BOSCH

ISP-PCBA-EMIL LSN Expansion module, EMIL, PCB

▶ Connects to 6 detector zones (conventional detector or monitoring contact inputs), 4 free control outputs and to arming devices (e.g. NBS 10) with associated system components

▶ Monitors the primary lines for alarms, short circuits or wire interruptions

▶ Expanded system limiting values in the "improved version" LSNi mode

▶ Tamper contact (tamper alarm) and integrated buzzer

The expansion modules have been developed for connection to LSN control panels, e.g. MAP 5000, and provide the extended functionality of LSN improved technology. The "classic" LSN mode can be selected via an integrated DIP switch, enabling the connection of all classic LSN emergency call detector control panels such as NZ 300 LSN, UEZ 2000 LSN and UGM 2020.

The LSN expansion modules are used for the following purposes:

• To connect 6 detector zones (conventional detectors or monitoring contact inputs) to the local security network (LSN).
• To connect arming devices (e.g. NBS 10) with associated system components to the local security network (LSN).
• Control purposes (4 control outputs).

System overview

**Connecting conventional detectors and control outputs**

In local security networks, detection and control functions are performed via the LSN line. This means additional primary lines in the control panel are not required for control procedures. Conventional detectors such as contact detectors, magnetic contacts or bolt contacts are grouped together on a primary line for one detector zone.
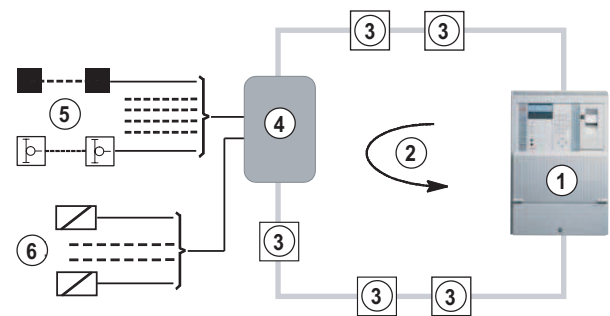
1	LSN control panel
2	LSN loop
3	LSN elements
4	LSN Expansion Module
5	6 detector zones with conventional detectors or monitoring contacts
6	4 control outputs

Connecting arming devices and conventional detectors

In local security networks, arming devices (block-type lock; for example, NBS 10, coded arming device) are connected to the associated system components through the LSN Expansion Module.
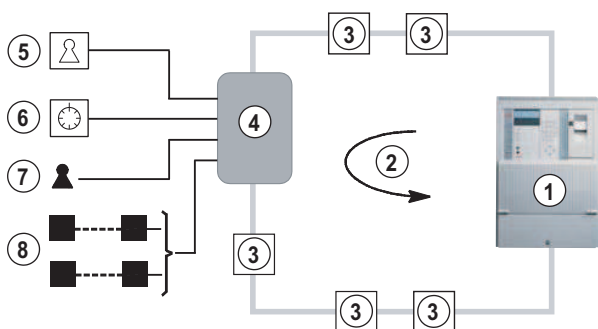
1   LSN control panel

2   LSN loop

3   LSN elements

4   LSN Expansion Module

5   Arming device (for example, NBS 10 block-type lock)

6   Code switching unit

7   Bolt contact

8   2 detector zones with conventional magnetic contacts (for example, door contact)

Installation/configuration notes

Control panels
Can be connected to both the MAP 5000 and the classic LSN control panels NZ 300 LSN, UEZ 2000 LSN and UGM 2020. Programming is carried out via the control panel's programming software (PC).

Power supply
The outputs are supplied with power via the expansion module's power supply or via an external power supply. External power supply units must be grounded.
All LSN elements are designed to loop through the power supply (+V, -V) of subsequent LSN elements. The maximum cable length of the separate power supply (+V, -V) depends on the current consumption of the LSN elements to be supplied and their peripherals, if not powered by an external source. The applicable voltage range must be taken into account to ensure correct operation of the expansion module. Possible voltage range: 9 V to 30 V.

+12 V output
An output of +12 V / 0 V is available for supplying external 12 V devices (note the max. output current).

Parts included

Quant-ity	Component
1	LSN Expansion Module with plastic cover
20	Pack of 3 connection terminals
12	EOL resistor (12k1)
2	EOL resistor (3k92)
1	Installation Manual

Technical specifications

Electrical

LSN part	
Minimum operating voltage in VDC	15
Maximum operating voltage in VDC	33
Maximum current consumption in mA	4.95

Other expansion module functions	
Minimum operating voltage in VDC	9
Maximum operating voltage in VDC	30
Maximum current consumption in mA at 12 V	370
Maximum current consumption in mA at 28 V	180

External devices	
Minimum output voltage in VDC	11.9
Maximum output voltage in VDC	16.3
Maximum output current in mA	100

Primary lines and control outputs

Primary lines PL 1 - PL 6	
Connection options	6 detector zones can be programmed as hold-up, intrusion, tamper, closure, or entry
Terminal resistance in kΩ	12.1
Interruption voltage in V	6
Maximum line resistance in Ω	100

Alarm criteria	± 40% of terminal resistance
Maximum response time in ms	200

Control outputs S1 - S3	
Principle	Open collector, 12 V when active, 0 V switching
Maximum voltage in V	30
Maximum switching voltage in V	1.4
Maximum switching current in mA	20

Control output S4	
Principle	12 V switching
Minimum switching voltage in V	11.9
Maximum switching voltage in V	16.3
Maximum switching current in mA	100

When connecting an arming device (e.g. NBS 10)/ coded arming device

Primary lines PL 1 – PL 6	
Primary lines 1, 2, 5, 6	See PL 1 - PL 6 of table primary lines and control outputs
Primary line PL 3	Block-type lock or code switching unit
Primary line PL 4	Code switching unit
End-of-line resistors Primary line PL 3 block type lock	R_E = 12.1 kΩ ±1% (armed) R_E = 12.1 kΩ II 3.92 kΩ ±1% (un-armed)
End-of-line resistors Primary line PL 3 or PL 4 coded arming device	R_E = 12.1 kΩ ±1% (coded arming device invalid) R_E = 12.1 kΩ II 3.92 kΩ ±1% (coded arming device valid)

S1–S3 control outputs	
Principle	Open collector, 12 V when active, 0 V switching
Maximum current in mA	20
Maximum voltage in V	30
Maximum witching voltage in V	1.4
Maximum line resistance	2 x 10 Ω

Short-circuit stability in s	2

Control output S4 (block-type lock magnet)	
Maximum current in mA	100 mA
Minimum voltage in V	11.9
Maximum voltage in V	16.3
Maximum line resistance	2 x 5 Ω
Short-circuit stability in s	2

Mechanical

Dimension in cm (H x W x D)	
Weight in g	
Material	
Color	

Environmental

Minimum operating temperature in ℃	0
Maximum operating temperature in ℃	55
Minimum storage temperature in ℃	-25
Maximum storage temperature in ℃	75
Maximum relative humidity in %	93
Protection class	IP30
Environmental class	II
EMC interference immunity	EN 60950, EN 50130, VdS 2110
EMC emitted interference	EN 61000-6-3

Ordering information

ISP-PCBA-EMIL LSN Expansion module, EMIL, PCB
Flush-mounting version
For connecting 6 detector zones, 4 control outputs or arming devices (e.g. NBS 10) to the local security network (LSN)
Order number **ISP-PCBA-EMIL | F.01U.078.200 F.01U.423.805**