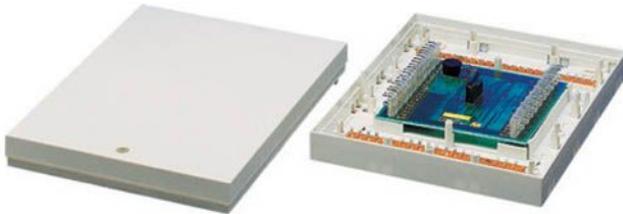




NNK 110 LSN expansion module



- ▶ 4 zones
- ▶ 1 non-monitored line
- ▶ 3 free control outputs
- ▶ Integrated buzzer
- ▶ Tamper contact (sabotage alert)
- ▶ Surface installation

The NNK 110 LSN expansion module is used to connect conventional detectors to the LSN network.

Functions

Four programmable zone inputs hold-up, intrusion, tamper, closure monitoring or other types of detection (can also be used as control input).

A non-monitored line for closure monitoring to obtain forced actuation system when arming monitoring areas can be connected.

There are three control outputs available whose function depends on the detectors attached. Control outputs that are not needed can be freely programmed with the panel functions.

The external power supply is monitored.

Max. 4 KR 100 LSN expansion module relays (option) can be installed.

LSN

Should wire interruptions or short-circuits occur, all LSN elements in the LSN loop continue to be monitored. In this event, the system automatically creates two stub lines which continue to monitor from both sides up to the location of the fault.

The interface housing has a tamper, which if triggered, sends a unique message and is evaluated as a sabotage

alert. An integrated buzzer can be used to signal status changes (e.g. for tests).

Certifications and Approvals

| Country | Certification | NNK 110 LSN |
|---------|---------------|-------------|
| DE | VdS | G 102069, C |

Installation/Configuration Notes

Power supply

To supply power to the remaining interface functions and possible connected conventional emergency call units, a second twin wire lead – hereinafter called +U/-U - is necessary. The length of the twin wire +U/-U depends on the current consumption of the LSN interface modules being supplied as well as their peripherals, insofar as these do not have independent supplies.

The applicable voltage range must be taken into account and the required power supply must be determined to ensure correct operation of the LSN interface modules. Voltage range: 9 V ... 30 V.

There is an electrically isolated output, $V_0=12V$, to supply 12V consuming units (note max. output current).

Because terminal voltage can be 28 V or 12 V, the voltage drop up to the LSN interface module can be a maximum of 6 V or 3 V depending on the type of LSN interface module. If current consumption is high, LSN interface modules and peripherals can be supplied via a separate line with a larger line cross section if necessary.

Note Current consumption I_{in} ; with varying power supply and output current I_{out}

| + V | I_{in} where $I_{out} = 0\text{mA}$ | I_{in} where $I_{out} = 100\text{mA}$ |
|-----|--|--|
| 9V | 7mA | 240mA |
| 12V | 7mA | 160mA |
| 30V | 13mA | 70mA |

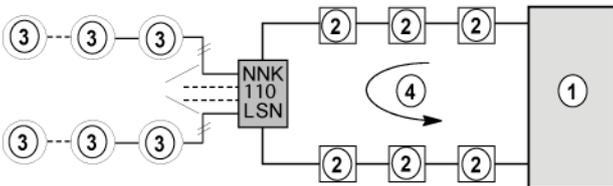
In order to keep the total current requirement of the NNK 110 LSN low, the input voltage must be as high as possible. For this reason, it is essential to take account of the voltage drop on the line.

Cable lengths

Cable length per zone or control lines

- Maximum length unshielded cable - 10 m
- Maximum length shielded cable - 500 m

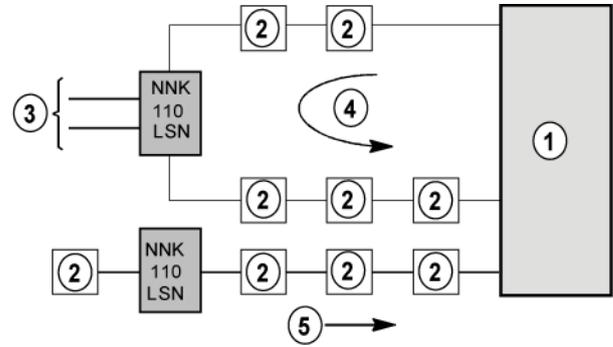
Connecting conventional detectors



- 1 Control unit
- 2 LSN element
- 3 1-4 DC zones
- 4 Loop

Detection and control via two wires

In the case of the Local SecurityNetwork, detection and control functions are performed via the LSN line. This means additional primary leads in the control unit are not required for control procedures.



- 1 Control unit
- 2 LSN element
- 3 Controlling
- 4 Loop
- 5 Stub

Optional expansion module relay KR 100 LSN

The expansion module relay KR 100 LSN is intended for use in the NNK 110 LSN and NVK 100 LSN. The KR 100 LSN is installed if the high current requirement means the connected control elements cannot be controlled directly from the LSN interface modules, or in order to enable zero-potential switching. Up to four KE 100 LSN can be installed per NNK 110 LSN or NVK 100 LSN. One solder distributor is supplied for two KR 100 LSN.

Parts Included

| Type | Qty. | Components |
|-------------|------|------------------|
| NNK 110 LSN | 1 | Expansion module |

Technical Specifications

| | |
|--------------------------------------|--|
| Operating voltage | |
| • LSN part | +12 V +33 V |
| • Other interface functions | +9 V +30 V |
| Current consumption | 2.2 mA for LSN part and 7 mA for the remaining interface functions |
| Control output 1 (terminal 14) | |
| | Open collector, 0 V when active |
| • Over threshold voltage | max. 30 V |
| • Over threshold current | max. 20 mA |
| Control output 2 (terminal 13) | |
| | Open collector, 0 V when active |
| • Over threshold voltage | max. 30 V |
| • Over threshold current | max. 20 mA |
| Control output 2 (terminal 12) | |
| | Open collector, 0 V when inactive |
| • Over threshold voltage | max. 30 V |
| • Over threshold current | max. 10 mA |
| Control output 3 (connection 15, 16) | |
| | Open collector, 12 V when active |
| • Over threshold voltage | < 1.5 V |
| • Over threshold current | 100mA max. |
| Output voltage | +12.65 V |
| Output current | 100mA max. (The total of all V_0 outputs and control output) |
| Connection options | |
| 1 - 4 zones | |
| • Terminal resistance | RE = 12k1 Ω 1% |
| • Alarm criteria | \pm 40% of terminal resistance |
| • Line resistance | max. 100 Ω |
| • Response time | < 200 ms |
| Closure monitoring | max. 100 Ω |
| Ambient temperature | -5° C +45° C |
| Housing base/cover | Plastic |
| Color | RAL 9002 grayish white |
| Weight | Approx. 400 g |
| Dimensions (H x W x D) | 215 x 160 x 35.5 mm |
| Protective system | IP 30 |
| Environmental class | II (VdS 2110) |

KR 100 optional

| | |
|-------------------------------|---------------------------------------|
| reel | |
| • response voltage | >7 V |
| • fall-off voltage | <1 V |
| • reel voltage | max. 14.3 V |
| Contacts | |
| • principle | 2 change-over contacts potential free |
| • switch-on current | max. 5 A |
| • permanent current | max. 2 A |
| • switch-off current | max. 1 A |
| • Over threshold voltage | max. 60 V |
| • switch performance | max. 30 W |
| Current consumption per relay | |
| • at 12 V | 20 mA |
| • at 28 V | 10 mA |
| Ambient temperature | 0° C +55° C |
| Protective system | IP 40 |

Ordering Information

| | |
|------------------------------|------------|
| NNK 110 LSN expansion module | 4998114146 |
|------------------------------|------------|

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