

TMC-PO Touch Module Central Priority Operation

Application

The TMC-PO is an operating unit for collective malfunction message (SSM), collective malfunction message acknowledgement (SSM-Q) and release of all connected TMU-PO modules.

An NFC (Near Field Communication) key switch solution enables/ manually locks the operation of all connected TMU-PO modules with an NFC chip.

This ensures that the TMU-PO modules may only be operated by authorized persons.

TMC-PO and the BMD0401-PO form a device unit.

Together with the BMA0804-PO, BMD1204-PO and the TMU-PO, they fulfill the functionality of a local priority control (LO and ID) according to DIN EN ISO 16484-2.



Content	Page
Important Information on Product Safety	2
Item	3
Technical Data	3
Accessories (included in delivery)	4
Accessories (not included in delivery)	4
Dimensions	5
Connection.....	5
Mounting	7
Removal.....	8
Operation and display icons	8



Important Information on Product Safety

Safety instructions

This document contains information on installing and commissioning the product “TMC-PO”. Each person who carries out work on this product must have read and understood this document. If you have any questions that are not resolved by this document, you can obtain further information from the supplier or manufacturer.

If the product is not used in accordance with this document, the protection provided could be impaired.

The applicable regulations must be observed when installing and using the devices. Within the EU, these include regulations regarding occupational safety and accident prevention as well as those from the VDE (German Association for Electrical, Electronic & Information Technologies). If the device is used outside of the EU, it is the responsibility of the plant engineer or operator to comply with local regulations.

Mounting, installation and commissioning work on the devices may only be carried out by qualified technicians. Qualified technicians are persons who are familiar with the described product and who can assess given tasks and recognize possible dangers based on their technical training, knowledge and experience, as well as their knowledge of the applicable regulations.

Symbol meanings



WARNING

Indicates a hazard of medium risk which can result in death or serious bodily injury if not avoided.



CAUTION

Indicates a hazard of low risk which can result in minor or medium bodily injury if not avoided.



CAUTION

Indicates a hazard which can result in material damage or malfunctions if not avoided.



NOTE

Indicates additional information that can simplify working with the product.

Notes on disposal

In accordance with the applicable laws and directives of the European Union countries, the product should not be disposed of with household waste. This ensures environmental protection and sustainable recycling or raw materials.

Commercial users should contact their supplier and observe the conditions of the purchase agreement. This device may not be disposed of together with other commercial waste.

The local and currently applicable laws must be observed.



Item

TMC-PO Touch Module Central Priority Operation

Technical Data

Nominal voltage	DC 12..24 V $\pm$ 10%; 2.0 W Power is supplied via the LO and ID bus interface from the BMD0401-PO
Interfaces	■ LO and ID bus, 200 m PtP (point to point) connection to the input-output module BMD0401-PO ■ LO and ID backbone, 200 m PtP connection to the Touch-Module-Central TMU-PO ■ NFC
Housing	Plastic housing
Level of contamination	2
Method of operation	Type 1
Rated impulse voltage	800 V
Degree of protection	IP54
Ambient temperature	0..55 °C
Ambient humidity	20..80% r.h.; non-condensing
Mounting	Control cabinet door installation
Weight	0.13 kg
Dimensions	WxHxD: 50.2 x 135.4 x 75.8 mm

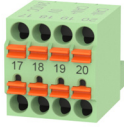


Product Description

TMC-PO

Connection clamps

- Spring-loaded terminals
- Twisting two conductors is not permitted, twin wire-end ferrules can be used

	Bus terminals  Terminals 7..10 and 17..20
Single-wire conductor Conductor cross-section: Stripping:	0.5..1.0 mm ² 10 mm
Multiwire conductor Conductor cross-section: Stripping:	0.5..1.0 mm ² 10 mm
Multi-wire conductor with wire end sleeve and plastic collar Conductor cross-section: Wire end sleeve length:	0.5..1.0 mm ² 10 mm
Multi-wire conductor with wire end sleeve without plastic collar Conductor cross-section: Wire end sleeve length:	0.5..1.0 mm ² 10 mm
Required crimping	Square crimping

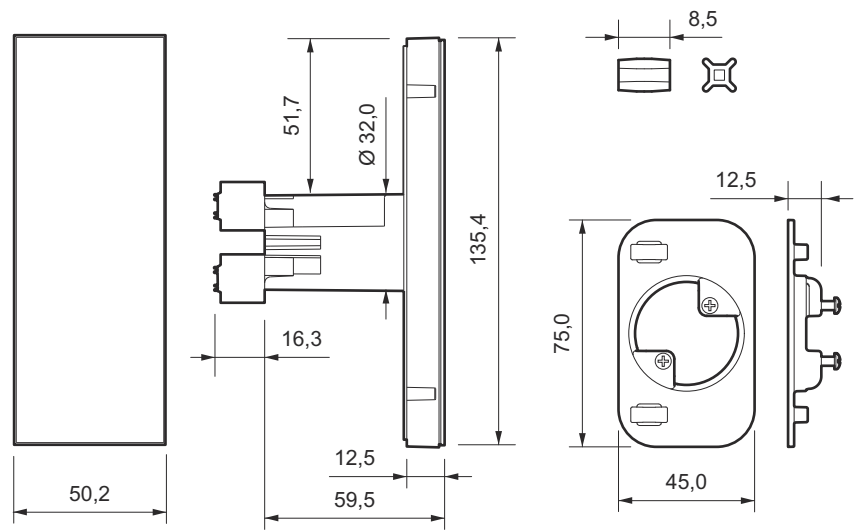
Accessories (not included in delivery)

NFC-KEY-KP1	1 pc. NFC key card for TMC-PO for releasing/manually locking the connected TMU-PO modules
TMB-PO	Dummy module cover for closing empty slots in the adaptor plate or the control cabinet door
Z851	Adaptor plate for KA 19" rack-mounted frame for installing four LO and ID modules
ADRA070-PO	Complete adapter frame for TPC070 and 4x TMx-PO

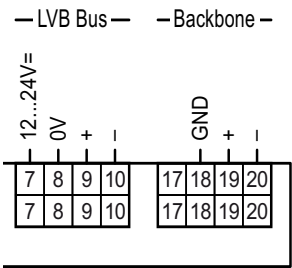
Accessories (included in delivery)

Three NFC key cards are included in the scope of delivery.
If additional NFC key cards are required, you can order them via the article NFC-KEY-KP1.

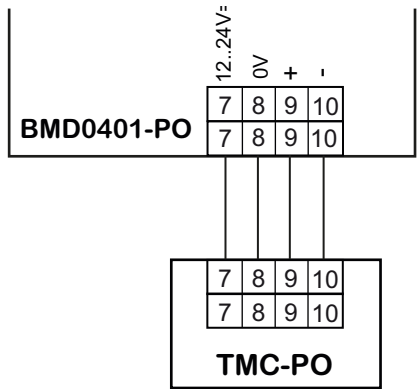
Dimensions



Connection



Connection of BMD0401-PO

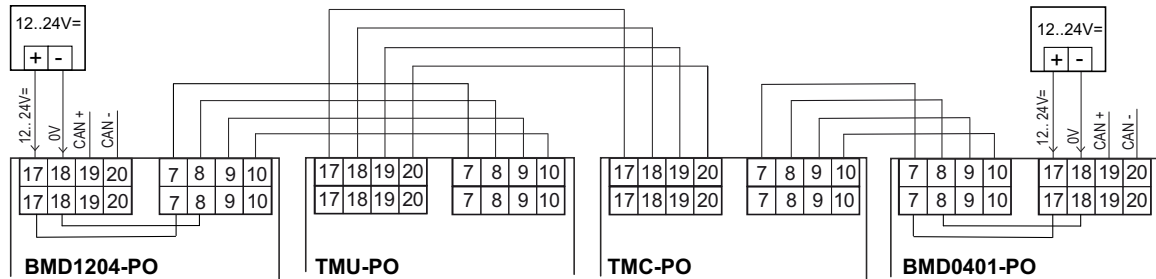




Product Description

TMC-PO

System overview LO and ID



CAUTION

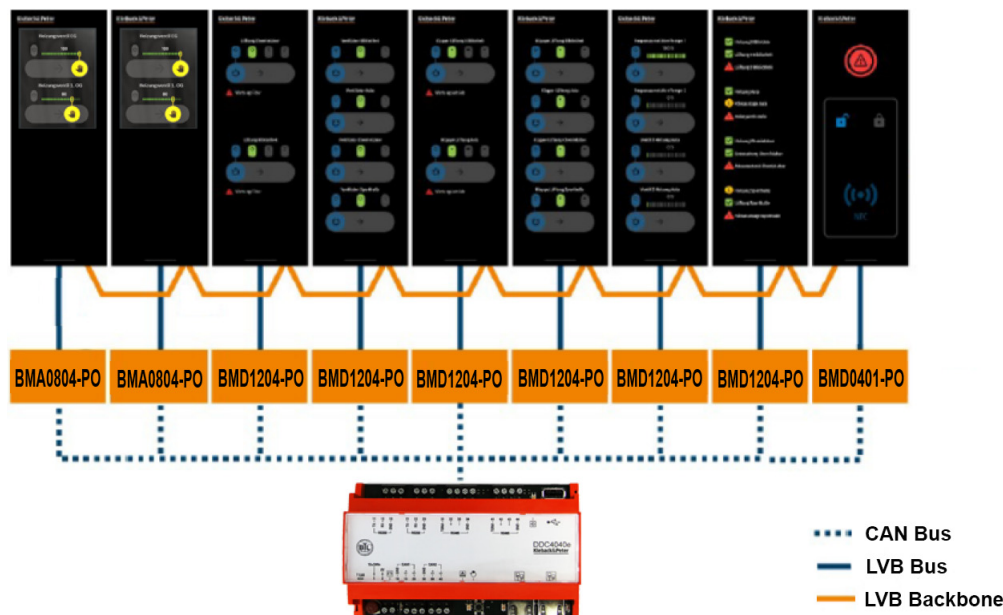
Only one TMC-PO module and a maximum of 62 TMU-PO modules may be connected to the LO and ID backbone.

Only one TMU-PO module may be connected to a BMD1204-PO or BMA0804-PO.



CAUTION

At the end of the LO and ID backbone (most remote point), a terminating resistor of approximately 180 ohms must be installed between the two data lines (+ and -) terminal "19" and terminal "20". The terminating resistor is supplied with the TMC-PO module as an accessory.





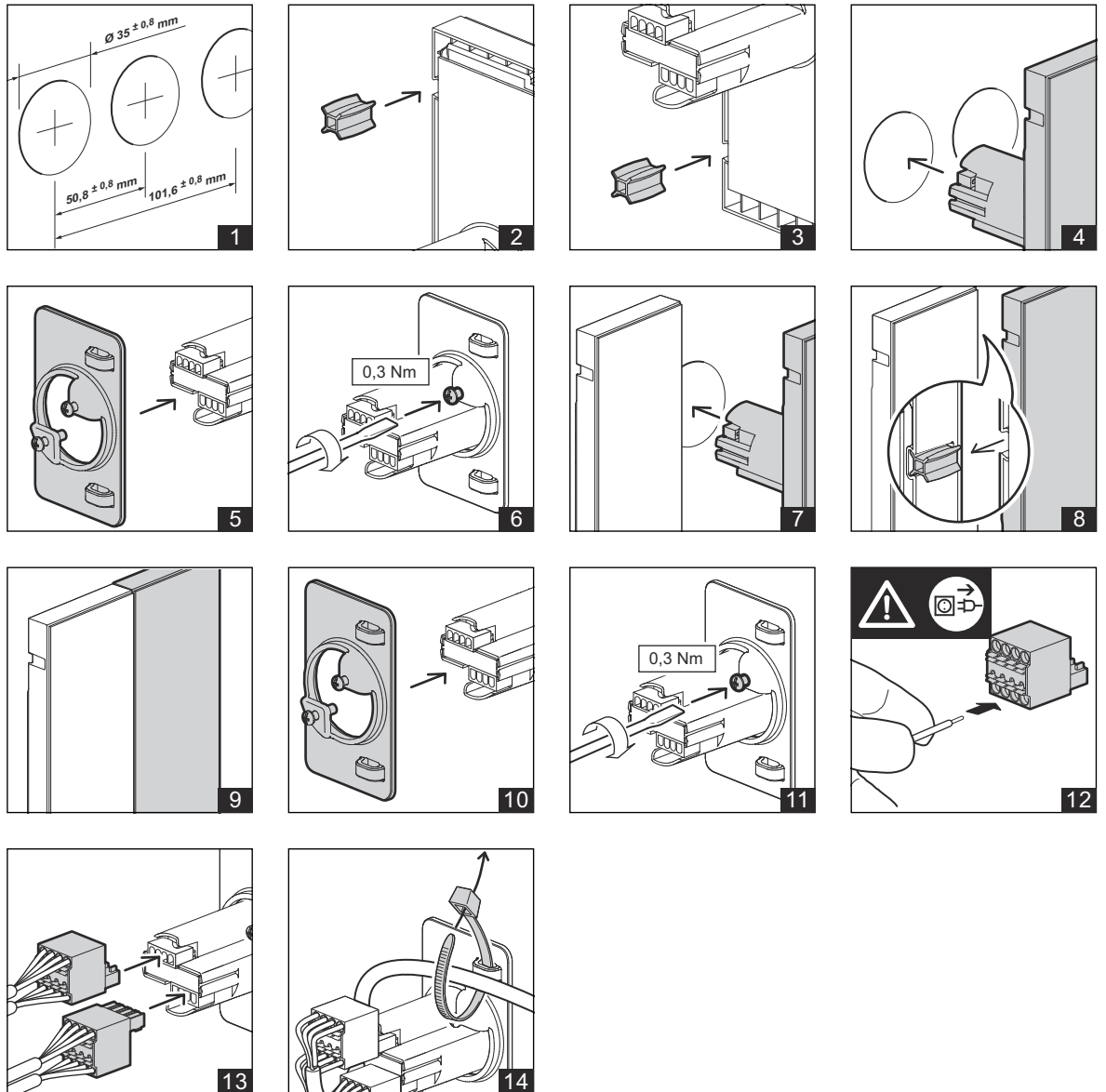
Mounting



WARNING

Danger of death by electrocution.

Mount or remove only when power is switched off.





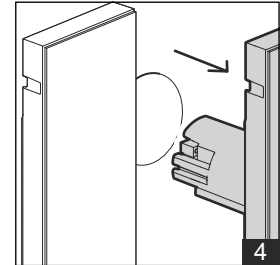
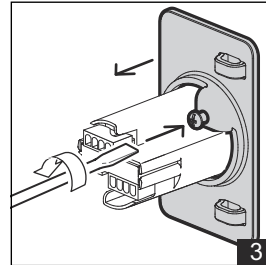
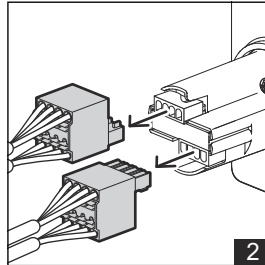
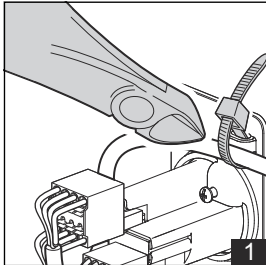
Removal



WARNING

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Mount or remove only when power is switched off.



Operation and display icons



(1) Acknowledgement button for collective malfunction message (SSM), with LED

Flashing red = SSM present, not acknowledged

Red = SSM present, acknowledged

Gray = no SSM present

(2) Status display Operation TMU-PO module is enabled (blue = enabled, gray = not enabled)

(3) Status display Operation TMU-PO module is locked (blue = enabled, gray = not enabled)

(4) NFC sensor release or manual locking of the TMU-PO modules with an NFC chip (key switch)

Blue = operating voltage is applied

(5) Status of device message (LED bar) TMC-PO module

■ Acknowledge malfunction message

▶ Pressing the acknowledgement button

■ Enable TMU-PO module

▶ Hold the NFC chip in front of the radio icon on the TMC-PO module



NOTE

If the operation of the TMU-PO modules was enabled via NFC chip (key switch), the lock is automatically activated after approx. 15 min. after the last operation.



NOTE

In the event of a TMC-PO module failure, power supply no longer available and malfunction on the LO and ID backbone, all connected TMU-PO modules are immediately enabled and can be operated.

LO and ID malfunction message processing

If a malfunction message is present on the BMD/BMA module, this is indicated in color in the module status (LED bar) at the associated TMC-PO module.

A collective malfunction message SSM is then present at the TMC-PO module. The acknowledgement button is red
(Red flashing = not acknowledged, Red = acknowledged). As long as the SSM has not been acknowledged, the relay (output DO1) is on at the BMD0401-PO. In addition, a horn can be controlled as an acoustic signal via this output DO1.

Event		Status				
BMD/BMA	TMC-PO	TMC-PO		TMU-PO		
Malfunction message at the BMD/BMA module	SSM acknowledgement	Device message (LED bar)	SSM acknowledgement on (acknowledgement button)	Aggregate status icon	Device message (LED bar) BMD/BMA in automatic mode	Device message (LED bar) BMD/BMA in manual mode
Not present	Not acknowledged	Off	Off	Off	Off	Yellow
Present	Not acknowledged	Flashing red	Flashing red	Flashing red	Flashing red	Flashing yellow/ red
Present	Acknowledged	Red	Red	Red	Red	Flashing yellow/ red
Passed	Not acknowledged	Off	Off	Off	Off	Yellow
Passed	Acknowledged	Off	Off	Off	Off	Yellow



NOTE

For more information, see "LO and ID System Overview" and "LO and ID Commissioning".



Product Description
TMC-PO