

Manual | EN

MS1025-0011-2245

Power infeed, 24 V DC/10 A, 400/480 V AC/25 A, B23

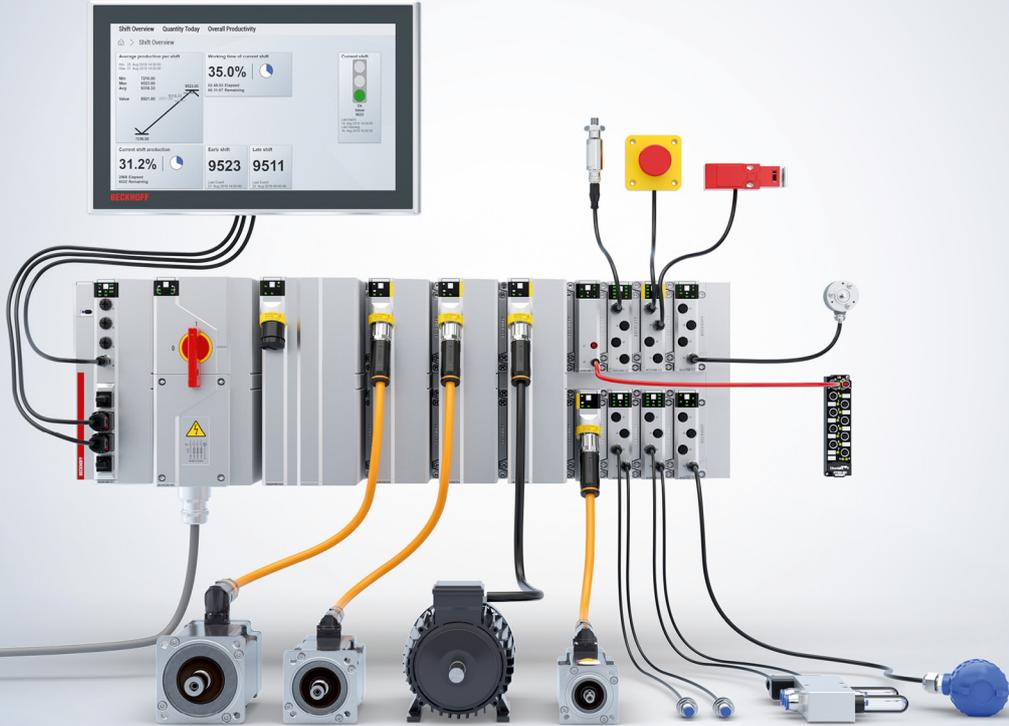


Table of contents

| | |
|--|-----------|
| 1 Foreword | 5 |
| 1.1 Notes on the documentation | 5 |
| 1.2 For your safety | 6 |
| 1.3 Intended use | 7 |
| 2 Product overview | 8 |
| 2.1 Block diagram | 11 |
| 2.2 Type key..... | 12 |
| 2.3 Status display | 13 |
| 2.4 Dimensions | 14 |
| 3 Technical data | 15 |
| 4 Mechanical installation | 16 |
| 4.1 Preparation..... | 16 |
| 4.2 Placement of the module on the baseplate | 17 |
| 4.3 Mounting the module..... | 18 |
| 5 Connection | 19 |
| 6 Commissioning and operation | 20 |
| 6.1 Requirements | 20 |
| 6.2 Commissioning..... | 20 |
| 6.3 During operation..... | 20 |
| 7 Decommissioning | 22 |
| 7.1 Disassembly | 22 |
| 7.2 Disposal | 22 |
| 8 Appendix | 23 |
| 8.1 Manual version history | 23 |
| 8.2 Support and Service..... | 24 |
| 8.3 Accessories | 25 |

1 Foreword

1.1 Notes on the documentation

This description is intended exclusively for trained specialists in control and automation technology who are familiar with the applicable national standards.

The documentation and the following notes and explanations must be complied with when installing and commissioning the components.

The trained specialists must always use the current valid documentation.

The trained specialists must ensure that the application and use of the products described is in line with all safety requirements, including all relevant laws, regulations, guidelines, and standards.

Disclaimer

The documentation has been compiled with care. The products described are, however, constantly under development.

We reserve the right to revise and change the documentation at any time and without notice.

Claims to modify products that have already been supplied may not be made on the basis of the data, diagrams, and descriptions in this documentation.

Trademarks

Beckhoff®, ATRO®, EtherCAT®, EtherCAT G®, EtherCAT G10®, EtherCAT P®, MX-System®, Safety over EtherCAT®, TC/BSD®, TwinCAT®, TwinCAT/BSD®, TwinSAFE®, XFC®, XPlanar®, and XTS® are registered and licensed trademarks of Beckhoff Automation GmbH.

If third parties make use of the designations or trademarks contained in this publication for their own purposes, this could infringe upon the rights of the owners of the said designations.

EtherCAT 

EtherCAT® is a registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.

Copyright

© Beckhoff Automation GmbH & Co. KG, Germany.

The distribution and reproduction of this document, as well as the use and communication of its contents without express authorization, are prohibited.

Offenders will be held liable for the payment of damages. All rights reserved in the event that a patent, utility model, or design are registered.

Third-party trademarks

Trademarks of third parties may be used in this documentation. You can find the trademark notices here: <https://www.beckhoff.com/trademarks>.

1.2 For your safety

Safety regulations

Read the following explanations for your safety.

Always observe and follow product-specific safety instructions, which you may find at the appropriate places in this document.

Exclusion of liability

All the components are supplied in particular hardware and software configurations which are appropriate for the application. Modifications to hardware or software configurations other than those described in the documentation are not permitted, and nullify the liability of Beckhoff Automation GmbH & Co. KG.

Personnel qualification

This description is only intended for trained specialists in control, automation, and drive technology who are familiar with the applicable national standards.

Signal words

The signal words used in the documentation are classified below. In order to prevent injury and damage to persons and property, read and follow the safety and warning notices.

Personal injury warnings

⚠ DANGER

Hazard with high risk of death or serious injury.

⚠ WARNING

Hazard with medium risk of death or serious injury.

⚠ CAUTION

There is a low-risk hazard that could result in medium or minor injury.

Warning of damage to property or environment

NOTICE

The environment, equipment, or data may be damaged.

Information on handling the product



This information includes, for example:
recommendations for action, assistance or further information on the product.

1.3 Intended use

Intended use of an MX-System

Application in machines and systems in industrial environments and exclusively inside buildings.

The electrical wiring must be permanent wiring.

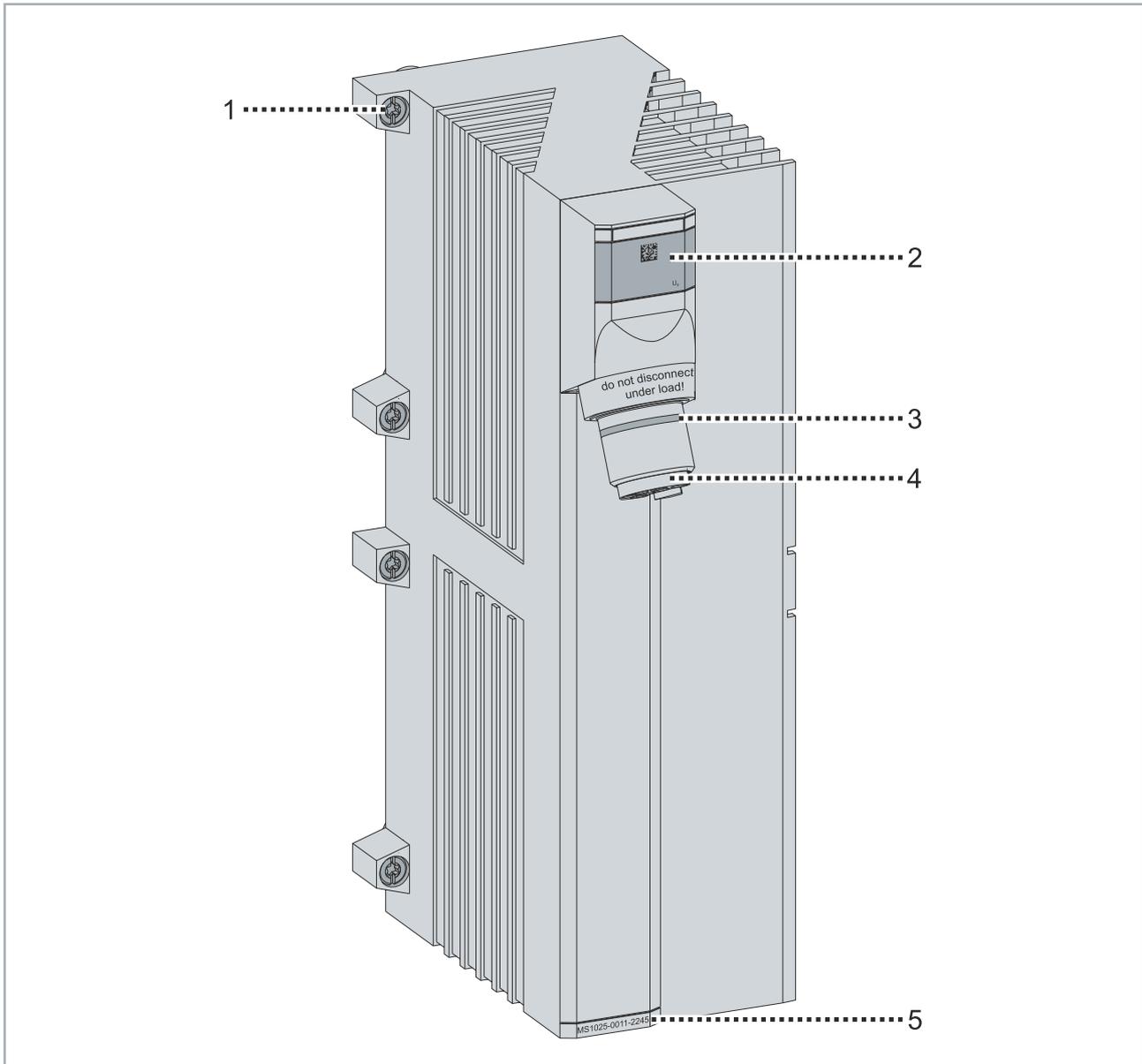
Improper use

Improper use is not permitted and will result in the exclusion of liability on the part of Beckhoff Automation GmbH & Co.

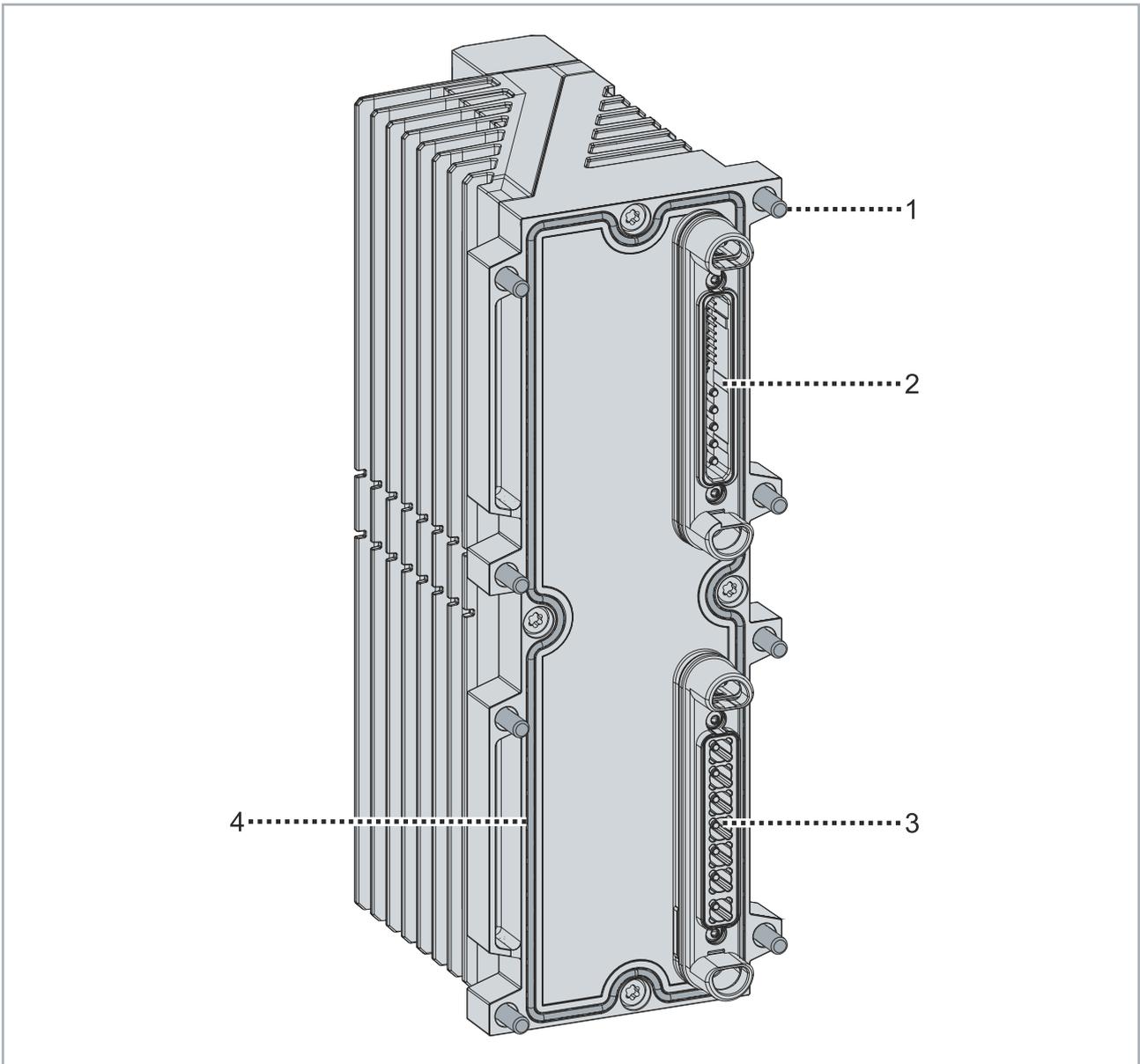
2 Product overview

The MS1025-0011-2245 power infeed module provides 400...480 V AC and up to 25 A for the system.

An additional supply of 24 V DC and up to 10 A is provided via a hybrid connector.

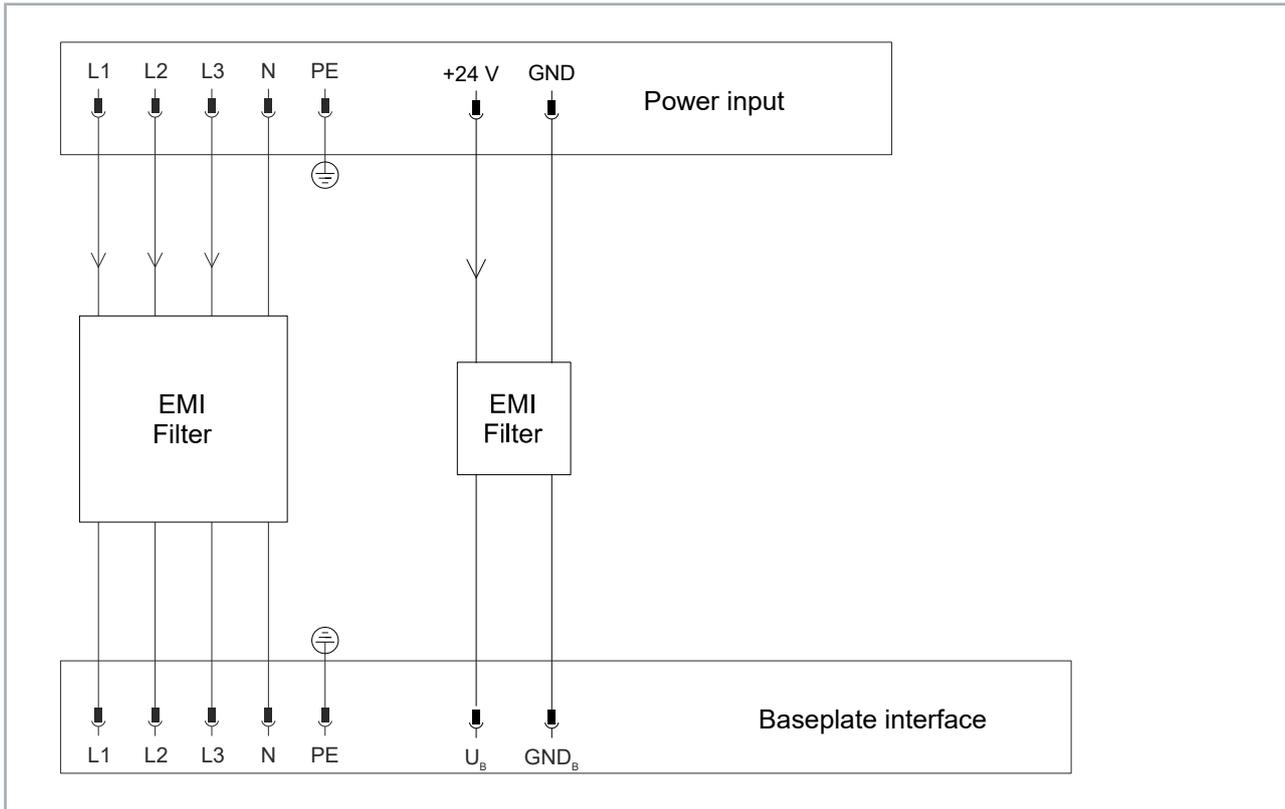


| Position | Name |
|----------|-------------------------------|
| 1 | Fastening screw, captive, 8 x |
| 2 | Status display |
| 3 | Seal |
| 4 | Power infeed |
| 5 | Module name |

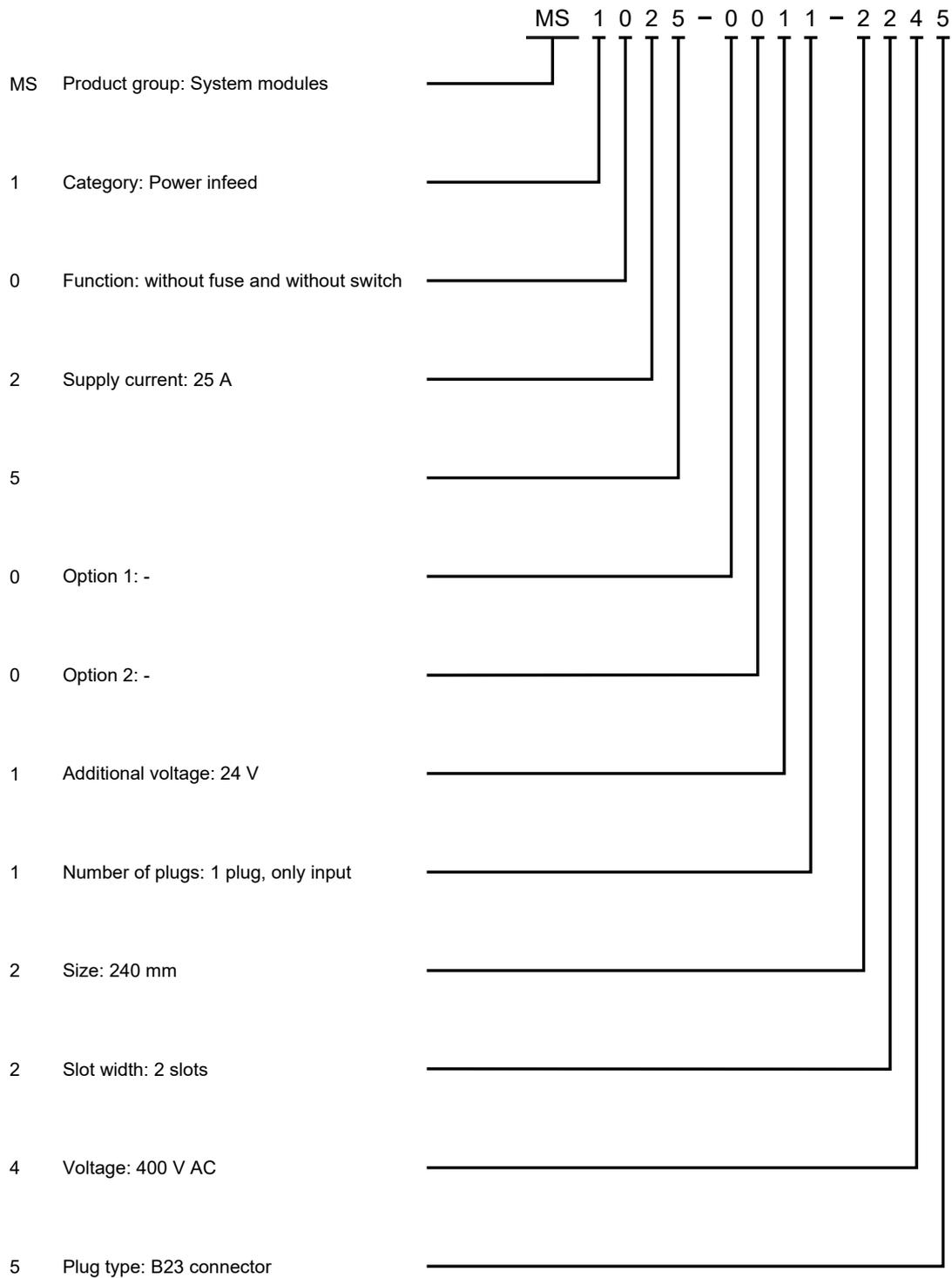


| Position | Name |
|----------|-------------------------------|
| 1 | Fastening screw, captive, 8 x |
| 2 | Data connector |
| 3 | Power connector |
| 4 | Seal |

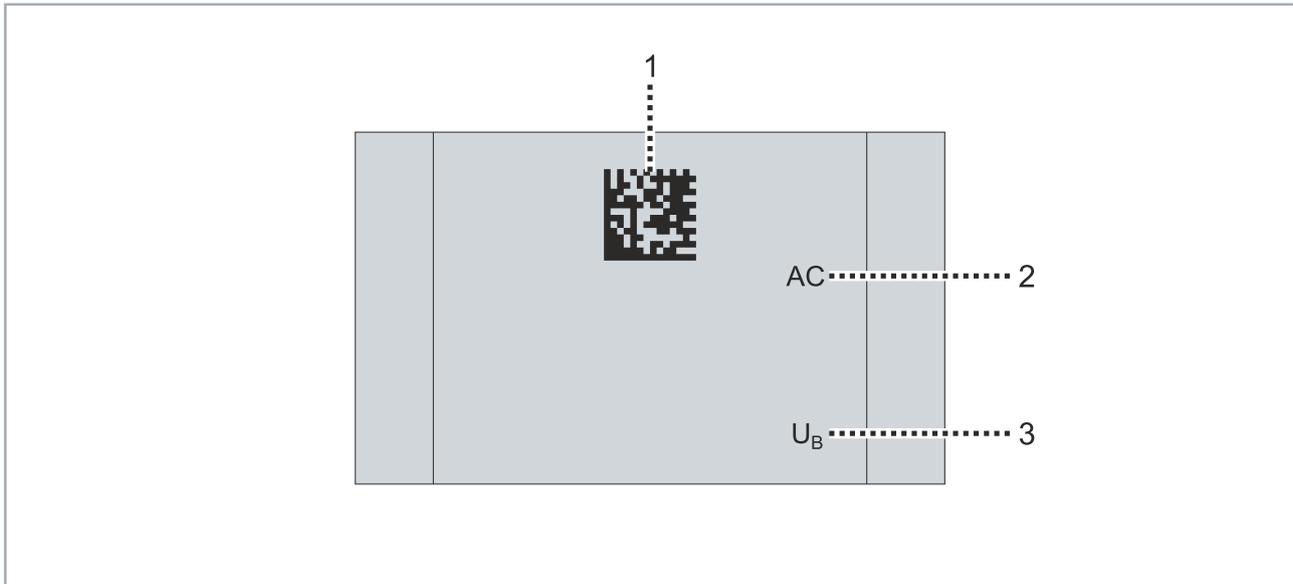
2.1 Block diagram



2.2 Type key



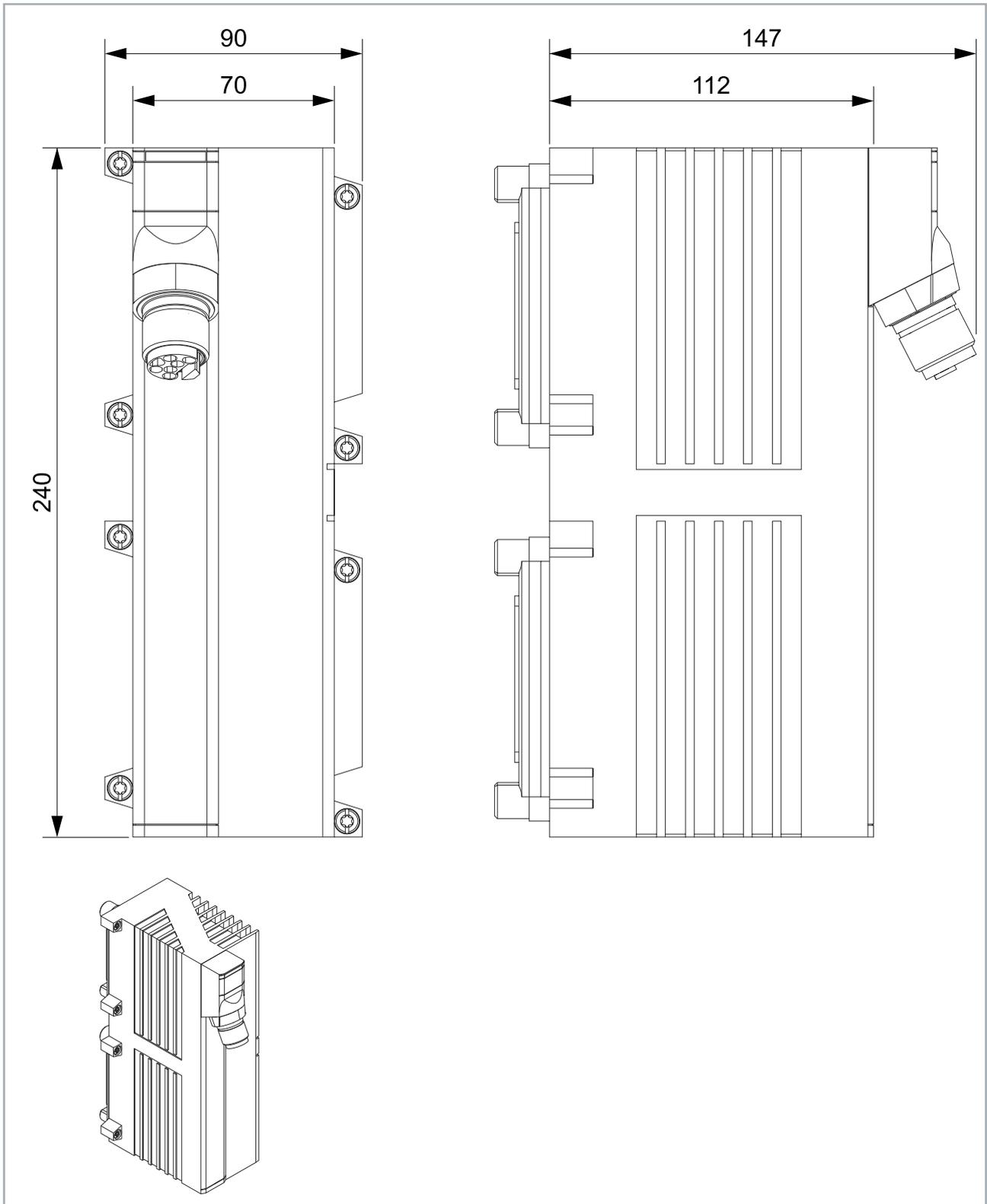
2.3 Status display



| Position | Status display | Status | Explanation |
|----------|----------------|-------------------|---|
| 1 | - | - | Beckhoff Identification Code as DataMatrix code |
| 2 | AC | off | No mains voltage available |
| | | green illuminated | Mains voltage available |
| 3 | U _B | off | No supply voltage present |
| | | green illuminated | Supply voltage switched on |

2.4 Dimensions

All dimensions in mm



3 Technical data

All values are typical values over the entire temperature range, unless stated otherwise.

| Baseplate interface | |
|---------------------|---------------------------------------|
| Connector | 1 data connector 1 power connector |
| Hot Swap | No |

| Supply voltage input | |
|----------------------|------------------------------------|
| Connection | 1 x B23 connector, 7-pin, coding 2 |
| Rated voltage (AC) | 400...480 V AC (-15 % ... +10 %) |
| Rated current (AC) | 25 A |
| Rated voltage (DC) | 24 V DC (-15% ... +20%) |
| Rated current (DC) | 10 A |

| Housing data | |
|-----------------------|--|
| Width (slots) | 2 |
| Height (rows) | 2 |
| Dimensions W × H × D | 90 mm × 240 mm × 147 mm 90 mm × 240 mm × 112 mm (housing only) |
| Material | Zinc die-cast and aluminum die-cast |
| Cooling | Convection |
| Weight | - |
| Installation position | Vertical. See system manual, chapter "Installation conditions". |

| Environmental conditions | |
|-------------------------------|---|
| Operating temperature | 0 ... 50 °C |
| Storage temperature | -25 ... +60 °C |
| Air humidity | 95%, no condensation |
| Protection rating | IP20 as a separate module IP65 / IP67 as part of a fully and correctly assembled MX-System |
| Pollution degree | 2 |
| Overvoltage category | III 300 V |
| Maximum installation altitude | 2000 m |

| Standards, approvals | |
|----------------------------|---|
| Device safety | conforms to EN 61010-2-201 |
| EMC immunity/emission | conforms to EN IEC 61000-6-2 / EN IEC 61000-6-4 |
| Vibration/shock resistance | conforms to EN 60068-2-6 / EN 60068-2-27 |
| Approvals | CE, UL in preparation |

4 Mechanical installation



Required tools

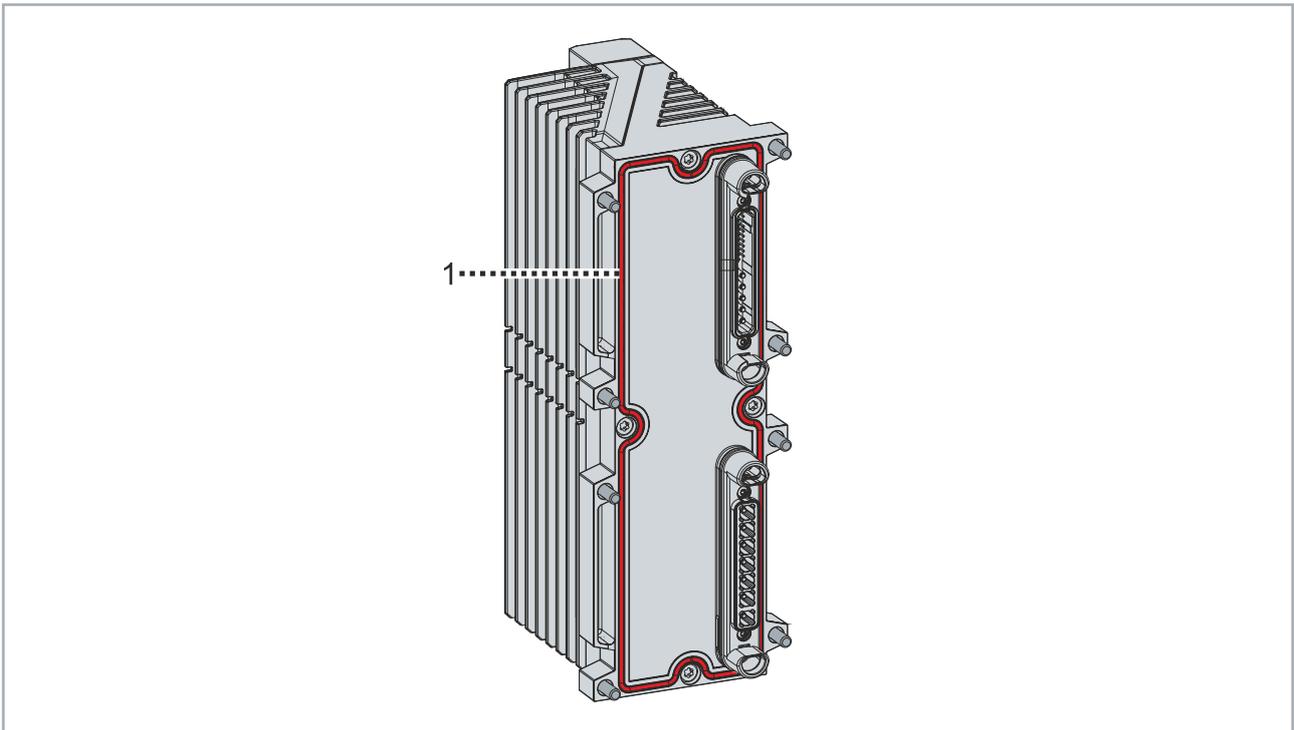
- Torx T25 screwdriver
- Torque wrench 5 Nm

4.1 Preparation

NOTICE

Check the module for damage

If the seal is worn or damaged, liquids and dirt can penetrate and damage the MX-System. The IP67 protection rating is not met if the seals are worn or damaged.



1. Check the seal [1] of the module for wear and damage
2. Replace worn and damaged seals

4.2 Placement of the module on the baseplate

The module can be plugged into the following areas marked in green:



4.3 Mounting the module

⚠ CAUTION

Danger due to the high weight of an equipped baseplate

First mount the baseplate and then the modules to the baseplate. If you mount the modules on the baseplate first, the total weight of the MX-System will increase. Another person is required to transport and assemble an equipped baseplate.

- Wear personal protective equipment.
- The equipped baseplate must be transported and mounted by two people.

NOTICE

Ensure correct installation

If the module is not installed correctly, liquids and dirt may enter and damage the MX-System. The IP67 protection rating is not met if the installation is incorrect.

NOTICE

Limited number of mating cycles

The module may be plugged in a maximum of 25 times to attach it to the baseplate. If the module is plugged into the baseplate more than 25 times, a secure connection between the module and the baseplate cannot be guaranteed.

- Observe the permissible number of mating cycles.
- Replace the module if the number of mating cycles is exceeded.
- Replace the baseplate if the number of mating cycles is exceeded.

The module can be plugged into any position on a data slot and an underlying power slot on a baseplate. Depending on the design, an additional free data slot and power slot are required. Slot 101 must not be used.

1. Plug the module on the baseplate
2. Tighten all screws
3. Observe tightening torques:

| Components | Tightening torque [Nm] |
|------------|------------------------|
| Screws | 5 |

Further information on installation can be found in the system manual in the "Mounting" chapter.

5 Connection

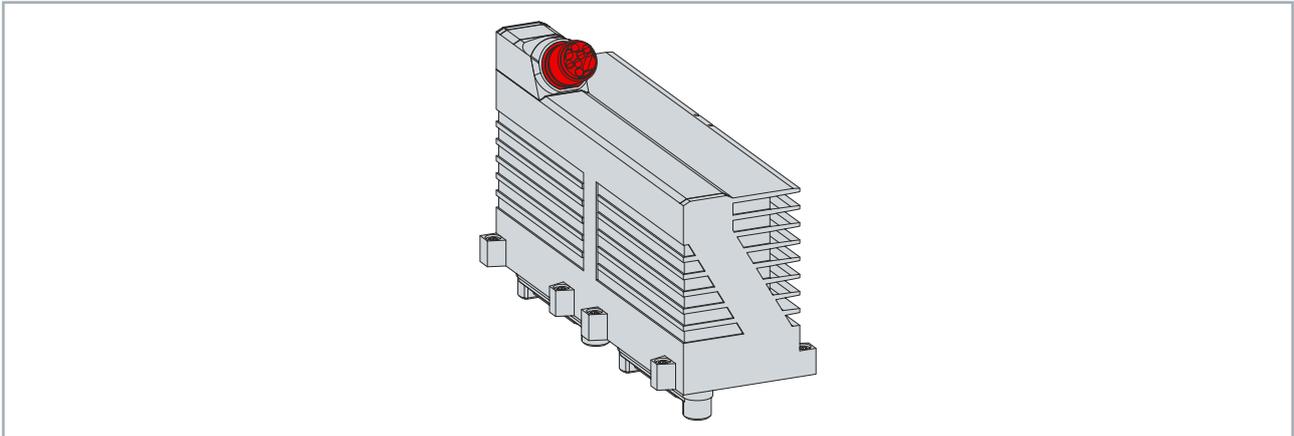
NOTICE

Defect caused by hot plug

If cables are connected or disconnected during operation, damage to property is possible.

- Only connect or disconnect cables when all supply voltages have been shutdown.

Power input



The power input is a 7-pin B23 connector with coding 3.

Pin assignment

| B23 connector | Pin | Symbol | Function |
|---------------|-----|---------|-------------------------------|
| | 5 | PE | Protective earth |
| | 6 | 24 V DC | U _B 24 V DC output |
| | 7 | 0 V | GND to pin 6 |
| | 8 | N | N |
| | 9 | L1 | L1 |
| | 10 | L2 | L2 |
| | 11 | L3 | L3 |

6 Commissioning and operation

NOTICE

Danger if operated in an unsuitable environment

Material damage is possible.

- Before commissioning, ensure that the environmental conditions at the place of commissioning and operation are complied with at all times. See environmental conditions in the chapter [Technical data](#) [▶_15].

6.1 Requirements

- Components show no signs of damage
- Screw connections of the components are correctly tightened
- Wiring and cables are installed correctly

6.2 Commissioning

- Switch on the external supply voltage
- Parameterize the functions of the module if required

6.3 During operation

- Observe information for environment and operation
- Observe maintenance intervals
- Switch off the system if
 - unusual noise occurs
 - smoke develops
 - an atypical temperature development occurs

7 Decommissioning

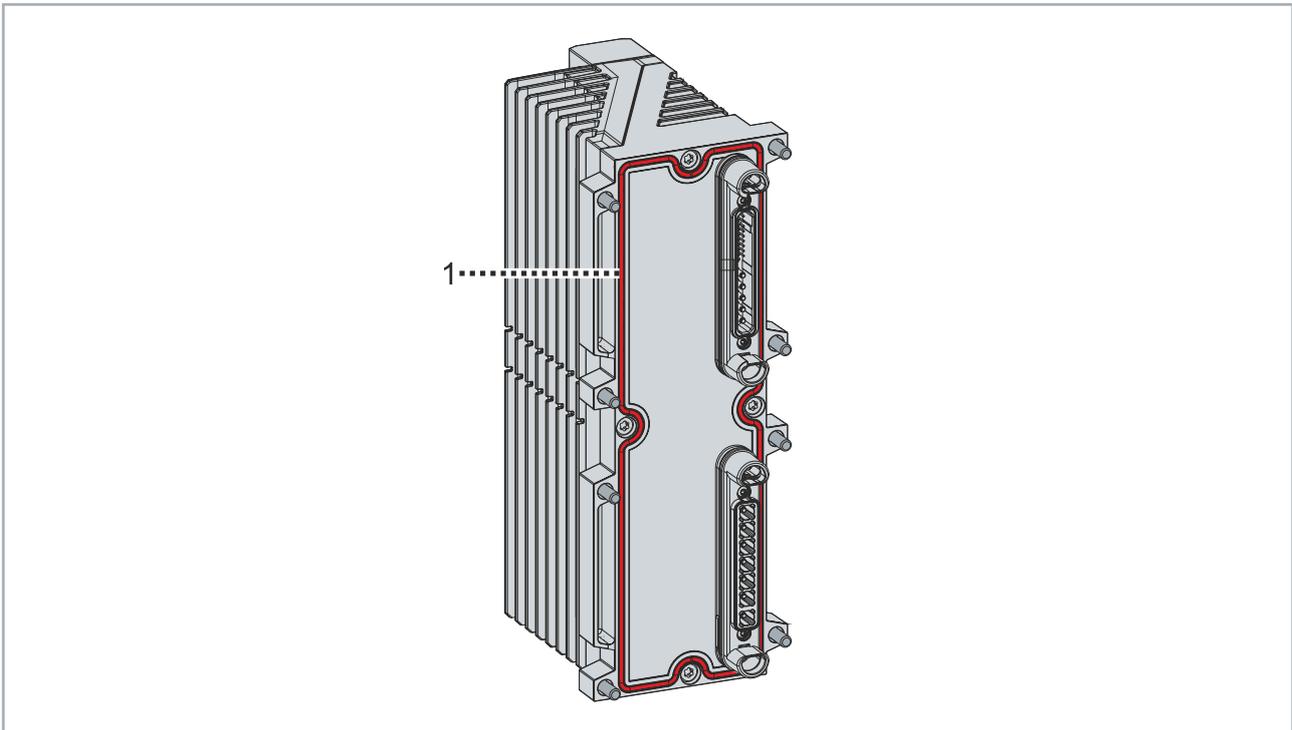
7.1 Disassembly

Disassembly may only be carried out by qualified and trained technical personnel.

Further information can be found in chapter [Notes on the documentation](#) [▶ 5].

1. Remove Power cable
2. Loosen all mounting screws of the module
3. Take the module off the baseplate
4. Transport the module to the workplace or storage place

Further information can be found in the chapter [Technical data](#) [▶ 15] and in the system manual in the chapter "Disassembly".



1. Check the seal [1] of the module for wear and damage
2. Replace worn or damaged seals

Further information can be found in chapter [Accessories](#) [▶ 25].

7.2 Disposal



Products marked with a crossed-out wheeled bin shall not be discarded with the normal waste stream. The device is considered as waste electrical and electronic equipment. The national regulations for the disposal of waste electrical and electronic equipment must be observed.

8 Appendix

8.1 Manual version history

The following table shows the version history of this manual.

| Version | Comment |
|---------|-----------------|
| 1.0.0 | • First release |

8.2 Support and Service

Beckhoff and their partners around the world offer comprehensive support and service, making available fast and competent assistance with all questions related to Beckhoff products and system solutions.

Download finder

Our [download finder](#) contains all the files that we offer you for downloading. You will find application reports, technical documentation, technical drawings, configuration files and much more.

The downloads are available in various formats.

Beckhoff's branch offices and representatives

Please contact your Beckhoff branch office or representative for [local support and service](#) on Beckhoff products!

The addresses of Beckhoff's branch offices and representatives round the world can be found on our internet page: www.beckhoff.com

You will also find further documentation for Beckhoff components there.

Beckhoff Support

Support offers you comprehensive technical assistance, helping you not only with the application of individual Beckhoff products, but also with other, wide-ranging services:

- support
- design, programming and commissioning of complex automation systems
- and extensive training program for Beckhoff system components

Hotline: +49 5246 963-157
e-mail: support@beckhoff.com

Beckhoff Service

The Beckhoff Service Center supports you in all matters of after-sales service:

- on-site service
- repair service
- spare parts service
- hotline service

Hotline: +49 5246 963-460
e-mail: service@beckhoff.com

Beckhoff Headquarters

Beckhoff Automation GmbH & Co. KG

Huelshorstweg 20
33415 Verl
Germany

Phone: +49 5246 963-0
e-mail: info@beckhoff.com
web: www.beckhoff.com

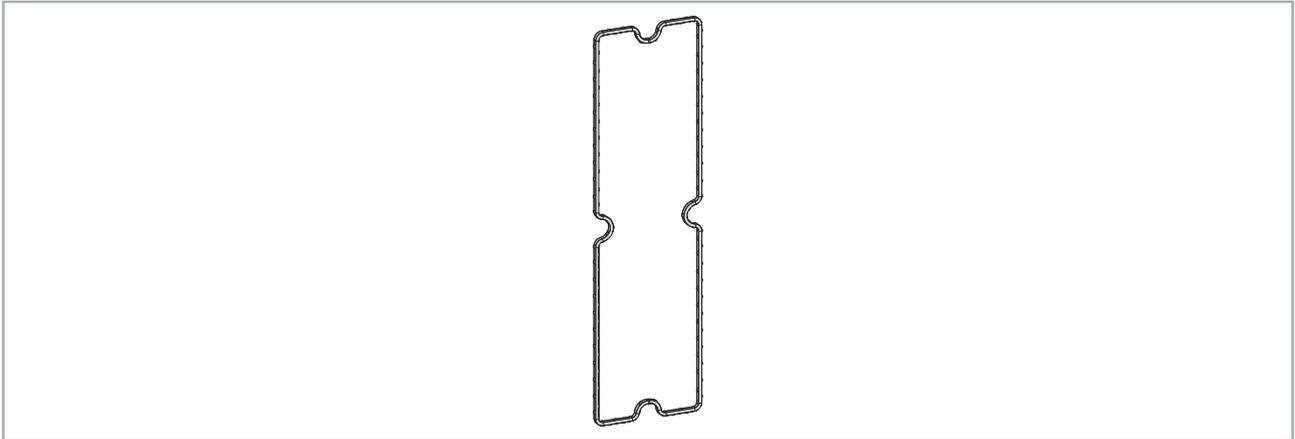
8.3 Accessories

Suitable accessories can be found on the product website:

www.beckhoff.com/ms1025-0011-2245

The following items are also available for replacing worn parts:

MX seal S2R2



The S2R2 seal is available to replace worn and damaged seals on a 2-row MX module with two slots.

Trademark statements

Beckhoff®, ATRO®, EtherCAT®, EtherCAT G®, EtherCAT G10®, EtherCAT P®, MX-System®, Safety over EtherCAT®, TC/BSD®, TwinCAT®, TwinCAT/BSD®, TwinSAFE®, XFC®, XPlanar® and XTS® are registered and licensed trademarks of Beckhoff Automation GmbH.

More Information:

www.beckhoff.com/ms1025-0011-2245

Beckhoff Automation GmbH & Co. KG
Hülshorstweg 20
33415 Verl
Germany
Phone: +49 5246 9630
info@beckhoff.com
www.beckhoff.com

