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 appliances

Electrical or electronic devices that are no longer serviceable must be collected separately and sent for environmentally compatible recycling (in accordance with the European Waste Electrical and Electronic Equipment Directive).

To dispose of old electrical or electronic devices, you should use the return and collection systems put in place in the country concerned.

Short information

This zone expander module integrates manual conventional sensor technology (e.g. conventional magnet contacts) into the local security network (LSN).
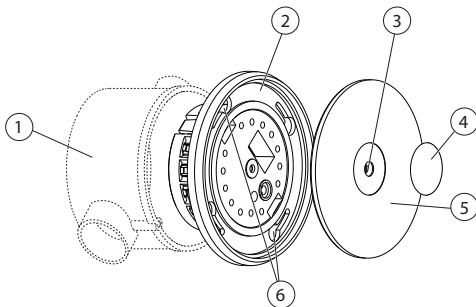
System overview

Fig. 1: System overview

Element	Description

1	Recessed socket (not part of the delivery)
2	Mount with PCB
3	Opening for housing cover fastening screw
4	Adhesive seal
5	Housing cover
6	Opening for fastening screws

Mounting the zone expander module

ℹ Notice!
The recessed socket is not part of the delivery. Use a recessed socket according to DIN 49073 part I.

How to mount the zone expander module

1. Connect the PCB.
2. Place the mount with PCB into a recessed socket and lock it in position using the two fastening screws.

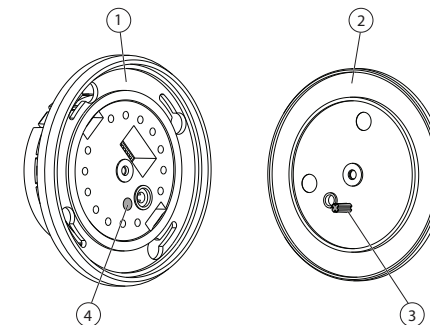## Closing the zone expander module

Fig. 2: Closing the zone expander module

Element	Description
1	Mount with PCB
2	Housing cover
3	Insertion post
4	Opening for insertion post

How to close the zone expander module

1. To close the zone expander module, put the housing cover onto the mount with PCB while ensuring that the insertion post (element 3 in figure above) on the lower side of the housing cover fits into the designated opening for the insertion post (element 4 in figure above) on the mount with PCB. Do not force the insertion post into any of the other openings.
2. Secure the housing cover with the housing cover fastening screw.
3. Put the adhesive seal onto the housing cover fastening screw.

Connection

⚠ Caution!
Incorrect cabling
Incorrect cabling leads to malfunction 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 **500m** for the primary cables, the control cables and the contact cables of EM 55, KD55/1, NKK, NNK 100 2-wire, NVK and IC 400.

Permitted cable length of the primary cables (PL)

– Maximum length of one unshielded cable: 3m
– Maximum length of all shielded cables: 500m

LSN connection

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

4-wire and 2-wire connections

ℹ 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.
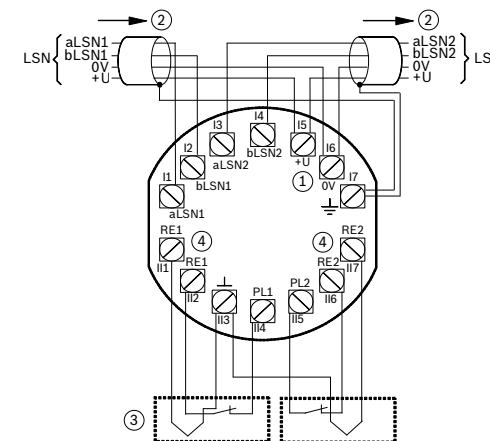
ℹ Notice!
For a 4-wire connection always use unshielded cables.
For a 2-wire connection always use shielded cables.

4-wire connection (unshielded)

– Use a 4-wire connection with an unshielded cable with a maximum length of 3 m and the internal EOL resistor (e.g. for magnetic contacts).
– With an unshielded cable, do **not** connect contacts with metallic enclosure.

Element	Description
1	Terminal for fed-through voltage supply
2	LSN connection
3	4-wire connections, e.g. magnet contacts (unshielded)

4	Internal EOL 12.1 kΩ resistors, already onboard

2-wire connection (shielded)

– Use a 2-wire connection with a shielded cable with a maximum length of 500 m and an external EOL resistor (e.g. for lock contacts).
– Connect shielding only to the zone expander module.
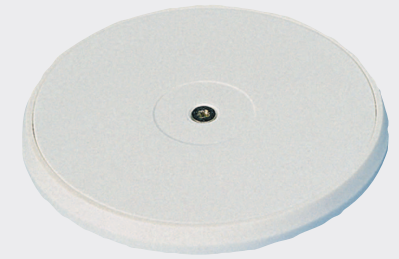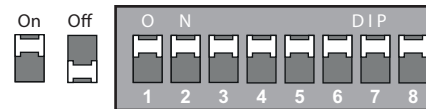– Use one ferrite bead per shielding.
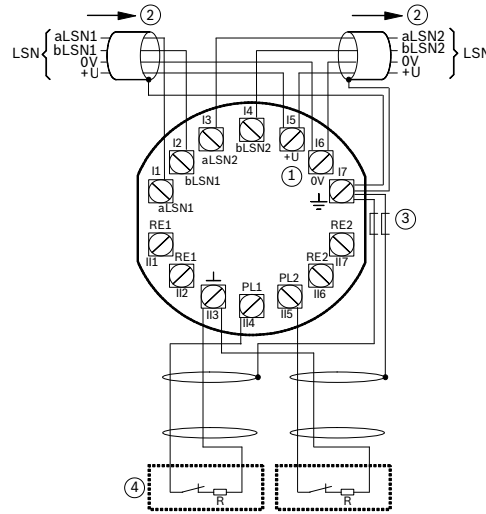
Element	Description
1	Terminal for fed-through voltage supply

2	LSN connection
3	Ferrite bead (not part of the delivery); approved: Wuerth # 74270017
4	2-wire connections, e.g. lock contacts

DIP switch settings for LSN improved mode

DIP switch settings for LSN classic mode

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 g

Environmental

Minimum operating temperature in °C	0
Maximum operating temperature in °C	50
Protection class	IP40
Security level	IK04
Environmental class	II

ISP-EM55FM-120 LSN 2 Zone Expander Module, Recessed Mounting

BOSCH

en Quick Installation Guide