Safety

Danger!
Electricity
Injuries due to electricity are possible.
Switch off all electricity while installing the product.
Do not open or modify this product, except if described in this manual.

Old electrical and electronic equipment

This product and/or battery must be disposed of separately from household waste. Dispose such equipment according to local laws and regulations, to allow their reuse and/or recycling. This will help in conserving resources, and in protecting human health and the environment.

Short information

This expansion module integrates conventional sensor technology, for example conventional magnet contacts, into the local security network (LSN).
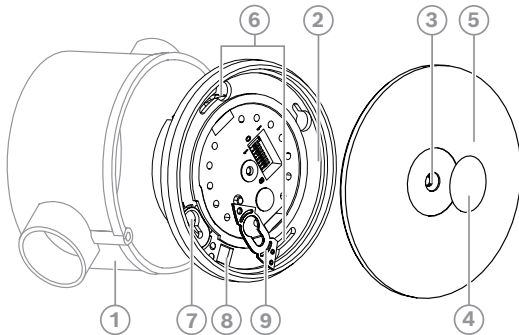
System overview

Fig. 1: System overview

Element	Description
1	Recessed box (not included in delivery)
2	Expansion module
3	Hole for lid-fastening screw
4	Self-adhesive seal
5	Lid
6	Holes for fastening screws
7	Location for wall tamper contact
8	Feedthrough for wall tamper cable
9	Wall tamper contact (optional)

Notice!
The recessed box is not included in delivery. Use a recessed box according to DIN 49073 part I.

Notice!
The recessed box must be a fixed element of the wall.

Connecting the expansion module

Caution!
Incorrect cabling leads to malfunction or damage of the system.

Caution!
Cable length
Exceeding the permitted cable length is not covered by CE declarations and leads to malfunction of the system.

– Do not exceed the total cable length of 500 m for the primary cables, the control cables, and the contact cables of EM 55.

Permitted cable length of the primary cables (PL)
– Maximum length of one unshielded cable: 3 m
– Maximum length of all shielded cables: 500 m

LSN connection
– Voltage supply can be fed-through (otherwise free terminals for 0V and +U).
– Incoming and outgoing LSN can be swapped over.

Notice!
A mixed operation of a 4-wire connection at one of the primary outputs and a 2-wire connection at the other primary output is not permitted.

4-wire connection (unshielded)

Use a 4-wire connection with an unshielded cable with a maximum length of 3 m and the internal end-of-line resistor, for example for magnetic contacts.
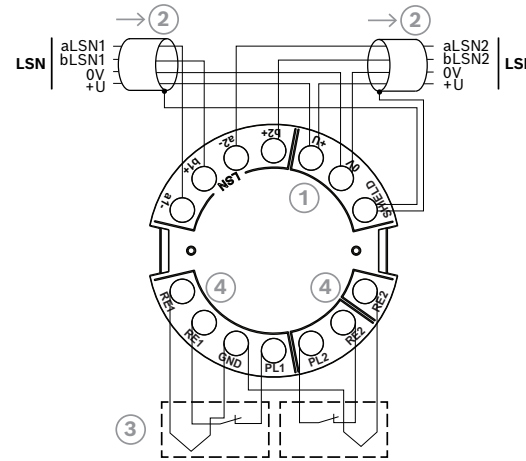
Fig. 2: 4-wire connection

Element	Description
1	Terminal for fed-through voltage supply
2	LSN connection
3	4-wire connections, for example for magnet contacts (unshielded)
4	Internal end-of-line 12.1 kΩ resistors, already onboard

2-wire connection (shielded)
1. Use a 2-wire connection with a shielded cable with a maximum length of 500 m and an external end-of-line resistor, for example for lock contacts.
2. Connect shielding only to **SHIELD** on the expansion module. Use one ferrite bead per shielding.
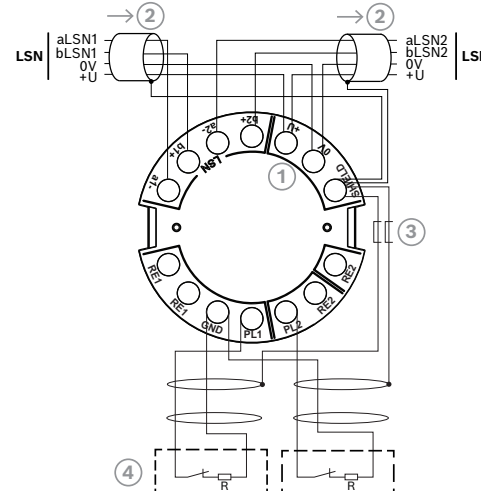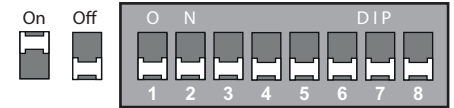
Fig. 3: 2-wire connection

Element	Description

1	Terminal for fed-through voltage supply
2	LSN connection
3	Ferrite bead (not included in delivery); approved: Würth Elektronik WE-SAFB, order code 74270017
4	2-wire connections, for example for lock contacts

DIP switch settings for LSN improved mode

DIP switch settings for LSN classic mode

Installing the wall tamper contact

Wall tamper contacts are not included in delivery.
Order ISP-EM55-WTC if you want to install the wall tamper contact.

Notice!
For VdS-C and EN-Grade-3 compliance, it is required to affix the wall tamper contact to the expansion module.

Notice!
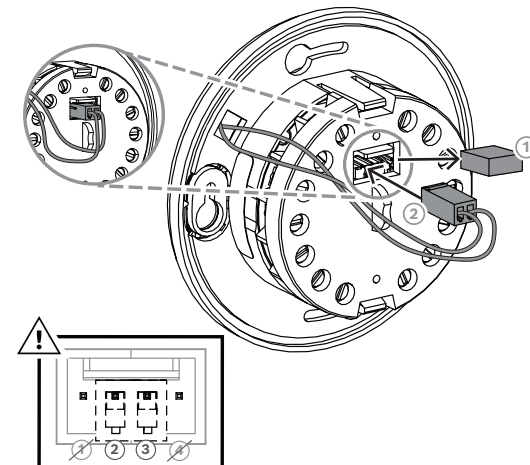Do not tighten the screws with power tools.
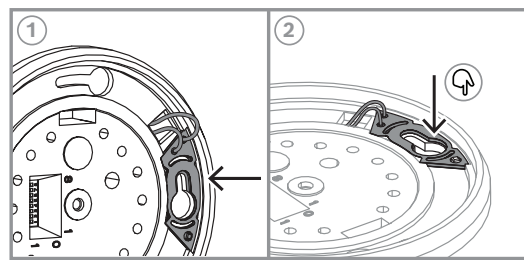
Fig. 4: Connecting the wall tamper contact
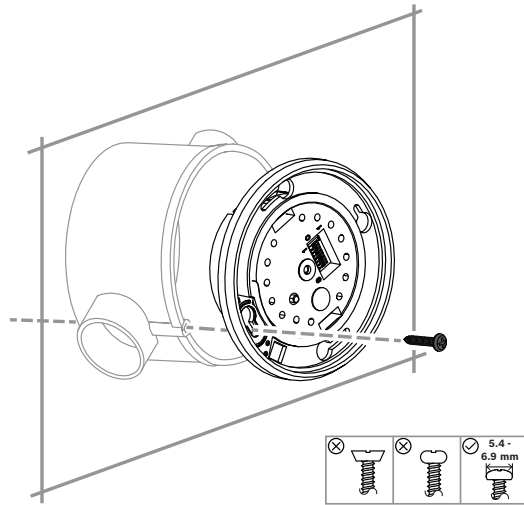
Fig. 5: Latching the wall tamper contact

Fig. 6: Fixing the wall tamper contact

How to install the wall tamper contact

1. Remove the jumper from the expansion module.
2. Feed the wall tamper cable through the hole on the expansion module.
3. Plug in the wall tamper jumper using pins 2 and 3.
4. Put the wall tamper in position on the expansion module and latch it to the stud.
5. Hand-tighten the wall tamper with an appropriate screw as defined in the image.
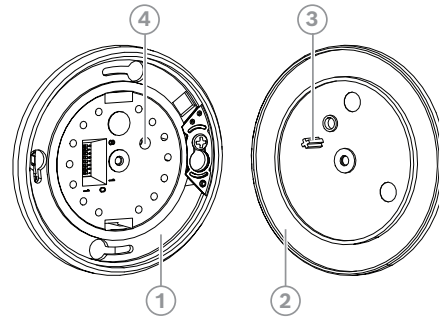
Closing the expansion module

Fig. 7: Closing the expansion module

Element	Description
1	Expansion module
2	Lid
3	Insertion post
4	Opening for insertion post

How to close the expansion module

1. Tighten the expansion module to the recessed box using the delivered screws.
2. Align the lid with the expansion module using the correct opening for the insertion post. Do not force the insertion post into any of the other openings.
3. Attach the lid with the delivered screw.
4. Put the self-adhesive seal onto the screw.

Technical data

Electrical

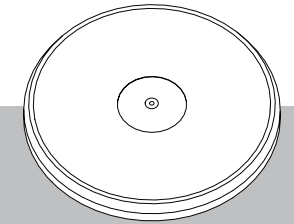|	
Minimum operating voltage in VDC	10
Maximum operating voltage in VDC	33
Maximum current consumption in mA	0.6
Number of primary lines	2
Terminal resistance in KΩ	12.1

Mechanical

Dimension in cm (Ø x D)	7.6 x 2.5
Housing material	ABS
Color	RAL 9002
Weight in g	54

Environmental

Minimum operating temperature in °C	0
Maximum operating temperature in °C	50
Relative humidity in % (non-condensing)	< 93

Protection class	IP40
Security level	IK04
Environmental class	II

BOSCH

LSN Exp. module, EM55, flush mount
ISP-EM55FM-120

Installation manual

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