined as appropriate. If they are used in an inappropriate manner, then situations can develop that may lead to property damage or injury to personnel.

Note: Bosch Rexroth, as manufacturer, is not liable for any damages resulting from inappropriate use. In such cases, the guarantee and the right to payment of damages resulting from inappropriate use are forfeited. The user alone carries all responsibility of the risks.

Before using Rexroth products, make sure that all the pre-requisites for appropriate use of the products are satisfied:

- Personnel that in any way, shape or form uses our products must first read and understand the relevant safety instructions and be familiar with appropriate use.
- If the product takes the form of hardware, then they must remain in their original state, in other words, no structural changes are permitted. It is not permitted to decompile software products or alter source codes.
- Do not mount damaged or faulty products or use them in operation.
- Make sure that the products have been installed in the manner described in the relevant documentation.

Areas of Use and Application

The IndraControl L40 of Rexroth is suitable for motion/logic applications.

Note: The IndraControl L40 may only be used with the accessories and parts specified in this document. If a component has not been specifically named, then it may not be either mounted or connected. The same applies to cables and lines.

Operation is only permitted in the specified configurations and combinations of components using the software and firmware as specified in the relevant function descriptions.

In case of non-observance the warranty claim expires automatically.

Typical applications of the IndraControl 40 are:

- Handling and assembly systems,
- Packaging and foodstuff machine,
- Printing and paper processing machines
- Machine tools.

The IndraControl L40 may only be operated under the assembly, installation and ambient conditions as described here (temperature, system of protection, humidity, EMC requirements, etc.) and in the position specified.

In residential areas as well as in business and commercial areas Class A devices may be used with the following note:

Note: This is a Class A device. In a residential area, this device may cause radio interferences. In such a case, the user may be required to introduce suitable countermeasures at his own cost.

1.2 Inappropriate Use

Using the IndraControl L40 outside of the above-referenced areas of application or under operating conditions other than described in the document and the technical data specified is defined as “inappropriate use".

The IndraControl L40 may not be used, if

- it is subject to operating conditions that do not meet the above specified ambient conditions. This includes, for example, operation under water, in the case of extreme temperature fluctuations or extremely high maximum temperatures, or if
- Bosch Rexroth has not specifically released them for that intended purpose. Please note the specifications outlined in the general Safety Guidelines!

2 Safety Instructions for Electric Drives and Controls

2.1 Introduction

Read these instructions before the initial startup of the equipment in order to eliminate the risk of bodily harm or material damage. Follow these safety instructions at all times.

Do not attempt to install or start up this equipment without first reading all documentation provided with the product. Read and understand these safety instructions and all user documentation of the equipment prior to working with the equipment at any time. If you do not have the user documentation for your equipment, contact your local Bosch Rexroth representative to send this documentation immediately to the person or persons responsible for the safe operation of this equipment.

If the equipment is resold, rented or transferred or passed on to others, then these safety instructions must be delivered with the equipment.

WARNING

Improper use of this equipment, failure to follow the safety instructions in this document or tampering with the product, including disabling of safety devices, may result in material damage, bodily harm, electric shock or even death!

2.2 Explanations

The safety instructions describe the following degrees of hazard seriousness in compliance with ANSI Z535. The degree of hazard seriousness informs about the consequences resulting from non-compliance with the safety instructions.

Warning symbol with signal word	Degree of hazard seriousness according to ANSI
 **DANGER**	Death or severe bodily harm will occur.
 **WARNING**	Death or severe bodily harm may occur.
 **CAUTION**	Bodily harm or material damage may occur.

Fig. 2-1: Hazard classification (according to ANSI Z535)

2.3 Hazards by Improper Use

DANGER

High voltage and high discharge current! Danger to life or severe bodily harm by electric shock!

DANGER

Dangerous movements! Danger to life, severe bodily harm or material damage by unintentional motor movements!

WARNING

High electrical voltage due to wrong connections! Danger to life or bodily harm by electric shock!

WARNING

Health hazard for persons with heart pacemakers, metal implants and hearing aids in proximity to electrical equipment!

CAUTION

Surface of machine housing could be extremely hot! Danger of injury! Danger of burns!

CAUTION

Risk of injury due to improper handling! Bodily harm caused by crushing, shearing, cutting and mechanical shock or incorrect handling of pressurized systems!

CAUTION

Risk of injury due to incorrect handling of batteries!

2.4 General Information

- Bosch Rexroth AG is not liable for damages resulting from failure to observe the warnings provided in this documentation.
- Read the operating, maintenance and safety instructions in your language before starting up the machine. If you find that you cannot completely understand the documentation for your product, please ask your supplier to clarify.
- Proper and correct transport, storage, assembly and installation as well as care in operation and maintenance are prerequisites for optimal and safe operation of this equipment.
- Only persons who are trained and qualified for the use and operation of the equipment may work on this equipment or within its proximity.
  - The persons are qualified if they have sufficient knowledge of the assembly, installation and operation of the equipment as well as an understanding of all warnings and precautionary measures noted in these instructions.
  - Furthermore, they must be trained, instructed and qualified to switch electrical circuits and equipment on and off in accordance with technical safety regulations, to ground them and to mark them according to the requirements of safe work practices. They must have adequate safety equipment and be trained in first aid.
- Only use spare parts and accessories approved by the manufacturer.
- Follow all safety regulations and requirements for the specific application as practiced in the country of use.
- The equipment is designed for installation in industrial machinery.
- The ambient conditions given in the product documentation must be observed.
- Use only safety features and applications that are clearly and explicitly approved in the Project Planning Manual. If this is not the case, they are excluded.
  The following areas of use and application, for example, include safety features and applications: construction cranes, elevators used for people or freight, devices and vehicles to transport people, medical applications, refinery plants, transport of hazardous goods, nuclear applications, applications in which electrical devices with vital functions can be electromagnetically disturbed, mining, food processing, control of protection equipment (also in a machine).
- The information given in the documentation of the product with regard to the use of the delivered components contains only examples of applications and suggestions.
  The machine and installation manufacturer must
  - make sure that the delivered components are suited for his individual application and check the information given in this documentation with regard to the use of the components,
  - make sure that his application complies with the applicable safety regulations and standards and carry out the required measures, modifications and complements.
- Startup of the delivered components is only permitted once it is sure that the machine or installation in which they are installed complies with the national regulations, safety specifications and standards of the application.
- Technical data, connections and operational conditions are specified in the product documentation and must be followed at all times.

- Operation is only permitted if the national EMC regulations for the application are met.
  The instructions for installation in accordance with EMC requirements can be found in the documentation "EMC in Drive and Control Systems".
  The machine or installation manufacturer is responsible for compliance with the limiting values as prescribed in the national regulations.

2.5 Protection Against Contact with Electrical Parts

Note: This section refers to equipment and drive components with voltages above 50 Volts.

Touching live parts with voltages of 50 Volts and more with bare hands or conductive tools or touching ungrounded housings can be dangerous and cause electric shock. In order to operate electrical equipment, certain parts must unavoidably have dangerous voltages applied to them.

DANGER

High electrical voltage! Danger to life, severe bodily harm by electric shock!

⇒ Only those trained and qualified to work with or on electrical equipment are permitted to operate, maintain or repair this equipment.

⇒ Follow general construction and safety regulations when working on high voltage installations.

⇒ Before switching on power the ground wire must be permanently connected to all electrical units according to the connection diagram.

⇒ Do not operate electrical equipment at any time, even for brief measurements or tests, if the ground wire is not permanently connected to the points of the components provided for this purpose.

⇒ Before working with electrical parts with voltage higher than 50 V, the equipment must be disconnected from the mains voltage or power supply. Make sure the equipment cannot be switched on again unintended.

⇒ The following should be observed with electrical drive and filter components:

⇒ Wait thirty (30) minutes after switching off power to allow capacitors to discharge before beginning to work. Measure the voltage on the capacitors before beginning to work to make sure that the equipment is safe to touch.

⇒ Never touch the electrical connection points of a component while power is turned on.

⇒ Install the covers and guards provided with the equipment properly before switching the equipment on. Prevent contact with live parts at any time.

⇒ A residual-current-operated protective device (RCD) must not be used on electric drives! Indirect contact must be prevented by other means, for example, by an overcurrent protective device.

⇒ Electrical components with exposed live parts and uncovered high voltage terminals must be installed in a protective housing, for example, in a control cabinet.

To be observed with electrical drive and filter components:

DANGER

High electrical voltage on the housing!
High leakage current! Danger to life, danger of injury by electric shock!

⇒ Connect the electrical equipment, the housings of all electrical units and motors permanently with the safety conductor at the ground points before power is switched on. Look at the connection diagram. This is even necessary for brief tests.

⇒ Connect the safety conductor of the electrical equipment always permanently and firmly to the supply mains. Leakage current exceeds 3.5 mA in normal operation.

⇒ Use a copper conductor with at least 10 mm² cross section over its entire course for this safety conductor connection!

⇒ Prior to startups, even for brief tests, always connect the protective conductor or connect with ground wire. Otherwise, high voltages can occur on the housing that lead to electric shock.

2.6 Protection Against Electric Shock by Protective Low Voltage (PELV)

All connections and terminals with voltages between 0 and 50 Volts on Rexroth products are protective low voltages designed in accordance with international standards on electrical safety.

WARNING

High electrical voltage due to wrong connections! Danger to life, bodily harm by electric shock!

⇒ Only connect equipment, electrical components and cables of the protective low voltage type (PELV = Protective Extra Low Voltage) to all terminals and clamps with voltages of 0 to 50 Volts.

⇒ Only electrical circuits may be connected which are safely isolated against high voltage circuits. Safe isolation is achieved, for example, with an isolating transformer, an opto-electronic coupler or when battery-operated.

2.7 Protection Against Dangerous Movements

Dangerous movements can be caused by faulty control of the connected motors. Some common examples are:

- improper or wrong wiring of cable connections
- incorrect operation of the equipment components
- wrong input of parameters before operation
- malfunction of sensors, encoders and monitoring devices
- defective components
- software or firmware errors

Dangerous movements can occur immediately after equipment is switched on or even after an unspecified time of trouble-free operation.

The monitoring in the drive components will normally be sufficient to avoid faulty operation in the connected drives. Regarding personal safety, especially the danger of bodily injury and material damage, this alone cannot be relied upon to ensure complete safety. Until the integrated monitoring functions become effective, it must be assumed in any case that faulty drive movements will occur. The extent of faulty drive movements depends upon the type of control and the state of operation.

DANGER

Dangerous movements! Danger to life, risk of injury, severe bodily harm or material damage!

⇒ Ensure personal safety by means of qualified and tested higher-level monitoring devices or measures integrated in the installation. Unintended machine motion is possible if monitoring devices are disabled, bypassed or not activated.

⇒ Pay attention to unintended machine motion or other malfunction in any mode of operation.

⇒ Keep free and clear of the machine's range of motion and moving parts. Possible measures to prevent people from accidentally entering the machine's range of motion:

- use safety fences
- use safety guards
- use protective coverings
- install light curtains or light barriers

⇒ Fences and coverings must be strong enough to resist maximum possible momentum, especially if there is a possibility of loose parts flying off.

⇒ Mount the emergency stop switch in the immediate reach of the operator. Verify that the emergency stop works before startup. Don't operate the machine if the emergency stop is not working.

⇒ Isolate the drive power connection by means of an emergency stop circuit or use a starting lockout to prevent unintentional start.

⇒ Make sure that the drives are brought to a safe standstill before accessing or entering the danger zone. Safe standstill can be achieved by switching off the power supply contactor or by safe mechanical locking of moving parts.

⇒ Secure vertical axes against falling or dropping after switching off the motor power by, for example:

- mechanically securing the vertical axes
- adding an external braking/ arrester/ clamping mechanism
- ensuring sufficient equilibration of the vertical axes

The standard equipment motor brake or an external brake controlled directly by the drive controller are not sufficient to guarantee personal safety!

⇒ Disconnect electrical power to the equipment using a master switch and secure the switch against reconnection for:

- maintenance and repair work
- cleaning of equipment
- long periods of discontinued equipment use

⇒ Prevent the operation of high-frequency, remote control and radio equipment near electronics circuits and supply leads. If the use of such equipment cannot be avoided, verify the system and the installation for possible malfunctions in all possible positions of normal use before initial startup. If necessary, perform a special electromagnetic compatibility (EMC) test on the installation.

2.8 Protection Against Magnetic and Electromagnetic Fields During Operation and Mounting

Magnetic and electromagnetic fields generated near current-carrying conductors and permanent magnets in motors represent a serious health hazard to persons with heart pacemakers, metal implants and hearing aids.

WARNING

Health hazard for persons with heart pacemakers, metal implants and hearing aids in proximity to electrical equipment!

⇒ Persons with heart pacemakers, hearing aids and metal implants are not permitted to enter the following areas:

- Areas in which electrical equipment and parts are mounted, being operated or started up.
- Areas in which parts of motors with permanent magnets are being stored, operated, repaired or mounted.

⇒ If it is necessary for a person with a heart pacemaker to enter such an area, then a doctor must be consulted prior to doing so. Heart pacemakers that are already implanted or will be implanted in the future, have a considerable variation in their electrical noise immunity. Therefore there are no rules with general validity.

⇒ Persons with hearing aids, metal implants or metal pieces must consult a doctor before they enter the areas described above. Otherwise, health hazards will occur.

2.9 Protection Against Contact with Hot Parts

CAUTION

Housing surfaces could be extremely hot! Danger of injury! Danger of burns!

⇒ Do not touch housing surfaces near sources of heat! Danger of burns!

⇒ After switching the equipment off, wait at least ten (10) minutes to allow it to cool down before touching it.

⇒ Do not touch hot parts of the equipment, such as housings with integrated heat sinks and resistors. Danger of burns!

2.10 Protection During Handling and Mounting

Under certain conditions, incorrect handling and mounting of parts and components may cause injuries.

CAUTION

Risk of injury by incorrect handling! Bodily harm caused by crushing, shearing, cutting and mechanical shock!

⇒ Observe general installation and safety instructions with regard to handling and mounting.

⇒ Use appropriate mounting and transport equipment.

⇒ Take precautions to avoid pinching and crushing.

⇒ Use only appropriate tools. If specified by the product documentation, special tools must be used.

⇒ Use lifting devices and tools correctly and safely.

⇒ For safe protection wear appropriate protective clothing, e.g. safety glasses, safety shoes and safety gloves.

⇒ Never stand under suspended loads.

⇒ Clean up liquids from the floor immediately to prevent slipping.

2.11 Battery Safety

Batteries contain reactive chemicals in a solid housing. Inappropriate handling may result in injuries or material damage.

CAUTION

Risk of injury by incorrect handling!

⇒ Do not attempt to reactivate discharged batteries by heating or other methods (danger of explosion and cauterization).

⇒ Never charge non-chargeable batteries (danger of leakage and explosion).

⇒ Never throw batteries into a fire.

⇒ Do not dismantle batteries.

⇒ Do not damage electrical components installed in the equipment.

Note: Be aware of environmental protection and disposal! The batteries contained in the product should be considered as hazardous material for land, air and sea transport in the sense of the legal requirements (danger of explosion). Dispose batteries separately from other waste. Observe the legal requirements in the country of installation.

2.12 Protection Against Pressurized Systems

Certain motors and drive controllers, corresponding to the information in the respective Project Planning Manual, must be provided with pressurized media, such as compressed air, hydraulic oil, cooling fluid and cooling lubricant supplied by external systems. Incorrect handling of the supply and connections of pressurized systems can lead to injuries or accidents. In these cases, improper handling of external supply systems, supply lines or connections can cause injuries or material damage.

CAUTION

Danger of injury by incorrect handling of pressurized systems !

⇒ Do not attempt to disassemble, to open or to cut a pressurized system (danger of explosion).

⇒ Observe the operation instructions of the respective manufacturer.

⇒ Before disassembling pressurized systems, release pressure and drain off the fluid or gas.

⇒ Use suitable protective clothing (for example safety glasses, safety shoes and safety gloves)

⇒ Remove any fluid that has leaked out onto the floor immediately.

Note: Environmental protection and disposal! The media used in the operation of the pressurized system equipment may not be environmentally compatible. Media that are damaging the environment must be disposed separately from normal waste. Observe the legal requirements in the country of installation.

3 Diagnosis IndraMotion MLC - General

3.1 Diagnosis Posibilities

The control offers the following diagnosis possibilities:

- Identification and display of the actual control condition- inclusive the connected drives on base of priority dependent diagnosis generation
- Organisation of a MLC-internal diagnosis memory with chronological sorted diagnosis messages (Index 1 = recent message)
- Diagnosis display of the control
- Representation of the diagnosis memory content in a logbook
- Diagnosis for designation of errors of (PLCopen-) function blocks

3.2 Further Documentation

No.	Title	Designation
/1/	Rexroth IndraControl L40, Project Planning Manual	DOK-CONTRL-IC*L40*****-PR02-EN-P
/2/	IndraLogic L40, System Description, Operating and Programming Guide, here error messages	DOK-CONTRL-IC*L40*****-AW01-EN-P
/10/	Rexroth IndraDrive, Firmware for Drive Controllers, MPH-03, MPB-03, MPD-03, Functional Description	DOK-INDRV*-MP*-03VRS**-FK01-EN-P
/11/	Rexroth IndraDrive, Firmware for Drive Controllers, MPH-04, MPB-04, MPD-04, Functional Description	DOK-INDRV*-MP*-04VRS**-FK01-EN-P
/12/	Rexroth IndraDrive, Drive Controllers, MPx-02; MPx-03; MPx-04, Parameter Description	DOK-INDRV*-GEN-**VRS**-PA03-EN-P
/13/	Rexroth IndraDrive, MPx02, MPx03, MPx04 and HMV, Troubleshooting Guide	DOK-INDRV*-GEN-**VRS-WA03-EN-P
/20/	Rexroth IndraMotion MLC; Functional Description	DOK-IM*MLC-SYSTEM**V02-FK01-EN-P
/21/	Rexroth IndraMotion MLC; Axis and Control Parameters	DOK-IM*MLC-A*C*PAR*V02-PA01-EN-P
/22/	Rexroth IndraMotion MLC, Diagnostics, Troubleshooting Guide	DOK-IM*MLC-DIAGN***V02-WA01-DE-P
/23/	Rexroth IndraMotion MLC; PLCopen Function Blocks, Functions and Data	DOK-IM*MLC-PLCOPEN*V02-FK01-EN-P
/24/	Rexroth IndraMotion MLC; Function Modules	DOK-IM*MLC-FM******V02-FK01-EN-P
/25/	Rexroth IndraMotion MLC; First Steps	DOK-IM*MLC-F*STEP**V02-KB01-EN-P

Fig. 3-1: Further documentation

4 Diagnosis IndraMotion MLC

4.1 Layout of a MLC Diagnosis

A diagnosis consists of a 8-digit diagnosis number - a diagnosis text - which is kept multilingual - and for some selected messages additionally a plaintext - which is displayed instead of the diagnosis number.

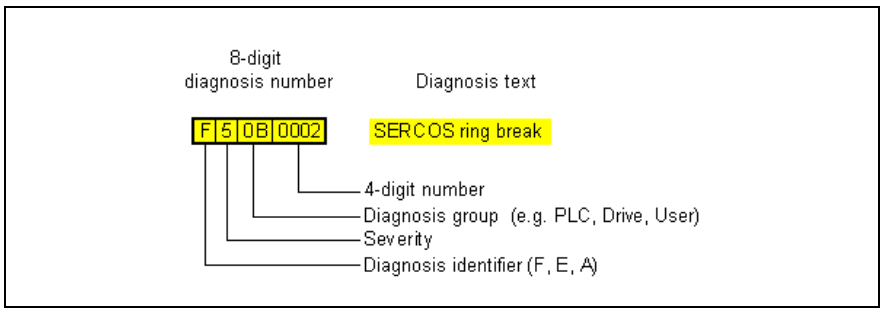

Fig. 4-1: Layout of a diagnosis

Diagnosis identifier:

At the time three different categories are supported:

- F - Error
- E - Warning
- A - Message

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

Note: Plaintext displays have the lowest message priority (**A0**).

Diagnosis, severity code:

At the time ten severity codes (depending on the diagnosis identifier) are supported:

Occupied are: **F9 > ... >F1 >F0 - E0 - A0**.

The next table shows the severity for a MLC controller.

Severity	Description/ Name	Error reaction
0	Non fatal error	Logbook entry, Diagnostic message at the display, none error reaction,
1	Non fatal error	Logbook entry, Diagnostic message at the display,
2	Axis error	Logbook entry, Diagnostic message at the display, Axis (or drive) is set to standstill as best as possible, all other axes are not concerned by it
3/4	Reserved	-
5	Controller error	Logbook entry, Diagnostic message at the display, **all** axis are set to standstill as best as possible.
6	Controller error	Logbook entry, Diagnostic message at the display, **all** axis are set to standstill as best as possible.
7	Reserved	-
8	Fatal controller error	Logbook entry, Diagnostic message at the display, **all** axis are set to standstill as best as possible.
9	Fatal System Error Undefined system states, Exception	Logbook entry, Diagnostic message at the display Firmware is no longer operable, invocation of FatalSystemErrorHandler(), none error reaction to the drive

Fig. 4-2: Error reaction, Source MLC

Order of display: Always the most serious diagnosis is displayed. If it is receipted - so the next serious diagnosis move up.

Diagnosis group: Indicates - which component the diagnosis has caused (the indication supports a faster assignment of the error to the causer).

Group	Causer /ErrorTable
00	IndraDrive/ INDRV_TABLE (see also IndraDrive-Errors, page 4-5 or IndraDrive-Warnings, page 4-5)
01...A9	MLC-Firmware, e.g. virtual axis with error reaction
2D	SERCOS-Fehler/ SERCOS_TABLE (see also SERCOS-Error Message, page 4-7)
2E	Generic axis/ generic drive
AE	User program (assigned by the user)

Fig. 4-3: Diagnosis groups (error source)

A weighting between the groups does not take place.

Number: For each group a number interval between 0000 ... FFFF is available. A weighting does not take place.

4.2 Usage of Diagnosis Numbers and -texts as Indication for the Display of the IndraMotion MLC

Diagnosis texts and -numbers are indicated via display of the IndraMotion MLC. They describe the run-up of the control, are used as "Rotating Life Sign", blinking as error number or alternating at drive errors with the drive number. The following figure is taken from /20/:

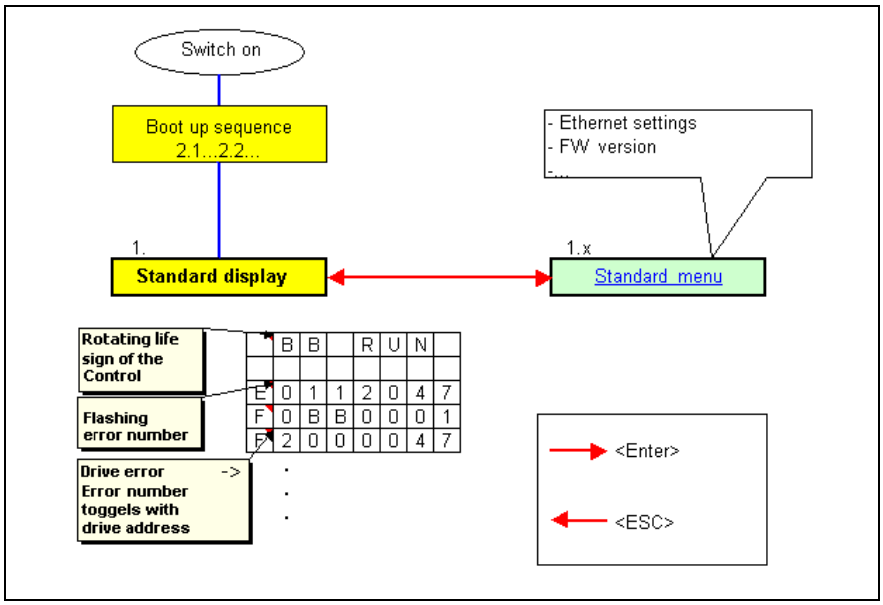

Fig. 4-4: Standard indication of the display

4.3 Usage of Diagnosis Numbers and -texts in Dialog Window "Error/Diagnostic Memory", IndraWorks MLC

The dialog window "Error/Diagnostic memory" gives an overview of the error condition of control and its drives. For that purpose the logbook is analyzed. The access takes place via the below described parameters. Error memory / logbook are organized as a stack. The actual status lies as the last on top, it has the highest index (top level line in figure).

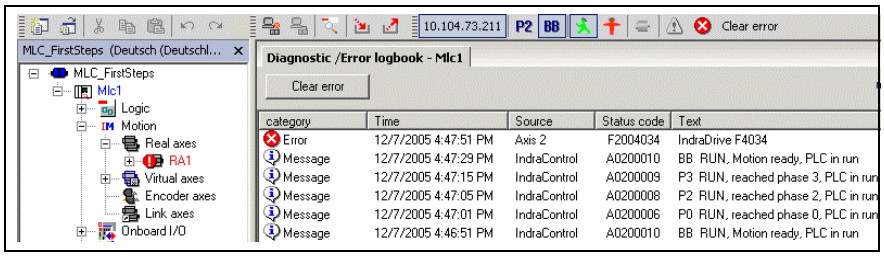

Fig. 4-5: Dialog from /20/: Error/Diagnostic-memory

A doubleclick to the desired line opens the <F1>-Help to the corresponding diagnosis.

4.4 Usage of Diagnosis Numbers in the PLC-Program as Entries of the Error Table, "MLC_TABLE", 16#0030

PLCopen function blocks have an error management, which display errors with a 0/1 change at the error-bit, exemplify it by a short enum text at the ErrorID output and supply a detailed description at the Error-Ident output.

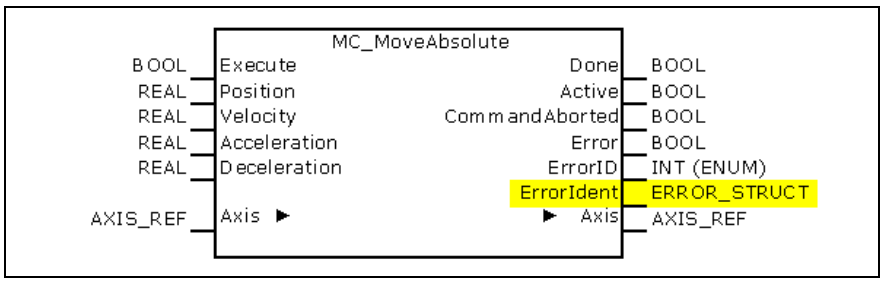

Fig. 4-6: Error management at example of the FB MC_MoveAbsolute

	Name	Type	Comment
TYPE ERROR_STRUCT			
STRUCT			
	Table	INT (ENUM)	ERROR_TABLE: Table is of type Enum. The enum value points to a list, which is necessary to identify the concrete error of "Additional1".
	Additional1	DWORD	Contains the concrete error number (diagnosis) according to the given table.
	Additional2	DWORD	May contain complement to "Additional1".
END_STRUCT			
END_TYPE			

Fig. 4-7: Data type: ERROR_STRUCT (STRUCT)

As "table number" each below listed table number may be issued:

	Name		Value	Comment
TYPE	ERROR_TABLE			Enumaration of valid error tables for analysis of "Additional1"
(	NO_TABLE_USED	:=	16#0000	reserved
	SERCOS_TABLE	:=	16#0010	Sercos Error: "Additional1" = Sercos Code
	MLDS_TABLE	:=	16#0020	Drive based Motion Logic
	MLC_TABLE	:=	16#0030	Controller based Motion Logic
	MLX_TABLE	:=	16#0040	CNC
	MLP_TABLE	:=	16#0050	PC-based Motion
	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
	USER1_TABLE		16#1000	free user table
	....	...	...	...
	USER10_TABLE	:=	16#1009	free user table
)				
END_TYPE				

Fig. 4-8: Tables in "ERROR_TABLE"

To each of these numbers belong a list of its diagnosis.

The diagnosis of the MLC_TABLE are listed below.

4.5 Inplementation of the Diagnosis Messages

IndraDrive-Errors

The diagnosis is extended to eight places and the error class 2 is defined (e.g.: E-Stop, interpreted as error message: **F4034** -> **F**200**4034**).

Error class 2 defines the error reaction of the control, as drive F4 and control F2:

- Logbook entry is generated,
- Message is shown at the display,
- As best as possible standstill of the axis.

In IndraWorks the original message of the drive additionally appears in the text.

Place of the display	Content of the message
Diagnostic message number S-0-0390	F4034
Axis diagnostic message A-0-0020	"F2004034"
Axis diagnostic number A-0-0023	F2004034
L40 display C-0-0626	Axis 1 F2004034
Error reaction	Class 2
IW Text	"IndraDrive F4034"
Help on IW_Text (Double-click to line)	Diagnosis to IndraDrive

Fig. 4-9: Example: IndraDrive-Error

IndraDrive-Warnings

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

- Logbook entry is generated,
- Message is shown at the display,
- no drive-/ AxisError reaction released by the control.

In IndraWorks the original message of the drive additionally appears in the text.

Place of the display	Content of the message
Diagnostic message number S-0-0390	E8034
Axis diagnostic message A-0-0020	"E0008034"
Axis diagnostic number A-0-0023	E0008034
L40 display C-0-0626	Axis 1 E0008034
Error reaction	Class 0
IndraWorks text	"IndraDrive E8034"
Help on IW_Text (Double-click to line)	Diagnosis to IndraDrive

Fig. 4-10: Example: IndraDrive-Warning

Virtual Axis, Error Message

The diagnosis is eight-digit and the error class always 2 (e.g.: in IndraLogic MC_Stop is activated and subsequently MC_MoveVelocity is started):

- Logbook entry is generated,
- Message is shown at the display,
- As best as possible standstill of the axis.

In IndraWorks the message of the data base additionally appears in the text.

Place of the display	Content of the message
Diagnostic message number S-0-0390	n/a
Axis diagnostic message A-0-0020	"F2229206"
Axis diagnostic number A-0-0023	F2229206
L40 display C-0-0626	Axis 2 F2229206
Error reaction	Class 2
IndraWorks text	Virtual axis F2229206 "Command rejected while 'Stopping'"
Help on IW_Text (Double-click)	Diagnosis to MLC

Fig. 4-11: Example: Error of a virtual axis

Generic Axis/Drive, Error Message

The diagnosis of generic axes/drive cannot be detected. In case of an error the diagnosis F22E0000 is defined:

- Logbook entry is generated,
- Message is shown at the display,
- As best as possible standstill of the axis.

In IndraWorks the original message of the drive additionally appears in the text.

Place of the display	Content of the message
Diagnostic message number S-0-0390	n/a
Axis diagnostic message A-0-0020	"F22E0000"
Axis diagnostic number A-0-0023	F22E0000
L40 display C-0-0626	Axis 3 F22E0000
Error reaction	Class 2
IndraWorks text	Drive error!
Help on IW_Text	Diagnosis to MLC

Fig. 4-12: Example: Error of a generic axis

For a special diagnosis the user must use the diagnosis tool of the drive manufacturer.

SERCOS-Error Message

The four-digit error messages are extended to eight places. All messages get error class 0 (e.g.: **1001** -> F02D**1001**). In the IW-Logbook the original error and the corresponding text is displayed (e.g.: MC_ReadParameter on S-0-0200; access on a not existing parameter).

Place of the display	Content of the message
L40 Display C-0-0626	F02D1001
Error reaction	Class 0
IndraWorks text	Error 1001: ID Number does not exist
Help on IW_Text	Diagnosis to MLC

Fig. 4-13: Example: SERCOS error message

PLC-User Blocks, Assumption of Diagnosis into the Logbook (in Preparation)

The error structure at the output of a PLCopen-Block contains all detailed informations on a special error. The concept is also applicable on user function blocks.

Note: Required for transfer is a function block xxx.

The information of an IndraMotion-Block is directly evaluable and readable. The interpretation of the elements must be written as follows:

Table ERROR_TABLE. With it the origin of the error is fixed.

Additional1/ Additional2 The content is the diagnosis number which is to be find in the respective block descriptions. Check whether "Additional2" = 0, if yes, the diagnosis is complete, if no go on -> Evaluation of "Additional2" (e.g.:error from User-FB; Table=User1_Table; Additional1=F0004711; Additional2=0815):

Place of the display	Content of the message
IndraWorks text	IndraLogic, F0004711, User1_TABLE, 0815
Help on IW_Text	chm-Help to the respective table assumed.

Fig. 4-14: Example: User-Error message

4.6 Diagnosis Parameters

The parameters involved in diagnosis creating and -display are described in /21/.

A-0-0020: **Axis diagnostic message** - This parameter contains the actual **diagnosis** message of the axis. The message is displayed in the dialog window "Axis status" for the concrete axis and in window "Device status" for all axes.

A-0-0021: **Axis status** - This parameter describes the actual value of the status of the axis.

- Bit 8: Axis displays a warning
- Bit 9 Axis displays an error (diagnosis number is contained in A-0-0023)

A-0-0023: **Axis diagnostic number** - If bit 9 of parameter "Extended axis status" (A-0-0021) is set, the actual axis message code may be read in this parameter.

C-0-0001: **Language selection** - In the IndraMotion MLC all parameter names - units and **diagnosis**-/faults are stored multi-lingual. In which language the text is to be displayed, is determined in this parameter.

C-0-0620: **Diagnosis recorder index** - This parameter is used to select any entry of the MLC-internal error memory for system diagnosis. By usage of parameter "Indexed diagnosis message" (C-0-0621) the selected entry in this parameter (C-0-0620) may be displayed.

Only for internal use!

C-0-0621: **Indexed Diagnosis message** - With this parameter the diagnosis message of the MLC-Diagnosis memory is displayed, which was selected by parameter "Diagnosis recorder index" (C-0-0620).

Only for internal use!

C-0-0622: **Amount of diagnosis message** - This parameter contains the number of messages which are stored in the diagnosis memory.

C-0-0623: **Last reset message** - By this parameter the last reset message of the MLC-Diagnosis memory is displayed.

Only for internal use!

C-0-0625: **Display message** - This parameter is only for internal use.

This parameter contains the actual display message in binary format.

C-0-0626: **Diagnosis** - This parameter contains the presently relevant diagnosis of the MLC as text. Prefixed to the text appears the respective content from parameter "Diagnosis number" (C-0-0627).

C-0-0627: **Diagnosis number** - In this parameter the displayed diagnosis number is stored. This enables the user to generate own diagnosis on the basis of this number (HMI, additional languages).

C-0-0650: **Diagnosis status word** - This parameter contains the status information of the control.

- Bit 0, at least one message is present
- Bit 1, at least one warning is present
- Bit 2, at least one error of class F0 is present
- Bit 3, at least one error of classes F1...F9 is present.
- Bit 31, OR combination bit 1...3, warning or error of any class.

C-0-0711 **MLC-link - MDT error counter**, Each link-slave counts all invalid master data telegrams (MDT). If more than one MDT fails directly in a row, the MLC reacts as follows:

- All drives are set to standstill with "P-0-0119, Best possible deceleration".
- All positions of the master axes stop.
- All status bits "Link-Participant # data valid" ("MLC-link - status link data" C-0-0712, elements 1 and 2) are set to zero.

The error message "F0280005 Link ring - masterposition incorrect MDT" is issued.

C-0-0714 **MLC-Verbund - MLC-link - status function modul**,

This 16-Bit-Parameter contains the diagnostics bits for the function module of the link participant.

- Bit0 - MLC-Link - Transmission error
- Bit1 - FM CrossComm - Error primary ring
- Bit2 - FM CrossComm - Error secondary ring
- Bit3 - MLC-Link - Redundancy error.

4.7 MLC-Diagnosis - Error Numbers at the L40-Display

General

A diagnosis consists of a 8-digit diagnosis number - a diagnosis text - which is kept multilingual - and for some selected messages additionally a plaintext - which is displayed instead of the diagnosis number.

A00B0005 - Drive message

Message, 0005

Alternatively to an error or warning, a drive may cause a message.

The message is a one-time action which is not be receipted.

A message is recognized by the "Diagnosis status word" (C-0-0650, Bit 0) and "MC system configuration" (C-0-0023, bit 24), the message bit is set in each case.

Cause: At least one drive has send a message.

Remedy: With drives of own manufacturing you get a corresponding Online-Help. With external drives please use the documentation of the drive.

A00B0005-Attributes Display: A00B0005

A00B0007 - ZeroBit, Sercos driver, Test mode, Zero bit strem

Message, 0007

The test mode zero bit stream for the drive interface SERCOS was selected in parameter (C-0-0500).

Cause: The test mode was selected in parameter "Drive bus configuration" (C-0-0500).

Remedy: Change parameter "Drive bus configuration" (C-0-0500).

A00B0007-Attributes Display: ZeroBit

A00B0008 - LightOn, Sercos driver, Test mode, Continuous light on

Message, 0008

The test mode continuous light on for the drive interface SERCOS was selected in parameter (C-0-0500).

Cause: The test mode was selected in parameter "Drive bus configuration" (C-0-0500).

Remedy: Change parameter "Drive bus configuration" (C-0-0500).

A00B0008-Attributes Display: LightOn

A00B0009 - LightOff, Sercos driver, Test mode, Continuous light off

Message, 0009

The test mode continuous light off for the drive interface SERCOS was selected in parameter (C-0-0500).

Cause: The test mode was selected in parameter "Drive bus configuration" (C-0-0500).

Remedy: Change parameter "Drive bus configuration" (C-0-0500).

A00B0009-Attributes Display: LightOff

A00C0001 - BOOT END, boot up of control finished

Message, 0001

The boot up of the control was completed successfully. The switching to target boot up phase takes place ("Power up target motion mode" (C-0-0450)).

Cause: The boot up of the control was completed successfully.

Remedy: -

A00C0001-Attributes Display: BOOT END

A00C0002 - ErrClear, Error cleared

Message, 0002

The command for clearing the error was executed successfully.

An active error, in dependency whether the cause of the error still exist or not, changes to

- Error passive, the cause is still existing
- Error reset, the cause no longer exist.

A00C0002-Attributes Display: ErrClear

A00D0001 - Warning

Message, 0001

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.

A00D0001-Attributes Display: A00D0001

A00D0002 - Info

Message, 0002

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-Attributes Display: A00D0002

A00D0010 - PLC user task watchdog expired

Message, 0010

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.

A00D0010-Attributes Display: A00D0010

A00D0011 - Wardware Watchdog expired

Message, 0011

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.

A00D0011-Attributes Display: A00D0011

A00D0012 - Bus error

Message, 0012

Cause: In the IEC-Program there was an access to an invalid address.

Remedy: More informations you will find in the call-up tree.

A00D0012-Attributes Display: A00D0012

A00D0013 - Checksum error

Message, 0013

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.

A00D0013-Attributes Display: A00D0013

A00D0014 - Field bus error

Message, 0014

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

Cause:
1. "Error loading IO drivers!": At least one configured IO-Driver could not be loaded.
2. "Error init IO-Driver!"
3. "Error in Configuration Data!"

Remedy:
1. Inform the customer service.
2. Inform the customer service.
3. Inform the customer service.

A00D0014-Attributes Display: A00D0014

A00D0015 - Error while I/O update

Message, 0015

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.

A00D0015-Attributes Display: A00D0015

A00D0016 - Cycletime exceeded

Message, 0016

This error does not appear in the current runtime.

Cause: -

Remedy: -

A00D0016-Attributes Display: A00D0016

A00D0017 - Not enough memory

Message, 0017

Online-Change-Code is too big.

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

Remedy: Please repeat the download.

A00D0017-Attributes Display: A00D0017

A00D0018 - Unresolved external references

Message, 0018

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

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

A00D0018-Attributes Display: A00D0018

A00D0019 - Download was rejected by custom adaption

Message, 0019

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

Remedy: Follow the instructions in the dialog box.

A00D0019-Attributes Display: A00D0019

A00D001A - Bootprojekt saved on Controller

Message, 001A

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

Remedy: Text not available.

A00D001A-Attributes Display: A00D001A

A00D001B - Boot project not loaded and deleted

Message, 001B

Cause: Possibly the file system is corrupt.

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

A00D001B-Attributes Display: A00D001B

A00D001C - System memory very low (memory leak)

Message, 001C

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

Remedy: Please reboot the control.

A00D001C-Attributes Display: A00D001C

A00D001D - Retain memory corrupt or cannot be mapped

Message, 001D

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

Remedy: Please call the customer service.

A00D001D-Attributes Display: A00D001D

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

Message, 001E

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.

A00D001E-Attributes Display: A00D001E

A00D001F - Not enough memory for target visu

Message, 001F

Cause: Not enough memory available for the target visualization.

Remedy: No text available.

A00D001F-Attributes Display: A00D001F

A00D0020 - Not enough memory for config

Message, 0020

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

Remedy: No text available.

A00D0020-Attributes Display: A00D0020

A00D0021 - Target of the bootproject doesn't match the current target

Message, 0021

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

Remedy: Please adjust a matching target system.

A00D0021-Attributes Display: A00D0021

A00D0022 - Error at scheduling tasks

Message, 0022

Cause: An error occurred in the task scheduler.

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

A00D0022-Attributes Display: A00D0022

A00D0023 - Checksum error at transfer of file

Message, 0023

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.

A00D0023-Attributes Display: A00D0023

A00D0024 - Retain identity does not match to bootproject identity

Message, 0024

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.

A00D0024-Attributes Display: A00D0024

A00D0050 - Illegal instruction

Message, 0050

Cause: The programming system has generated a faulty compilation.

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

A00D0050-Attributes Display: A00D0050

A00D0051 - Access violation

Message, 0051

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 libray RIL_CheckRtv.Lib.

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

A00D0051-Attributes Display: A00D0051

A00D0052 - Privileged instruction

Message, 0052

Cause: The programming system has generated a faulty compilation.

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

A00D0052-Attributes Display: A00D0052

A00D0053 - Page fault

Message, 0053

Cause: The programming system has generated a faulty compilation.

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

A00D0053-Attributes Display: A00D0053

A00D0054 - Stack overflow

Message, 0054

Cause: The programming system has generated a faulty compilation.

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

A00D0054-Attributes Display: A00D0054

A00D0055 - Invalid disposition

Message, 0055

Cause: The programming system has generated a faulty compilation.

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

A00D0055-Attributes Display: A00D0055

A00D0056 - Invalid handle

Message, 0056

Cause: The programming system has generated a faulty compilation.

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

A00D0056-Attributes Display: A00D0056

A00D0057 - Access on guarded page

Message, 0057

Cause: The programming system has generated a faulty compilation.

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

A00D0057-Attributes Display: A00D0057

A00D0058 - Double fault

Message, 0058

Cause: The programming system has generated a faulty compilation.

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

A00D0058-Attributes Display: A00D0058

A00D0059 - Invalide Opcode

Message, 0059

Cause: The programming system has generated a faulty compilation.

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

A00D0059-Attributes Display: A00D0059

A00D0100 - Access on odd address

Message, 0100

Cause: The access via pointer has been executed on an invalid address.

Remedy: Please check your PLC-Program on use of pointer. If necessary include the library RIL_CheckRtv.Lib.

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

A00D0100-Attributes Display: A00D0100

A00D0101 - Array bounds exceeded

Message, 0101

Cause: The index of an array was exceeded.

Remedy: Please check your PLC-Program on use of array accesses. If necessary include the libray RIL_CheckRtv.Lib.

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

A00D0101-Attributes Display: A00D0101

A00D0102 - Division by zero

Message, 0102

Cause: In the PLC-Program a division by zero was programmed.

Remedy: Please check your PLC-Program regarding the division. If necessary include the libray RIL_CheckRtv.Lib.

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

A00D0102-Attributes Display: A00D0102

A00D0103 - Overflow

Message, 0103

Cause: The programming system has generated a faulty compilation.

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

A00D0103-Attributes Display: A00D0103

A00D0104 - Non continuable exception

Message, 0104

Cause: The programming system has generated a faulty compilation.

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

A00D0104-Attributes Display: A00D0104

A00D0150 - FPU, Unspecified error

Message, 0150

Cause: The programming system has generated a faulty compilation.

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

A00D0150-Attributes Display: A00D0150

A00D0151 - FPU, Denormal operand

Message, 0151

Cause: The programming system has generated a faulty compilation.

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

A00D0151-Attributes Display: A00D0151

A00D0152 - FPU, Division by zero

Message, 0152

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.

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

A00D0152-Attributes Display: A00D0152

A00D0153 - FPU, Inexact result

Message, 0153

Cause: The programming system has generated a faulty compilation.

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

A00D0153-Attributes Display: A00D0153

A00D0154 - FPU, Invalid operation

Message, 0154

Cause: The programming system has generated a faulty compilation.

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

A00D0154-Attributes Display: A00D0154

A00D0155 - FPU, Overflow

Message, 0155

Cause: The programming system has generated a faulty compilation.

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

A00D0155-Attributes Display: A00D0155

A00D0156 - FPU, Stack check failed

Message, 0156

Cause: The programming system has generated a faulty compilation.

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

A00D0156-Attributes Display: A00D0156

A00D0157 - FPU, Underflow

Message, 0157

Cause: The programming system has generated a faulty compilation.

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

A00D0157-Attributes Display: A00D0157

A00D0158 - Specific diagnosis of node

Message, 0158

Cause: The programming system has generated a faulty compilation.

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

A00D0158-Attributes Display: A00D0158

A00D07D0 - Fatal error communication

Message, 07D0

A fatal error occured in the communication.

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

A00D07D0-Attributes Display: A00D07D0

A00D07D1 - Fatal error semaphores

Message, 07D1

An error occured in the semaphore administration.

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

A00D07D1-Attributes Display: A00D07D1

A00D07D2 - Fatal error memory managment

Message, 07D2

An error occured in the memory administration.

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

A00D07D2-Attributes Display: A00D07D2

A00D07D3 - Rexroth-Inline configuration mismatch from node

Message, 07D3

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.

A00D07D3-Attributes Display: A00D07D3

A00D07D4 - File not written ( )

Message, 07D4

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

A00D07D4-Attributes Display: A00D07D4

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

Message, 07E3

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

Cause: The restart of the PLC-Project assumes a reset of the PLC. If it is tried to start the PLC instead of a control reset, this error is generated.

Note: A renewed attempt of the restart of the PLC without resetting is rejected with a runtime error in 2039 and the same error text. The error message 2019 (resp. 16#7E3) and 2039 (alternatively 16#7F7) alternate if no other message occur.

Remedy: Execute a control reset . Restart the PLC.

A00D07E3-Attributes Display: A00D07E3

A00D07E4 - Array lower bounds violation - RESET

Message, 07E4

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: An access to an array takes place with an inadmissible small index.

Example:

Declaration:

x: BOOL;

Errorarray: Array [1..100] of BOOL;

Implementation:

LD x

ST Errorarray[0];

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07E4-Attributes Display: A00D07E4

A00D07E5 - Array upper bounds violation - RESET

Message, 07E5

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: An access to an array takes place with an inadmissible big index.

Example:

Declaration:

x: BOOL;

Errorarray: Array [1..100] of BOOL;

Implementation:

LD x

ST Errorarray[101];

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07E5-Attributes Display: A00D07E5

A00D07E6 - Division (8bit) by zero - RESET

Message, 07E6

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: With the division of a 8Bit-Variable it was divided by zero.

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07E6-Attributes Display: A00D07E6

A00D07E7 - Division (16bit) by zero - RESET

Message, 07E7

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: With the division of a 16Bit-Variable it was divided by zero.

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07E7-Attributes Display: A00D07E7

A00D07E8 - Division (32bit) by zero - RESET

Message, 07E8

the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: With the division of a 16Bit-Variable it was divided by zero.

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07E8-Attributes Display: A00D07E8

A00D07E9 - Division (REAL) by zero - RESET

Message, 07E9

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: With the division of a REAL-Variable it was divided by zero.

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07E9-Attributes Display: A00D07E9

A00D07EA - Lower range bounds (unsigned) violation - RESET

Message, 07EA

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: A smaller value than the lower range bounds was assigned to a subrange type variable.

Example:

Declaration:

```
ui1 : UINT (10..20);
```

Implementation:

```
LD 5
ST ui1
```

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07EA-Attributes Display: A00D07EA

A00D07EB - Upper range bounds (unsigned) violation - RESET

Message, 07EB

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: A bigger value than the upper range bounds was assigned to a subrange type (unsigned) variable.

Example:

Declaration:

```
ui1 : UINT (5...20);
```

Implementation:

```
LD 100
ST ui1
```

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07EB-Attributes Display: A00D07EB

A00D07EC - Lower range bounds (signed) violation - RESET

Message, 07EC

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: A smaller value than the lower range bounds was assigned to a subrange type (signed) variable.

Example:

Declaration:

```
i1 : INT (5...20);
```

Implementation:

```
LD 1
ST i1
```

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07EC-Attributes Display: A00D07EC

A00D07ED - Upper range bounds (signed) violation - RESET

Message, 07ED

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: A bigger value than the upper range bounds was assigned to a subrange type (signed) variable.

Example:

Declaration:

```
i1 : INT (5...20);
```

Implementation:

```
LD 100
ST i1
```

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07ED-Attributes Display: A00D07ED

A00D07EE - Division (LREAL) by zero - RESET

Message, 07EE

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: With the devision of a LREAL-Variable it was divided by zero.

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07EE-Attributes Display: A00D07EE

A00D07EF - Invalid pointer access (address), - RESET

Message, 07EF

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: In the PLC-Project was tried to access a variable via pointer at which the access was outside the valid memory range of the PLC.

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07EF-Attributes Display: A00D07EF

A00D07F0 - Invalid pointer access (area) - RESET

Message, 07F0

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: In the PLC-Project was tried to access a variable via pointer at which the access was outside the reserved memory range of this variable.

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07F0-Attributes Display: A00D07F0

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

Message, 07F1

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: In the PLC-Project was tried to write on an input variable via pointer.

Example:

Declaration:

```
var_in AT %IB0: BYTE;
ptr_var_in: POINTER TO BYTE;
```

Implementation:

```
ptr_var_in := ADR(var_in);
ptr_var_in^:=16#AA;
```

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07F1-Attributes Display: A00D07F1

A00D07F2 - Invalid pointer access (Alignment) - RESET

Message, 07F2

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: In the PLC-Project was tried to access a variable at which the alignment does not match.

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07F2-Attributes Display: A00D07F2

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

Message, 07F7

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: The restart of the PLC-Project assumes a reset of the PLC. Is tried to start the PLC instead of a control reset, this error is generated.

Note: A renewed attempt of the restart of the PLC without resetting is rejected with a runtime error 2019 and the same error text. The error message 2019 (resp. 16#7E3) and 2039 (alternatively 16#7F7) alternate if no other message occur.

Remedy: Execute a control reset. Restart the PLC after you have changed your PLC-Project.

A00D07F7-Attributes Display: A00D07F7

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

Message, 07F8

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: An access to an array takes place with an inadmissible small index.

Example:

Declaration:

x: BOOL;

Errorarray: Array [1..100] of BOOL;

Implementation:

LD x

ST Errorarray[0];

The index has been corrected to the minimum admissible index.

Remedy: Please change your PLC-Project.

A00D07F8-Attributes Display: A00D07F8

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

Message, 07F9

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: An access to an array takes place with an inadmissible big index.

Exampe:

Declaration:

x: BOOL;

Errorarray: Array [1..100] of BOOL;

Implementation:

LD x

ST Errorarray[200];

The index has been corrected to the maximum admissible index.

Remedy: Please change your PLC-Project.

A00D07F9-Attributes Display: A00D07F9

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

Message, 07FA

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: With the division of a 8Bit variable should be divided by 0. The divisor was corrected to the value 1.

Remedy: Please change your PLC-Project.

A00D07FA-Attributes Display: A00D07FA

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

Message, 07FB

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: With the division of a 16Bit-Variable should be divided by 0. The divisor was corrected to the value 1.

Remedy: Please change your PLC-Project.

A00D07FB-Attributes Display: A00D07FB

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

Message, 07FC

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: With the division of a 32Bit-Variable should be divided by 0. The divisor was corrected to the value 1.

Lösung: Please change your PLC-Project.

A00D07FC-Attributes Display: A00D07FC

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

Message, 07FD

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: With the division of a REAL-Variable should be divided by 0. The divisor was corrected to the value 1.0.

Remedy: Please change your PLC-Project.

A00D07FD-Attributes Display: A00D07FD

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

Message, 07FE

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: A smaller value than the lower range bounds was assigned to a subrange type (unsigned) variable.

Example:

Declaration:

```
ui1: UINT (10..20);
```

Implementation:

```
LD 5
ST ui1
```

The value of variable ui1 has been corrected to the minimum admissible value.

Remedy: Please change your PLC-Project.

A00D07FE-Attributes Display: A00D07FE

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

Message, 07FF

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: A bigger value than the upper range bounds was assigned to a subrange type (unsigned) variable.

Example:

Declaration:

```
ui1 : UINT (5...20);
```

Implementation:

```
LD 100
ST ui1
```

The value of variable ui1 has been corrected to the maximum admissible value.

Remedy: Please change your PLC-Project.

A00D07FF-Attributes Display: A00D07FF

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

Message, 0800

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: A smaller value than the lower range bounds was assigned to a subrange type (signed) variable.

Example:

Declaration:

```
i1 : INT (5...20);
```

Implementation:

```
LD 1
ST i1
```

The value of variable i1 was corrected to the minimum admissible value.

Remedy: Change your PLC-Project.

A00D0800-Attributes Display: A00D0800

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

Message, 0801

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: A bigger value than the upper range bounds was assigned to a subrange type (signed) variable.

Example:

Declaration:

```
i1 : INT (5...20);
```

Implementation:

```
LD 100
ST i1
```

The value of variable i1 was corrected to the maximum admissible value.

Lösung: Change your PLC-Project.

A00D0801-Attributes Display: A00D0801

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

Message, 0802

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: By a division of a LREAL-Variable should be divided by zero. The divisor was corrected to value 1.0.

Remedy: Change your PLC-Project.

A00D0802-Attributes Display: A00D0802

A00D0803 - Invalid pointer access (address) - Pointer to a dummy!

Message, 0803

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: In the PLC-Project was tried to access a variable via pointer at which the access was outside the valid memory range of the PLC.

The pointer access was executed on a dummy variable.

Remedy: Change your PLC-Project.

A00D0803-Attributes Display: A00D0803

A00D0804 - Invalid pointer access (area) - Pointer to a dummy!

Message, 0804

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: In the PLC-Project was tried to access a variable via pointer. The access would be outside the reserved memory range for this variable.

The pointer access was executed on a dummy variable.

Remedy: Change your PLC-Project.

A00D0804-Attributes Display: A00D0804

A00D0805 - Invalid pointer access (Write on input)- Pointer to a dummy!

Message, 0805

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network.

Cause: In the PLC-Project was tried to write on an input variable via a pointer.

Example:

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 on a dummy variable.

Remedy: Change your PLC-Project.

A00D0805-Attributes Display: A00D0805

A00D0806 - Invalid pointer access (alignment) - Pointer to a dummy!

Message, 0806

By the integration of library RIL_CheckRtv.lib an error was detected at the runtime of the PLC-Project and the PLC was stopped.

The occurred error is specified by an error message in the programming user interface IndraLogic. It can be localized by menu item "Call-up hierarchy" if the compiler option "Debugging" is activated.

In the call-up hierarchy the network is indicated which follows on the error-causing network..

Cause: In the PLC-Project was tried to access a variable via pointer at which the alligment do not match.

The access was executed on a dummy variable.

Remedy: Change your PLC-Project.

A00D0806-Attributes Display: A00D0806

A00D1200 - WriteParameter, inputs do not fit to attribute of parameter

Message, 1200

The error was generated by a block listed below, because kind of parameter (list- or single parameter) or type REAL, DINT do not agree with the input of the block.

Cause: The access violation occur when writing a parameter datum, if the wrong function block was selected.

Remedy: Check the type of the block according to your desired parameter.

Writing of parameters:

	DINT	REAL	List of parameters
MB_WriteParameter	X		
MB_WriteRealParameter		X	
MB_WriteListParameter			X

A00D1200-Attributes Display: A00D1200

A00D1201 - WriteParameter, inputs do not fit to attribute of parameter

Message, 1201

The error was generated by a block listed below, because kind of parameter (list- or single parameter) or type REAL, DINT do not agree with the input of the block.

Cause: The access violation occur when writing a parameter datum, if the wrong function block was selected.

Remedy: Check the type of the block according to your desired parameter.

Writing of parameters:

	DINT	REAL	List of parameters
MB_WriteParameter	X		
MB_WriteRealParameter		X	
MB_WriteListParameter			X

A00D1201-Attributes Display: A00D1201

A00D1202 - WriteParameter, inputs do not fit to attribute of parameter

Message, 1202

The error was generated by a block listed below, because kind of parameter (list- or single parameter) or type REAL, DINT do not agree with the input of the block.

Cause: The access violation occur when writing a parameter datum, if the wrong function block was selected.

Remedy: Check the type of the block according to your desired parameter.

Writing of parameters:

	DINT	REAL	List of parameters
MB_WriteParameter	X		
MB_WriteRealParameter		X	
MB_WriteListParameter			X

A00D1202-Attributes Display: A00D1202

A00D1203 - WriteParameter, inputs do not fit to attribute of parameter

Message, 1203

The error was generated by a block listed below, because kind of parameter (list- or single parameter) or type REAL, DINT do not agree with the input of the block.

Cause: The access violation occur when writing a parameter datum, if the wrong function block was selected.

Remedy: Check the type of the block according to your desired parameter.

Writing of parameters:

	DINT	REAL	List of parameters
MB_WriteParameter	X		
MB_WriteRealParameter		X	
MB_WriteListParameter			X

A00D1203-Attributes Display: A00D1203

A00D1204 - WriteParameter, parameter types are not supported

Message, 1204

The error was generated by a block listed below, because kind of parameter (list- or single parameter) or type REAL, DINT do not agree with the input of the block.

Cause: The access violation occur when writing a parameter datum, if the wrong function block was selected.

Remedy: Check the type of the block according to your desired parameter.

Writing of parameters:

	DINT	REAL	List of parameters
MB_WriteParameter	X		
MB_WriteRealParameter		X	
MB_WriteListParameter			X

A00D1204-Attributes Display: A00D1204

A00D2EE0 - Nonconforming Inline IO Configuration

Message, 2EE0

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

Cause: This error message may have two causes: either the configuration projected in IndraWorks is incorrect, or the wrong inline modules are connected to the control.

Remedy: If the projected configuration of the Inline io bus in IndraWorks is incorrect, correct these settings and load it into the control.

If wrong inline io modules are connected to the control, switch off the control and plug the proper inline modules to the control.

A00D2EE0-Attributes Display: A00D2EE0

A00E0001 - No entry found in data base

Message, 0001

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

Remedy: Please contact the service.

A00E0001-Attribute Display: A00E0001

A00E0002 - OK

Message, 0002

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

A00E0002-Attribute Display: A00E0002

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

Message, 0001

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was stopped.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200001-Attribute Display: P0 STOP

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

Message, 0002

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was stopped.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200002-Attribute Display: P1 STOP

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

Message, 0003

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was stopped.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200003-Attribute Display: P2 STOP

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

Message, 0004

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was stopped.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200004-Attribute Display: P3 STOP

A0200005 - BB STOP, Motion ready, PLC in stop

Message, 0005

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was stopped.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200005-Attribute Display: BB STOP

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

Message, 0006

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was started.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be stopped e.g. via IndraWorks.

A0200006-Attribute Display: P0 RUN

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

Message, 0007

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was started.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be stopped e.g. via IndraWorks.

A0200007-Attribute Display: P1 RUN

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

Message, 0008

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was started.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be stopped e.g. via IndraWorks.

A0200008-Attribute Display: P2 RUN

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

Message, 0009

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was started.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be stopped e.g. via IndraWorks.

A0200009-Attribute Display: P3 RUN

A0200010 - BB RUN, Motion ready, PLC in run

Message, 0010

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was started.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be stopped e.g. via IndraWorks.

A0200010-Attribute Display: BB RUN

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

Message, 0011

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC get still initialized.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200011-Attribute Display: P0 INIT

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

Message, 0012

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC get still initialized.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200012-Attribute Display: P1 INIT

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

Message, 0013

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC get still initialized.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200013-Attribute Display: P2 INIT

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

Message, 0014

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC get still initialized.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200014-Attribute Display: P3 INIT

A0200015 - BB INIT, Motion ready, PLC in init

Message, 0015

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC get still initialized.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200015-Attribute Display: BB INIT

A0200016 - Firmware download successfully finished

Message, 0016

Download of the firmware successfully completed.

Cause: The new firmware was downloaded successfully. The system is now ready for reboot. Only by a reboot the downloaded firmware is also activated.

Remedy: -

A0200016-Attributes Display: A0200016

A0200017 - Hardware changed; Restoring nvRAM

Message, 0017

A hardware change took place, i.e. the MLC-Parameters and PLC-RETAIN-Data stored on the Compact-Flash-Karte (CF) are unequal the MLC-Parameters and PLC-RETAIN-Data stored in the NVRAM of the MLC-Hardware.

Therefore the parameter C-0-1001 was executed automatically during the bootup after a hardware change.

Thereby all stored data in the flash and NVRAM and also the internal stored data, e.g. axis position, are overwritten by values which have been stored at the last execution of command "Command: Store Motion Control Parameter in FW-Module" (C-0-1002) (possibly for this see parameter documentation for C-0-1001 resp. C-0-1002).

Cause: A hardware change took place.

Remedy: -

A0200017-Attributes Display: A0200017

A0200018 - Restoring nvRAM

Message, 0018

The nvRAM was manually restored via parameter C-0-1001. Thereby all stored data in the flash and NVRAM and also the internal stored data, e.g. axis position, are overwritten by values which have been stored at the last execution of command "Command: Store Motion Control Parameter in FW-Module" (C-0-1002) (possibly for this see parameter documentation for C-0-1001 resp. C-0-1002).

After execution of this command a reboot is required.

Cause: The nvRAM was manually restored via parameter C-0-1001.

Remedy: -

A0200018-Attributes Display: A0200018

E00B0005 - Drive warning

Warning, 0005

Alternatively to an error, the drive may cause in less critical cases a warning (or message).

The warning remain obtained independent by an error clearing and disappear only, if the cause of its appearance does no longer exist.

A warning is recognized at "Diagnosis status word" (C-0-0650, Bit 1) and "MC system configuration" (C-0-0023, Bit 25), the warning bit is set in each case.

Cause: At least one drive reports a warning.

Remedy: With drives of own manufacturing you get a corresponding Online-Help. With external drives please use the documentation of the drive.

E00B0005-Attribute Display: E00B0005

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

Warning, 0001

A hardware change takes places, i.e. the MLC-Parameter and PLC-RETAIN-Data stored on the compact flash (CF) are unequal to the MLC-Parameter and PLC-RETAIN-Data stored in the NVRAM of the MLC-Hardware.

For this reason, parameter C-0-1001 is automatically executed during bootup after a hardware change.

All stored data on the flash and NVRAM as well as internal stored values, e. g. axis position, get overwritten by values, which were stored at the last execution of command "Command: Store motion control parameters in FW-module" (C-0-1002) (for this see possibly the parameter documentation of C-0-1001 resp. C-0-1002).

Note: After execution of this command, automatically a reboot of the system for take-over of the new system data is performed.

Cause: A hardware change takes place

Remedy: -

E00C0001-Attribute Display: E00C0001

E00C0002 - running on unsupported hardware

Warning, 0002

The MLC-Firmware is operated on an unsupported hardware. This may result in unexpected system conditions till to a system crash with lost of all MLC-Parameters and PLC-RETAIN-Data.

Cause: An unsupported hardware is used.

Remedy: Please change to a supported hardware.

E00C0002-Attribute Display: E00C0002

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

Warning, 1001

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 Indra-Works by a valid parameter unequal (S-0-0000).
2. Or remove the access from the PLC-Program.

E00D1001-Attribute Display: E00D1001

E00E0026 - Version conflict in error logbook, logbook deleted!

Warning, 0026

The error memory (diagnosis logbook) is provided with a version.

During the system start is checked whether the error memory version is compatible to the firmware version.

If the version is not compatible, the logbook is cleared; this means that all old entries get lost.

The system goes on working normally.

Cause: Firmware update, firmware downgrade, the new firmware doesn't support the found version of the error memory.

Remedy: None.

Not required, only the old entries get lost.

E00E0026-Attributes Display: E00E0026

E0110001 - Axis in 'PowerOn'

Warning, 0001

The control is to be switched from operating mode to parameter mode, while an axis is in condition "Power turned on".

Cause: An axis is in condition "Power turned on".

Remedy: Bring up axis by MC_Power to the condition "No power turned" (parameter "Extended axis status" (A-0-0022, bit 3= 0)).

E0110001-Attributes Display: E0110001

E0110002 - Axis not in 'StandStill'

Warning, 0002

The control is to be switched from operating mode to parameter mode, while an axis is not in condition "Axis velocity <= A-0-0222 Standstill window" ("Axis status" (A-0-0021, bit 5).

Cause: An axis reports not "Axis velocity <= A-0-0222 Standstill window".

Remedy: Bring up axis to standstill or adjust parameter "Standstill window" (A-0-0222).

E0110002-Attributes Display: E0110002

E0110029 - Positive travel limit exceeded

Warning, 0029

The drive provides a function for monitoring an allowed travel range by means of software limit switches that can be parameterized.

Note: The travel range monitor has to be activated and parameterized via **Positive position limit value (A-0-0030)**, **Negative position limit value (A-0-0031)** and **Position polarities (A-0-0029)**.

The drive reaction (warning or error) in case the travel range is exceeded has to be parameterized in **Travel range limit parameter (A-0-0028)**.

Cause	Remedy
Command value set for drive causes axis position outside of negative travel range/position limit value **Positive position limit value (A-0-0030)**	Set command value that leads back to the allowed travel range Contact machine manufacturer in order to clarify cause of incorrect command value
Positive position limit value (A-0-0030) incorrectly parameterized	Check and, if necessary, correct parameterization of **Positive position limit value (A-0-0030)**

Note: The **Position window (A-0-2795)** parameter is used to realize a hysteresis function for evaluating the position limit values.

See also Functional Description "Position Limitation/Travel Range Limit Switch"

E0110029-Attributes Display: E0110029

E0110030 - Negative travel limit exceeded

Warning, 0030

The drive provides a function for monitoring an allowed travel range by means of software limit switches that can be parameterized.

Note: The travel range monitor has to be activated and parameterized via **Positive position limit value (A-0-0030)**, **Negative position limit value (A-0-0031)** and **Position polarities (A-0-0029)**.

The drive reaction (warning or error) in case the travel range is exceeded has to be parameterized in **Travel range limit parameter (A-0-0028)**.

Cause	Remedy
Command value set for drive causes axis position outside of negative travel range/position limit value **Negative position limit value (A-0-0031)**	Set command value that leads back to the allowed travel range Contact machine manufacturer in order to clarify cause of incorrect command value
Negative position limit value (A-0-0031) incorrectly parameterized	Check and, if necessary, correct parameterization of **Negative position limit value (A-0-0031)**

Note: The **Position window (A-0-2795)** parameter is used to realize a hysteresis function for evaluating the position limit values.

See also Functional Description "Position Limitation/Travel Range Limit Switch"

E0110030-Attributes Display: E0110030

E0110050 - Axis position is extrapolated

Warning, 0050

Link axes offer the functionality to extrapolate the axis position at AT- resp. MDT- Loss. This warning indicates that such extrapolation takes place. After how much cycles the diagnosis is displayed depends on the cycletime of the link. This means that the warning is displayed if the axis has extrapolated for a time of 32 ms:

Cycletime in the link	Cycles with AT/MDT-Loss till the diagnosis is displayed
2000 µs	16
4000 µs	8
8000 µs	4

Dependency cycletime for displaying the diagnosis

Cause	Remedy
MDT- resp. AT-Loss on the link ring	Check the cabling of the link ring. Check parameter "MLC-Link – Configuration LWL-Length" (C-0-0702)
Ring break of the link ring	Correct the ring break on the link ring

E0110050-Attributes Display: E0110050

E0112039 - Maximum acceleration exceeded

Warning, 2039

The specified acceleration at the function block is checked against a maximum value ("Bipolar acceleration limit" (A-0-0034)).

Cause: A too less value in "Bipolar acceleration limit" (A-0-0034).

The acceleration presetting was greater than the parameterized value in "Bipolar acceleration limit" (A-0-0034).

Remedy: Check parameterizing of "Bipolar acceleration limit" (A-0-0034) and correct it, if necessary.

Reduce the used acceleration value.

E0112039-Attributes Display: E0112039

E0112047 - Velocity of interpolation = 0

Warning, 2047

At discrete movements the programmed velocity is checked.

Cause: The specified velocity is 0.

Remedy: Adjust the velocity to the desired value

E0112047-Attributes Display: E0112047

E0112048 - Acceleration of interpolation = 0

Warning, 2048

At discrete movements the programmed velocity is checked.

Cause: The specified velocity is 0.

Remedy: Adjust the velocity to the desired value

E0112048-Attributes Display: E0112048

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

Warning, 2049

The effective velocity command value (positioning velocity) is limited to the parameterized value "Positive velocity limit" (A-0-0032) or "Negative velocity limit" (A-0-0033).

Cause: Incorrect velocity presetting (the predetermined value in the program is too large).

The "Positive velocity limit" (A-0-0032) or "Negative velocity limit" (A-0-0033) is parameterized incorrect.

Remedy: Adjust the programmed acceleration to the desired value

Check content of parameter "Positive velocity limit" (A-0-0032) or "Negative velocity limit" (A-0-0033)

E0112049-Attributes Display: E0112049

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

Warning, 2063

The commanded velocity is limited to the parameterized value "Positive velocity limit" (A-0-0032) or "Negative velocity limit" (A-0-0033).

Cause: Incorrect predetermined velocity (the predetermined value in the programm is too large).

The "Positive velocity limit" (A-0-0032) or "Negative velocity limit" (A-0-0033) is parameterized incorrect.

Remedy: Adjust the programmed acceleration to the desired value

Check content of parameter "Positive velocity limit" (A-0-0032) or "Negative velocity limit" (A-0-0033)

E0112063-Attributes Display: E0112063

E0170001 - Configured master axis is parking

Warning, 0001

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 **Axis condition (A-0-0024)** of the according axis to 0 so that the axis is parked no longer.

E0170001-Attributes Display: E0170001

E0200000 - Usable memory (RAM) near minimum

Warning, 0000

The available user memory (RAM) is near minimum. This may result in a critical system condition, because other operations in the system, which

nead memory, possibly cannot be performed. For example, no communication to the drives may be performed.

Cause:
- An error in the PLC-User program, in which always memory is allocated, but never is released again.
- An error in the firmware.

Remedy: 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.

If after accurate analysis the problem still exist, please contact the service.

E0200000-Attributes Display: E0200000

E0200001 - Usable memory (CF) near minimum

Warning, 0001

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

Cause:
- Too many, resp. too large projects are stored on the control (CompactFlash)
- Too large PLC-User programs (possibly also defective by reason of the size) have been stored

Remedy: Check the PLC-User program, resp. the project(s) for this kind of errors, resp. delete the too many/incorrect saved projects.

If after accurate analysis the problem still exist, please contact the service.

E0200001-Attributes Display: E0200001

E0200002 - Temperature warning

Warning, 0002

A temperature of 60.0°C (140°F) was exceeded.

This bit will be cleared if the temperature falls below 55°C (131°F).

See also diagnosis "F9200023; Critical Temperatur reached; processor will stop"

Cause:
- The control was mounted at a place without sufficient ventilation.
- At a mounting place without sufficient ventilation, no cooler was assembled to the control.

Remedy: Make sure to have sufficient ventilation or mount a cooler.

E0200002-Attributes Display: E0200002

E0200003 - CPU-Load critical

Warning, 0003

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.

E0200003-Attributes Display: E0200003

F0020001 to F0050013, RTOS-Error

A none fatal internal firmware error occured.

Cause: In the firmware an error occured.

Remedy: Stop the machine manually in the common way and switch off/on the control. If the error is still displayed, please contact the service.

F0070001 - Size of parameter changed

None 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).

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.

F0070001-Attribute Display: F0070001

F00A0001 - Parameter write-error during import, see C-0-0114

None fatal error, Other_Error

With parameter "C-0-1011, Command: Import parameter" the parameter import was activated by a par-file.

At this minimum one parameter could not be written. The list of the aborted parameters can be checked with parameter "C-0-0114, IDN-List of the import errors".

Cause: Possibly the par-file was edited manually; at this an error could be creeped in.

Remedy: Correct the error and repeat the import or correct faulty parameters manually.

F00A0001-Attributes Display: F00A0001

F00A0002 - Import/Export: file could not be opened

None fatal error, Other_Error

With parameter "C-0-1011, Command: Import parameter" the parameter import was activated by a par-file. The required par-file could not be found.

Cause: No export was executed or the

file was deleted

Remedy: Create a new file.

F00A0002-Attributes Display: F00A0002

F00A0003 - Import/Export: unknown parameter type

None fatal error, Other_Error

With parameter "C-0-1011, Command: Import parameter" " the parameter import was activated by a par-file. Parameter types are used in the file that are not supported by the control.

Cause: Possibly the par-file was created with another MLC-Firmware-Version.

Remedy: Delete according parameter in the file.

F00A0003-Attributes Display: F00A0003

F00A0004 - Import: length of line in import file exceeded maximum

None fatal error, Other_Error

With parameter "C-0-1011, Command: Import parameter" " the parameter import was activated by a par-file.

Cause: In the file is at least one parameter whose line length is more largely than 999 characters.

Remedy: Delete according parameter in the file and enter parameter manually.

F00A0004-Attributes Display: F00A0004

F00A0005 - Import/Export: unsupported Sercos parameter format

None fatal error, Other_Error

With parameter "C-0-1011, Command: Import parameter" " the parameter import was activated by a par-file.

Cause: The file contains at least one parameter whose parameter format (e.g. 8-Byte parameter) is not supported.

Remedy: Delete according parameter in the file and enter parameter manually.

F00A0005-Attributes Display: F00A0005

F00B0003 - Fiber optic ring not closed

None fatal error, System_Error

After switch on of the control, the SERCOS-Ring is not closed. The control cannot receive 10 consecutive MST-Telegrams of phase 0.

Cause:

- Fiber optic cable interchanged or not correctly screwed.
- Defect fiber optic cable ring.
- Data rates of the drives and control adjusted different
- The optical transmitting power of the control "Drive bus fiber optic length" (C-0-0502) or one of the participants in the SERCOS interface ring is adjusted incorrect.
- Defect drive.
- The power supply of the drives has been switched on after run up of the Controller.

Remedy:

- Check all fiber optic cable.
- Check data rate.
- Adjust optical transmitting power of all participants at the SERCOS-Ring to the actual LWL-Length.
- The power supply of the drives should be switched on before run up of the controller.

F00B0003-Attribute Display: F00B0003

F00B0005 - Drive error

None fatal error, System_Error

If drives of other manufacturers are used, so the drive diagnosis are not administrated by the MLC-Diagnosis system.

An error is recognized at "Diagnosis status word" (C-0-0650, Bit 2) and "MC System configuration" (C-0-0023, Bit 26), the error bit is set in each case.

Cause: Alt least one drive reports an error of error class 1.

Remedy: Please contact the drive manufacturer, or for corresponding actions see the documentation of the drive.

F00B0005-Attribute Display: F00B0005

F00B0006 - Progression to phase 3 not possible

None fatal error, System_Error

The control cannot perform the switching from parameter mode to SERCOS phase 3.

Cause: At least one drive denied the switching to phase 3.

Remedy: Correct the error in the corresponding drive.

F00B0006-Attribute Display: F00B0006

F00B0007 - Progression to state ready not possible

None fatal error, System_Error

The control cannot perform the switching from parameter mode to operating mode.

Cause: At least one drive denied the switching to operating mode.

Remedy: Correct the error in the corresponding drive.

F00B0007-Attribute Display: F00B0007

F00B0008 - Drive not found

None fatal error, Other_Error

The control checks the listed drive addresses in parameter C-0-0484, Axes configuration list with the actually found drives.

Address settings up to maximal 40 are permitted.

Cause: At least one drive was not found.

Remedy: Correct the axes configuration.

F00B0008-Attribute Display: F00B0008

F00B0009 - Maximum number of drives exceeded

None fatal error, System_Error

The number of drives is limited by the communication via SERCOS.

Cause: At least one drive denied the switching to phase 3.

Remedy: Correct the error in the corresponding drive.

F00B0009-Attribute Display: F00B0009

F00B0013 - MC cycletime too less

None fatal error, System_Error

The control adjusts the cycle time selected in parameter "Desired MC cycle time (Tcyc)" (C-0-0400).

Cause: The adjusted cycle time cannot be realized.

Remedy: Increase the adjusted cycle time in "Desired MC cycle time (Tcyc)" (C-0-0400)

Decrease the number of drives.

F00B0013-Attribute Display: F00B0013

F00B0014 - Parameter write protected by password

None fatal error, Access_Error

While switching from parameter mode to operating mode the control must set several parameters in the drive.

Cause: The to be set parameters are write protected in the drive.

Remedy: Remove write protection in the corresponding drive.

F00B0014-Attribute Display: F00B0014

F00B0090 - RTOS error (Real Time Operating System)

None fatal error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F00B0090-Attributes Display: F00B0090

F00B0098 - Cannot write on parameter S-0-0015

None fatal error, System_Error

While switching from parameter mode to operating mode the control must set parameter "Telegram type parameters" (S-0-0015) in the drive.

Cause: The parameter in the drive cannot be write.

Remedy: Remove write protection in the corresponding drive.

F00B0098-Attribute Display: F00B0098

F00B0099 - Cannot write on parameter S-0-0016

None fatal error, System_Error

While switching from parameter mode to operating mode the control must set parameter "Configuration list DT" (S-0-0016) in the drive.

Cause: The parameter in the drive cannot be write.

Remedy: Remove write protection in the corresponding drive.

F00B0099-Attribute Display: F00B0099

F00B0100 - Cannot write on parameter S-0-0024

None fatal error, System_Error

While switching from parameter mode to operating mode the control must set parameter "Configuration list MDT" (S-0-0024) in the drive.

Cause: The parameter in the drive cannot be write.

Remedy: Remove write protection in the corresponding drive.

F00B0100-Attribute Display: F00B0100

F00B0101 - Cannot write on parameter S-0-0007

None fatal error, System_Error

While switching from parameter mode to operating mode the control must set parameter "Measuring time actual values (T4)" (S-0-0007) in the drive.

Cause: The parameter in the drive cannot be write.

Remedy: Remove write protection in the corresponding drive.

F00B0101-Attribute Display: F00B0101

F00B0102 - Cannot read time slot parameter

None 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.

F00B0102-Attribute Display: F00B0102

F00B0103 - Cannot read time slot parameter

None 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-Attribute Display: F00B0103

F00B0104 - Cannot write on time slot parameter

None 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.

F00B0104-Attribute Display: F00B0104

F00B0105 - Cannot write on time slot parameter

None 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.

F00B0105-Attribute Display: F00B0105

F00B7010 - Command already set

None fatal error, Access_Error

By program processed function blocks, partial commands in the drive are used (e.g. "Command drive-controlled referencing" (S-0-0148)). 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.

F00B7010-Attribute Display: F00B7010

F00C0001 - Error while setting module references

None fatal error, System_Error

An internal firmware error occured. The boot sequence was aborted.

Cause: An error occured in the firmware.

Remedy: Please contact the service.

F00C0001-Attribute Display: F00C0001

F00C0003 - Error in power up delay

None fatal error, System_Error

An internal firmware error occured. 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 occured in the firmware.

Remedy: Please contact the service.

F00C0003-Attribute Display: F00C0003

F00C0004 - Error while switching to power up target mode

None fatal error, System_Error

An internal firmware error occured. 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 occured 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.

F00C0004-Attribute Display: F00C0004

F00D1002 - Cyclic position channel already open

None fatal error, Access_Error

A cyclical setpoint channel for an axis was opened by function block ML_OpenCyclicPositionChannel, but the channel was already opened for an axis.

Cause: Multiple opening of the cyclical setpoint channel for an axis.

Remedy: Avoid in the PLC-Program that the cyclical setpoint channel could be opened multiple.

F00D1002-Attributes Display: F00D1002

F00D100A - Error while reading C-0-0483

None fatal error, Access_Error

The parameter "List of configured axes" (C-0-0483) could not be read.

Cause: An error occured in the firmware.

Remedy: Please contact the service.

F00D100A-Attributes Display: F00D100A

F00D100B - Error while reading C-0-0484

None fatal error, Access_Error

The parameter "Axes configuration list" (C-0-0484) could not be read.

Cause: An error occured in the firmware.

Remedy: Please contact the service.

F00D100B-Attributes Display: F00D100B

F00D100C - Error while opening cyclic channel

None 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 which cannot be opened cyclical.

Remedy: Check the configured user-defined actual value.

F00D100C-Attributes Display: F00D100C

F00D100D - Error while opening cyclic channel

None fatal error, Access_Error

The cyclic channel for the configured, user-defined parameter could not be opened.

Cause: A user-defined commanded value A, B, C or D was configured in Indra-Works which cannot be opened cyclical.

Remedy: Check the configured user-defined commanded value.

F00D100D-Attributes Display: F00D100D

F00D1014 - No reference for opening cyclic channel available

None fatal error, Access_Error

A firmware error occured.

Cause: An error occured in the firmware.

Remedy: Please contact the service.

F00D1014-Attributes Display: F00D1014

F00D1016 - Wrong #-address of axis data

None 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.

F00D1016-Attributes Display: F00D1016

F00D1017 - Wrong #-address of axis data

None 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-Attributes Display: F00D1017

F00D1018 - Wrong #-address of axis data

None 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-Attributes Display: F00D1018

F00D1019 - Error while closing cyclic channel

None fatal error, Communication_Error

A firmware error occured.

Cause: An error occured in the firmware.

Remedy: Please contact the service.

F00D1019-Attributes Display: F00D1019

F00D1027 - Error closing cyclic channel

None fatal error, Communication_Error

An internal firmware error occured when closing the cyclic channel for AT-Data.

Cause: Firmware error.

Remedy: Please contact the service.

F00D1027-Attributes Display: F00D1027

F00D102A - ListParameter requested, ReadParameter

None fatal error, Device_Error

This error occured, because with function blocks MB_Read-Parameter or MB_ReadRealParameter an access to a list parameter takes place.

Cause: Access error, wrong function block for list parameter

Remedy: For reading list parameters, please use function block MB_Read-List-Parameter.

F00D102A-Attributes Display: F00D102A

F00D1030 - Error closing cyclic channel

None fatal error, Communication_Error

At closing the cyclic channel for MTD-Data, an internal firmware error occured.

Cause: Firmware error.

Remedy: Please contact the service.

F00D1030-Attributes Display: F00D1030

F00D103B - Invalid control number

None fatal error, Input_Invalid_Error

A varibale of type 'AXIS_REF' is used in the PLC-Program, which address an axis in a remote control. In the existing firmware version only the access to axes of the local control is supported.

Cause: In the PLC-Program an axis of a remote control was addressed.

Remedy: Actualize the PLC-Program.

F00D103B-Attributes Display: F00D103B

F00D103C - Invalid axis number

None fatal error, Input_Invalid_Error

A variable of type 'AXIS_REF' is used in the PLC-Program, which address an unknown axis in the control.

Cause: In the PLC-Program an unknown axis was addressed.

Remedy: Actualize the PLC-Program or configure the missing axis in the control (see parameter "Axes configuration" C-0-0484).

F00D103C-Attributes Display: F00D103C

F00D1205 - Error ReadListParameter, cannot handle a single parameter

None fatal error, System_Error

This error occured, because with function block MB_ReadList-Parameter an access to a single parameter takes place.

Cause: Access error, wrong function block for single parameter

Remedy: For reading single parameters, please use function block MB_ReadParameter or MB_ReadRealParameter.

F00D1205-Attributes Display: F00D1205

F00D1207 - Error WriteListParameter, data greater 64KBytes

None fatal error, System_Error

This error occured, because with function block MB_WriteList-Parameter it was tempted, to write more than 65532 Byte data to a list parameter.

Cause: The possible write data to a list parameter are generally limited to 65532 Byte. At selected list parameters the limit may be lower.

Remedy: Please notice, that it is not possible, to write more than 65532 Byte data to a list parameter. Reduce the corresponding input parameter of the block, which represents the number of to be write bytes.

F00D1207-Attributes Display: F00D1207

F00D1210 - Error WriteListParameter, cannot handle a single parameter

None fatal error, System_Error

This error occured, because with function block MB_WriteList-Parameter an access to a single parameter takes place.

Cause: Access error, wrong function block for single parameters

Remedy: For writing single parameters, please use function block MB_WriteParameter or MB_WriteRealParameter.

F00D1210-Attributes Display: F00D1210

F00D1211 - Error ReadSercosDataStatus, no memory available

None fatal error, System_Error

This error occurred with the function block MB_ReadSercosDataStatus when reading the data of a parameter.

Cause: This firmware error occurs when reading the parameter datum.

Remedy: If the error appears again at the attempt to read the parameter, please inform the customer service.

F00D1211-Attributes Display: F00D1211

F00D1218 - Error ReadStringParameter, no memory available

None fatal error, Access_Error

This error occurred with the function block MB_ReadStringParameter when reading data of a parameter.

Cause: This firmware error occurs when reading a parameter datum.

Remedy: If the error appears again at the attempt to read the parameter, please inform the customer service.

F00D1218-Attributes Display: F00D1218

F00D1219 - Error ReadStringParameter, cannot handle a single parameter

None fatal error, Access_Error

This error occurred because there was an access to a single parameter by function block "MB_ReadStringParameter".

Cause: Access error, wrong function block for single parameters.

Remedy: Please use "MB_ReadParameter" or "MB_ReadRealParameter" for reading single parameters.

F00D1219-Attributes Display: F00D1219

F00D1222 - Error WriteStringParameter, too many data to transmit

None fatal error, Access_Error

This error occurred because with function block "MB_WriteStringParameter" was tried to write more than 255 Byte data on a single parameter.

Cause: The data writeable on a string parameter are limited generally to 255 bytes of data. With selected string parameters the limit can be still lower.

Remedy: Please, pay attention that it is not possible to write more than 255 bytes of data on a string parameter. Reduce the number of bytes.

F00D1222-Attributes Display: F00D1222

F00D1224 - Error WriteStringParameter, no memory available

None fatal error, Access_Error

This error occurred with function block MB_WriteStringParameter when writing the data of a parameter.

Cause: This firmware error occurs when writing a parameter datum.

Remedy: If the error appears again at the attempt to write the parameter, please inform the customer service.

F00D1224-Attributes Display: F00D1224

F00D1225 - Error WriteStringParameter, cannot handle a single parameter

None fatal error, Access_Error

This error occurred because with function block "MB_WriteString Parameter" was tried to write a single parameter.

Cause: Access error, wrong function block for single parameters.

Remedy: Please use for writing single parameters "MB_WriteParameter" or "MB_WriteRealParameter".

F00D1225-Attributes Display: F00D1225

F00D1227 - Error WriteStringParameter, error writing date

None fatal error, Access_Error

This error occurred with function block "MB_WriteStringParameter" when writing a datum.

Cause: The too writing datum was wrong or was transferred wrongly. (e.g., datum too shortly transferred etc).

Remedy: Check, whether the too writing datum for this parameter is correct. If the error appears again at the attempt to write the parameter, please inform the customer service.

F00D1227-Attributes Display: F00D1227

F00D1230 - Error ReadSercosAttribute, no memory available

None fatal error, Access_Error

This error occurred with function block MB_ReadSercosAttribute when reading data of a parameter.

Cause: This firmware error occurs when reading a parameter datum.

Remedy: If the error appears again at the attempt to read the parameter, please inform the customer service.

F00D1230-Attributes Display: F00D1230

F00D2001 - Access error, axis 1

None 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.

F00D2001-Attributes Display: F00D2001

F00D2002 - Access error, axis 2

None 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-Attributes Display: F00D2002

F00D2003 - Access error, axis 3

None 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-Attributes Display: F00D2003

F00D2004 - Access error, axis 4

None 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-Attributes Display: F00D2004

F00D2005 - Access error, axis 5

None 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-Attributes Display: F00D2005

F00D2006 - Access error, axis 6

None 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-Attributes Display: F00D2006

F00D2007 - Access error, axis 7

None 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-Attributes Display: F00D2007

F00D2008 - Access error, axis 8

None fatal error, Access_Error

The axis data of the specified axis could not be written or read using direct variable access.

Cause	Remedy
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016, F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D2008-Attributes Display: F00D2008

F00D2009 - Access error, axis 9

None 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-Attributes Display: F00D2009

F00D200A - Access error, axis 10

None 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-Attributes Display: F00D200A

F00D200B - Access error, axis 11

None 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-Attributes Display: F00D200B

F00D200C - Access error, axis 12

None 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-Attributes Display: F00D200C

F00D200D - Access error, axis 13

None 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-Attributes Display: F00D200D

F00D200E - Access error, axis 14

None 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	See documentation of this errors.

F00D1018 (wrong #-Address of the axis data).	
A firmware error has occurred.	Contact the customer service.

F00D200E-Attributes Display: F00D200E

F00D200F - Access error, axis 15

None 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-Attributes Display: F00D200F

F00D2010 - Access error, axis 16

None 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-Attributes Display: F00D2010

F00D2064 - Axis not configured

None fatal error, Access_Error

The axis data of the specified axias could not be written or read using direct variable access.

Cause	Remedy
The specified axis is not (any longer) configured.	Configure the axis or remove the accesses in the PLC-Program.
There was an access on an axis parameter which is not available with this axis type.	Adapt the PLC-Program accordingly.
It is a subsequent error of F00D1016, F00D1017 or F00D1018 (wrong #-Address of the axis data).	See documentation of this errors.
A firmware error has occurred.	Contact the customer service.

F00D2064-Attributes Display: F00D2064

F00F0001 to F00F0006, RTOS error (Real Time Operating System)

A non-fatal internal firmware error occured.

Cause: An error occured 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.

F0110001 - No power turned

None fatal error, Other_Error

For executing MC_Power the power must be switched on.

Cause: The function block MC_Power was executed without switched on power.

Remedy: Switch on power by the supply unit of the drive controllers, start the block again.

F0110001-Attributes Display: F0110001

F0140001 - Error in drive configuration

None fatal error, Other_Error

When switching the Sercos-Phase from

- P0 to P2 or
- P2 to P4, as well as

after writing parameter C-0-0478 "Drive configuration" the drives configured in parameter C-0-0478 are compared with the drives detected at the Sercosring. In this connection an error has appeared.

Cause	Remedy
If a drive is parameterized in parameter C-0-0478 and is active or parked, the following verifications are executed:	The parameter C-0-0478 is written by Indraworks depending on the configured axes.
- Is the drive in the Sercosring	- If a drive is not available in the Sercosring, so this drive must be added or the axis must be deactivated.
- Is the drive firmware version similar	- If the drive firmware is wrong, or
- Is the function package similar	- if the function package is wrong,
If at least one verification fails	**so the axis must be reconfigured in Indraworks.**

F0140001-Attributes Display: F0140001

F0160001 to F0160002, RTOS error (Real Time Operating System)

A non-fatal internal firmware error occured.

Cause: An error occured 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.

F0160003 - Error while changing to P0

None 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 occured possibly be-fore
- an internal firmware error occured

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160003-Attributes Display: F0160003

F0160004 - Error while changing to P0

None 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 occured possibly be-fore

- an internal firmware error occured

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160004-Attributes Display: F0160004

F0160005 - Error while changing to P2

None 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 occured possibly before
- an internal firmware error occured

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160005-Attributes Display: F0160005

F0160006 - Error while changing to P2

None 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 occured possibly before
- an internal firmware error occured

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160006-Attributes Display: F0160006

F0160008 - Error while changing to P3

None 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 occured possibly before (e.g. see S-0-0095)
- an internal firmware error occured

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160008-Attributes Display: F0160008

F0160009 - Error while changing to P3

None 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 occured possibly before (e.g. see S-0-0095)
- an internal firmware error occured

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160009-Attributes Display: F0160009

F0160010 - Error while changing to P3

None 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 occured possibly before (e.g. see S-0-0095)
- an internal firmware error occured

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160010-Attributes Display: F0160010

F0160011 - Error during preparation for changing to P2

None 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 occured possibly be-fore
- an internal firmware error occured

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160011-Attributes Display: F0160011

F0160012 - Error while changing to BB

None 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 occured possibly be-fore
- an internal firmware error occured

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160012-Attributes Display: F0160012

F0160013 - Error while changing to BB

None 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 occured possibly be-fore
- an internal firmware error occured

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160013-Attributes Display: F0160013

F0160014 - Error while changing to BB

None 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 occured possibly be-fore
- an internal firmware error occured

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160014-Attributes Display: F0160014

F0160015 to F0160023, RTOS-Error

A non-fatal internal firmware error occured.

Cause: An error occured 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.

F0160024 - Error in cross check C parameters

None fatal error, System_Error

At the cross check of the C-Parameters an invalid combination/an invalid min/max-value or similar, occured.

Cause: Possible causes e.g.:

- Min-/max-values are exceeded, resp. under-run
- invalid parameter combinations are detected

Remedy: Call parameter C-0-0111 and check the listed parameters.

F0160024-Attribute Display: F0160024

F0160025 - Error in cross check A parameters

None fatal error, System_Error

At the cross check of the C-Parameters an invalid combination/an invalid min/max-value or similar, occured.

Cause: Possible causes e.g.:

- Min-/max-values are exceeded, resp. under-run
- invalid parameter combinations are detected

Remedy: Call parameter A-0-0011 and check the listed parameters.

F0160025-Attribute Display: F0160025

F0160026 to F0160029, RTOS-Error

A non-fatal internal firmware error occured.

Cause: An error occured 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.

F0160032 - Error while changing to P2

None 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 occured possibly before
- an internal firmware error occured

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160032-Attributes Display: F0160032

F0160033 - Error while changing to P2

None 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 occured possibly before
- an internal firmware error occured

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160033-Attributes Display: F0160033

F0160034 - Error while changing to P3

None 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 occured possibly before (e.g. see S-0-0095)
- an internal firmware error occured

Remedy: See diagnosis logbook, correct possibly existing errors and try switching again (see C-0-0451). At unrecoverable cause please contact the service.

F0160034-Attributes Display: F0160034

F0160035 - Error during configuration of link communication

None fatal error, System_Error

The control should be switched from operation mode to parameterization mode. In this connection an error has appeared when configuring the link communication.

Cause: A configured master axis is not available as an axis in parameter **Axes configuration list (C-0-0484)**.

Remedy: Configure the used master axis in parameter **Axes configuration list (C-0-0484),** or remove the master axis in **parameter MLC-Link - Configuration Master Axes (C-0-0703)**.

F0160035-Attributes Display: F0160035

F0160036 - Error during configuration of link communication

None fatal error, System_Error

The control should be switched from operation mode to parameterization mode. In this connection an error has appeared when configuring the link communication.

Cause	Remedy
The MLC participates at the link, is configured as master and another master was detected in the MLC-Link.	Configure only one MLC as master in parameter **MLC-Link - Configuration Function modes (C-0-0701)**.
The MLC participates at the link without errors. In parameterization mode the time slice of the integrated PLC on the MC-Cycletime was increased.	Reduce parameter **time slice of the integrated PLC on the MLC Cycletime (C-0-0401**) to an uncritical value or increase the cycletime in parameters **MLC-Link – Cycletime (Tcyc) Setpoint (C-0-0700)** and **MC-Cycletime (Tcyc) Setpoint (C-0-0400)**.
The MLC participates at the link without errors. In parameterization mode the cycletime in the drive- and link ring was reduced.	Increase the cycletime in parameters **MLC-Link – Cycletime (Tcyc) Setpoint (C-0-0700)** and **MC-Cycletime (Tcyc) Setpoint (C-0-0400** to an uncritical value Or reduce parameter **time slice of the integrated PLC on the MLC Cycletime (C-0-0401)**.
The configured control address is invalid.	Configure a valid control address in parameter **Control address (C-0-0031)** without exceeding the maximum value according following table.

A valid control address must be as a function of parameter **MLC-Link-Cycletime (Tcyc) nominal value (C-0-0700)** more smally than the maximally permissible number:

Cycletime	Maximum control address
2000 µs	16
4000 µs	32
8000 µs	64

Maximum control address

F0160036-Attributes Display: F0160036

F0160037 - Error during configuration of link communication

None fatal error, System_Error

The control should be switched from operation mode to parameterization mode. In this connection an error has appeared when configuring the link communication.

Cause: A configured master axis is not available as an axis in parameter **Axes Configuration list (C-0-0484)**.

Remedy: Configure the used master axis in parameter **Axes configuration list (C-0-0484),** or remove the master axis in **parameter MLC-Link - Configuration Master Axes (C-0-0703)**.

F0160037-Attributes Display: F0160037

F01B0000 to F01D0014, RTOS-Error

A non-fatal internal firmware error occured.

Cause: An error occured 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.

F0200001 - Firmware download failed

None fatal error, System_Error

A non-fatal internal firmware error occured.

Cause: A firmware error occured.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0200001-Attributes Display: F0200001

F0200002 - Firmware download failed

None fatal error, System_Error

A non-fatal internal firmware error occured.

Cause: A firmware error occured.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0200002-Attributes Display: F0200002

F0200003 - Firmware download failed

None fatal error, System_Error

A non-fatal internal firmware error occured.

Cause: A firmware error occured.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0200003-Attributes Display: F0200003

F0200004 - Firmware download failed

None fatal error, System_Error

A non-fatal internal firmware error occured.

Cause: A firmware error occured.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0200004-Attributes Display: F0200004

F0200005 - Firmware download failed

None fatal error, System_Error

A non-fatal internal firmware error occured.

Cause: A firmware error occured.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0200005-Attributes Display: F0200005

F0200006 - Firmware download failed

None fatal error, System_Error

A non-fatal internal firmware error occured.

Cause: A firmware error occured.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0200006-Attributes Display: F0200006

F0200007 - Firmware download failed

None fatal error, System_Error

A non-fatal internal firmware error occured.

Cause: A firmware error occured.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0200007-Attributes Display: F0200007

F0200008 - Firmware download failed

None fatal error, System_Error

A non-fatal internal firmware error occured.

Cause: A firmware error occured.

Remedy: Stop the machine manually as usual and cycle power on the control. If the error persists, contact customer service.

F0200008-Attributes Display: F0200008

F0200011 to F0200022, RTOS-Error

A non-fatal internal firmware error occured.

Cause: An error occured 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.

F0220200 - General drive error

None 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.

F0220200-Attribute Display: F0220200

F0220201 - Invalid control number

None fatal error, Resource_Error

A varibale of type 'AXIS_REF' is used in the PLC-Program, which address an axis in a remote control. In the existing firmware version only the access to axes of the local control is supported.

Cause: In the PLC-Program an axis of a remote control was addressed.

Remedy: Actualize the PLC-Program.

F0220201-Attribute Display: F0220201

F0220202 - Invalid axis number

None fatal error, Resource_Error

A variable of type 'AXIS_REF' is used in the PLC-Program, which address an unknown axis in the control.

Cause: In the PLC-Program an unknown axis was addressed.

Remedy: Actualize the PLC-Program or configure the missing axis in the control (see parameter "Axes configuration" C-0-0484).

F0220202-Attribute Display: F0220202

F0220203 - Invalid command type

None 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.

F0220203-Attribute Display: F0220203

F0220204 - Command not supported by axis

None fatal error, State_Machine_Error

In the PLC-Program a command is generated, which is not supported by the addressed axis. At the configuration of the axis, an axis type was selected, which does not support the desired command (see condition diagram of the axis type).

Cause: In the PLC-Program an illegal command was generated for the addressed axis.

Remedy: Actualize the PLC-Program or change configuration of the axis in the control (see parameter "Axis configuration" C-0-0484).

F0220204-Attribute Display: F0220204

F0220205 - Command rejected no power

None fatal error, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. For this axis no power, resp. torque is activated at this time.

Cause: In the PLC-Program a movement command for an axis without power release was generated.

Remedy: Switch on power, resp torque for the axis by using function block 'MC_Power'.

F0220205-Attribute Display: F0220205

F0220206 - Command rejected while 'Stopping'

None fatal error, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis was switched to condition 'Stopping' by function block 'MC_Stop'. Function block 'MC_Stop' is already active and has priority primarily other function blocks, resp. movement commands (see condition diagram of axis type).

Cause: In the PLC-Program an invalid movement command was generated for an axis in conditon 'Stopping'.

Remedy: Switch the axis to conditon 'Standstill' by function block 'MC_Stop' and subsequently activate the desired movement command.

F0220206-Attribute Display: F0220206

F0220207 - Command rejected while 'Homing'

None fatal error, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis was switched to condition 'Stopping' by function block 'MC_Home'. Function block 'MC_Home' is already active and has priority primarily other function blocks, resp. movement commands (see condition diagram of axis type).

Cause: In the PLC-Program a movement command was generated for an axis in conditon 'Homing'.

Remedy: Wait until the function block 'MC_Home' is processed by the control, or switch the axis in Standstill' condition by function block 'MC_Stop' and subsequently activate the desired movement command.

F0220207-Attribute Display: F0220207

F0220208 - Invalid command number

None fatal error, Access_Error

A movement command is generated in the PLC-Program by a function block. When generating the command, the function block obtaines 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: Aktualize the PLC-Program.

F0220208-Attribute Display: F0220208

F0220210 - Reset still 'Errorstop'

None fatal error, State_Machine_Error

In the PLC-Program the command 'Errorstop' is generated by function block 'MC_Reset'. The existing error cannot be deleted.

Cause: In the PLC-Programm the command 'MC_Reset' was generated by function block 'MC_Reset'. The existing error could not be deleted.

Remedy: Correct the error cause and subsequently quit the error.

F0220210-Attribute Display: F0220210

F0220211 - Command rejected while 'Diskrete Motion'

None fatal error, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis is in condition 'Discrete Motion'. The required movement command, resp. the activated function block is invalid in conditon 'Discrete Motion' (see condition diagram of axis type).

Cause: In the PLC-Program an invalid movement command for an axis was generated in condition 'Discrete Motion'.

Remedy: Activate the desired movement command after the running movement command was processed by the control and the axis was switched to

'Standstill' condition, or switch the axis by function block 'MC_Stop' to 'Standstill' condition and subsequently activate the desired movement command.

F0220211-Attribute Display: F0220211

F0220212 - Command rejected while 'Continuous Motion'

None fatal error, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis is in condition 'Continuous Motion'. The required movement command, resp. the activated function block is invalid in condition 'Continuous Motion' (see condition diagram of axis type).

Cause: In the PLC-Program an invalid movement command for an axis was generated in condition 'Continuous Motion'.

Remedy: Switch the axis by function block 'MC_Stop' to 'Standstill' condition and subsequently activate the desired movement command.

F0220212-Attribute Display: F0220212

F0220213 - Command rejected while 'Synchonized Motion'

None fatal error, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis is in condition 'Synchronized Motion'. The required movement command, resp. the activated function block is invalid in condition 'Synchronized Motion' (see condition diagram of axis type).

Cause: In the PLC-Program an invalid movement command for an axis was generated in condition 'Synchronized Motion'.

Remedy: Switch by one of the function blocks 'MC_GearOut', 'MC_CamOut' or 'MC_Stop' the axis to 'Continuous Motion'- or 'Standstill' condition and subsequently activate the desired movement command.

F0220213-Attribute Display: F0220213

F0220214 - Command rejected while 'ErrorStop'

None fatal error, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis has detected an error and switched to 'ErrorStop' condition. The required movement command, resp. the activated function block is invalid in condition 'ErrorStop' (see condition diagram of axis type).

Cause: In the PLC-Program an invalid movement command for an axis was generated in condition 'ErrorStop'.

Remedy: Clear the existing error of the axis or switch the axis by function block 'MC_Reset' to 'Standstill' condition and subsequently activate the desired movement command.

F0220214-Attribute Display: F0220214

F0220216 - No power available

None fatal error, Access_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The torque of the axis cannot be switched on by function block 'MC_Power'. The drive controller is missing power (see drive documentation).

Cause: The drive controller is missing power.

Remedy: Check the drive controller, resp. its power supply (see drive documentation).

F0220216-Attribute Display: F0220216

F0220217 - Command rejected, while 'Standstill' and 'PowerOn'

None fatal error, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis is in condition 'Standstill' / 'PowerOn'. The required movement command, resp. the activated function block is invalid in condition 'Standstill' / 'PowerOn' (e.g. MC_CamOut or MC_GearOut).

Cause: In the PLC-Program an invalid movement command for an axis was generated in condition 'Standstill' / 'PowerOn'.

Remedy: Aktualize the PLC-Program.

F0220217-Attribute Display: F0220217

F0220218 - Command rejected, while standstill

None fatal error, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis is in condition 'Standstill'. The required movement command, resp. the activated function block is invalid in condition 'Standstill' (see condition diagram of axis type).

Cause: In the PLC-Program an invalid movement command for an axis was generated in condition 'Standstill'.

Remedy: Aktualize the PLC-Program.

F0220218-Attribute Display: F0220218

F0220223 - Velocity below minimum

None 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 per-

mitted minimum value in parameter commanded velocity (see parameter "Commanded velocity" A-0-2202).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220223-Attribute Display: F0220223

F0220224 - Velocity above maximum

None 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 "Commanded velocity" A-0-2202).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220224-Attribute Display: F0220224

F0220225 - Acceleration below minimum

None 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 "Commanded acceleration" A-0-2203).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220225-Attribute Display: F0220225

F0220226 - Acceleration above maximum

None 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 "Commanded acceleration" A-0-2203).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220226-Attribute Display: F0220226

F0220227 - Deceleration below minimum

None 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 "Commanded deceleration" A-0-2204).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220227-Attribute Display: F0220227

F0220228 - Deceleration above maximum

None 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 "Commanded deceleration" A-0-2204).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220228-Attribute Display: F0220228

F0220232 - Invalid master control number

None fatal error, Resource_Error

A variable of type 'AXIS_REF' is used in the PLC-Program, which address a master axis in a remote control. In the existing firmware version only the access to axes of the local control is supported.

Cause: In the PLC-Program a master axis of a remote control was addressed.

Remedy: Actualize the PLC-Program.

F0220232-Attribute Display: F0220232

F0220233 - Invalid master axis number

None fatal error, Resource_Error

A variable of type 'AXIS_REF' is used in the PLC-Program, which address an unknown master axis in the control.

Cause: In the PLC-Program an unknown axis was addressed.

Remedy: Aktualize the PLC-Program or configure the missing axis in the control (see parameter "Axes configuration" C-0-0484).

F0220233-Attribute Display: F0220233

F0220234 - Invalid CamTableID

None fatal error, Resource_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The desired cam table (CAMTableID) is unknown (see description of data type 'MC_CAM_ID' and parameter "Cam table preselection" A-0-2740).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220234-Attribute Display: F0220234

F0220263 - RatioNumerator below minimum

None fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The master drive gear input revolutions (RatioNumerator) for the required movement command, resp. the activated function block is less than the permitted minimum value in parameter master drive gear input revolutions (see parameter "Master drive gear input revolutions" A-0-2720).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220263-Attribute Display: F0220263

F0220264 - RatioNumerator above maximum

None fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The master drive gear input revolutions (RatioNumerator) for the required movement command, resp. the activated function block is greater than the permitted maximum value in parameter master drive gear input revolutions (see parameter "Master drive gear input revolutions" A-0-2720).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220264-Attribute Display: F0220264

F0220265 - RatioDenominator below minimum

None fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The master drive gear output revolu-

tions (RatioDenominator) for the required movement command, resp. the activated function block is less than the permitted minimum value in parameter master drive gear output revolutions (see parameter "Master drive gear ouput revolutions" A-0-2721).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220265-Attribute Display: F0220265

F0220266 - RatioDenominator above maximum

None fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The master drive gear output revolutions (RatioDenominator) for the required movement command, resp. the activated function block is greater than the permitted maximum value in parameter master drive gear output revolutions (see parameter "Master drive gear ouput revolutions" A-0-2721).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220266-Attribute Display: F0220266

F0220267 - MasterFineAdjust below minimum

None fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The gear ratio fine adjust (MasterFineAdjust) for the required movement command, resp. the activated function block is less than the permitted minimum value in parameter gear ratio fine adjust (see parameter "Gear ratio fine adjust" A-0-2722).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220267-Attribute Display: F0220267

F0220268 - MasterFineAdjust above maximum

None fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The gear ratio fine adjust (MasterFineAdjust) for the required movement command, resp. the activated function block is greater than the permitted maximum value in parameter gear ratio fine adjust (see parameter "Gear ratio fine adjust" A-0-2722).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220268-Attribute Display: F0220268

F0220269 - Invalid SyncMode

None fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The desired sync mode direction (SyncMode) is unknown (see description of data type 'MC_SYNC_MODE').

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220269-Attribute Display: F0220269

F0220270 - Invalid StartMode

None fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The desired start mode (StartMode) is unknown (see description of data type 'MC_START_MODE').

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220270-Attribute Display: F0220270

F0220271 - CamShaftDistance below minimum

None fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The cam shaft distance (CamShaft-Distance) for the required movement command, resp. the activated function block is less than the permitted minimum value in parameter cam shaft distance (see parameter " CAM Shaft Distance" A-0-2741).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220271-Attribute Display: F0220271

F0220272 - CamShaftDistance above maximum

None fatal error, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The cam shaft distance (CamShaft-Distance) for the required movement command, resp. the activated function block is greater than the permitted maximum value in parameter cam shaft distance (see parameter " CAM Shaft Distance" A-0-2741).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F0220272-Attribute Display: F0220272

F0220273 - Command rejected while parameter mode

None 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.

F0220273-Attribute Display: F0220273

F0220274 - Axis not referenced

None fatal error, Other_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis is not referenced and can only be moved relative.

Cause: In the PLC-Program a movement command for an axis without position reference was generated, which requires the position reference of the axis.

Remedy: Reference the axis by function block 'MC_Home' or by parameter command set absolute measuring (see parameter "Command Set Absolute Measuring" A-0-2807) and subsequently activate the desired movement command.

F0220274-Attribute Display: F0220274

F0220275 - Command aborted

None 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: Aktualize the PLC-Program.

F0220275-Attribute Display: F0220275

F0220276 - Control error

None 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.

F0220276-Attribute Display: F0220276

F0220277 - Direct master axis change

None fatal error, Other_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. 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. In the existing firmware version the direct switching to a new master axis is not supported.

Cause: In the PLC-Program a movement command was generated, which requires a direct master axis change from the axis.

Remedy: Disconnect the axis from the original master axis (e.g. by MC_CamOut or MC_GearOut). Subsequently activate the desired movement command.

F0220277-Attribute Display: F0220277

F0220278 - Disabled axis

None fatal error, Access_Error

With parameter "A-0-0024, Axis condition" the axis was switched to state 'deactivated'. A deactivated axis cannot execute movement commands.

Cause: In the PLC-Program a movement command for a deactivated axis was generated.

Remedy: Switch the control to parameterization mode (Parameter C-0-0451) and activate the axis (Parameter A-0-0024). Subsequently restart the desired movement command.

F0220278-Attributes Display: F0220278

F0220279 - Command 'parking axis' active

None fatal error, Access_Error

With parameter "A-0-0024, Axis condition" the axis was switched to the 'parked' state. A parked axis cannot execute movement commands.

Cause: In the PLC-Program a movement command for a parked axis was generated

Remedy: Switch the control to parameterization mode (Parameter C-0-0451) and activate the axis (Parameter A-0-0024). Subsequently restart the desired movement command.

F0220279-Attributes Display: F0220279

F0220501 - Wrong data type

None fatal error, Access_Error

The error was generated by one of the following blocks, because kind of parameter (list- or single parameter) or Typ REAL, DINT does not agree with the input of the block.

Cause: The access error occur at reading/writing of a parameter datum, wether the wrong function block was selected.

Remedy: Check the block type according to your desired parameter.

Read of parameters:

	DINT	REAL	List of parameters
MB_ReadParameter	X		
MB_ReadRealParameter		X	
MB_ReadListParameter			X

Writing of parameters:

	DINT	REAL	List of parameters
MB_WriteParameter	X		
MB_WriteRealParameter		X	
MB_WriteListParameter			X

F0220501-Attribute Display: F0220501

F0280004 - Link ring broken

None fatal error, Communication_Error

The link participant has detected a LWL break of the link ring.

Cause: Each DAQ monitors its optical inputs. With staying away signals it is detected a LWL break.

Remedy: Check LED ErP and ErS on the CrossCom (bias display , LWL break display)

LWL break is physically "before" that participant who announces this error.

F0280004-Attributes Display: F0280004

F0280005 - Link ring - masterposition incorrect MDT

None 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.

F0280005-Attributes Display: F0280005

F0280006 - Link ring - masterposition incorrect AT

None fatal error, Communication_Error

The transmission of the master axis position from Link-Slave to the Link-Master is disturbed. Only master axis positions are monitored which are used in the own MLC-Ring.

Cause: Data transmission failure (Bit error). The Link-Drive telegram of a Link-Slave was incorrect in two consecutive cycles.

Remedy: Check LED ErP (CrossComm), if necessary check LWLs.

F0280006-Attributes Display: F0280006

F10B0001 - External synchron clock failed

Error F1, System_Error

The communication of the SERCOS interface Bus is synchronized by the cross communication module.

Cause: The cross communication module does not synchronize the control.

Remedy: The cross communication module is put into operation incorrect.

The cross communication module is defect.

F10B0001-Attribute Display: F10B0001

F20D1015 - Error while closing cyclic channel

Error F2, Access_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F20D1015-Attribute Display: F20D1015

F20D1025 - Error closing cyclic channel

Error F2, Communication_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F20D1025-Attribute Display: F20D1025

F20D1029 - Error opening cyclic channel

Error F2, Communication_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F20D1029-Attribute Display: F20D1029

F20D102B - Error opening cyclic channel (READ-ACCESS)

Error F2, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F20D102B-Attribute Display: F20D102B

F20D102C - Error reading access (DirectReadReal)

Error F2, 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.

F20D102C-Attribute Display: F20D102C

F20D102D - Error reading access (DirectReadWord)

Error F2, 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.

F20D102D-Attribute Display: F20D102D

F20D102E - Error reading access (DirectReadDword)

Error F2, 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-Attribute Display: F20D102E

F20D1034 - Error write access (DirectWriteWord)

Error F2, 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.

F20D1034-Attribute Display: F20D1034

F20D1036 - axis has not been found (ML_AXISDATA)

Error F2, 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.

F20D1036-Attribute Display: F20D1036

F20D1037 - Invalid Write/Read-Access to ML_AXISDATA

Error F2, 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: Aktualize the PLC-Program by the IndraWorks-Project.

F20D1037-Attribute Display: F20D1037

F2110002 - Axis is not homed

Error F2, Access_Error

For executing the desired function block, a referenced axis is required.

Cause: The function block MC_Home was not executed.

The actual condition of the axis may be checked in parameter "Axis status" (A-0-0021, Bit10).

Remedy: Execute function block MC_Home again.

F2110002-Attributes Display: F2110002

F2110003 - Drive of axis does not exist

Error F2, Resource_Error

In parameter "Axes configuration list" (C-0-0484) the axes of the control are defined. In order that a real axis can be created, it is necessary, that the paramerterized drive is available in the Sercos ring.

Cause: A real axis configured in parameter (C-0-0484) could not find the assigned drive in the Sercos ring.

Remedy: Adjust the Sercos address at the drive correctly and switch the control off/on.

Adjust the configuration of the real axes in parameter (C-0-0484) to the existing drives.

F2110003-Attributes Display: F2110003

F2110004 - Synchronization A to S/P-Parameter failed (A-0-0014)

Error F2, System_Error

While switching the control from parameter- to operating mode, several A-Parameters are transmitted to drive parameters (S/P-Parameter).

If one or several transmissions failed, so these parameters are listed in parameter "List of not transmitted A-Parameters" (A-0-0014).

Cause: One or several parameters incorrect.

Remedy: Correct the parameters listed in (A-0-0014). Subsequently switch to operating mode again.

F2110004-Attributes Display: F2110004

F2110005 - Loss of encoder axis reference

Error F2, System_Error

If an encoder axis is parameterized in the control, at switch off as well as switching from phase 4 to phase 2 the actual position is stored in the control. At resetting, resp. switching from phase 2 to 2, the actual position of the drive is compared to the stored position in the control, and the actual position is recalculated. At reference lost the new actual position could not be calculated.

Cause: 1. The encoder of the drive has lost its reference

2. The gear of the encoder axis was modified

3. A singleturn-encoder with a gear ratio was used, which is not clearly representable.

4. An unknown drive firmware was used

Remedy: to 1. Reference drive encoder and encoder axis again

to 2. Reference encoder axis again.

to 3. No solution.

to 4. Use valid drive-firmware only.

F2110005-Attributes Display: F2110005

F2110006 - Invalid axis configuration

Error F2, System_Error

During phase run-up, depending on the adjusted configuration in parameter "Axes configuration" (A-0-0007), operating methods in the drive are set.

This failed, because the configuration in (A-0-0007) is incorrect.

Cause: Incorrect parameterization in (A-0-0007) axes configuration.

Remedy: Write a valid value to the parameter.

F2110006-Attributes Display: F2110006

F2110029 - Positive travel limit exceeded

Error F2, Device_Error

The drive provides a function for monitoring an allowed travel range by means of software limit switches that can be parameterized.

Note: The travel range monitor has to be activated and parameterized via **Positive position limit value (A-0-0030)**, **Negative position limit value (A-0-0031)** and **Position polarities (A-0-0029)**.

The drive reaction (warning or error) in case the travel range is exceeded has to be parameterized in **Travel range limit parameter (A-0-0028)**.

Cause	Remedy
Command value set for drive causes axis position outside of negative travel range/position limit value **Positive position limit value (A-0-0030)**	1. Clear error 2. Preset command value that leads back to the allowed travel range Contact machine manufacturer in order to clarify cause of incorrect command value
Positive position limit value (A-0-0030) incorrectly parameterized	Check and, if necessary, correct parameterization of **Positive position limit value (A-0-0030)**

Note: The **Position window (A-0-2795)** parameter is used to realize a hysteresis function for evaluating the position limit values.

See also Functional Description "Position Limitation/Travel Range Limit Switch"

F2110029-Attributes Display: F2110029

F2110030 - Negative travel limit exceeded

Error F2, Device_Error

The drive provides a function for monitoring an allowed travel range by means of software limit switches that can be parameterized.

Note: The travel range monitor has to be activated and parameterized via **Positive position limit value (A-0-0030)**, **Negative position limit value (A-0-0031)** and **Position polarities (A-0-0029)**.

The drive reaction (warning or error) in case the travel range is exceeded has to be parameterized in **Travel range limit parameter (A-0-0028)**.

Cause	Remedy
Command value set for drive causes axis position outside of negative travel range/position limit value **Negative position limit value (A-0-0031)**	1. Clear error 2. Preset command value that leads back to the allowed travel range Contact machine manufacturer in order to clarify cause of incorrect command value
Negative position limit value (A-0-0031) incorrectly parameterized	Check and, if necessary, correct parameterization of **Negative position limit value (A-0-0031)**

Note: The **Position window (A-0-2795)** parameter is used to realize a hysteresis function for evaluating the position limit values.

See also Functional Description "Position Limitation/Travel Range Limit Switch"

F2110030-Attributes Display: F2110030

F2112053 - Target position out of travel range error

Error F2, System_Error

At discrete movements, prior a movement is performed, it is checked, if the predetermined target position is in the valid travel range of the drive.

Cause: Incorrect parameterized position limit ("Positive position limit" (A-0-0030), "Negative position limit" (A-0-0031)).

Position limit monitoring is activated, although it is not required.

At relative movement the travel path was adjusted too large, or several travel path, which are added, result in, that the effective target position (cp. "Target position" (A-0-2201)) is outside the position limits.

At absolute interpolation the target position was predetermined incorrect.

Remedy: Check parameterization of the position limit values and adjust the corresponding desired travel range (the "Positive position limit" (A-0-0030) must be greater than "Negative position limit" (A-0-0031)).

If the position limit value monitoring is not required (e.g. in modulo mode), deactivate it.

Check the predetermined travel path (cp. "Target position" (A-0-2201)), and if necessary, adjust it in the control program.

Check the predetermined target position, and if necessary, adjust it in the control program (enter target position only within the position limit values).

F2112053-Attributes Display: F2112053

F2116029 - Positive travel limit exceeded

Error F2, Input_Range_Error

The axis offers a function for monitoring a permitted travel range by parameterizable software travel limits.

Cause: A commanded value was predetermined to the axis, which result in an axis position outside the "Positive position limit" (A-0-0030).

Incorrect parameterization of "Positive position limit" (A-0-0030).

Remedy: Clear error and switch on power.

Predetermine a commanded value which leads to the permitted travel range again.

Check incorrect parameterization of "Positive position limit" (A-0-0030) and if necessary, correct it.

F2116029-Attributes Display: F2116029

F2116030 - Negative travel limit exceeded

Error F2, Input_Range_Error

The axis offers a function for monitoring a permitted travel range by parameterizable software travel limits.

Cause: A commanded value was predetermined to the axis, which result in an axis position outside the "Negative position limit" (A-0-0031).

Incorrect parameterization of "Negative position limit" (A-0-0031).

Remedy: Clear error and switch on power.

Predetermine a commanded value which leads to the permitted travel range again.

Check incorrect parameterization of "Negative position limit" (A-0-0031) and if necessary, correct it.

F2116030-Attributes Display: F2116030

F2119001 - RTOS error, illegal master axis

Error F2, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F2119001-Attributes Display: F2119001

F2229200 - General drive error

Error F2, 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.

F2229200-Attribute Display: F2229200

F2229203 - Invalid command type

Error F2, 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.

F2229203-Attribute Display: F2229203

F2229204 - Command not supported by axis

Error F2, State_Machine_Error

In the PLC-Program a command is generated, which is not supported by the addressed axis. At the configuration of the axis, an axis type was selected, which does not support the desired command (see condition diagram of the axis type).

Cause: In the PLC-Program an illegal command was generated for the addressed axis.

Remedy: Actualize the PLC-Program or change configuration of the axis in the control (see parameter "Axis configuration" C-0-0484).

F2229204-Attribute Display: F2229204

F2229205 - Command rejected, no power

Error F2, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. For this axis no power, resp. torque is activated at this time.

Cause: In the PLC-Program a movement command for an axis without power release was generated.

Remedy: Switch on power, resp torque for the axis by using function block 'MC_Power'.

F2229205-Attribute Display: F2229205

F2229206 - Command rejected while 'Stopping'

Error F2, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis was switched to condition 'Stopping' by function block 'MC_Stop'. Function block 'MC_Stop' is already active and has priority primarily other function blocks, resp. movement commands (see condition diagram of axis type).

Cause: In the PLC-Program an invalid movement command was generated for an axis in conditon 'Stopping'.

Remedy: Switch the axis to conditon 'Standstill' by function block 'MC_Stop' and subsequently activate the desired movement command.

F2229206-Attribute Display: F2229206

F2229207 - Command rejected while 'Homing'

Error F2, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis was switched to condition 'Stopping' by function block 'MC_Home'. Function block 'MC_Home' is already active and has priority primarily other function blocks, resp. movement commands (see condition diagram of axis type).

Cause: In the PLC-Program a movement command was generated for an axis in conditon 'Homing'.

Remedy: Wait until the function block 'MC_Home' is processed by the control, or switch the axis in Standstill' condition by function block 'MC_Stop' and subsequently activate the desired movement command.

F2229207-Attribute Display: F2229207

F2229208 - Invalid command number

Error F2, State_Machine_Error

A movement command is generated in the PLC-Program by a function block. When generating the command, the function block obtaines 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: Aktualize the PLC-Program.

F2229208-Attribute Display: F2229208

F2229210 - Reset still 'Errorstop'

Error F2, State_Machine_Error

In the PLC-Program the command 'Errorstop' is generated by function block 'MC_Reset'. The existing error cannot be deleted.

Cause: In the PLC-Programm the command 'MC_Reset' was generated by function block 'MC_Reset'. The existing error could not be deleted.

Remedy: Correct the error cause and subsequently quit the error.

F2229210-Attribute Display: F2229210

F2229211 - Command rejected while 'Diskrete Motion'

Error F2, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis is in condition 'Discrete Motion'. The required movement command, resp. the activated function block is invalid in conditon 'Discrete Motion' (see condition diagram of axis type).

Cause: In the PLC-Program an invalid movement command for an axis was generated in condition 'Discrete Motion'.

Remedy: Activate the desired movement command after the running movement command was processed by the control and the axis was switched to 'Standstill' condition, or switch the axis by function block 'MC_Stop' to 'Standstill' condition and subsequently activate the desired movement command.

F2229211-Attribute Display: F2229211

F2229212 - Command rejected while 'Continuous Motion'

Error F2, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis is in condition 'Continuous Motion'. The required movement command, resp. the activated function block is invalid in condition 'Continuous Motion' (see condition diagram of axis type).

Cause: In the PLC-Program an invalid movement command for an axis was generated in condition 'Continuous Motion'.

Remedy: Switch the axis by function block 'MC_Stop' to 'Standstill' condition and subsequently activate the desired movement command.

F2229212-Attribute Display: F2229212

F2229213 - Command rejected while 'Synchonized Motion'

Error F2, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis is in condition 'Synchronized Motion'. The required movement command, resp. the activated function block is invalid in condition 'Synchronized Motion' (see condition diagram of axis type).

Cause: In the PLC-Program an invalid movement command for an axis was generated in condition 'Synchronized Motion'.

Remedy: Switch by one of the function blocks 'MC_GearOut', 'MC_CamOut' or 'MC_Stop' the axis to 'Continuous Motion'- or 'Standstill' condition and subsequently activate the desired movement command.

F2229213-Attribute Display: F2229213

F2229214 - Command rejected while 'ErrorStop'

Error F2, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis has detected an error and switched to 'ErrorStop' condition. The required movement command, resp. the activated function block is invalid in condition 'ErrorStop' (see condition diagram of axis type).

Cause: In the PLC-Program an invalid movement command for an axis was generated in condition 'ErrorStop'.

Remedy: Clear the existing error of the axis or switch the axis by function block 'MC_Reset' to 'Standstill' condition and subsequently activate the desired movement command.

F2229214-Attribute Display: F2229214

F2229216 - No power available

Error F2, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The torque of the axis cannot be switched on by function block 'MC_Power'. The drive controller is missing power (see drive documentation).

Cause: The drive controller is missing power.

Remedy: Check the drive controller, resp. its power supply (see drive documentation).

F2229216-Attribute Display: F2229216

F2229217 - Command rejected, while 'Standstill' and 'PowerOn'

Error F2, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis is in condition 'Standstill' / 'PowerOn'. The required movement command, resp. the activated function block is invalid in condition 'Standstill' / 'PowerOn' (e.g. MC_CamOut or MC_GearOut).

Cause: In the PLC-Program an invalid movement command for an axis was generated in condition 'Standstill' / 'PowerOn'.

Remedy: Aktualize the PLC-Program.

F2229217-Attribute Display: F2229217

F2229218 - Command rejected, while standstill

Error F2, State_Machine_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis is in condition 'Standstill'. The required movement command, resp. the activated function block is invalid in condition 'Standstill' (see condition diagram of axis type).

Cause: In the PLC-Program an invalid movement command for an axis was generated in condition 'Standstill'.

Remedy: Aktualize the PLC-Program.

F2229218-Attribute Display: F2229218

F2229223 - Velocity below minimum

Error F2, 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 "Commanded velocity" A-0-2202).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229223-Attribute Display: F2229223

F2229224 - Velocity above maximum

Error F2, 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 "Commanded velocity" A-0-2202).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229224-Attribute Display: F2229224

F2229225 - Acceleration below minimum

Error F2, 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 "Commanded acceleration" A-0-2203).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229225-Attribute Display: F2229225

F2229226 - Acceleration above maximum

Error F2, 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 "Commanded acceleration" A-0-2203).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229226-Attribute Display: F2229226

F2229227 - Deceleration below minimum

Error F2, 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 "Commanded deceleration" A-0-2204).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229227-Attribute Display: F2229227

F2229228 - Deceleration above maximum

Error F2, 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 "Commanded deceleration" A-0-2204).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229228-Attribute Display: F2229228

F2229231 - Invalid direction

Error F2, Input_Range_Error

If "Position data scaling type" (A-0-0059) 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 "Direction" (A-0-0203), 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.

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F2229231-Attribute Display: F2229231

F2229232 - Invalid master control number

Error F2, Resource_Error

A variable of type 'AXIS_REF' is used in the PLC-Program, which address a master axis in a remote control. In the existing firmware version only the access to axes of the local control is supported.

Cause: In the PLC-Program a master axis of a remote control was addressed.

Remedy: Actualize the PLC-Program.

F2229232-Attribute Display: F2229232

F2229233 - Invalid master axis number

Error F2, Resource_Error

A variable of type 'AXIS_REF' is used in the PLC-Program, which address an unknown master axis in the control.

Cause: In the PLC-Program an unknown axis was addressed.

Remedy: Aktualize the PLC-Program or configure the missing axis in the control (see parameter "Axes configuration" C-0-0484).

F2229233-Attribute Display: F2229233

F2229234 - Invalid CamTableID

Error F2, Resource_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The desired cam table (CAMTableID) is unknown (see description of data type 'MC_CAM_ID' and parameter "Cam table preselection" A-0-2740).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229234-Attribute Display: F2229234

F2229263 - RatioNumerator below minimum

Error F2, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The master drive gear input revolutions (RatioNumerator) for the required movement command, resp. the activated function block is less than the permitted minimum value in parameter master drive gear input revolutions (see parameter "Master drive gear input revolutions" A-0-2720).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229263-Attribute Display: F2229263

F2229264 - RatioNumerator above maximum

Error F2, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The master drive gear input revolutions (RatioNumerator) for the required movement command, resp. the activated function block is greater than the permitted maximum value in parameter master drive gear input revolutions (see parameter "Master drive gear input revolutions" A-0-2720).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229264-Attribute Display: F2229264

F2229265 - RatioDenominator below minimum

Error F2, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The master drive gear output revolutions (RatioDenominator) for the required movement command, resp. the activated function block is less than the permitted minimum value in parameter master drive gear output revolutions (see parameter "Master drive gear ouput revolutions" A-0-2721).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229265-Attribute Display: F2229265

F2229266 - RatioDenominator above maximum

Error F2, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The master drive gear output revolutions (RatioDenominator) for the required movement command, resp. the

activated function block is greater than the permitted maximum value in parameter master drive gear output revolutions (see parameter "Master drive gear ouput revolutions" A-0-2721).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229266-Attribute Display: F2229266

F2229267 - MasterFineAdjust below minimum

Error F2, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The gear ratio fine adjust (MasterFineAdjust) for the required movement command, resp. the activated function block is less than the permitted minimum value in parameter gear ratio fine adjust (see parameter "Gear ratio fine adjust" A-0-2722).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229267-Attribute Display: F2229267

F2229268 - MasterFineAdjust above maximum

Error F2, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The gear ratio fine adjust (MasterFineAdjust) for the required movement command, resp. the activated function block is greater than the permitted maximum value in parameter gear ratio fine adjust (see parameter "Gear ratio fine adjust" A-0-2722).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229268-Attribute Display: F2229268

F2229269 - Invalid SyncMode

Error F2, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The desired sync mode direction (SyncMode) is unknown (see description of data type 'MC_SYNC_MODE').

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229269-Attribute Display: F2229269

F2229270 - Invalid StartMode

Error F2, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The desired start mode (StartMode) is unknown (see description of data type 'MC_START_MODE').

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229270-Attribute Display: F2229270

F2229271 - CamShaftDistance below minimum

Error F2, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The cam shaft distance (CamShaft-Distance) for the required movement command, resp. the activated function block is less than the permitted minimum value in parameter cam shaft distance (see parameter " CAM Shaft Distance" A-0-2741).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229271-Attribute Display: F2229271

F2229272 - CamShaftDistance above maximum

Error F2, Input_Range_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The cam shaft distance (CamShaft-Distance) for the required movement command, resp. the activated function block is greater than the permitted maximum value in parameter cam shaft distance (see parameter " CAM Shaft Distance" A-0-2741).

Cause: In the PLC-Program a movement command for an axis was generated with invalid parameters.

Remedy: Aktualize the PLC-Program.

F2229272-Attribute Display: F2229272

F2229273 - Command rejected while parameter mode

Error F2, 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.

F2229273-Attribute Display: F2229273

F2229274 - Axis not referenced

Error F2, Other_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. The axis is not referenced and can only be moved relative.

Cause: In the PLC-Program a movement command for an axis without position reference was generated, which requires the position reference of the axis.

Remedy: Reference the axis by function block 'MC_Home' or by parameter command set absolute measuring (see parameter "Command Set Absolute Measuring" A-0-2807) and subsequently activate the desired movement command.

F2229274-Attribute Display: F2229274

F2229275 - Command aborted

Error F2, 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: Aktualize the PLC-Program.

F2229275-Attribute Display: F2229275

F2229276 - Control error

Error F2, 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.

F2229276-Attribute Display: F2229276

F2229277 - Direct master axis change

Error F2, Other_Error

In the PLC-Program a movement command is generated, which cannot be executed by the addressed axis. 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. In the existing firmware version the direct switching to a new master axis is not supported.

Cause: In the PLC-Program a movement command was generated, which requires a direct master axis change from the axis.

Remedy: Disconnect the axis from the original master axis (e.g. by MC_CamOut or MC_GearOut). Subsequently activate the desired movement command.

F2229277-Attribute Display: F2229277

F22E0000 - Drive error (generic axis)

Error F2, Device_Error

The diagnosis of generic axes/drive cannot be detected. For a special diagnosis the user must use the diagnosis tool of the drive manufacturer.

F22E0000-Attributes Display: F22E0000

F50B0002 - Sercos ring break

Error F5, System_Error

The fiber optic cable ring has been interrupted, after it was detected that it is closed.

Cause:
- Defect fiber optic cable ring
- Defect drive
- The optical transmitting power of the control "Drive bus fiber optic length" (C-0-0502) or one of the participants in the SERCOS interface ring is adjusted incorrect.

Remedy: Check all fiber optic cable

Adjust optical transmitting power of all participants at the SERCOS-Ring to the actual LWL-Length.

F50B0002-Attributes Display: F50B0002

F50D2000 - Forced stop activated

Error F5, System_Error

Although active axes exist in your project (real axis with at least 'PowerOn', virtual axis activated), you have stopped the PLC (in IndraWorks via menu button "Stop PLC" or in IndraLogic via menu item Online->Stop).

Cause: At stopped PLC it is not possible for activated axes to work forward. For these axes a forced stop is activated.

Remedy: Clear error, start PLC again.

F50D2000-Attributes Display: F50D2000

F50D2EE1 - Fatal error at Inline IOs

Error F5, Device_Error

At the inline io bus a serious error occurred during running operation. The further operation of the inline io bus is no longer possible after a fatal error.

Cause: Several causes are possible:

- At running operation a inline io module was removed.
- The inline io modules are not correctly sticked together and have a loose connection.
- A inline io modul is defect.
- strong EMC interferences (grid-bound or insolation).
- Power supply has breaking downs.
- Firmware error.

Remedy: Switch off the control and check, wether the inline io modules are correctly sticked together. Possibly change modules to detect, wether a module is defect.

Check, wether the control is installed correct according to the installation guideline (EMV interferences, power supply).

If no physical cause is visible and the error appears again, a firmware error may exist. In this case please contact the service.

F50D2EE1-Attributes Display: F50D2EE1

F5180001 - Invalid master axes combination

Error F5, 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: Aktualize the PLC-Program.

F5180001-Attributes Display: F5180001

F5180005 - Motion kernel exceeded control cycle time

Error F5, System_Error

In the PLC-Program movements commands are generated, which result in an exceeding of the control cycle time of the motion kernel. In parameter "Desired MC cycle time (Tcyc)" C-0-0400 the cycle time of the control is defined. The motion kernel must be processed within the defined cycle. In parameter "Relative PLC time slot" C-0-0401 is defined,

how much calculating time is aquired by the PLC. The remaining calculating time is required for processing the motion kernel. If the motion kernel requires more calculating time for processing, the error "F5180005" is generated (see description of parameter C-0-0400 und C-0-0401).

Cause: In the PLC-Program movement commands have been generated, which result in a cycle time exceeding of the motion kernel.

Remedy: Increase the cycle time (parameter C-0-0400) or reduce the time slice of the integrated PLC (parameter C-0-0401).

F5180005-Attributes Display: F5180005

F5280007 - Link ring - different cycle times detected

Error F5, Communication_Error

The cycletime in the link is compared to the adjusted cycletime (MLC-Link-Cycletime (Tcyc) Setpoint (C-0-0700)).

Cause: The cycletime in parameter MLC-Link-Cyctime (Tcyc) Setpoint (C-0-0700) does not match the cycletime in the link.

Remedy: Adjust the parameter MLC-Link-Cycletime (Tcyc) Setpoint (C-0-0700) to the cycletime in the link.

F5280007-Attributes Display: F5280007

F80B0004 - Double AT missing

Error F8, System_Error

Two consecutive drive telegrams (AT) of a drive or two consecutive master synchronisation telegrams (MST) have been not received by the control.

Cause:
- Fiber optic cable not correctly screwed on.
- Defect fiber optic cable ring
- Defect drive
- The optical transmitting power of the control "Drive bus fiber optic length" (C-0-0502) or one of the participants in the SERCOS interface ring is adjusted incorrect.

Remedy: Check all fiber optic cable

Adjust optical transmitting power of all participants at the SERCOS-Ring to the actual LWL-Length.

F80B0004-Attributes Display: F80B0004

F8200023 - Critical Temperatur reached; processor will stop

Error F8, Device_Error

A critical temperature of 75.0°C (167°F) was exceeded, the processor will stop to avoid damages on the hardware.

See also diagnosis "E0200002; Temperatur warning "

Cause:
- The control was mounted at a place without sufficient ventilation.
- At a mounting place without sufficient ventilation, no cooler was assembled to the control.

Remedy: Switch off the control to let it cool down. Additionaly make sure to have sufficient ventilation or mount a cooler.

F8200023-Attributes Display: F8200023

F9010001 - Default object on wrong address

Fatal system error, Access_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F9010001-Attributes Display: F9010001

F9010002 - Memory allocation error, no memory available

Fatal system error, Access_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F9010002-Attributes Display: F9010002

F9010003 - Invalid function pointer

Fatal system error, Access_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F9010003-Attributes Display: F9010003

F90B0012 - Sercos interface watch dog occured

Fatal system error, System_Error

The drive was switched off by the firmware.

Cause: An error occurred in the firmware (general software error).

Remedy: Please contact our service department.

F90B0012-Attributes Display: F90B0012

4.8 F9** **** - RTOS-Error

Errors of this category result in switching off the device by the firmware. The differentiation of several numbers serves for better locating of the error cause.

Cause: An error occured in the firmware.

Remedy: Please contact the service.

4.9 MLC-Diagnosis - Plaintext indication at the MLC-Display

In this chapter diagnosis, which indicate plaintext at the display, are summarized. These diagnosis are also contained additionally in the previous chapter, which is sorted by diagnosis numbers.

BOOT END, boot up of control finished

Message, 0001

The boot up of the control was completed successfully. The switching to target boot up phase takes place ("Power up target motion mode" (C-0-0450)).

Cause: The boot up of the control was completed successfully.

Remedy: -

A00C0001-Attribute Display: BOOT END

ErrClear, Error cleared

Message, 0002

The command for clearing the error was executed successfully.

An active error, in dependency whether the cause of the error still exist or not, changes to

- Error passive, the cause is still existing
- Error reset, the cause no longer exist.

A00C0002-Attribute Display: ErrClear

P0 STOP, reached phase 0, PLC in stop

Message, 0001

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was stopped.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200001-Attribute Display: P0 STOP

P1 STOP, reached phase 1, PLC in stop

Message, 0002

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was stopped.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200002-Attribute Display: P1 STOP

P2 STOP, reached phase 2, PLC in stop

Message, 0003

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was stopped.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200003-Attribute Display: P2 STOP

P3 STOP, reached phase 3, PLC in stop

Message, 0004

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was stopped.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200004-Attribute Display: P3 STOP

BB STOP, Motion ready, PLC in stop

Message, 0005

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was stopped.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200005-Attribute Display: BB STOP

P0 RUN, reached phase 0, PLC in run

Message, 0006

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was started.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be stopped e.g. via IndraWorks.

A0200006-Attribute Display: P0 RUN

P1 RUN, reached phase 1, PLC in run

Message, 0007

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was started.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be stopped e.g. via IndraWorks.

A0200007-Attribute Display: P1 RUN

P2 RUN, reached phase 2, PLC in run

Message, 0008

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was started.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be stopped e.g. via IndraWorks.

A0200008-Attribute Display: P2 RUN

P3 RUN, reached phase 3, PLC in run

Message, 0009

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was started.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be stopped e.g. via IndraWorks.

A0200009-Attribute Display: P3 RUN

BB RUN, Motion ready, PLC in run

Message, 0010

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC was started.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be stopped e.g. via IndraWorks.

A0200010-Attribute Display: BB RUN

P0 INIT, reached phase 0, PLC in init

Message, 0011

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC get still initialized.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200011-Attribute Display: P0 INIT

P1 INIT, reached phase 1, PLC in init

Message, 0012

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC get still initialized.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200012-Attribute Display: P1 INIT

P2 INIT, reached phase 2, PLC in init

Message, 0013

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC get still initialized.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200013-Attribute Display: P2 INIT

P3 INIT, reached phase 3, PLC in init

Message, 0014

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC get still initialized.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200014-Attribute Display: P3 INIT

BB INIT, Motion ready, PLC in init

Message, 0015

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

Cause: The motion was switched to this mode (e.g. by parameter "Power up target motion mode" (C-0-0450) or "Target motion mode" (C-0-0451)) and the PLC get still initialized.

Remedy: A switching to other motion modes is possible by parameter "Target motion mode" (C-0-0451). The PLC may be started e.g. via IndraWorks.

A0200015-Attribute Display: BB INIT

ZeroBit, Sercos driver, Test mode, Zero bit strem

Message, 0007

The test mode zero bit stream for the drive interface SERCOS was selected in parameter (C-0-0500).

Cause: The test mode was selected in parameter "Drive bus configuration" (C-0-0500).

Remedy: Change parameter "Drive bus configuration" (C-0-0500).

A00B0007-Attribute Display: ZeroBit

LightOn, Sercos driver, Test mode, Continuous light on

Message, 0008

The test mode continuous light on for the drive interface SERCOS was selected in parameter (C-0-0500).

Cause: The test mode was selected in parameter "Drive bus configuration" (C-0-0500).

Remedy: Change parameter "Drive bus configuration" (C-0-0500).

A00B0008-Attribute Display: LightOn

LightOff, Sercos driver, Test mode, Continuous light off

Message, 0009

The test mode continuous light off for the drive interface SERCOS was selected in parameter (C-0-0500).

Cause: The test mode was selected in parameter "Drive bus configuration" (C-0-0500).

Remedy: Change parameter "Drive bus configuration" (C-0-0500).

A00B0009-Attribute Display: LightOff

4.10 SERCOS-Errors

General

This chapter contains the errors of the ERROR_TABLE "SERCOS_TABLE".

The errors have been stated in the IndraMotion MLC as errors of class "F0", Error without error reaction.

The standard group number, label for SERCOS-Errors is the "2D"; followed by the known four-digit SERCOS-Error number (see also SERCOS-Error Message, page 4-7).

F02D0000 - Sercos, no error in the service channel

None fatal error, Access_Error

F02D0000-Attributes Display: F02D0000

F02D0001 - Sercos, Service channel not open

None fatal error, Access_Error

F02D0001-Attributes Display: F02D0001

F02D0009 - Sercos, invalid access to closing the service channel

None fatal error, Access_Error

F02D0009-Attributes Display: F02D0009

F02D1001 - Sercos, no IDN

None fatal error, Access_Error

F02D1001-Attributes Display: F02D1001

F02D1009 - Sercos, invalid access to element 1

None fatal error, Access_Error

F02D1009-Attributes Display: F02D1009

F02D2001 - Sercos, no name

None fatal error, Access_Error

F02D2001-Attributes Display: F02D2001

F02D2002 - Sercos, Name transmission too short

None fatal error, Access_Error

F02D2002-Attributes Display: F02D2002

F02D2003 - Sercos, Name transmission too long

None fatal error, Access_Error

F02D2003-Attributes Display: F02D2003

F02D2004 - Sercos, Name cannot be changed (read only)

None fatal error, Access_Error

F02D2004-Attributes Display: F02D2004

F02D2005 - Sercos, Name is write-protected at this time

None fatal error, Access_Error

F02D2005-Attributes Display: F02D2005

F02D3002 - Sercos, Attribute transmission too short

None fatal error, Access_Error

F02D3002-Attributes Display: F02D3002

F02D3003 - Sercos, Attribute transmission too long

None fatal error, Access_Error

F02D3003-Attributes Display: F02D3003

F02D3004 - Sercos, Attribute cannot be changed (read only)

None fatal error, Access_Error

F02D3004-Attributes Display: F02D3004

F02D3005 - Sercos, Attribute is write-protected at this time

None fatal error, Access_Error

F02D3005-Attributes Display: F02D3005

F02D4001 - Sercos, no units

None fatal error, Access_Error

F02D4001-Attributes Display: F02D4001

F02D4002 - Sercos, Unit transmission too short

None fatal error, Access_Error

F02D4002-Attributes Display: F02D4002

F02D4003 - Sercos, Unit transmission too long

None fatal error, Access_Error

F02D4003-Attributes Display: F02D4003

F02D4004 - Sercos, Unit cannot be changed (read only)

None fatal error, Access_Error

F02D4004-Attributes Display: F02D4004

F02D4005 - Sercos, Unit is write-protected at this time

None fatal error, Access_Error

F02D4005-Attributes Display: F02D4005

F02D5001 - Sercos, no minimum input value

None fatal error, Access_Error

F02D5001-Attributes Display: F02D5001

F02D5002 - Sercos, Minimum input value transmission too short

None fatal error, Access_Error

F02D5002-Attributes Display: F02D5002

F02D5003 - Sercos, Minimum input value transmission too long

None fatal error, Access_Error

F02D5003-Attributes Display: F02D5003

F02D5004 - Sercos, Minimum input value cannot be changed (read only)

None fatal error, Access_Error

F02D5004-Attributes Display: F02D5004

F02D5005 - Sercos, Minimum input value is write-protected at this time

None fatal error, Access_Error

F02D5005-Attributes Display: F02D5005

F02D6001 - Sercos, no maximum input value

None fatal error, Access_Error

F02D6001-Attributes Display: F02D6001

F02D6002 - Sercos, Maximum input value transmission too short

None fatal error, Access_Error

F02D6002-Attributes Display: F02D6002

F02D6003 - Sercos, Maximum input value transmission too long

None fatal error, Access_Error

F02D6003-Attributes Display: F02D6003

F02D6004 - Sercos, Maximum input value cannot be changed (read only)

None fatal error, Access_Error

F02D6004-Attributes Display: F02D6004

F02D6005 - Sercos, Maximum input value is write-protected at this time

None fatal error, Access_Error

F02D6005-Attributes Display: F02D6005

F02D7001 - Sercos, no operation data

None fatal error, Access_Error

F02D7001-Attributes Display: F02D7001

F02D7002 - Sercos, Operation data transmission too short

None fatal error, Access_Error

F02D7002-Attributes Display: F02D7002

F02D7003 - Sercos, Operation data transmission too long

None fatal error, Access_Error

F02D7003-Attributes Display: F02D7003

F02D7004 - Sercos, Operation data cannot be changed (read only)

None fatal error, Access_Error

F02D7004-Attributes Display: F02D7004

F02D7005 - Sercos, Operation data is write-protected at this time

None fatal error, Access_Error

F02D7005-Attributes Display: F02D7005

F02D7006 - Sercos, Operation data is smaller than the min input value

None fatal error, Access_Error

F02D7006-Attributes Display: F02D7006

F02D7007 - Sercos, Operation data is greater than the max input value

None fatal error, Access_Error

F02D7007-Attributes Display: F02D7007

F02D7008 - Sercos, invalid operation data

None fatal error, Access_Error

F02D7008-Attributes Display: F02D7008

F02D7009 - Sercos, Operation data write protected by a password

None fatal error, Access_Error

F02D7009-Attributes Display: F02D7009

F02D700A - Sercos, Operation data is write protected (cyclically conf)

None fatal error, Access_Error

F02D700A-Attributes Display: F02D700A

F02D700B - Sercos, invalid indirect addressing, (data container, list)

None fatal error, Access_Error

F02D700B-Attributes Display: F02D700B

F02D700C - Sercos, Operation data is write protected (other settings)

None fatal error, Access_Error

F02D700C-Attributes Display: F02D700C

F02D700D - Sercos, reserved

None fatal error, Access_Error

F02D700D-Attributes Display: F02D700D

F02D700E - Sercos, reserved

None fatal error, Access_Error

F02D700E-Attributes Display: F02D700E

F02D700F - Sercos, reserved

None fatal error, Access_Error

F02D700F-Attributes Display: F02D700F

F02D7010 - Sercos, Procedure command already active

None fatal error, Access_Error

F02D7010-Attributes Display: F02D7010

F02D7011 - Sercos, Procedure command not interruptible

None fatal error, Access_Error

F02D7011-Attributes Display: F02D7011

F02D7012 - Sercos, Procedure command at this time not executable

None fatal error, Access_Error

F02D7012-Attributes Display: F02D7012

F02D7013 - Sercos, Procedure command not executable

None fatal error, Access_Error

F02D7013-Attributes Display: F02D7013

F02D710C - Sercos, Data exceed maximal range

None fatal error, Access_Error

F02D710C-Attributes Display: F02D710C

F02D8001 - Sercos, Access temporary not possible

None fatal error, Access_Error

F02D8001-Attributes Display: F02D8001

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6 Service & Support

6.1 Helpdesk

Unser Kundendienst-Helpdesk im Hauptwerk Lohr am Main steht Ihnen mit Rat und Tat zur Seite. Sie erreichen uns

Our service helpdesk at our headquarters in Lohr am Main, Germany can assist you in all kinds of inquiries. Contact us

- telefonisch - by phone: **+49 (0) 9352 40 50 60**
  über Service Call Entry Center - via Service Call Entry Center
  Mo-Fr 07:00-18:00 Mo-Fr 7:00 am - 6:00 pm
- per Fax - by fax: **+49 (0) 9352 40 49 41**
- per e-Mail - by e-mail: **service.svc@boschrexroth.de**

6.2 Service-Hotline

Außerhalb der Helpdesk-Zeiten ist der Service direkt ansprechbar unter

After helpdesk hours, contact our service department directly at

+49 (0) 171 333 88 26

oder - or **+49 (0) 172 660 04 06**

6.3 Internet

Unter **www.boschrexroth.com** finden Sie ergänzende Hinweise zu Service, Reparatur und Training sowie die **aktuellen** Adressen *) unserer auf den folgenden Seiten aufgeführten Vertriebs- und Servicebüros.

Verkaufsniederlassungen
Niederlassungen mit Kundendienst

Außerhalb Deutschlands nehmen Sie bitte zuerst Kontakt mit unserem für Sie nächstgelegenen Ansprechpartner auf.

*) Die Angaben in der vorliegenden Dokumentation können seit Drucklegung überholt sein.

At **www.boschrexroth.com** you may find additional notes about service, repairs and training in the Internet, as well as the **actual** addresses *) of our sales- and service facilities figuring on the following pages.

sales agencies
offices providing service

Please contact our sales / service office in your area first.

*) Data in the present documentation may have become obsolete since printing.

6.4 Vor der Kontaktaufnahme... - Before contacting us...

Wir können Ihnen schnell und effizient helfen wenn Sie folgende Informationen bereithalten:

1. detaillierte Beschreibung der Störung und der Umstände.
2. Angaben auf dem Typenschild der betreffenden Produkte, insbesondere Typenschlüssel und Seriennummern.
3. Tel.-/Faxnummern und e-Mail-Adresse, unter denen Sie für Rückfragen zu erreichen sind.

For quick and efficient help, please have the following information ready:

1. Detailed description of the failure and circumstances.
2. Information on the type plate of the affected products, especially type codes and serial numbers.
3. Your phone/fax numbers and e-mail address, so we can contact you in case of questions.

6.5 Kundenbetreuungsstellen - Sales & Service Facilities

Deutschland – Germany

vom Ausland: (0) nach Landeskennziffer weglassen!
from abroad: don't dial (0) after country code!

Vertriebsgebiet Mitte Germany Centre	SERVICE AUTOMATION	SERVICE AUTOMATION	SERVICE AUTOMATION
Rexroth Indramat GmbH Bgm.-Dr.-Nebel-Str. 2 / Postf. 1357 97816 Lohr am Main / 97803 Lohr **Kompetenz-Zentrum Europa** Tel.: +49 (0)9352 40-0 Fax: +49 (0)9352 40-4885	CALL ENTRY CENTER Helpdesk MO – FR von 07:00 - 18:00 Uhr from 7 am – 6 pm **Tel. +49 (0) 9352 40 50 60** **Fax +49 (0) 9352 40 49 41** service.svc@boschrexroth.de	HOTLINE 24 / 7 / 365 außerhalb der Helpdesk-Zeit out of helpdesk hours **Tel.: +49 (0)172 660 04 06** oder / or **Tel.: +49 (0)171 333 88 26**	**ERSATZTEILE / SPARES** verlängerte Ansprechzeit - extended office time - ♦ nur an Werktagen - only on working days - ♦ von 07:00 - 18:00 Uhr - from 7 am - 6 pm - **Tel. +49 (0) 9352 40 42 22**
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