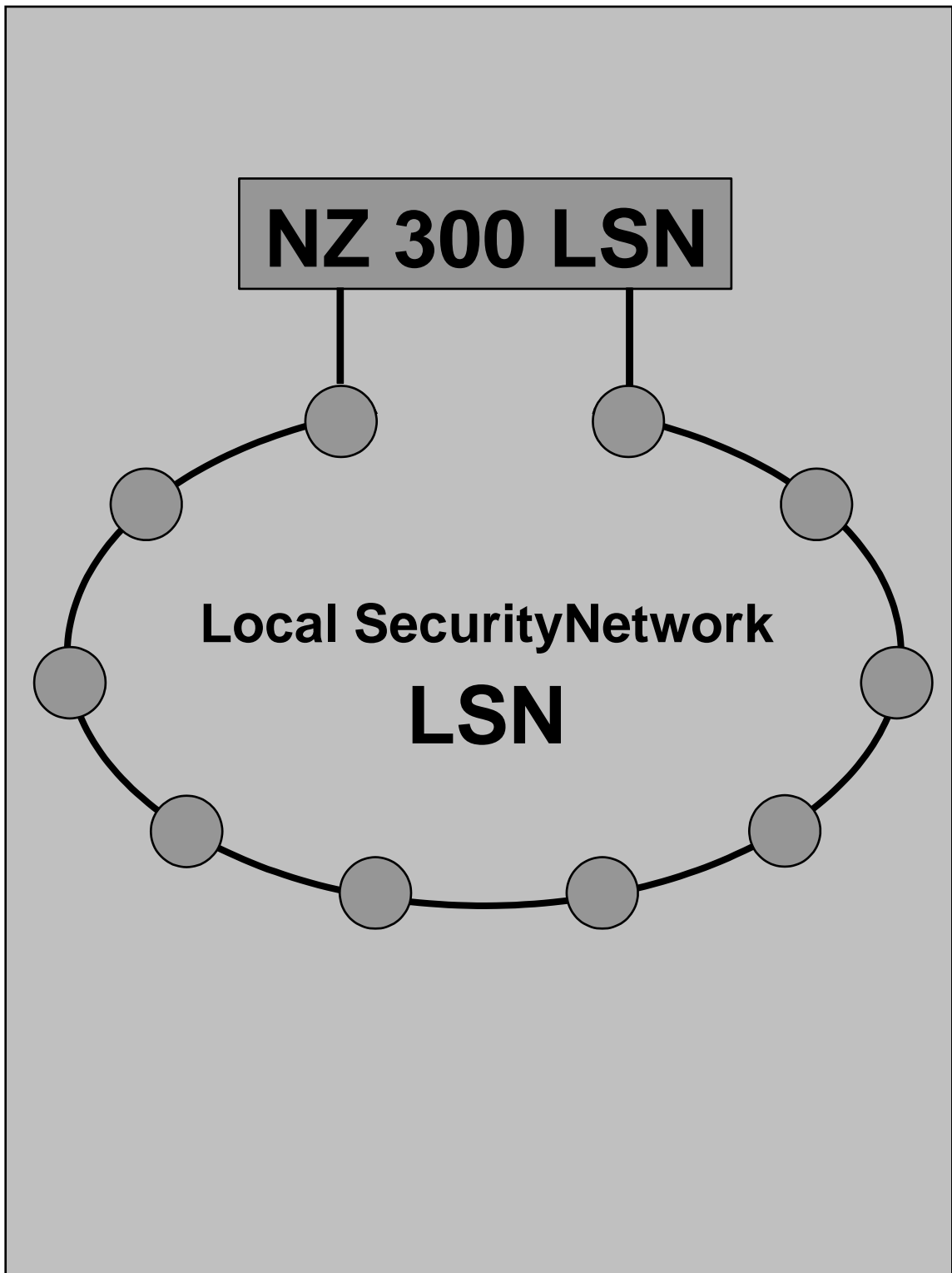


INSTALLATION MANUAL

NZ 300 LSN Intrusion control panel



BOSCH

610-4.998.101.911
Issue: 2
As at: Sept. 2001

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1 Product description

1.1 System overview

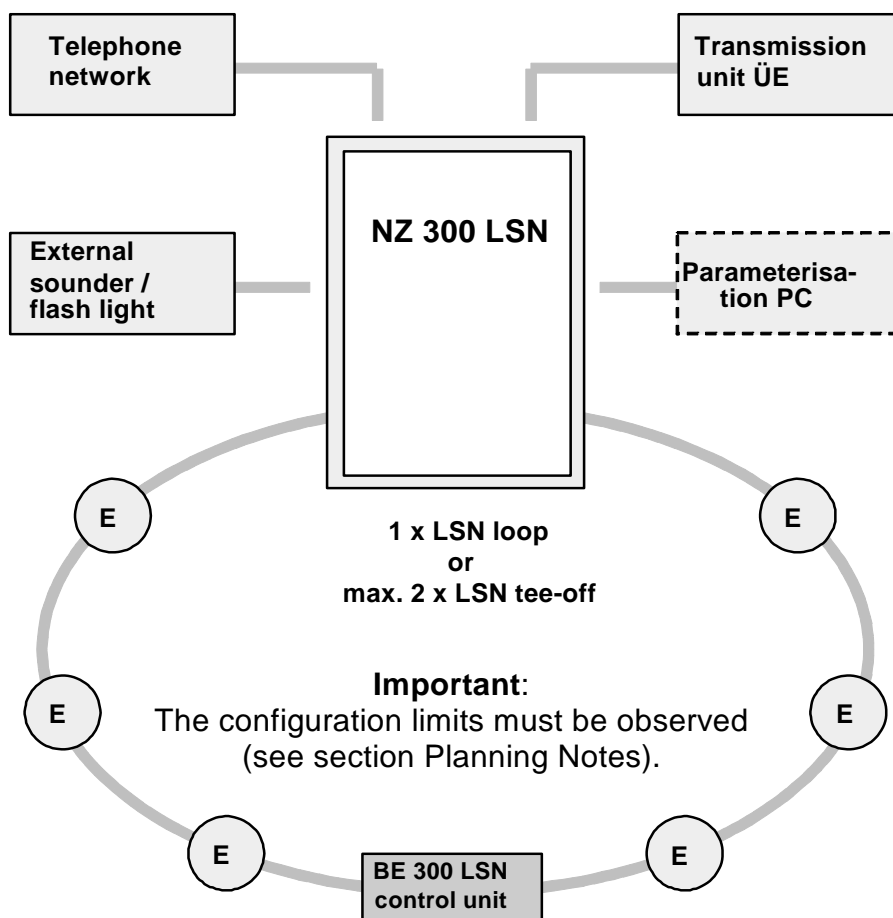
The NZ 300 LSN intrusion control panel and the BE 300 LSN keypad are highly flexible and reliable.

This is made possible by use of the Local SecurityNetwork LSN. The key feature of the Local SecurityNetwork LSN is that it connects all the detectors and control elements of a security system to a security system centre using a single transmission technology, saving on wiring and complying with regulations.

The remote BE 300 LSN keypad is used for controlling, alarm signaling and status display purposes.

The Local SecurityNetwork LSN is made up of:

- NZ 300 LSN intrusion control panel and BE 300 LSN keypad
- LSN coupler (E) for connecting STANDARD intrusion detectors, arming devices, indicator boards etc.
- LSN detectors (E):



Continuation of **Product description**

1.2 BE 300 LSN keypad

The BE 300 LSN keypad is used as a remote control / display panel for the NZ 300 LSN. The BE 300 LSN is integrated into an LSN loop or LSN tee-off. A maximum of 8 BE 300 LSN units can be connected.

The control / display panel consists of:

- Buzzer for alarm signaling
- Cumulative displays (LEDs) for alarms, malfunctions and operation.
- Plain-text display consisting of two lines of 16 alphanumeric characters each (illuminated in dialogue scenario). All waiting messages and information are output on the display.
- Keypad for operation purposes.

Continuation of **Product description**

1.3 Transmission of alarms

Assistance providers can be contacted by means of:

- a ÜE transmission unit
- an integrated auto dialler
- an auto dialler such as AT 2000
(integrated or casing to casing)
- 2 x external sounders and 1 x external flash light
(local alarm signaling)
- a remote auto dialler via the serial S1 interface

1.4 Resetting

Resetting restores e.g. triggered detectors to their original status. Specific zones can be assigned to users during the parameterisation process. These zones can then be reset specifically by this user following a triggering operation.

1.5 Outputs (relays/C-points)

The following outputs are available:

- Output for malfunctions (1 x malfunction relay)
- Output for alarms (1 x ÜE relay)
- Freely parameterisable output (1 x relay)
- Freely parameterisable central indicator board points
(2 x open collector outputs)

Continuation of **Product description**

1.6 Tamper contact

The tamper contact issues an alarm when the casing is manipulated (tampered with) or if the casing hood is removed.

1.7 Internal programs

4 internal zones can be created (freely parameterisable) by assigning detectors. Each zone can be "armed internally" (internal program).

1.8 Background memory

The NZ 300 LSN is equipped with a background memory for the last 1024 events. All alarms, malfunctions, shutdowns and resets of the central unit are stored.

The events stored with data and time can be output on the display of the BE 300 LSN or on the PC.

They can also be printed out on a PC.

2 Planning notes

2.1 Power supply

NZ 300 LSN power balance:

The power balance is generated in accordance with VDE 0833 and is created using the "uezpro" project planning and power calculation program. The limit values of the NZ 300 LSN are calculated and displayed automatically (see next page). External peripherals which are connected must be included in the calculation.

Thanks to the integrated power supply, batteries can be charged up to a capacity of 34 Ah.

The max. power pack current (battery charge current + standby current) is 2.4 A.

Stored energy time: max. 60 hours.

ERWE 10 voltage converter:

The basic voltage of the NZ 300 LSN is 12 V. If the voltage drop across the length of the line is too great (>3 V), a voltage converter must be employed.

Additional remote power supply:

The "EV 12V/1A" or the "UEV 1000" can be used for an additional remote power supply.

An additional remote power supply "NEV 300 LSN" is planned.

This power supply must **not** be connected in parallel with the NZ 300 LSN power supply (see section Connections "Additional remote power supply").

Continuation of **Planning notes****2.2 LSN project planning**

Applications, requirements	NZ 300 LSN
Loops and tee-offs	1 x loop or max. 2 x tee-offs possible. Loops should be preferred due to their greater reliability compared with tee-offs.
Mixture of LSN couplers and LSN detectors	LSN couplers and detectors can be mixed on one loop or tee-off (see sections 2.3 and 2.4).
Mixing of automatic and non-automatic LSN detectors	Automatic and non-automatic LSN detectors can be mixed.
Connection of GLT detectors	conventional GLT (DC circuit technology) detectors can be connected using the NNK 100 LSN network emergency call coupler via 4 DC primary lines or via the KD 55 LSN with 2 primary lines.
Power supply +U/0V	When calculating the line length +U/0V of LSN couplers NNK 100 LSN and NVK 100 LSN, it is important to remember that the LSN couplers require a minimum supply voltage of 9 V.
	Limit values of the NZ 300 LSN (loop or tee-offs (total))
Connection of LSN elements (E) ¹⁾	Max. 127 LSN elements (depending on power requirement).
Input addresses ²⁾	Max. 140
Output addresses ³⁾	Max. 64
Permissible current	Max. 100 mA LSN line voltage
Line length	Max. 1000 m for loop Max. 1000 m for tee-offs (total)

1) LSN elements (E) include LSN couplers or LSN detectors.

2) Input addresses of detectors, couplers, arming devices etc.

3) Output addresses of e.g. ATB LEDs.

Note: The number of LSN elements, input addresses, output addresses and the current consumption on the LSN bus line are displayed automatically in the “uezpro” project planning and current calculation program and the “NzPara” parameterisation program.

Continuation of **Planning notes**

2.3 LSN detectors

Connectable LSN detectors (**intrusion**) in loop or tee-off configuration:

- | | |
|-----------------------------------|----------------------------------|
| ▪ Manual intrusion points | ND 100/ND 200 LSN |
| ▪ Pass. infrared motion detectors | IR 210, IR 212/200 LSN |
| ▪ Sound-in-solid detector | NKS 100 LSN |
| ▪ Dual motion detectors | UP 350 T LSN/UP 370 T LSN |
| ▪ Infrarot motion detector | IR 250 T LSN |
| ▪ LSN magnetic contacts | EMK 36 LSN/EMK 36 ATZ LSN |
| ▪ LSN magnetic contacts | EMK 36 S LSN/MK 36 S LSN |
| ▪ LSN glass break detector | GBS 2036 LSN |
| ▪ LSN striking plate contacts | SKI 100 LSN/SKA 100 LSN |
| ▪ LSN roll-up door contacts | AMK 4 LSN/AMK 4 S LSN |

Connectable LSN detectors (**fire**) in loop or tee-off configuration:

- | | |
|--------------------------------|-----------------------|
| ▪ Non-automatic fire detectors | DM 200/210 LSN |
| ▪ Non-automatic fire detectors | SM 200/210 LSN |
| ▪ Multisensor detector | OT 200 LSN |
| ▪ Optical detector | OM 200 LSN |
| ▪ Temperature detector | TM 200 LSN |
| ▪ Optical detector | O 400 LSN |
| ▪ Temperature detector | T 400 LSN |
| ▪ Multisensor detector | OT 400 LSN |
| ▪ Multisensor detector | OC 400 LSN * |
| ▪ Multisensor detector | OTC 400 LSN * |

* **planned**

Continuation of **Planning notes**

2.4 LSN couplers

- **Intrusion coupler NNK 100 LSN**
- **Arming device coupler NVK 100 LSN**
- **Indicator board coupler NTK 100 LSN**
- **Branch coupler NAK 100 LSN**
- **Contact coupler NKK 100 LSN**
- **Junction box KD 55/1 LSN**
- **Indicator board module ATB 100 LSN**

Intrusion coupler NNK 100 LSN

- **Four** primary lines can be parameterised as holdup / intruder / tamper or closure zones for connecting STANDARD intrusion detectors
- **One** non-monitored input as closure monitor for connecting bolt contacts
- Facility for connecting **three** control outputs, use and control of which is governed by the connected STANDARD intrusion detectors.

Arming device coupler NVK 100 LSN:

- Facility for connecting **six** primary lines (DC primary lines).
Primary lines PL1 - PL4 can be used as holdup, intruder, tamper or closure zones.
- Primary line PL5 is used for connecting a block-type lock line / logical switching units with the statuses armed / not armed / malfunction or for connecting logical switching units with statuses rejected / set / malfunction.
- Primary line PL6 is used for connecting logical switching units with statuses rejected / set / malfunction or for connecting holdup, intruder, tamper or closure zones.
- **Four** control outputs with the functions
Control of block-type lock magnet
Control of block-type lock lamp "BLL" (LED1)
Control of block-type lock lamp "BLA" (LED2)
Open collector output (the output can be planned freely)

Continuation of **Planning notes**

LSN couplers

Indicator board coupler NTK 100 LSN

- Facility for connecting 8 open collector outputs for remote displays and 2 inputs for external buttons.

Branch coupler NAK 100 LSN:

- For branching a tee-off.

Contact coupler NKK 100 LSN

- Facility for connecting 8 contacts, e.g. door contacts for monitoring that doors are closed.

The statuses of the contacts can be evaluated as either "open" or

Junction box KD 55/1 LSN

- 2 primary lines for connecting contact detectors such as magnetic contacts or lock contacts.
An alarm can be evaluated as either a tamper, holdup, closure or intruder alarm (can be parameterised).

Indicator board module ATB 100 LSN (max. one ATB can be connected)

- Remote control and driver unit for max. 32 connectable location plan LEDs for displaying max. 32 partitions (installed in the existing location plan board).

Continuation of **Planning notes**

2.5 Arming devices

An arming device can be used to arm an area which has to be protected.

The following arming devices can be used in conjunction with the NZ 300 LSN:

- SmartKey and SmartKey LSN
- Block-type lock
- Key-operated switch (only dynamic key-operated switches)
- BE 300 LSN (user code)

Notes on the arming devices:

- The SmartKey or block-type lock are connected via the NVK 100 LSN arming device coupler.
- A key-operated switch is connected to any desired coupler input. The key-operated switch should be fitted close to a BE 300 LSN in order to be able to monitor arming / disarming.
- VdS directive: Key-operated switches and BE 300 LSN may only be used for arming internal programs.

2.6 Transmission unit

The NZ 300 LSN can be used to control a transmission unit ÜE. The central PCB holds a control relay and two terminal points for a terminal resistance in the case of a ÜE intrusion.

2.7 Signaling units

A maximum of 3 external sounders / flash lights can be controlled - 1 flash light and 2 sounders. If only one external sounder is connected, a terminal resistor of 12.1 kOhm must be connected to the terminal points for the second external sounder.

Continuation of **Planning notes**

2.8 Generating zones with arming devices

The NZ 300 LSN can be used with **max. 8 partitions**. The main zone or central zone must be **partition 1**. Zones can be created when parameterising the NZ 300 LSN. Explanations about zone generation and the significance of this is described below:

Partitions 1 to 8:

- Main zone **HB** (can only be parameterised for partition 1)
The only partition or the superordinate partition for one or more partitions.
- Central zone **ZB** (can only be parameterised for partition 1)
Partition in which the central unit is located if there are several partitions which are equal.
- Subzone **TB** (partitions 2 to 8)
Partition which is subordinate to the main zone.

Abbreviations in the examples:

HB = Main zone

ZB = Central zone

TB = Subzone

HBS = Main block-type lock

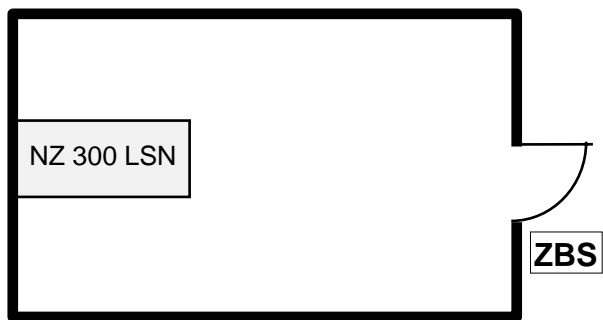
ZBS = Central block-type lock

TBS = Subzone block-type lock

Continuation of **Planning notes**

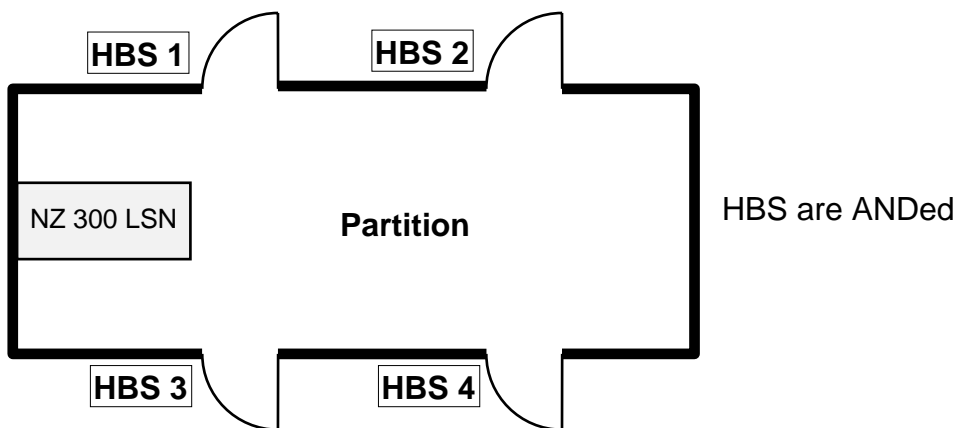
Application examples:

Holdup alarm central unit with central block-type lock:



Only one central zone with block-type lock.
Arming / disarming through ZBS.
If the zone cannot be armed, an alarm has been triggered in the zone.

Several block-type locks per zone:

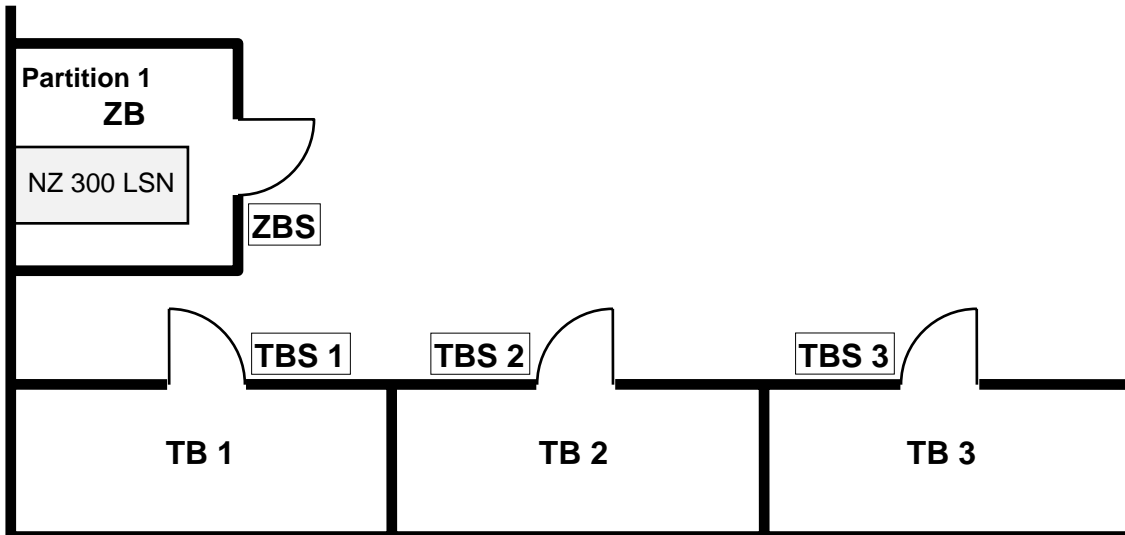


Arming: Arming is performed with HBS 1, HBS 2, HBS 3 and HBS 4, i.e. with the last block-type lock, any sequence is possible.
If the zone cannot be armed, an alarm has been triggered in the zone.

Disarming: With HBS 1 or HBS 2 or HBS 3 or HBS 4

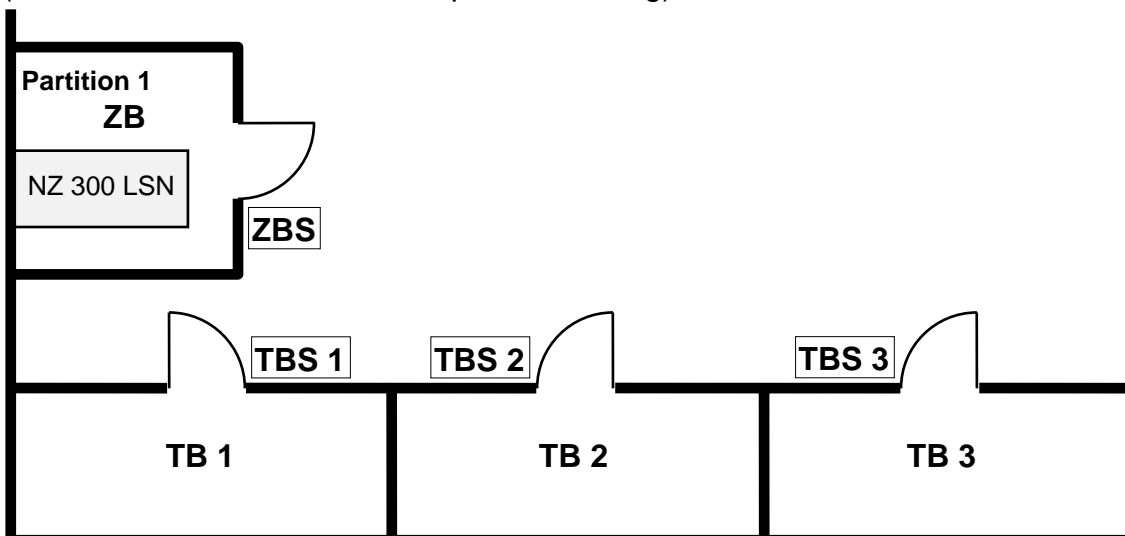
Continuation of **Planning notes**

Central zone with block-type lock and equivalent, independent TBs:
(select "ZB block-type lock" when parameterising)



Arming: TB 1...n can only be armed if ZB has been armed.
Disarming: ZB can only be disarmed if TB 1...n has already been disarmed.

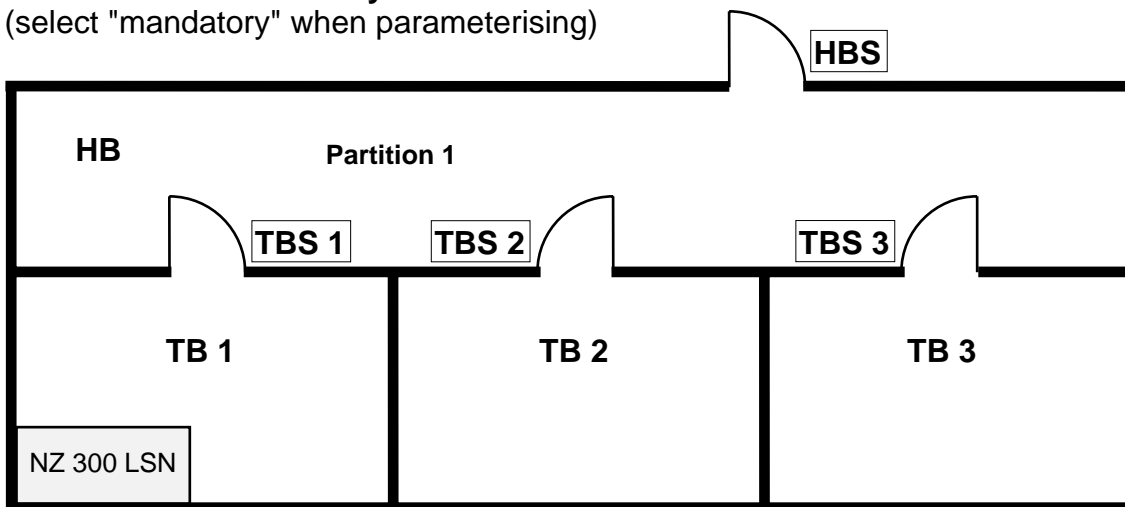
Central zone with conventional lock and equivalent, independent TBs:
(select "ZB conventional" when parameterising)



Arming: ZB is also armed when TB 1, TB 2 or TB 3 is armed.
Disarming: ZB is disarmed automatically if all TBs have been disarmed.

Continuation of **Planning notes**

Subzones are mandatory for main zone:
 (select "mandatory" when parameterising)

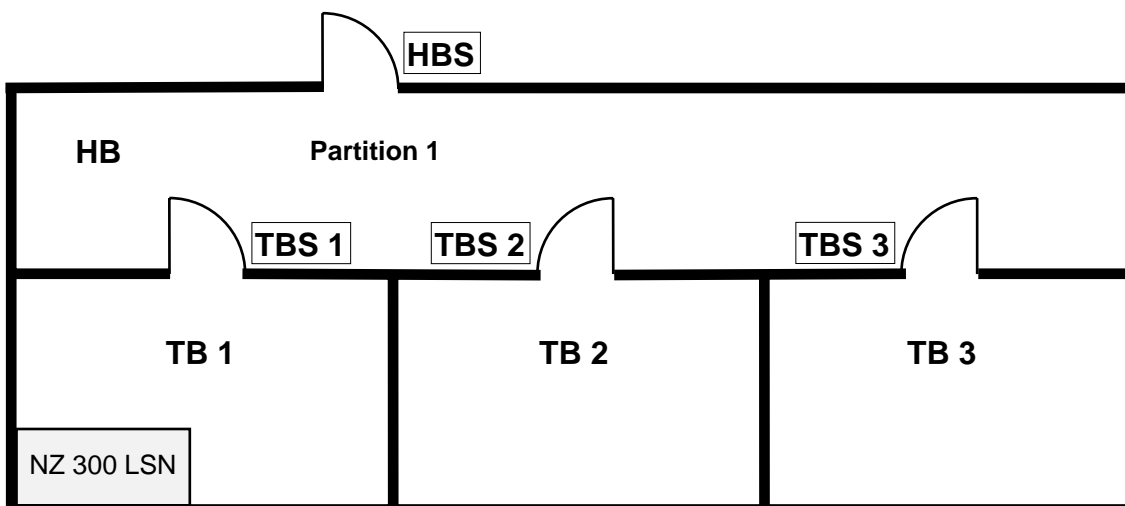


Arming: HB cannot be armed until all TBs have been armed.

Disarming: TB can only be disarmed if HB has been disarmed.

VdS directives: Not compliant with VdS.

Main zone overrides the subzones:
 (select "override" when parameterising)



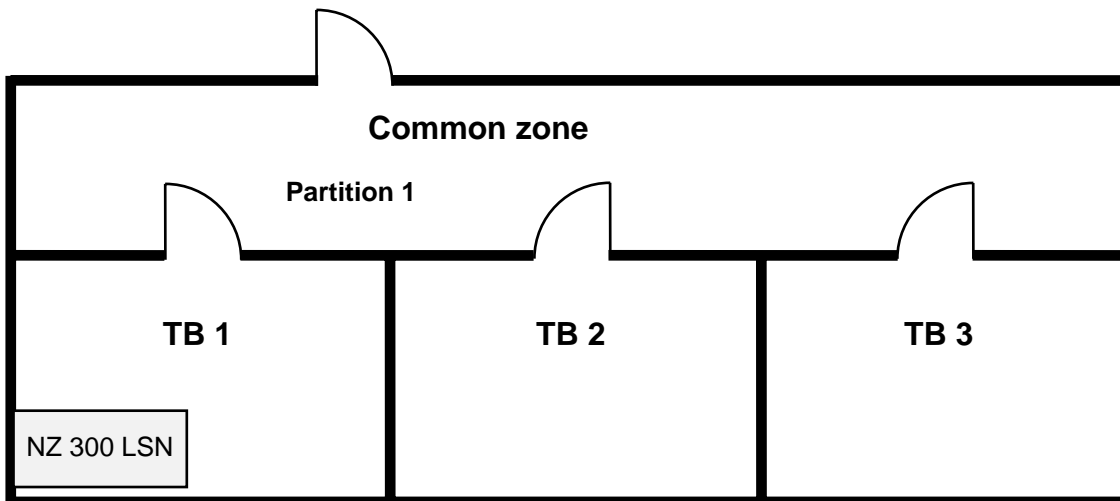
Arming: Arming HB also arms any TBs which are not armed.
 If HB is not armed, the TBs can be armed directly.

Disarming: Disarming HB also disarms the TBs if these have not
 been armed directly.

VdS directives: Not compliant with VdS.

Continuation of **Planning notes**

Several TBs with one common zone with code or key-operated switch:
(select "common" when parameterising)

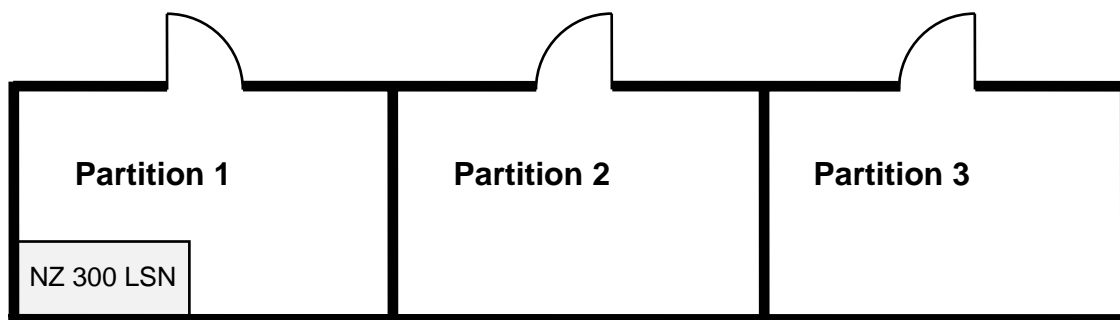


Arming: GB is armed automatically if all subzones have been armed (with a delay).

Disarming: GB is disarmed as soon as a TB is disarmed.

VdS directives: Not compliant with VdS.

Independent zones with block-type lock, code or key-operated switch:
(select "independent" when parameterising)



Arming: Each zone is armed separately.

Disarming: Each zone is disarmed separately.

VdS directives: Not VdS-compliant without ZBS.

Continuation of **Planning notes**

2.9 Auto diallers

Auto diallers are used for transmitting alarms, malfunctions, technical alarms and statuses via the telephone network.

The following statements may be relevant for the NZ 300 LSN:

- The analog auto dialler integrated onto the central PCB of the NZ 300 LSN.

This unit has been approved for use throughout Europe for connection as an individual terminal for the public telephone network in accordance with ruling 98/482/EC of the Council of Europe. Because of the differences which exist between the public telephone networks of the various states, this approval in itself does not necessarily ensure that the unit can be operated successfully at every network termination point.

If problems occur during operation, you should turn initially to your specialist dealer.

The following important data is entered when parameterising the integrated auto dialler:

- Telephone numbers (alarm destination)
- Identification number
- Dialling method (see below)
- Transmission method
- Number of alarm transmissions
- Routine call

Important note: If the auto dialler is connected directly to the main station, pulse dialling must not be used!

- Alarm Transceiver AT 2000 (integrated or unit to unit)
Descriptions are enclosed with the unit.

Continuation of **Planning notes**

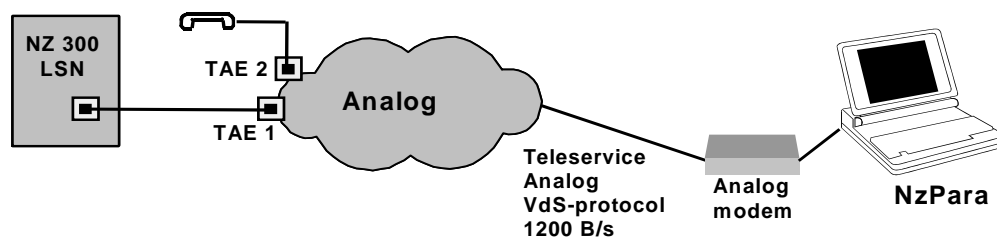
2.10 Teleservice

Teleservice with analog telephone connection:

The internal auto dialler of the NZ 300 LSN is connected directly to the telephone connection.

Phone number for Teleservice: when parameterising, the phone number under which the NZ 300 LSN can be accessed is entered. This number is automatically used as the dialling destination when a connection is set up later via NzPara if you have already loaded the appropriate parameterisation into NzPara.

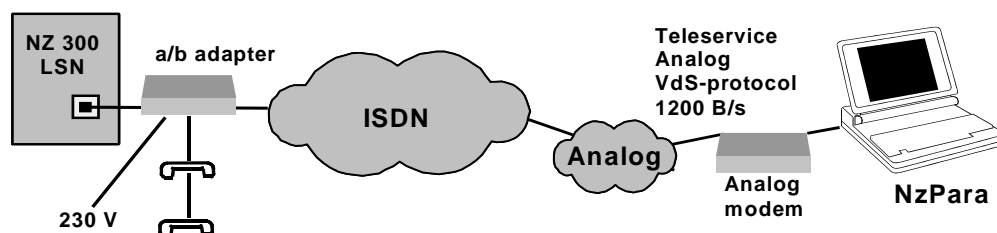
Permissible Teleservice phone number: You can specify up to 3 different phone numbers. If you do not enter a phone number but enable Teleservice, the phone number will not be checked. The installation is then open for all Teleservice calls.



Teleservice with digital telephone connection:

The internal auto dialler of the NZ 300 LSN is connected with an a/b adapter. The a/b adapter is then connected to the ISDN connection.

Phone numbers for Teleservice: as for analog telephone connection.



3 Installation instructions

3.1 Important notes prior to installation

- The AC line voltage must be protected (in accordance with VDE) by means of a 10A medium time-lag fuse and must be constructed as a separate circuit.
- Before installation, check that the 230 V power cable NYM 3x1.5 is not connected to the power source.
- Work on the power pack may only be performed with the power disconnected.
- If required, use edge protection for the cable entry points (edge protection included in the accessories pack).
- If the power cable is routed along the surface, the cable is run from below through the cable duct.
- To maintain the service life of the batteries, the unit should only be operated in locations with normal room temperatures.
- If the batteries are to be secured in the wall frame to prevent against vibration, pull two cable ties through the relevant openings in the wall frame prior to installation.
- Only use the cable material prescribed by UC-ST, otherwise immunity against interference cannot be ensured.
- When working with printed circuit boards, the normal precautionary measures for C-MOS technology must be complied with.
- Important! ESD (electrostatic discharge)
Comply with measures and regulations (discharge)!
- When exchanging the printed circuit board, use tooth lock washers to ensure a good contact exists between the printed circuit board and casing.
- The NZ 300 LSN and BE 300 LSN must be installed in dry, well-maintained inner rooms. The ambient conditions must be complied with (see Technical Data)
- The BE 300 LSN should be installed at eye level.
- The relevant connection conditions of the regional authorities (police and telecommunications authorities) must be complied with.

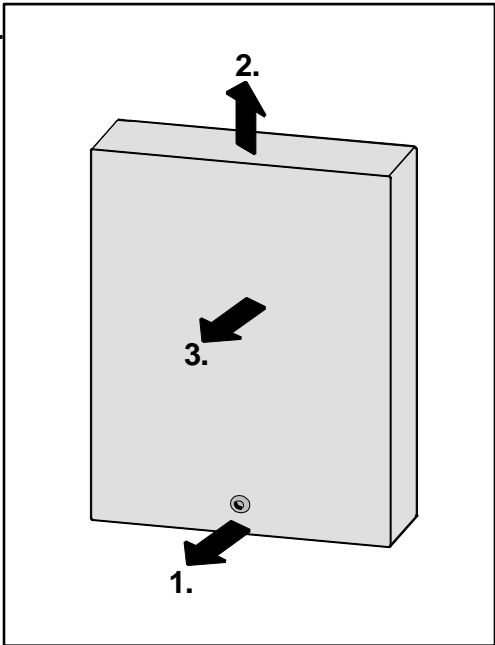
The unit satisfies the following laws / standards / directives:

- EMC law based on
 - EN 50081-1 (emitted interference)
 - DIN EN 50130-4 (interference immunity)
- Low-voltage directive based on
 - DIN EN 60950
- VDE 0833

Continuation **Installation instructions**

3.2 Installation sequence for NZ 300 LSN

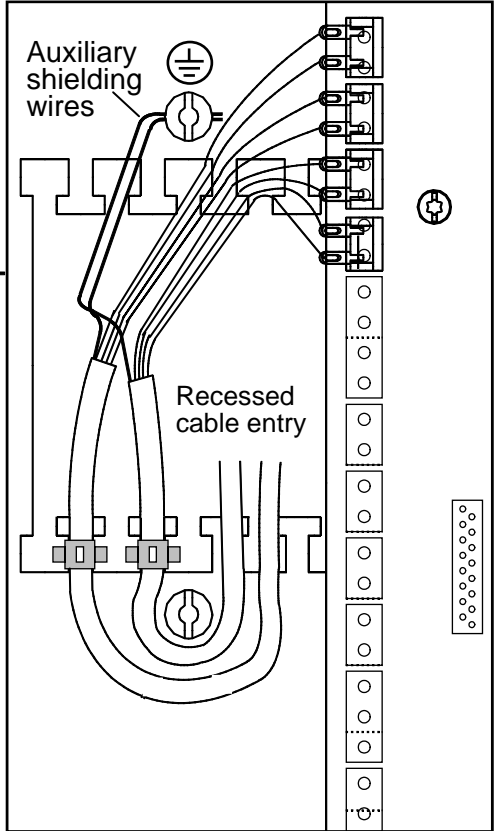
Remove casing hood:
 Undo the casing screw.
 1. Swing the bottom of the hood forwards approx. 3 cm.
 2. Lift up the hood slightly.
 3. Pull off the hood from the front.



Install the wall frame:
 Fit the TAE or UAE-8/8 socket, cable ducts and wall frame to the wall using the drilling template. If necessary, fit edge protection for the cable entry points (edge protection included in accessories pack).

Important: An earthing armband must be worn for all further operations.

Connect data lines:
 Strip away the LSN data cables.
 Secure the lines to the cable entry point with cable ties.
 Connect the auxiliary shielding wires to the screw terminal.
 The wires should be kept as short as possible.
 Solder the LSN data cables to the connectors and stick the labels printed with the signal names onto the connectors.
 Refer also to section "Connections".



Continued on next page

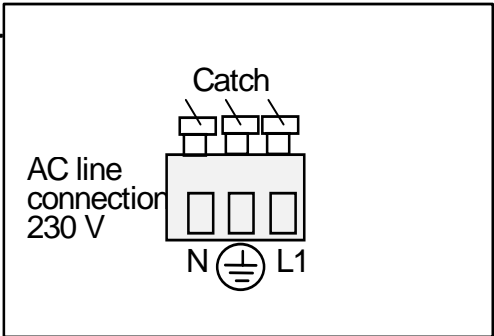
Continuation Installation instructions



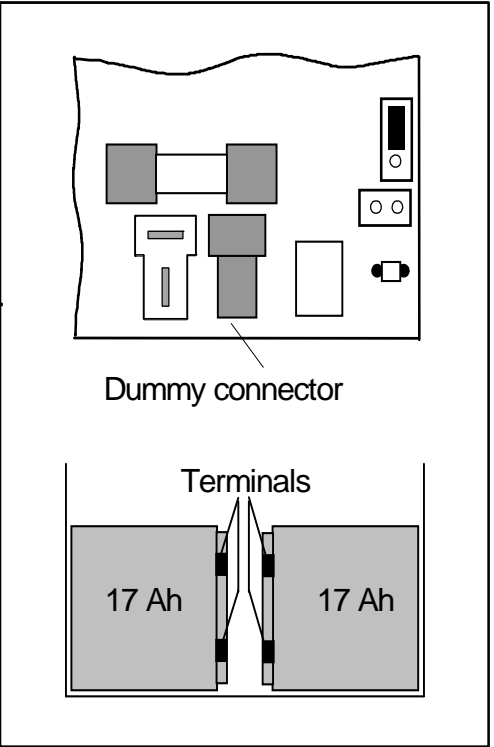
Connect periphery cables:
 Periphery cables are connected in the same way as data cables (see previous page).



Connect power cable NYM 3x1.5:
 Strip away the sheathing of the power cable.
 In the case of surface installation, secure the power cable at the cable entry point using a cable tie.
 Connect the power cable to the 230 V terminal.
 To do this, use a screwdriver to press the terminal catch to the rear and insert the wire from above.
 The protective earth conductor is connected (protection class I).



Connect batteries:
 When using two batteries, pull the dummy connector from the printed circuit board (right-hand battery connection).
 Fit the 2x17 Ah batteries so that the terminals are located on the sides at the front.
 Run the battery cables through the cable duct and connect the batteries. Refer also to section Connections 'Power Supply'.



Continued on next page

Continuation **Installation instructions**

Connect telephone connection cable:

Connect the central PCB with the TAE socket using a telephone connection cable.

Switch on the 230 V voltage:

Insert / activate the AC fuse (10A medium time-lag) of the 230 V power cable.

Important: The power pack carries voltage. Only work on the power pack when no voltage is applied.

Parameterise NZ 300 LSN:

See section 5

Put NZ 300 LSN into service:

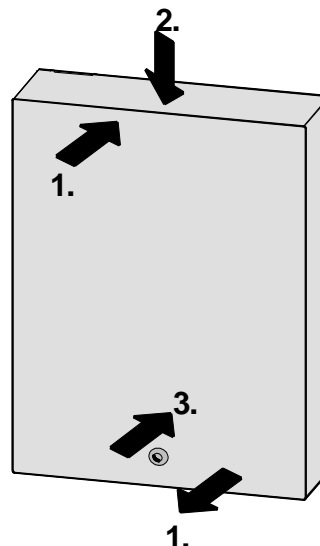
See section 6

Fit casing hood:

1. Fit the hood onto the bottom part of the casing. Hold the bottom of the hood so that it is only a small distance away from the wall.
2. Lift the hood slightly and lower it so that it engages.
3. Press the bottom of the hood onto the bottom part of the casing.

Screw-connect the casing. Seal the screw.

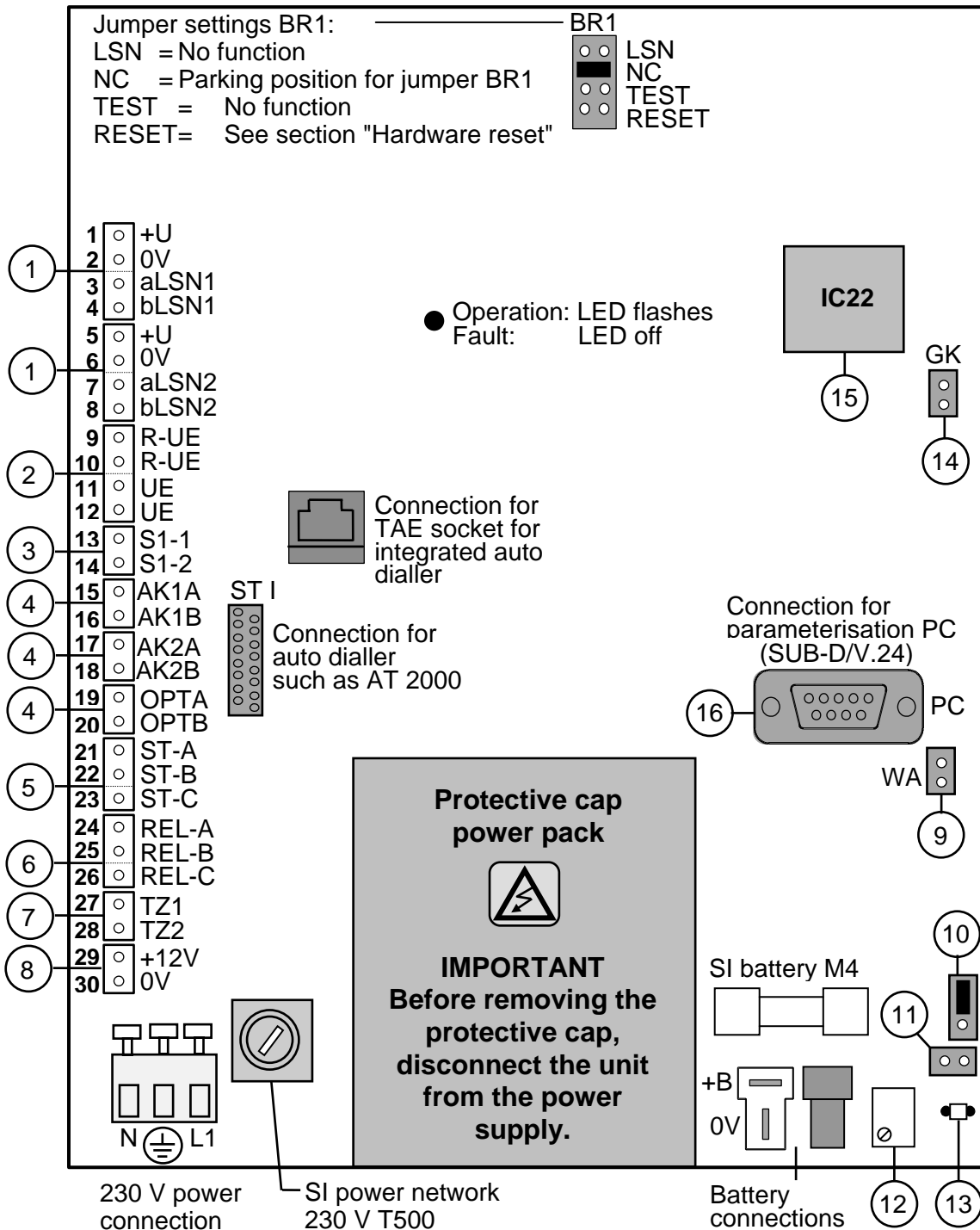
The NZ 300 LSN is ready for operation.



Type plate: The type plate enclosed in the accessories pack must be affixed to the casing so that it is visible.

4 Connections

4.1 Terminal assignments for NZ 300 LSN



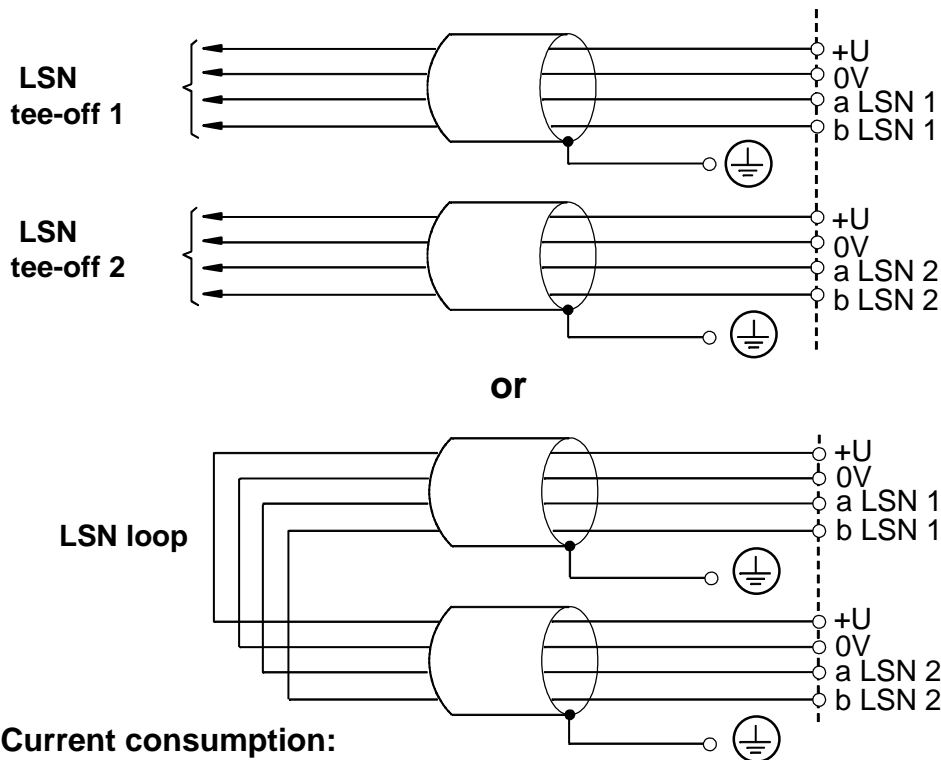
Important note relating to the connectors: When inserting and removing connectors, ensure they are aligned correctly. Otherwise, pins or printed circuit boards may be damaged!

① to ⑬ The description of the connectors / jumpers and their functions are set out on the following two pages.

Continuation Connections

Notes on the connections and their functions

1. LSN elements (1 x loop or max. 2 x tee-offs):



Current consumption:

- LSN line current max. 100 mA (loop or tee-off (total))
- each +U/0V max. 2 x 300 mA

Auxiliary shielding wire used for tee-offs and loops

- must always be earthed from the central unit
- must be kept as short as possible when run to the shielding terminal
- must be looped in the LSN elements

Additional shielding connections at other locations are not permitted.

With loops, connect the auxiliary shielding wire to both ends of the loop.

2. Transmission unit

R-UE.....Terminal point for terminal resistor in the case of UE emergency call.

UEControl of UE intrusion (relay).

3. Serial S1 interface:

S1-1/2.....Serial S1 interface for connecting an e.g. auto dialler.

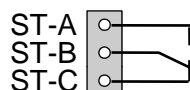
Continuation Connections

4. External sounder / flash lights

- AK1A/BConnection of the first external sounder
(if only AK1A/B is assigned and not AK2A/B, a terminal resistance of 12.1 kOhm must be used for AK2A/B).
- AK2A/BConnection of the second external sounder
- OPTA/BConnection of a flash light.

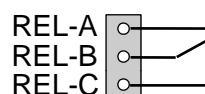
5. Output for malfunctions (relay):

Malfunction relay is triggered for all malfunctions.



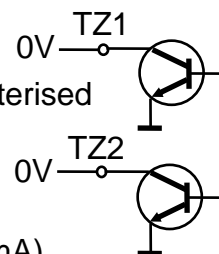
6. Output (relay):

Output can be freely parameterised (relay)



7. Outputs:

TZ1/2 Central indicator board points, can be freely parameterised
2 x open collector outputs (max. 100 mA in each case).



8. External power supply:

+12V/0V.....Connection for external consumers (max. 300 mA).

9. 28 V voltage converter:

Connection for optional voltage converter
(12 V to 28 V, max. 2 x 0.3 A at 28 V).

10. "Battery test time" jumper:

See section "Test of battery charge voltage".

11. "START" jumper:

See section "Starting up the central unit with batteries (no AC supply)".

12. Voltage regulator potentiometer:

The battery charge voltage has been set at the factory. Do not change it.

13. Resistor temperature RT:

Internal temperature monitoring of battery charge voltage.

14. Tamper contact:

Connection for tamper contact.

15. Program memory:

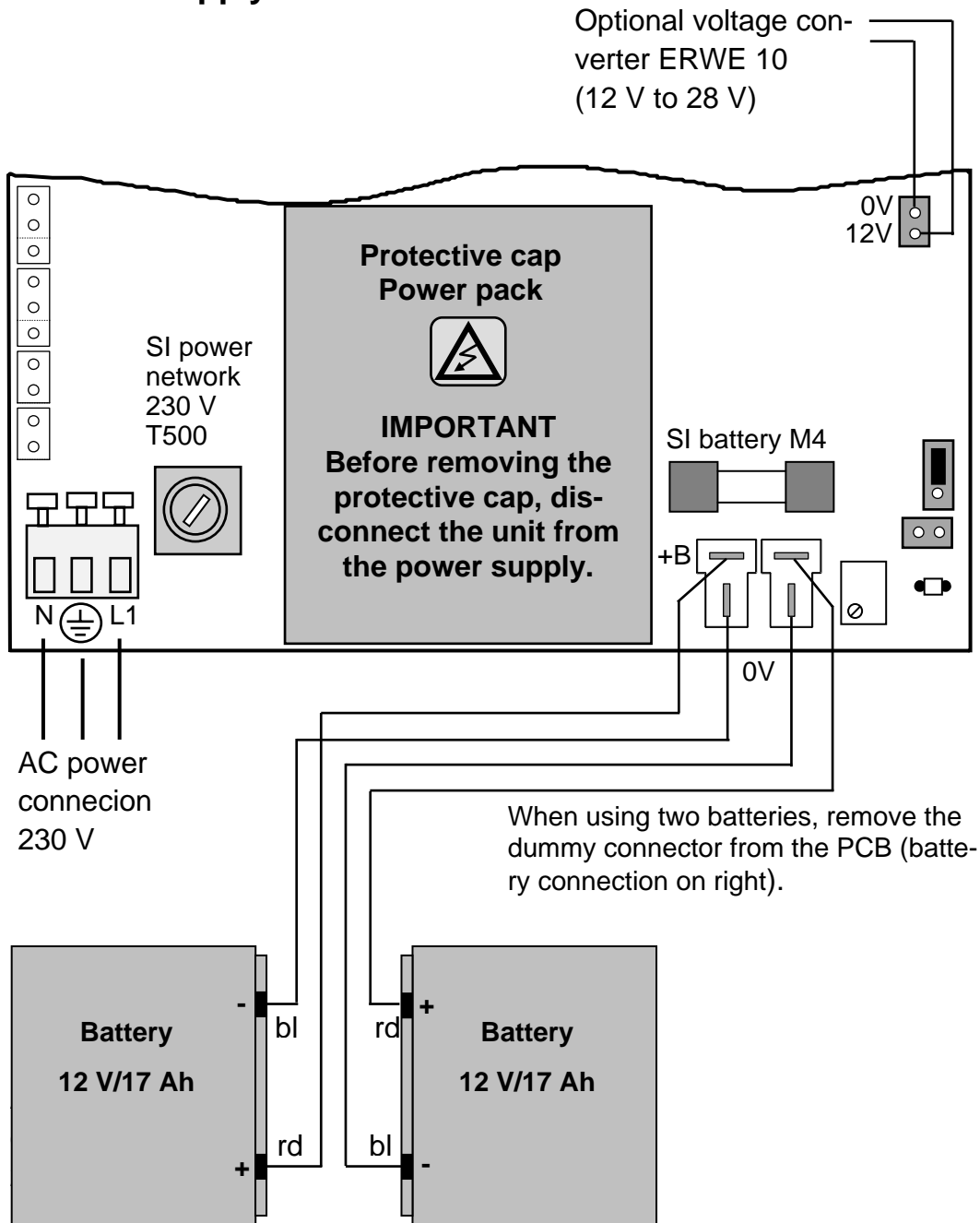
Change program memory IC22 for a new program version.

16. Serial interface:

For connecting a printer or superordinate central unit (UGM).

Continuation Connections

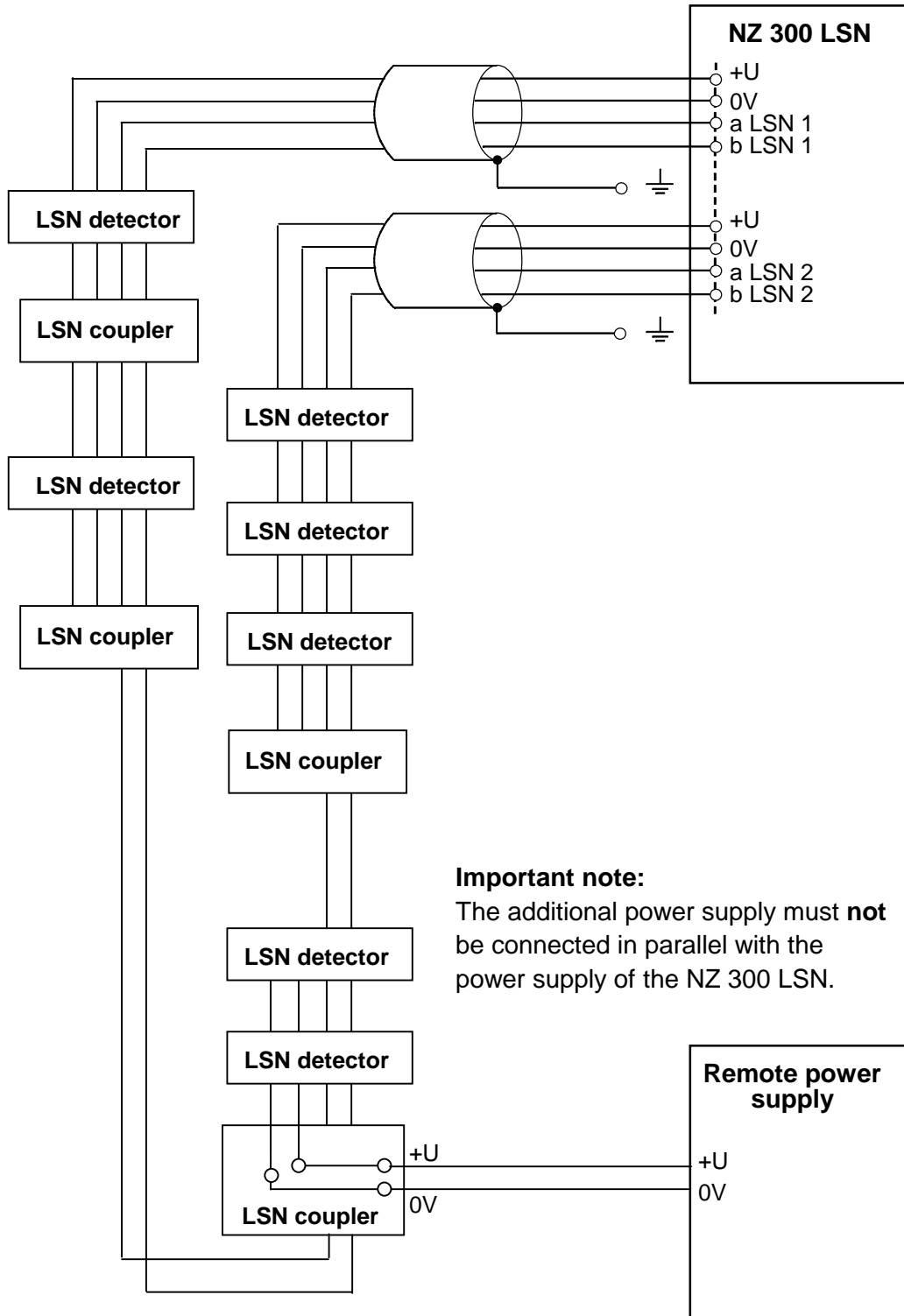
4.2 Power supply



Ensure pole connections are correct!
Risk of injury in the event of short circuit.

Continuation **Connections**

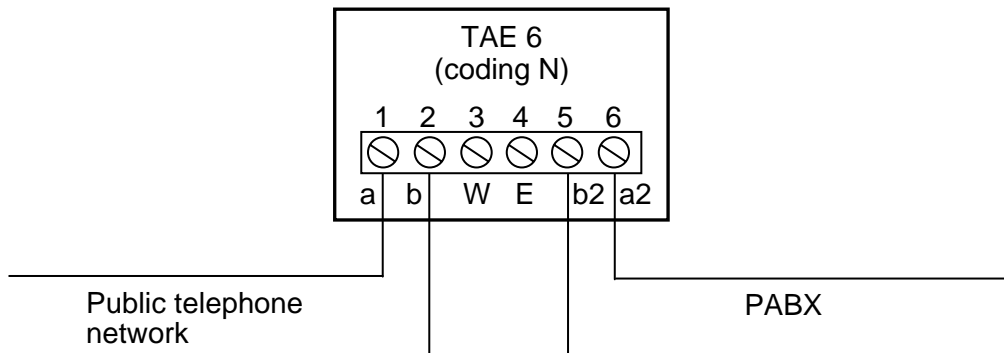
4.3 Additional remote power supply (example)



Continuation Connections

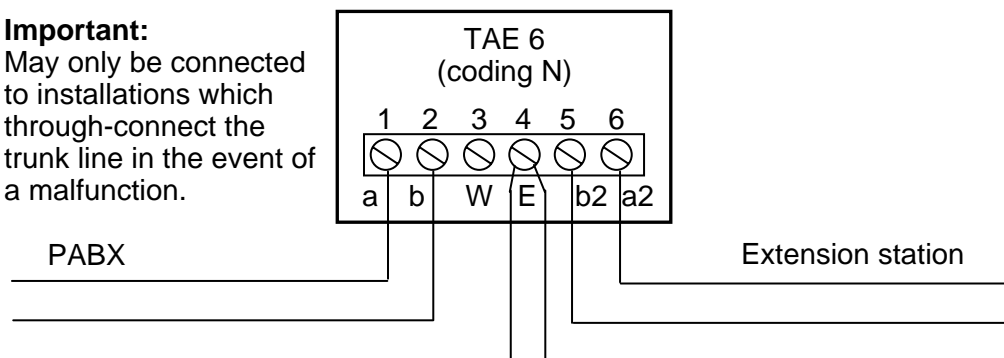
4.4 Telephone network (TAE socket)

Connection at an approved PABX

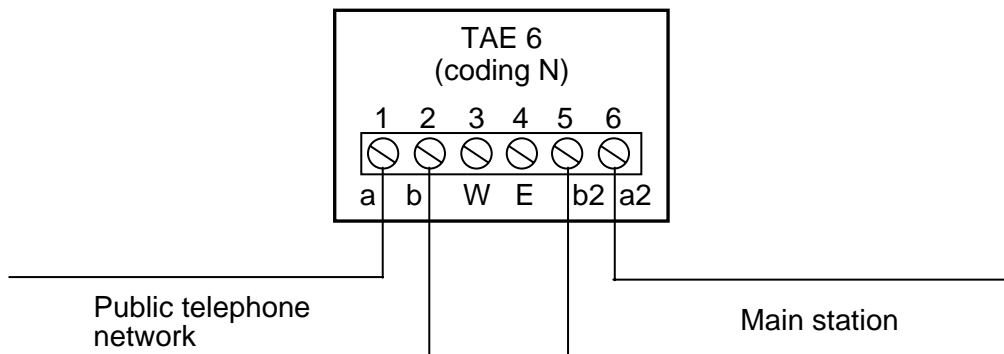


Connection to an approved PABX

Important:
May only be connected to installations which through-connect the trunk line in the event of a malfunction.



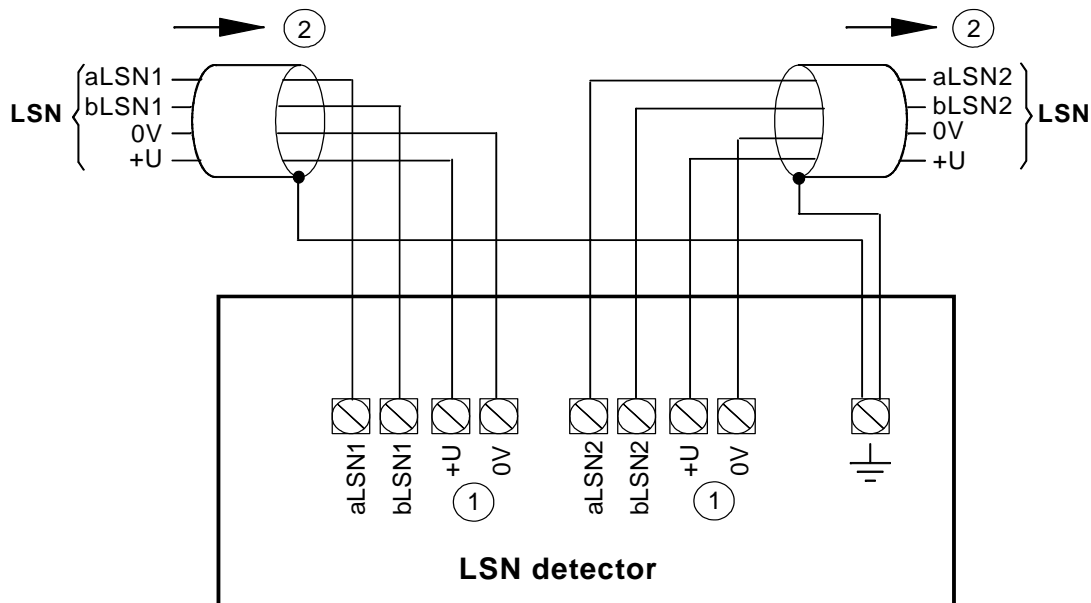
Connection to a main station with downstream approved terminal / telephone set



Continuation Connections

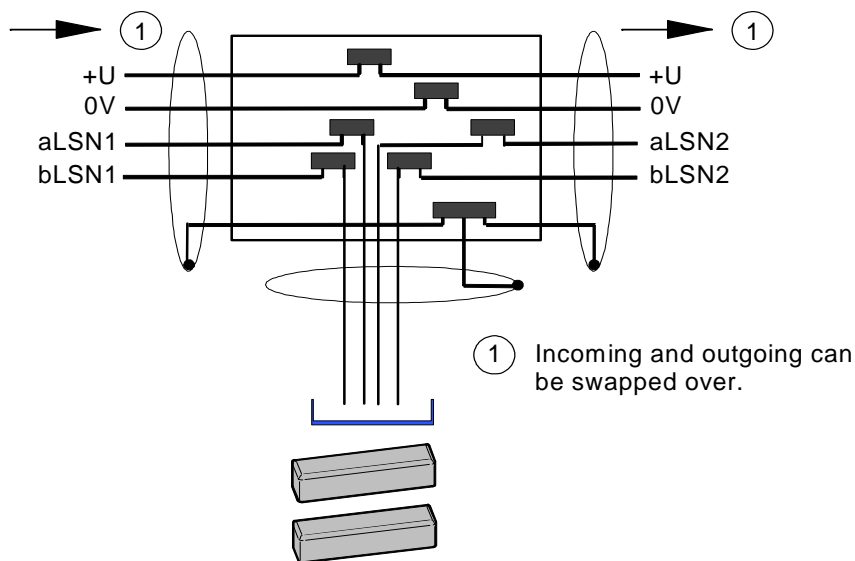
4.5 LSN detectors

Example of an LSN detector connection in a loop or tee-off configuration



- ① If an LSN detector does not require a separate voltage supply +U/0V, free terminals are available for feeding through the supply voltage for other LSN elements.
- ② Incoming and outgoing can be swapped over. Auxiliary shielding wires connected on both sides.

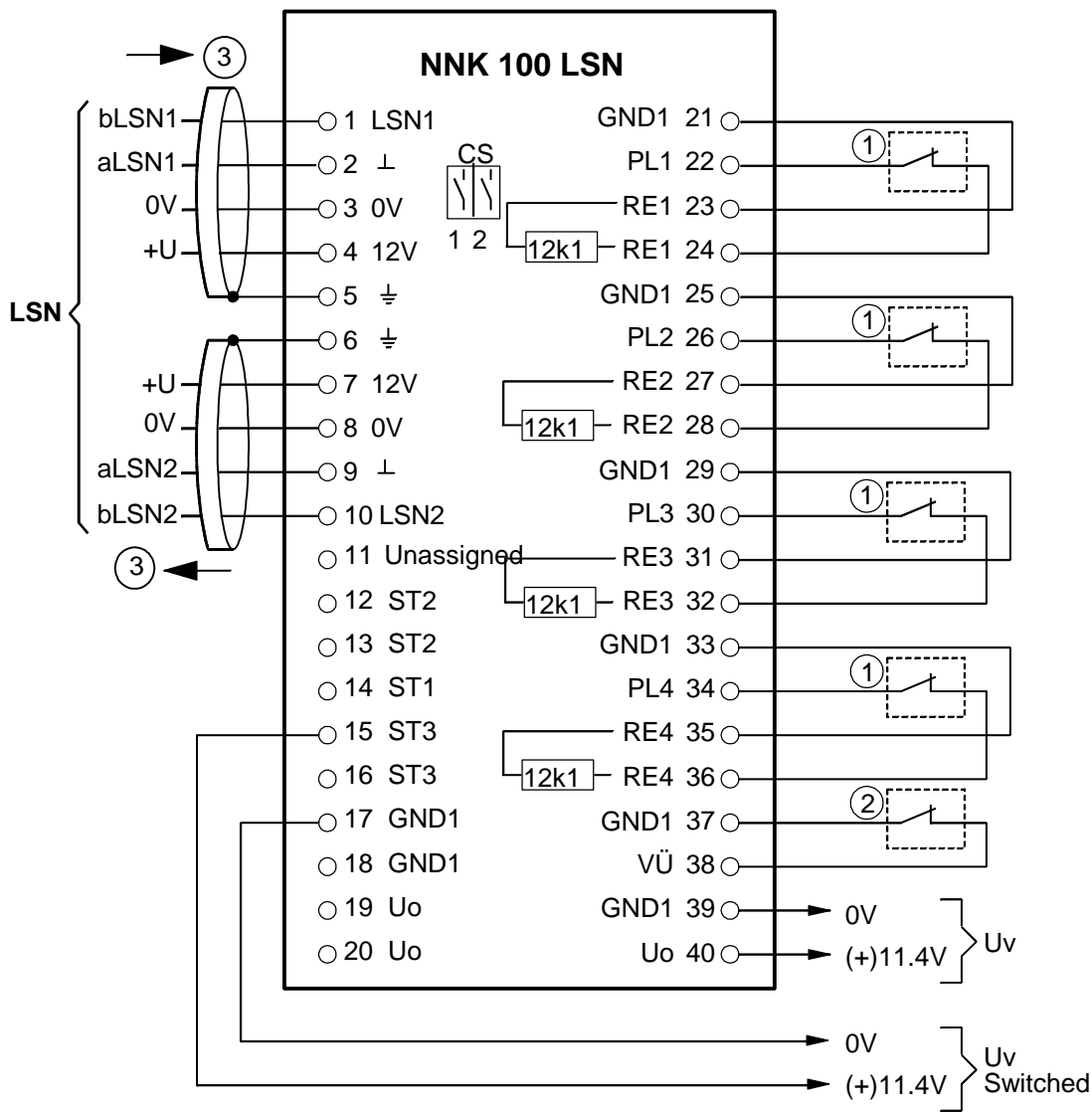
LSN contact in loop or tee-off configuration



- ① Incoming and outgoing can be swapped over.

Continuation Connections

4.6 Intrusion coupler NNK 100 LSN



- ① Detector contact or powered detectors, terminal resistance in coupler
- ② Lock contact for closure monitoring
- ③ Incoming and outgoing can be swapped over

For further details on terminal assignments refer to next page.

Continuation **Connections**

Terminal assignment, left

1:		}	See Connections
2:			
3:			
4:			
5:	⏏	}	Connections for cable shielding
6:	⏏		
7:		}	See Connections
8:			
9:			
10:			
11:	Unassigned		
12:	ST2	Control output 2	Open collector disabled 0 V
13:	ST2	Control output 2	Open collector enabled 0 V
14:	ST1	Control output 1	Open collector enabled 0 V
15:	ST3	Control output 3	Open collector enabled 12 V
16:	ST3	Control output 3	Open collector enabled 12 V
17:	GND 1	0 V	4-wire element
18:	GND 1	Ground LSN	2-wire element
19:	U ₀		approx. 11.4 V
20:	U ₀		approx. 11.4 V

Terminal assignment, right

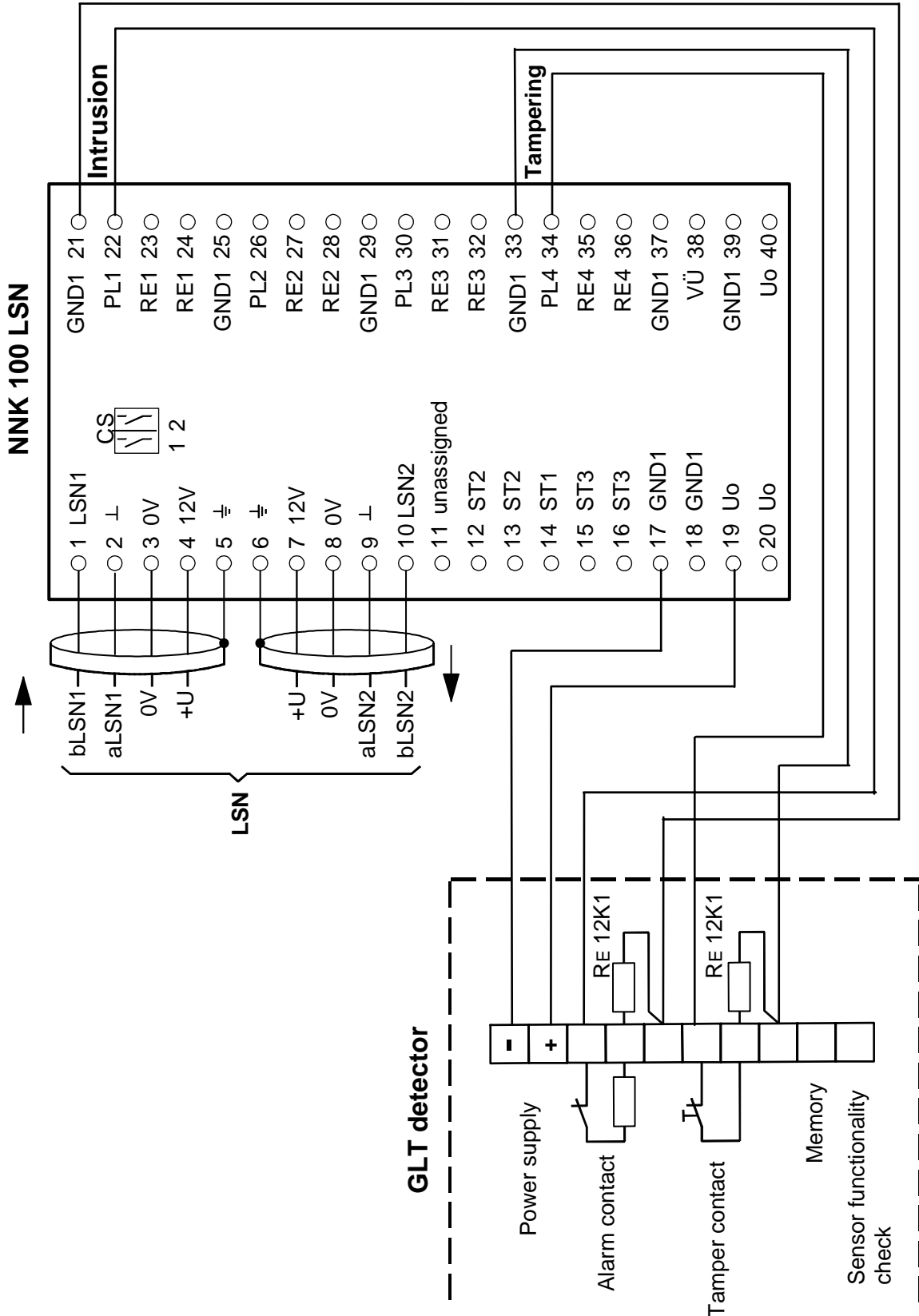
21:	GND 1	}	Connections for primary line 1
22:	PL1		
23:	RE1	}	Terminal resistance for primary line 1
24:	RE1		
25:	GND	}	Connections for primary line 2
26:	PL2		
27:	RE2	}	Terminal resistance for primary line 2
28:	RE2		
29:	GND 1	}	Connections for primary line 3
30:	PL3		
31:	RE3	}	Terminal resistance for primary line 3
32:	RE3		
33:	GND 1	}	Connections for primary line 4
34:	PL4		
35:	RE4	}	Terminal resistance for primary line 4
36:	RE4		
37:	GND 1		
38:	VÜ		Input for closure monitoring
39:	GND 1		
40:	U ₀		approx. 11.4V

Use shielded cables for primary lines.

The maximum length for non-shielded cables is 10 m.

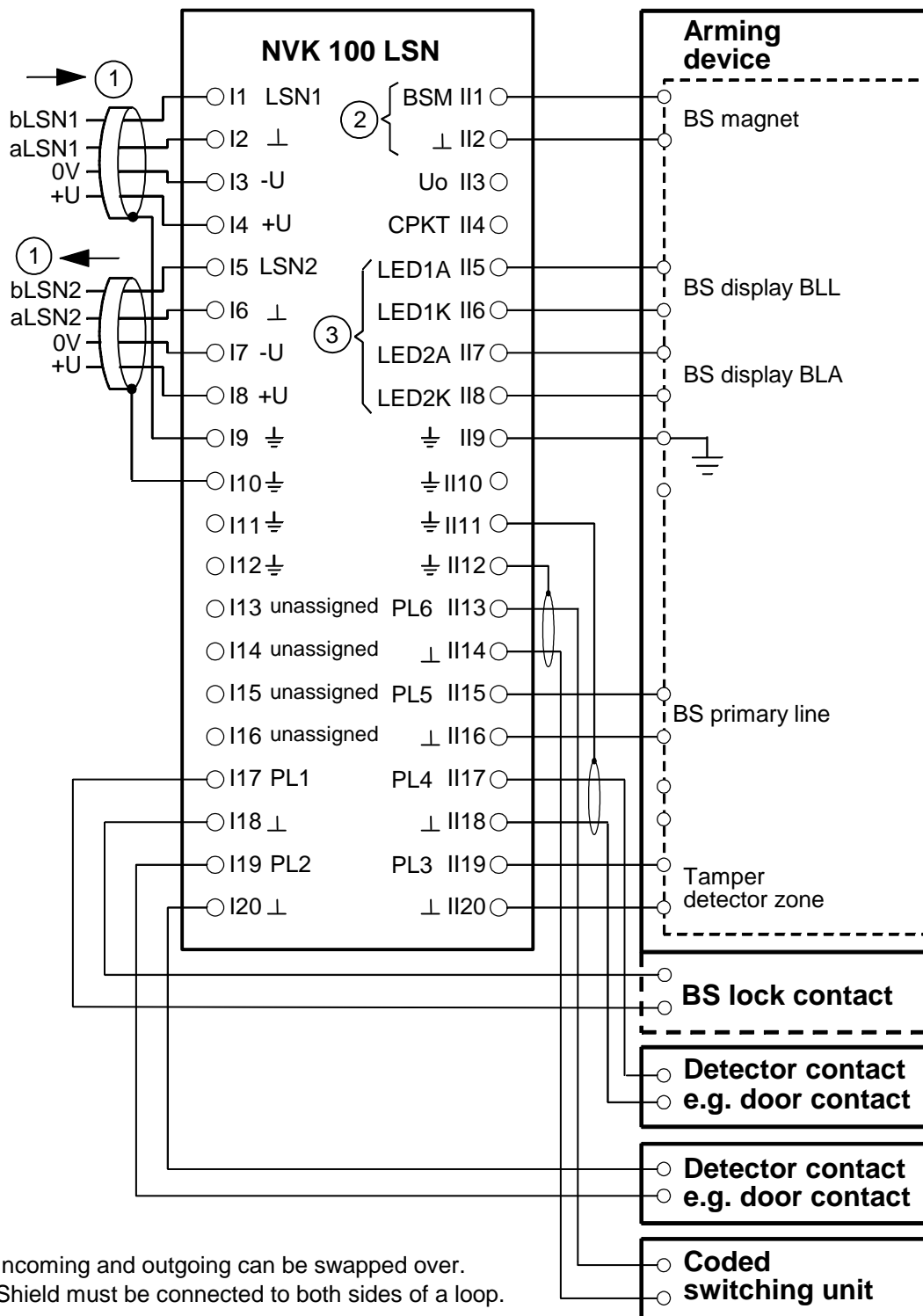
Continuation **Connections**

4.7 Standard detectors connected to NNK 100 LSN (example)



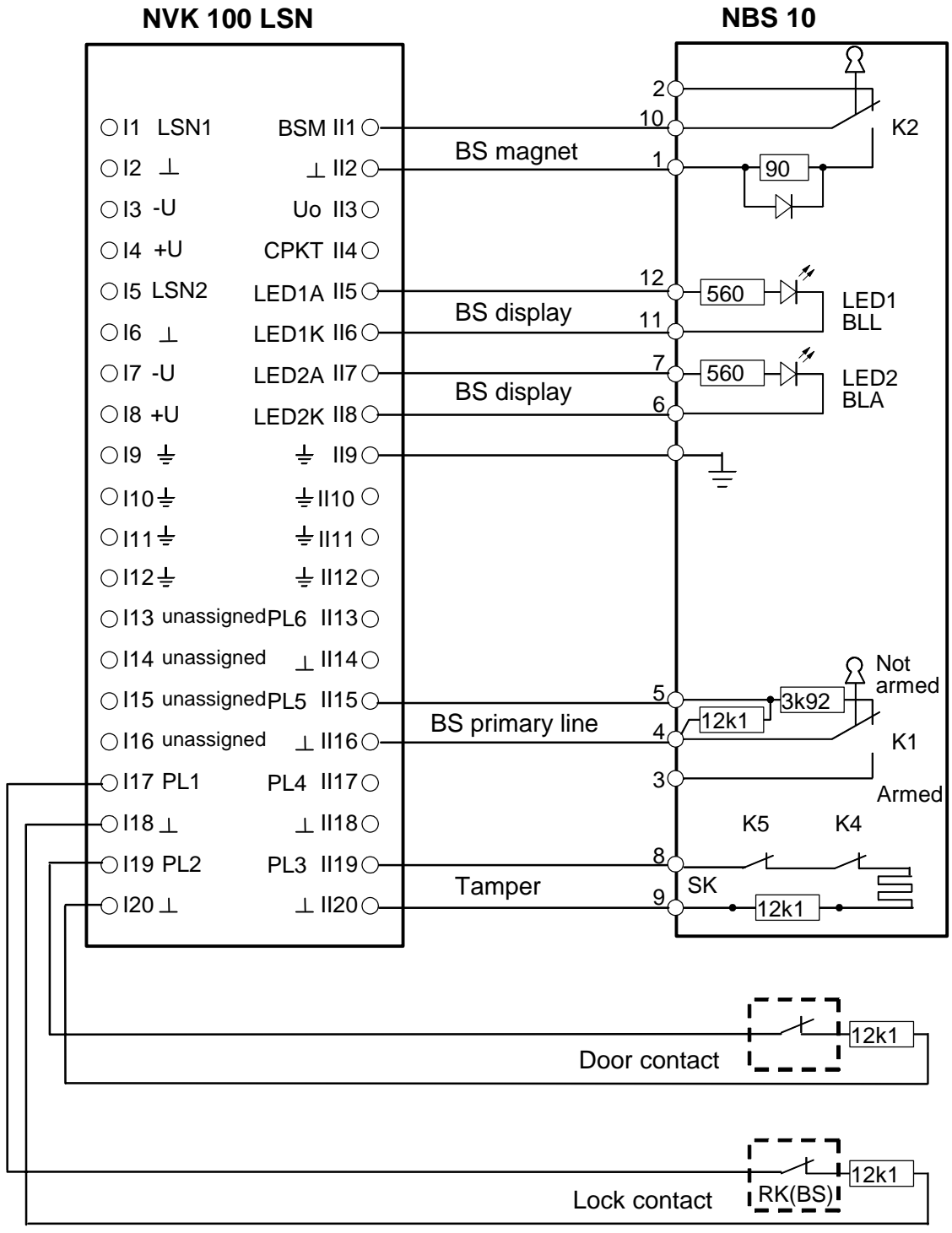
Continuation Connections

4.8 Arming device coupler NVK 100 LSN



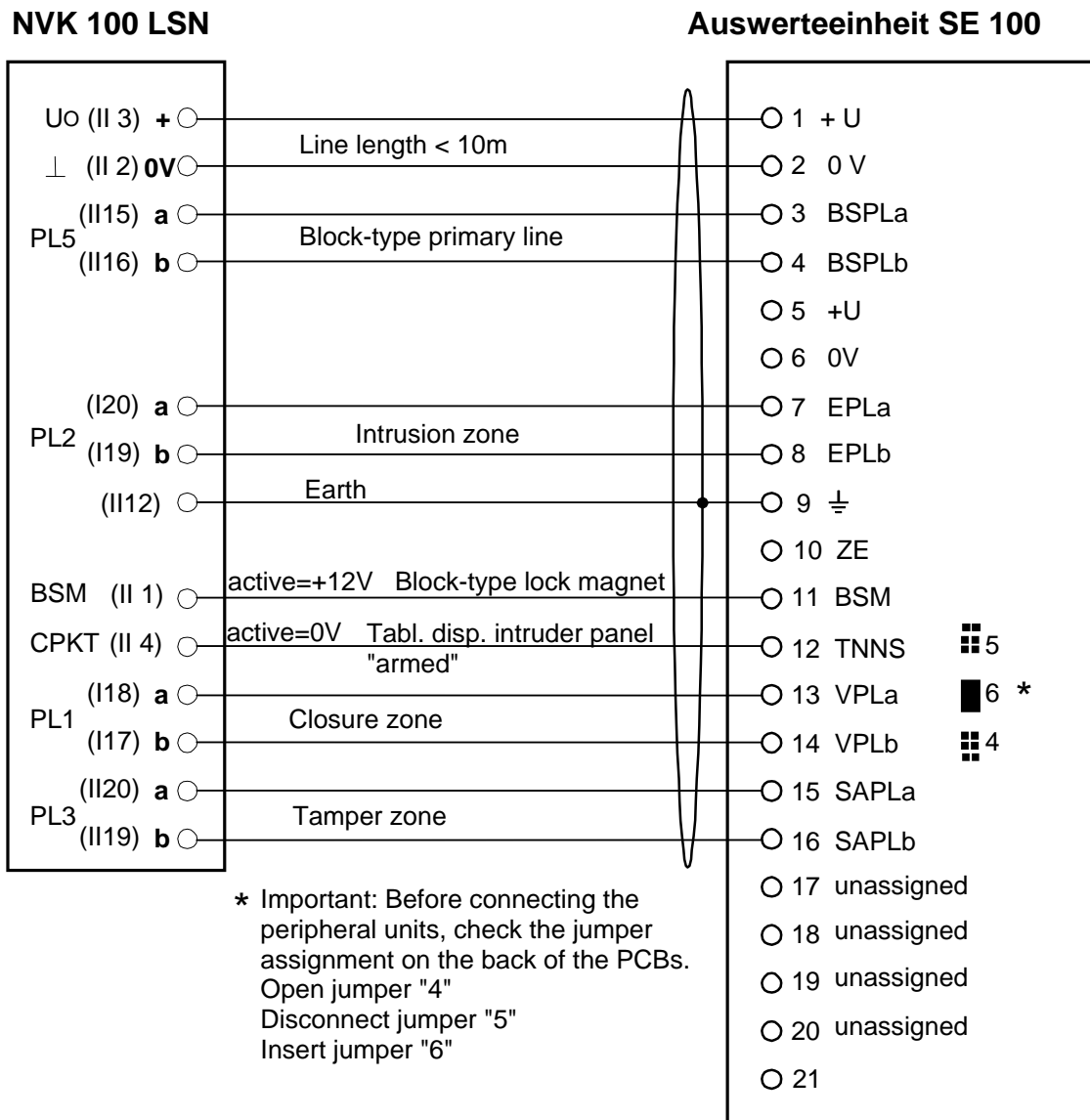
Continuation Connections

4.9 Block-type lock NBS 10 connected to NVK 100 LSN

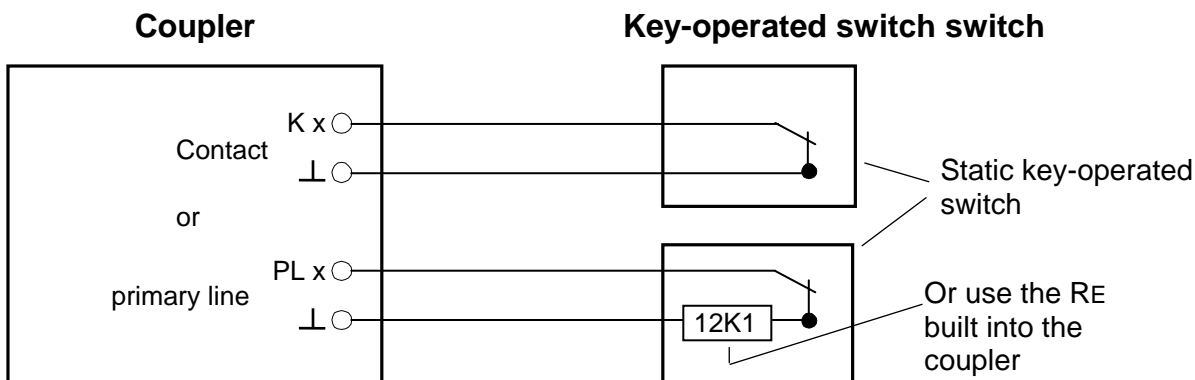


Continuation Connections

4.10 SmartKey switching unit SE 100 connected to NVK 100 LSN

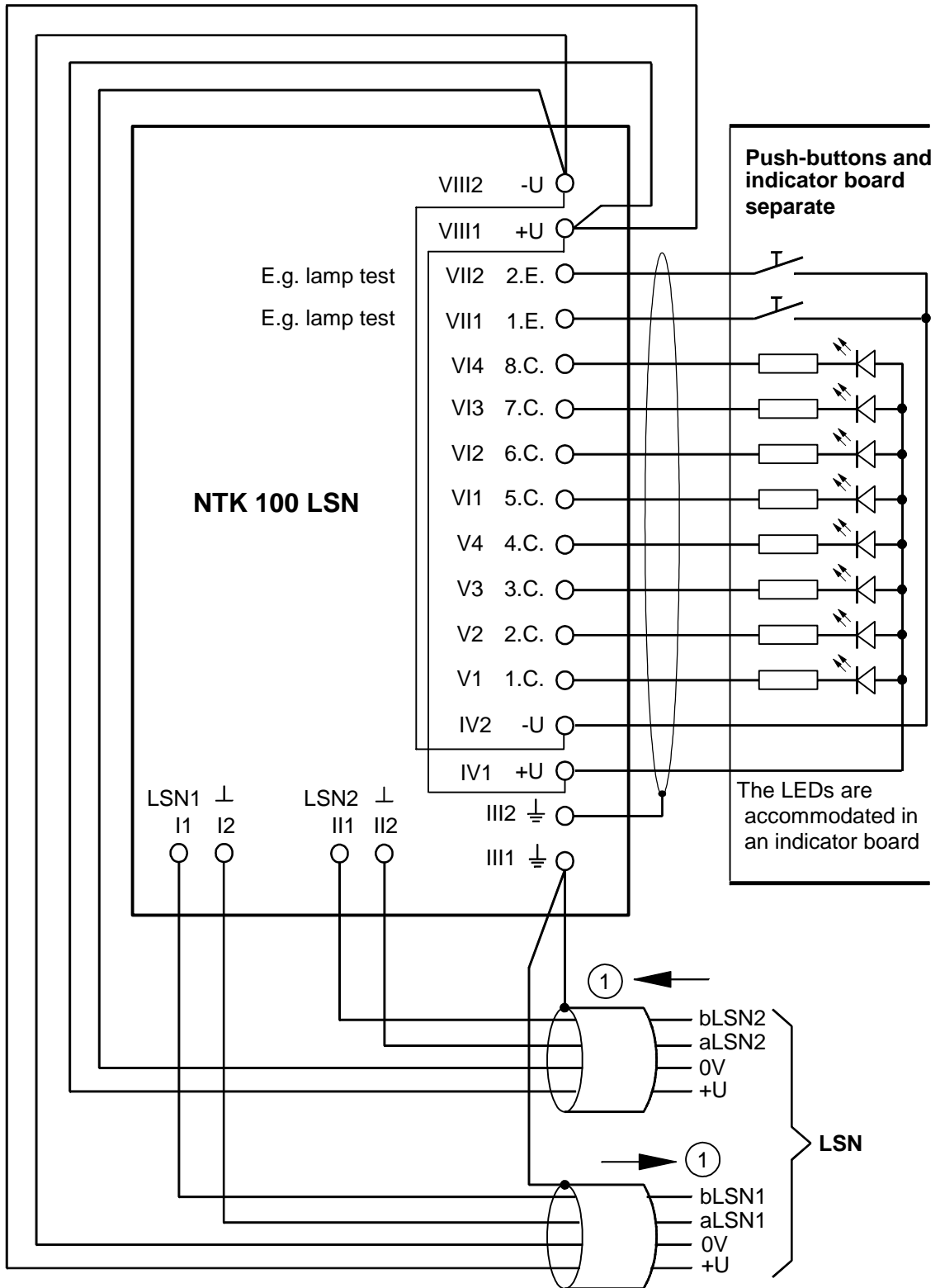


4.11 Key-operated switch connected to the coupler



Continuation **Connections**

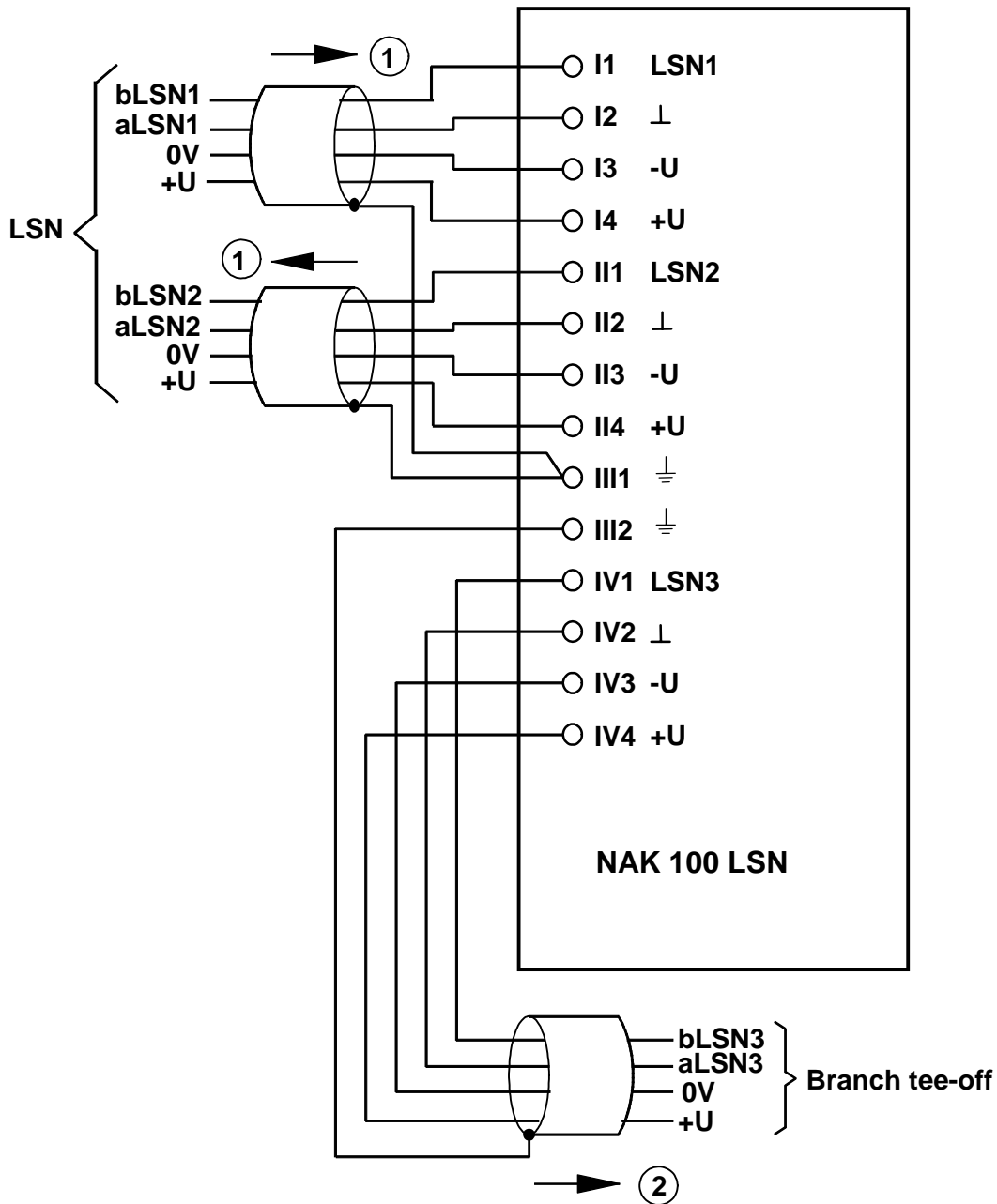
4.12 Indicator board coupler NTK 100 LSN



- ① Incoming and outgoing can be swapped over.
Shielding must be connected to both ends of the loop

Continuation **Connections**

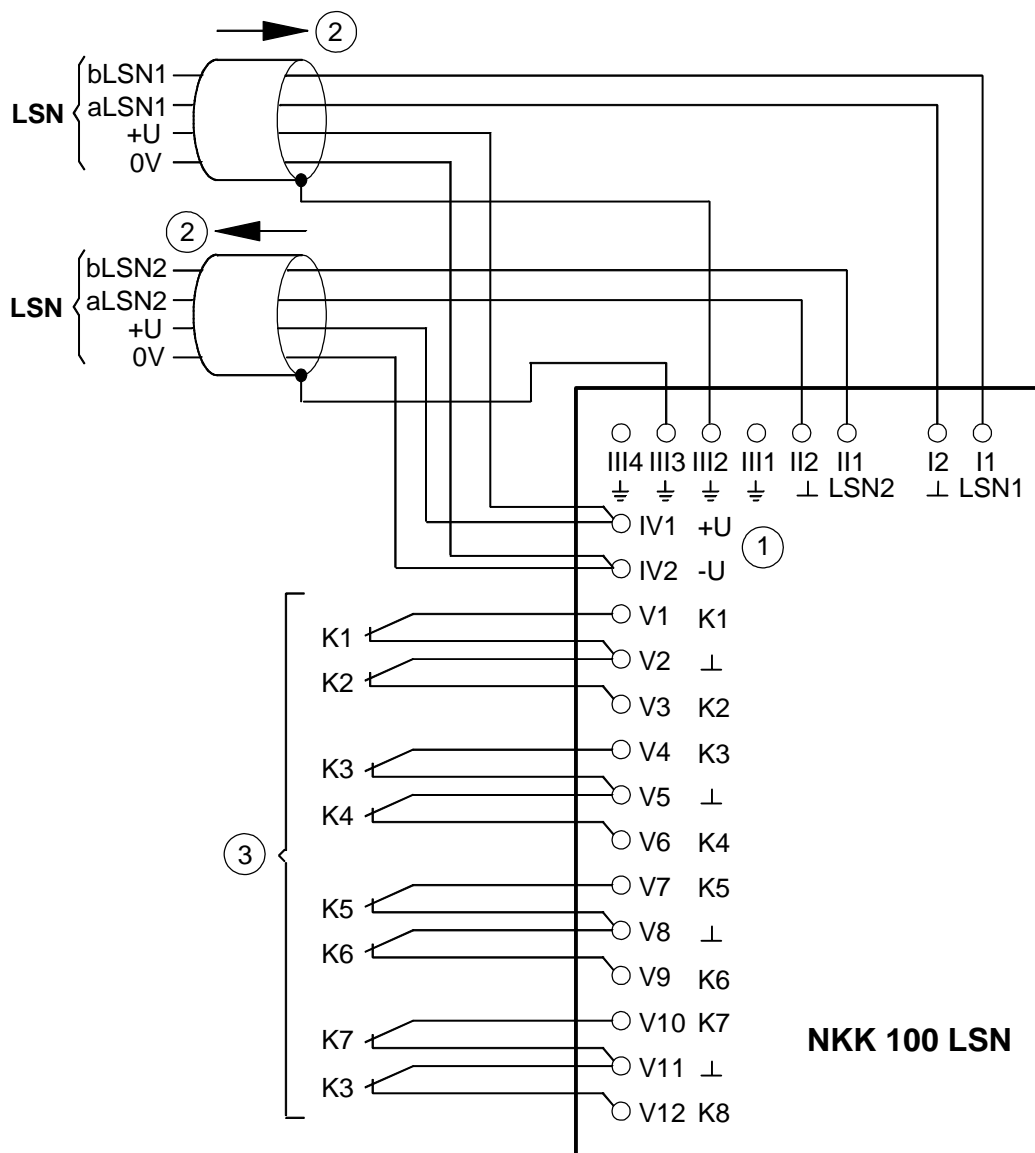
4.13 Branch coupler NAK 100 LSN



- ① Incoming and outgoing LSN lines can be swapped over. Shielding must be connected to both ends of the loop.
- ② No further branch coupler may be connected into the branch tee-off.

Continuation **Connections**

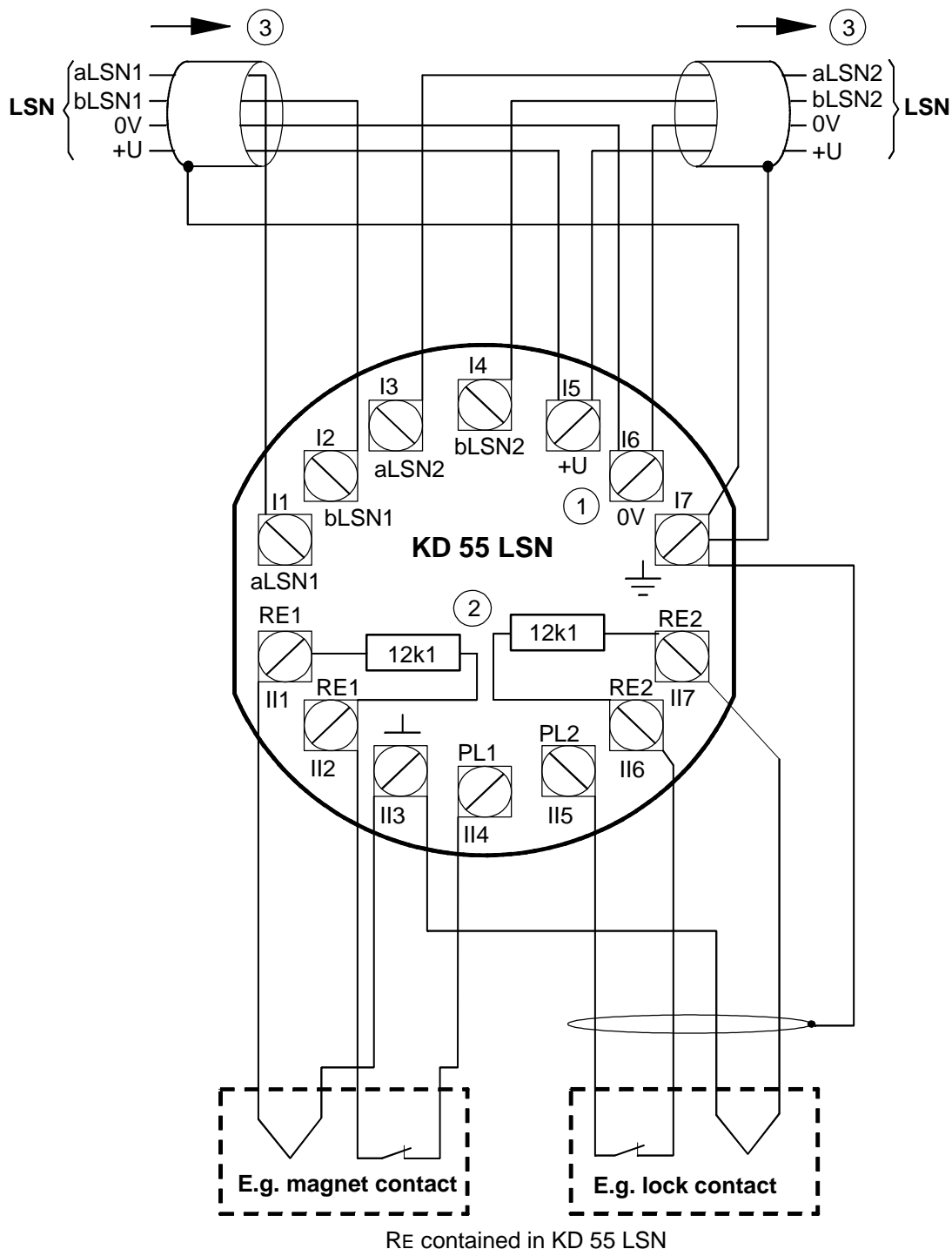
4.14 Contact coupler NKK 100 LSN



- ① Voltage supply can be fed-through (otherwise free terminals for 0V/+U).
- ② Incoming and outgoing can be swapped over. Shielding must be connected to both ends of the loop.
- ③ Floating contacts

Continuation Connections

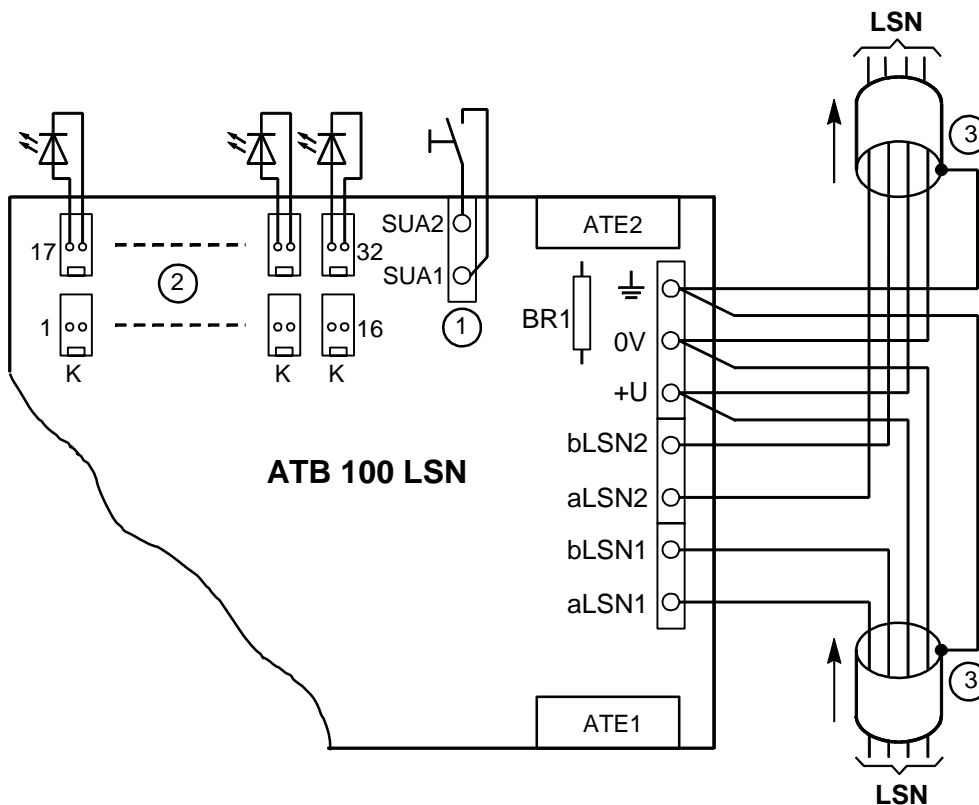
4.15 Junction box KD 55 LSN



- ① Voltage supply can be fed-through (otherwise free terminals for 0V/+U).
- ② RE installed, can be used if required.
- ③ Incoming and outgoing can be swapped over. Shielding must be connected to both ends of the loop.

Continuation **Connections**

4.16 Indicator board module ATB 100 LSN



- ① A push-button integrated in the front panel for "Display test" or "Buzzer off" can be applied to connections SUA1 and SUA2.
- ② The connections have been prepared for "LOW CURRENT LED's" ($I = 5 \text{ mA} / 5 \text{ V}$).
- ③ Shielding must be connected to both ends of the loop.

5 Parameterisation

5.1 Prior to parameterisation

Parameterisation is performed as described in the following sections.

PC/Laptop: The NZ 300 LSN is parameterised by means of a PC or laptop using the "NzPara" parameterisation program. A PC or laptop with Windows Version 3.1 or later and at least 4 MB working memory is required.

Create connection from PC/laptop to printed circuit board using 9-pin 1:1 interface cable.

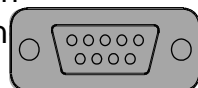
5.2 Parameterisation help

All information and explanations relating to parameterisation is available online, i.e. directly from the screen.

Help text in the dialog boxes: When you are in the parameterisation program, simply click the "Help" button. Help texts will be displayed for the dialog boxes in question.

Help texts in the Table of Contents: The complete parameterisation process with all operating procedures is described in the Table of Contents.

Click the "?" button.



(SUB-D/V.24)

Continuation **Parameterisation**

5.3 **Installing the "NzPara" parameterisation program**

Parameterisation is performed using the "NzPara" program. This requires a PC or laptop with Windows Version 3.1 or later. A working memory of at least 4 MB is required. A mouse is recommended for operating the program. Install the "NzPara" program using Setup.exe

5.4 **Important notes for a parameterisation file**

Automatic creation of a parameterisation file (Autoconfig LSN):

When the parameterisation PC is connected, a parameterisation file is created into which the connected detectors, couplers etc. are automatically imported. This parameterisation file is then loaded from the NZ 300 LSN into the parameterisation PC in order to perform additional settings. The parameterisation file is then loaded back into the NZ 300 LSN.

Start Autoconfig LSN: Click the "AUTO" button using the left-hand mouse button.

VdS consistency test:

The system checks your inputs and assignments continuously during the parameterisation work in order to ensure that they are reliable and are consistent with other data. Since it is not possible to perform all consistency checks at the input stage, however, NzPara also supports a global consistency check which can be started after parameterisation has been completed. A **standard** or **VdS**-compliant conformity check can be performed.

Start conformity check: Click the **Edit** menu and select menu item **Consistency check** or **VdS consistency check**. Successful checks end with a zero error system message. If a consistency check reports an error or warnings, a log file is opened which tells you about all error messages in plain text.

Continuation **Parameterisation**

5.5 Generating, retrieving and saving parameterisation files

When generating (see previous page), retrieving and saving parameterisation files, proceed as follows:

1. Start the "NzPara" program by double-clicking it.
2. After "NzPara" has been started, you can generate a new neutral parameterisation file using the "New" command in the "File" menu or can use the "Open" command to open an existing parameterisation file. You can also open a template.

This procedure can also be performed using the button with the arrow sign.

3. Saving

Save new parameterisation file: When using "Save", the program will ask you for a name for the parameterisation file.

Save existing parameterisation file: When "Saving" an existing parameterisation file, the old data will be overwritten.

When using "Save as ...", the old parameterisation file is retained and a new one is generated (new name must be entered for the new parameterisation file).

Save as template: Parameterisation file with logical parameters is saved as a template.

Continuation **Parameterisation**

5.6 Example of parameterisation (brief instructions)

1. Retrieve a parameterisation file (refer to previous page for details of how to generate, retrieve and save parameterisation file).
2. Call up "Parameterisation info" by means of a double-click, enter data and confirm with "OK".
3. Call up "NZ 300 LSN" with a double-click. In the "System - General Settings" dialog box, click the cells to make appropriate settings.
4. Loop has already been set **LSN-Bus - AP1 – RING 1**
5. Create tee-offs if required **LSN-Bus - AP1 – STICH 1**
6. Fit detectors and couplers into the loop or tee-off and then perform the appropriate settings.
7. Call up "Inputs/Outputs" and perform the appropriate settings.
8. Call up "User Rights" and perform the appropriate settings.
9. Call up "Internal Auto Dialler" and perform the appropriate settings.
10. Load the parameterisation file into the NZ 300 LSN.

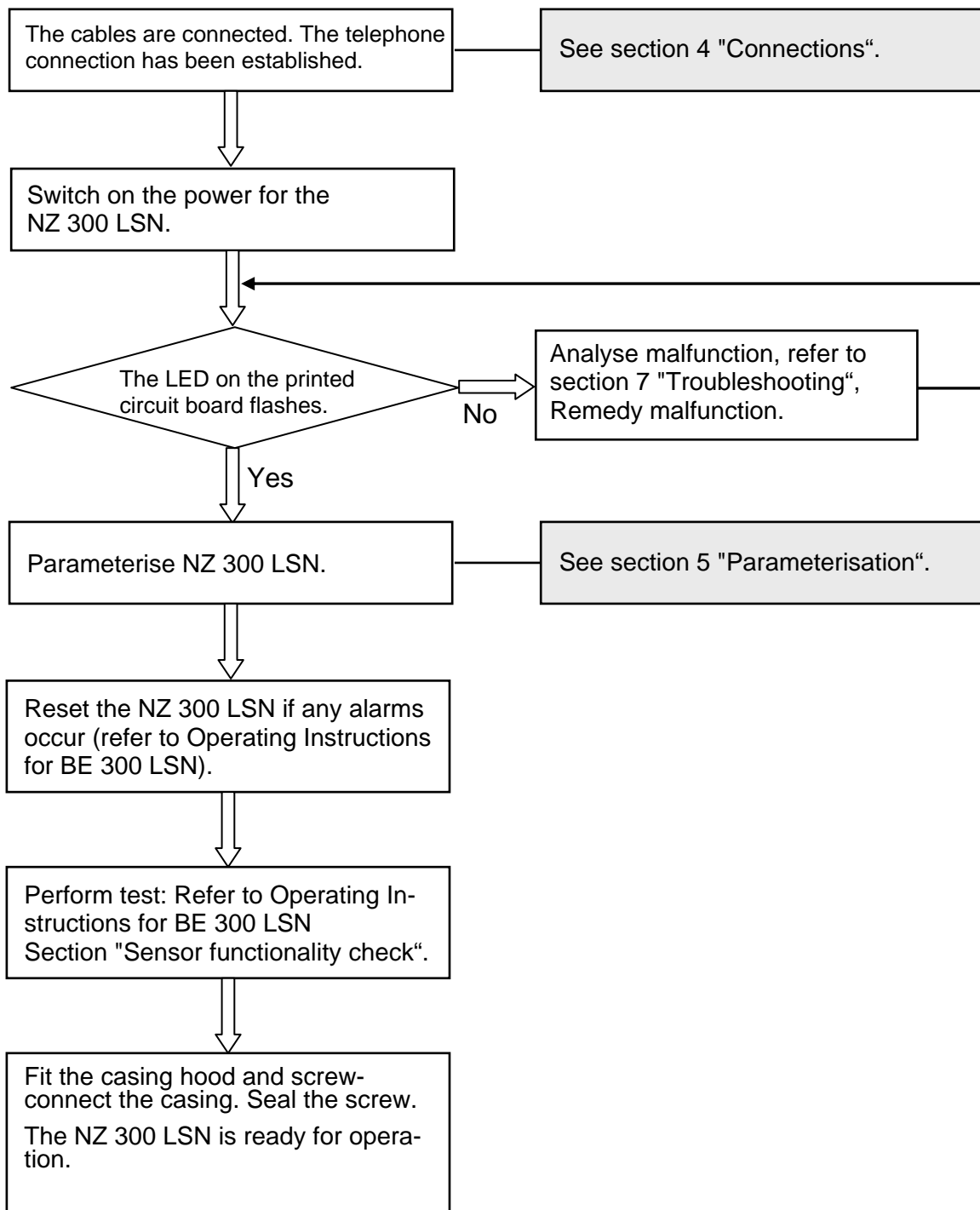
Continuation **Parameterisation**

5.7 Loading parameterisation file into the NZ 300 LSN.

Proceed as follows when loading a parameterisation file:

1. Use a 9-pin 1:1 interface cable to establish a connection between the parameterisation PC and the NZ 300 LSN.
2. Call up the parameterisation file already created for the NZ 300 LSN from the "NzPara" parameterisation program.
3. Select parameterisation interface.
 - Select **Settings** from the "*Connection*" menu.
 - Select interface for the appropriate parameterisation PC (COM 1 to COM 5).
 - Confirm with "OK".
4. Select Load **into System** from the "*Connection*" menu.
5. Once loading has been completed, this will be displayed on the screen of the **parameterisation** PC. In the event of a fault, any parameterisation file which has already been loaded will be retained.

6 Commissioning and start-up



7 Troubleshooting

7.1 Remediating malfunctions

Possibilities for error diagnosis during parameterisation

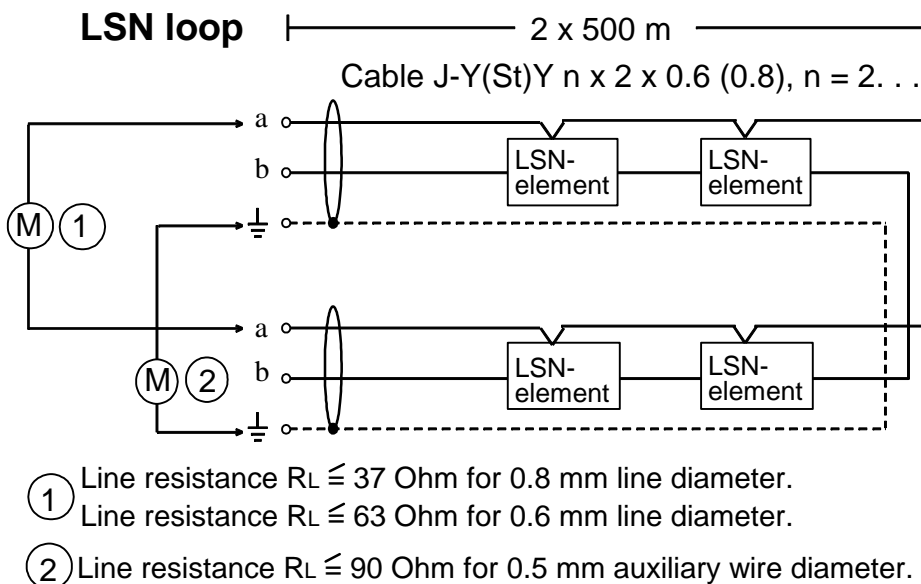
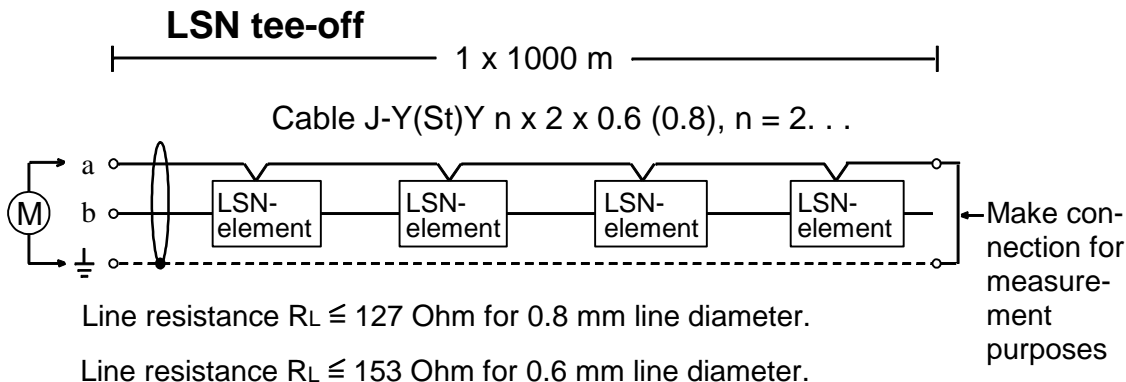
Error messages and other system messages which occur during or after loading the system parameters can have different causes. They do not necessarily relate to faulty parameterisation. NzPara offers several options for diagnosing and locating errors.

- **Consistency check** - call up the log file
(for parameterisation errors)
- **Periphery values**
Interrogate module status (e.g. in the case of malfunctions or interruptions to the LSN network and defective elements in the network)
Request dynamic data from detectors (e.g. relating to analog value or soiling of the detector)
- Read **background memory** (provides information on the last 1024 events)

Note: When malfunctions occur to the LSN network or resistance values are high, the resistance value of the LSN bus measured under normal conditions may prove useful as a basis for comparison. This value can be read from the **LSN** dialog box if the value has been entered. One possibility of locating errors is to open the loop.

Continuation **Troubleshooting**

7.2 Test setup for troubleshooting



Notes:

- 1.) The auxiliary wire in the central unit must be removed from the screw terminals.
- 2.) The connections must be swapped over on the measuring instrument when measuring the resistance in order to enhance reliability.
- 3.) During operation, the auxiliary wire may only be connected to the central unit using screw terminals.

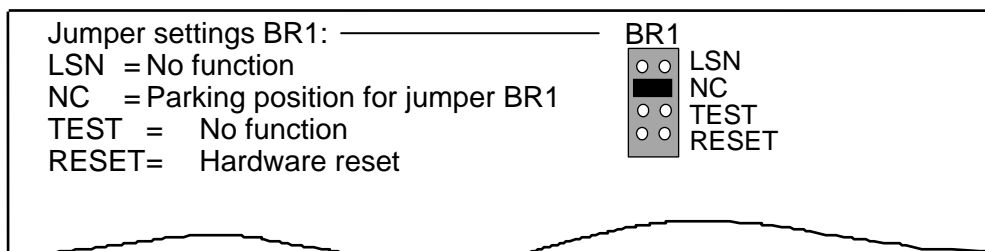
8 Maintenance and service notes

8.1 General

Maintenance and inspection measures must be performed at fixed intervals and by appropriately qualified personnel. The regulations set down in DIN VDE 0833 apply for such operations.

8.2 Hardware reset

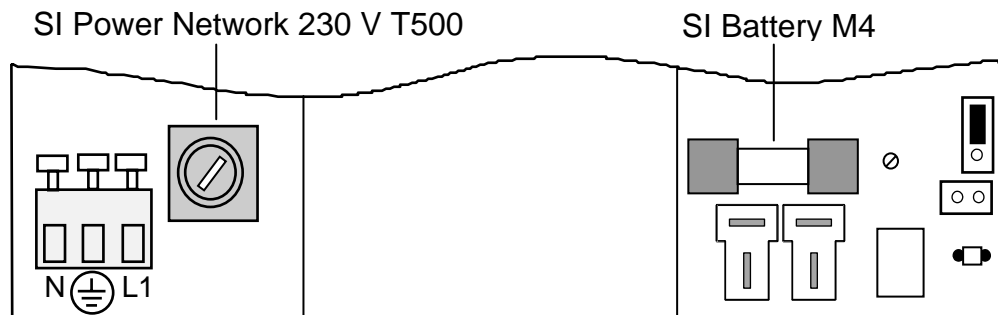
1. Pull jumper BR1 out of the parking position.
2. Plug the jumper into position "RESET" for approx. 2 seconds.
3. Then plug jumper BR1 back into the parking position.
The program is restarted.



Continuation **Maintenance and Service Notes**

8.3 Current measurement and fuses

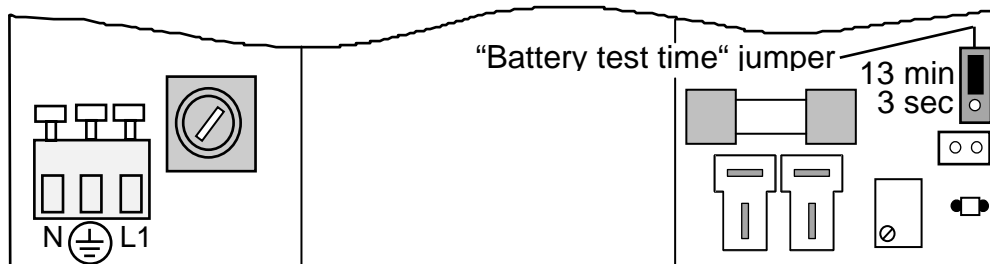
1. To measure the system current, connect the measuring instrument to the retaining clips of the "SI Battery" fuse.
2. Remove the "SI Power Network" fuse.
3. Remove the "SI Battery" fuse.



Continuation Maintenance and Service Notes

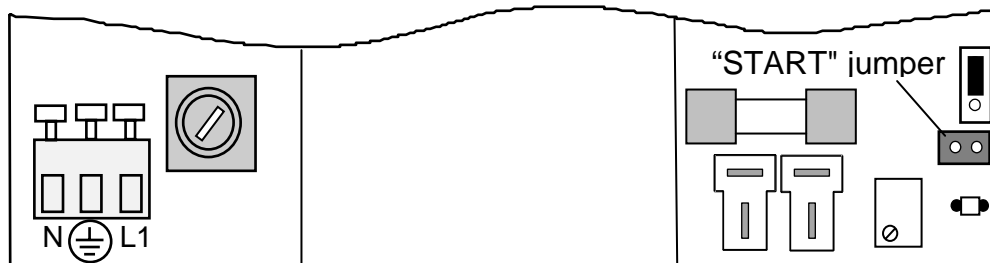
8.4 Testing the battery charge voltage

1. Plug the "Battery test time" jumper from 13 min to 3 sec.
2. If no malfunction is displayed after 3 seconds, the battery charge voltage is correct.
3. Plug the jumper back into 13 minutes.



8.5 Starting up the central unit with batteries (no AC supply).

After connecting the batteries, briefly jumper the two "START" pins.



8.6 Exchanging and disposing of batteries

Exchanging batteries: When exchanging batteries, use only batteries of the same voltage and capacity, otherwise this may result in malfunctions. You should therefore only ever use batteries of the same type and age from the same production series. Always ensure the battery poles are correctly fitted! There is a risk of injury in the event of short circuits.

Disposal: Printed circuit boards and batteries which are unusable and cannot be repaired must be disposed off correctly.

Continuation Maintenance and Service Notes

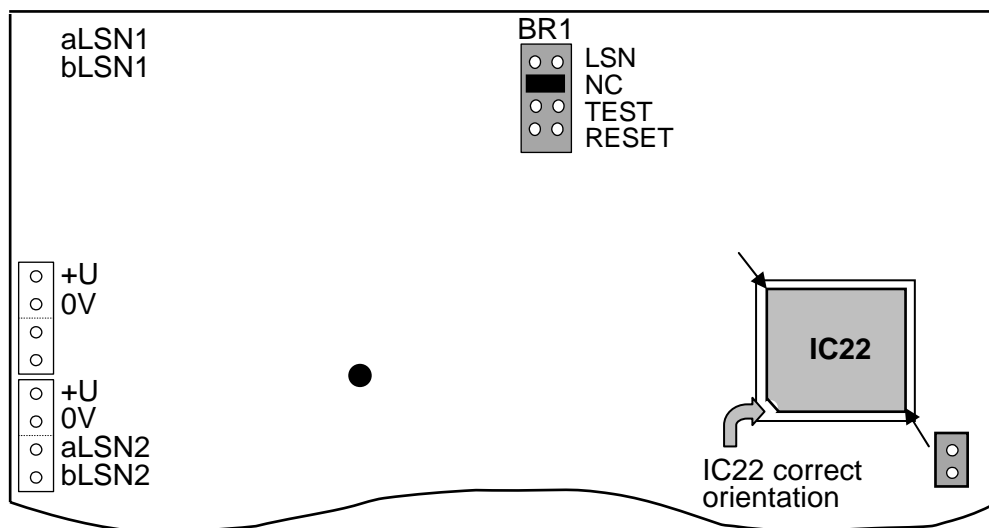
8.7 Sensor functionality check

The procedure for checking the detectors is described in the Operating Instructions for the BE 300 LSN, section "Sensor functionality check".

8.8 Exchanging program memory IC22

Important! The system must be disconnected from the power source (battery, AC line).

Remove the IC22 by applying IC tongs at the points marked with arrows. Fit a new IC22 in the correct orientation (see figure).



9 Technical data

9.1 Equipment data for NZ 300 LSN

VdS approval number	G 100070
VdS class	C
Approval of telecomm. equipment	CE 0682 X
Casing	
Dimensions (H x W x D)	460 x 380 x 97 mm
Colour	Light grey / RAL 7035
Weight (excl. batteries / incl. batteries)	2 kg / 15 kg
Ambient conditions	
Ambient temperature (operation)	268 K to 318 K (- 5° C to + 45° C)
Storage and transport temperature	253 K to 333 K (- 20° C to + 60° C)
Environment class	II (VdS 2110)
Degree of protection of casing	IP 40
Electromagnetic compatibility	
Interference immunity	DIN EN 50130-4
Emitted interference	DIN EN 50081-1
Power supply	
Class of protection	I (DIN VDE 0106-Part 1)
AC line voltage	230 V
AC line frequency	50 Hz
Power pack	12 V / 2.4 A
Output voltage	13.2 V at 323 K (50° C) to 14.5 V at 273 K (0° C)
Battery charge voltage from 0° C to 50° C in accordance with battery charge characteristic (factory setting: at 20° C 13.8 V)	
Protective circuits for output / battery charge voltage	
Overvoltage limiting at	16.8 V
Current limiting	> 2.4 A acc. to U/I characteristic
Battery capacity	12 V / 2 x 17 Ah
Stored energy time	Max. 60 hours
Current consumption of central PCB	180 mA
Max. power pack current (battery charge current + standby current) is 2.4 A. See section "Planning instructions for power supply".	

Continuation Technical data

LSN technology

Line voltage	Approx. 30 V
LSN line current (loop or tee-off (total))	Max. 100 mA
LSN detector or LSN coupler	Max. 127 (depending on current consumption)
Line network	1 loop with max. 1000 m or 2 tee-offs with Max. 1000 m (total)
Current consumption per +U/0V	Max. 300 mA
Short-circuit fuse blows at +U/0V (max. 15 V)	Between 0.5 A and 1.0 A

Transmission unit

Principle	Floating make contact
Contact load	30 W / 1 A
Control time	3 – 180 sec, continuous

External sounder / flash light

Principle	Polarity reversal
Line voltage	Approx. 6 V
Terminal resistance	12.1 kOhm
Control time	3 – 180 sec, continuous
Current consumption for polarity reversal	Max. 300 mA
Short-circuit fuse blows when polarity reversed to 12 V (max. 15 V)	Between 0.5 A and 1.0 A

Transmission protocol (auto dialler)

Network access	Analog
Method / protocol	VdS 2465, Telim

External power supply +12 V/0V (output 29/30)

Current consumption	Max. 300 mA
Short-circuit fuse blows at 12 V (max. 15 V)	Between 0.5 A and 1.0 A

Continuation Technical data

Serial interface

Range V.24	Max. 25 m
Transmission speed	9600 bit/s
Transmission protocol	VdS 2465

Outputs, central indicator board points

Principle	Open collector (short-circuit-proof)
Max. voltage	11 V to 15 V
Max. current	100 mA

Output, malfunction relay

Principle	Floating make contact
Contact load	30 W / 1 A
Control time	3 – 180 sec, continuous

Control output, free relay

Principle	Break contact
Contact load	30 W / 1 A
Control time	3 – 180 sec, continuous

Installation cable J-Y(St)Y The shielding (auxiliary wire) must be connected to the central unit.

Continuation **Technical data****9.2 Intrusion coupler NNK 100 LSN**

Operating voltage	
- LSN section	+12 V ... +33 V
- Other coupler functions	+9 V ... +15 V
Current consumption when connected as	
- 2-wire element	6 mA
- 4-wire element	2 mA for LSN section and 4 mA for other coupler functions
Control output 1 (connection 14)	Open collector, active 0 V
- Switching voltage	Max. 30 V
- Switching current	Max. 20 mA
Control output 2 (connection 13)	Open collector, active 0 V
- Switching voltage	Max. 30 V
- Switching current	Max. 20 mA
Control output 2 (connection 12)	Open collector, inactive 0 V
- Switching voltage	Max. 30 V
- Switching current	Max. 10 mA
Control output 3 (connection 15, 16)	Open collector, active 12 V
- Switching voltage	Max. 15 V
- Switching current	Max. 100 mA
Connectivity	4 DC primary lines
Primary lines PL 1 - 4	
- Terminal resistance	$R_E = 12k1, 1\%$
- Alarm criterion	$\pm 40\%$ of terminal resistance
- Line resistance	Max. 100 Ohm
- Response time	< 200 ms
Closure monitoring	Max. 100 Ohm
Ambient temperature	273 K 323 K (0°C +50°C)
Casing, bottom / cover	Plastic
Colour	Grey/white (RAL 9002)
Weight	Approx. 400 g
Dimensions (H x W x D)	215 x 160 x 35.5 mm
Degree of protection	IP 30
Environment class	II (VdS 2110)
VdS installation class	C
VdS approval number	G 195057

Continuation **Technical data****9.3 Arming device coupler NVK 100 LSN**

Operating voltage	
- LSN section	+10 V ... +33 V
- Other coupler functions	+8 V ... +30 V
Current consumption	
- LSN section	3.5 mA
- Other coupler functions	Idle: Max. 50 mA at +8 V Max. 40 mA at +12 V Max. 30 mA at +30 V Full load: Max. 315 mA at +8 V Max. 230 mA at +12 V Max. 105 mA at +30 V
Connectivity	4 DC primary lines
- Primary lines 1 - 4	As holdup, intrusion, tamper or closure zone
- Primary line 5	Block-type lock / or coded switching unit
- Primary line 6	As holdup, intrusion, tamper or closure zone or coded switching unit
Terminal resistances	
- Primary lines 1 - 4	$R_E = 12.1 \text{ k}\Omega \pm 1\%$
- Primary line 5	$R_{E1} = 12.1 \text{ k}\Omega \pm 1\%$ $R_{E2} = 2.96 \text{ k}\Omega \pm 1\%$
- Primary line 6 (holdup, intrusion, tamper)	$R_E = 12.1 \text{ k}\Omega \pm 1\%$
- Primary line 6 (log. switching unit)	$R_{E1} = 12.1 \text{ k}\Omega \pm 1\%$ Armed / not applicable 12K1 II 3K92 $\Omega \pm 1\%$ Not armed / applicable
Monitoring tolerance for PL 1 - 4 (possibly PL 6)	$\pm 40\%$ of terminal resistance
Control time PL 1 - 6	< 200 ms
Control outputs	
- Max. current	20 mA
- Max. voltage	8 V
- Max. line resistance	2 x 10 Ω
- Short-circuit capability	$\leq 2\text{s}$

Continued on next page

Continuation **Technical data**

Arming device coupler NVK 100 LSN

Block-type lock magnet	
- Max. current	60 mA
- Max. voltage	12 V
- Max. line resistance	2 x 5 Ohm
- Short-circuit capability	≤ 2s
Indoor environment	DIN 40040 R14
Permissible ambient temperature	273 K ... 328 K (0°C ... +55°C)
Casing	
- Lower section	Plastic
- Cover	Plastic
Colour	Grey/white (RAL 9002)
Weight	Approx. 450 g
Dimensions (H x W x D)	215 x 160 x 35.5 mm
Degree of protection	IP 30
Environment class	II (VdS 2110)
VdS installation class	C
VdS approval number	G 195058

Continuation **Technical data****9.4 Indicator board coupler NTK 100 LSN**

Operating voltage	
- LSN section	+10 V +33 V
- Other coupler functions	+9 V +30 V
Current consumption	
- LSN section	6 mA
- Other coupler functions	Standby: 0 mA Outputs: 8 x max. 100 mA Inputs: 2 x 6 mA
Connectivity	8 open collector outputs for remote displays; 2 inputs for external switches (inputs and outputs are separated from the LSN section by means of optocouplers)
Ambient temperature	273 K 323 K (0°C +50°C)
Casing	Plastic
Colour	Light grey
Weight	140 g
Dimensions (H x W x D)	135 x 100 x 36.5 mm
Degree of protection	IP 30
Environment class	II (VdS 2110)
VdS installation class	C
VdS approval number	G 195060

Continuation **Technical data****9.5 Branch coupler NAK 100 LSN**

Operating voltage	+10 V +33 V
Current consumption (LSN)	2.5 mA
Connectivity	Branching for a loop or tee-off
Ambient temperature	273 K 323 K (0°C +50°C)
Casing	Plastic
Colour	Light grey
Weight	140 g
Dimensions (H x W x D)	135 x 100 x 36.5 mm
Degree of protection	IP 30
Environment class	II (VdS 2110)
VdS installation class	C
VdS approval number	G 195059

9.6 Contact coupler NKK 100 LSN

Operating voltage	+10 V +33 V
Current consumption (LSN)	5 mA
Connectivity	8 contacts
Ambient temperature	273 K 323 K (0°C +50°C)
Casing	Plastic
Colour	Light grey
Weight	140 g
Dimensions (H x W x D)	135 x 100 x 36.5 mm
Degree of protection	IP 30
Environment class	II (VdS 2110)
VdS installation class	C
VdS approval number	Submitted

Continuation **Technical data****9.7 Junction box KD 55 LSN**

Operating voltage	+10 V +33 V
Current consumption (line feed)	Approx. 2.50 mA
Ambient temperature	273 K 323 K (0°C +50°C)
Casing	
- Material	ABS
- Colour	RAL 9002
- Weight	60 g
- Dimensions, surface-mounted (∅ x H)	76 x 38 mm
- Dimensions, recessed (∅ x H)	76 x 25 mm
Primary lines	2
Degree of protection	IP 40
Environment class	II (VdS 2110)
VdS installation class	C
VdS approval number	G 195066

9.8 Indicator board module ATB 100 LSN

Connectable ATB 100 LSN	Max. 1x
Operating voltage	
- LSN section	+12 V ... +33 V
- Other functions	+8 V ... +30 V
Current consumption	
- LSN section	3 mA
- Other functions	
(All LEDs on)	Max. 80 mA
(All LEDs off)	Max. 6 mA
LED output	
- Max. current	5 mA
- Max. voltage	5 V
- Short-circuit capability	Yes (only 1 output in each case)
Flashing frequency	1 Hz

10 Message type / control statuses

Message type	Operating status				Control status for switching points (control with ...)																		
	Not armed	Internal ON	External ON	Sensor functionality check	External alarm	With transm.fault: External alarm	External alarm without holdup	With transm.fault: Ext.alarm without holdup	Threat	Holdup	Intrusion	Tamper	Fire	Technical alarm	Internal alarm	Int.alarm, malfunction, sensor func. check	Malfunction, general	Malfunction, without AC power network	Manfunction, power supply	Trigger, not armed	Trigger, sensor functionality check	Not ready for arming	
Intrusion	x																				x		x
		x									x				x	x							x
			x		x	x	x	x			x												x
				x												x						x	x
Threat, holdup	x				x	x			B	Ü													x
		x			x	x			B	Ü													x
			x		x	x			B	Ü													x
				x	x	x			B	Ü													x
Tamper	x										x				x	x							x
		x									x				x	x							x
			x		x	x	x	x			x												x
				x												x						x	x
Detector malfunction ND100 always->	x														x	x	x						x
		x													x	x	x						x
			x		x	x	x	x			x					x	x						x
				x												x	x	x					x
Malfunction Input	x														x	x	x						x
		x													x	x	x						x
			x													x	x						x
				x												x	x	x				x	x
Malfunction System	x														x	x	x						x
		x													x	x	x						x
			x													x	x						x
				x												x	x	x					x
AC power malfunction	x														x	x		x					x
		x													x	x		x					x
			x													x		x					x
				x												x	x	x					x
Fire	x												x		x	x							
		x											x		x	x							
			x										x										
				x												x						x	
Technology	x													x		x							
		x												x		x							
			x											x									
				x												x						x	
Closure	x																				x		x
		x																					x
			x																				x
				x																		x	x

Continuation Message type / control statuses

Message type	Operating status				Control status for switching points (control with ...)																			
	Not armed	Internal ON	External ON	Sensor functionality check	External alarm	With transm.fault: External alarm	External alarm without holdup	With transm.fault: Ext. alarm without holdup	Kidwatch	Medical alarm	Int.alarm, malfunction, sensor func.check	Malfunction, general	Malfunction without AC power network	Changeover armed / not armed	Armed	Internal ON	Trigger, sensor functionality check	Sensor functionality check ON	OFF	Skip	General reset	Not ready for arming	Routine call	
Neg. acknowledgement	x									x	x	x											x	
		x								x	x	x											x	
			x			x	x					x	x											
				x																				x
Medical	x									x														
		x								x														
			x							x														
				x							x							x						
Detection area	x													x										
		x																						
			x											x	x									
				x															x					x
Reset	x																					x		
		x																				x		
			x																			x		
				x																				
Shutdown	x																		x					
		x																	x					
			x																x					
				x															x					
Skip	x																			x				
		x																		x				
			x																	x				
				x																x				
Internal ON	x																							
		x															x							
			x																					
				x																				
Routine call	x																							x
		x																						x
			x																					x
				x																				x

Continuation Message type / control statuses

Message type	Operating status				Control status for internal and external auto dialler (control with ...)																		
	Not armed	Internal ON	External ON	Sensor functionality check	External alarm	With transm.fault: External alarm	Ext. alarm without holdup	With transm.fault:Ext. alarm without holdup	Threat	Holdup	Intrusion	Tamper	Fire	Technical alarm	Internal alarm	Int.alarm, malfunction, sensor func.check	Malfunction, general	Malfunction without AC power network	Malfunction, power supply	Trigger, not armed	Trigger, sensor functionality check	Not ready for arming	
Intrusion	x																						
		x																					
			x		x	x	x	x			x												x
				x																			
Threat, Holdup	x				x	x			B	Ü												x	
		x			x	x			B	Ü												x	
			x		x	x			B	Ü												x	
				x	x	x			B	Ü												x	
Tamper	x																						
		x																					
			x		x	x	x	x				x										x	
				x																			
Detector malfunction ND100 always->	x																						
		x																					
			x		x	x	x	x				x					x	x				x	
				x																			
Malfunction Input	x																						
		x																					
			x															x	x			x	
				x																			
Malfunction System	x																						
		x																					
			x															x	x			x	
				x																			
AC power malfunction	x																						
		x																					
			x															x				x	
				x																			
Fire	x																						
		x																					
			x										x										
				x																			
Technology	x																						
		x																					
			x											x									
				x																			
Closure	x																						
		x																					
			x																				
				x																			

Continuation Message type / control statuses

Message type	Operating status				Control status for internal and external auto dialler (control with ...)																		
	Not armed	Internal ON	External ON	Sensor functionality check	External alarm	With transm.fault: External alarm	External alarm without holdup	With transm.fault: Ext. alarm without holdup	Kidwatch	Medical alarm	Int.alarm, malfunction, sensor func.check	Malfunction, general	Malfunction without AC power network	Changeover armed / not armed	Armed	Internal ON	Trigger, sensor functionality check	Sensor functionality check ON	OFF	Skip	General reset	Not ready for arming	Routine call
Neg. acknowledgement	x																						
		x																					
			x			x	x					x	x										
				x																			
Medical	x									x													
		x								x													
			x							x													
				x																			
Detection area	x												x										
		x																					
			x											x	x								
				x																			
Reset	x																				x		
		x																			x		
			x																				
				x																			
Shutdown	x																	x					
		x																x					
			x															x					
				x																			
Skip	x																			x			
		x																		x			
			x																	x			
				x																			
Internal ON	x																						
		x														x							
			x																				
				x																			
Routine call	x																						x
		x																					x
			x																				x
				x																			

Continuation Message type / control statuses

Message type	Operating status				BE300 displays and central functions																		
	Not armed	Internal ON	External ON	Sensor functionality (SF) check	Message type	Autom. message display (priority)	Autom. display only in code mode	LED on BE300	Buzzer on BE300	Display in 'Triggerings'	Display in 'View detectors'	Display in 'Sensor func. check' menu	Repeated control operations possible	Message suppression through 'Function'	Door/route detector (with 'Function')	Reset necessary	Tamper reset necessary (installer)	Background memory	Alarm counter	Overdrive code switching unit	sShutdown, skip		
Intrusion	x				Trigger	5				x	x					x							x
		x			Intrusion	7		r	x	x	x					x	x		x				x
			x		Intrusion	7		r	x	x	x					x	x		x	x	x		x
				x	SF alarm	4					x	x	x						x				x
Tamper	x				Tamper	7		r	x	x	x							x	x				x
		x			Tamper	7		r	x	x	x							x	x				x
			x		Tamper	7		r	x	x	x							x	x	x	x		x
				x	Tamper	7		r	x	x	x							x	x				x
Detector malfunction ND100 always->	x				Malfunc.	3		g	x	x	x						x		x				x
		x			Malfunc.	3		g	x	x	x						x		x				x
			x		Tamper	7		r	x	x	x							x	x	x	x		x
				x	Malfunc.	3		g	x	x	x							x		x			x
Malfunction Input	x				Malfunc.	3		g	x	x	x			x			x		x				x
		x			Malfunc.	3		g	x	x	x			x			x		x				x
			x		Malfunc.	3		g	x	x	x			x			x		x	x	x		x
				x	SF alarm	4					x	x	x		x								x
Malfunction System	x				Malfunc.	3		g	x	x	x			x			x		x				x
		x			Malfunc.	3		g	x	x	x			x			x		x				x
			x		Malfunc.	3		g	x	x	x			x			x		x	x	x		x
				x	Malfunc.	3				x	x	x			x				x				x
Malfunction AC power	x				Malfunc.	3		g	x	x	x			x				x					x
		x			Malfunc.	3		g	x	x	x			x			x		x				x
			x		Malfunc.	3		g	x	x	x			x			x		x	x	x		x
				x	Malfunc.	3				x	x	x			x				x				
Threat, Holdup	x				Holdup	7	x	r	x	x	x			x			x		x	x	x		x
		x			Holdup	7	x	r	x	x	x			x			x		x	x	x		x
			x		Holdup	7	x	r	x	x	x			x			x		x	x	x		x
				x	Holdup	7	x	r	x	x	x			x			x		x	x	x		x
Fire	x				Fire	5				x	x	x				x		x					x
		x			Fire	5				x	x	x				x		x					x
			x		Fire	5				x	x	x				x		x				x	x
				x	SF alarm	4					x	x	x										x
Technology	x				Technol.	5				x	x	x				x		x					x
		x			Technol.	5				x	x	x				x		x					x
			x		Technol.	5				x	x	x				x		x					x
				x	SF alarm	4					x	x	x										x
Closure	x				Trigger	5					x	x											
		x			Trigger	5					x	x											
			x		Trigger	5					x	x											
				x	SF alarm	4					x	x	x										

Continuation Message type / control statuses

Message type	Operating status				BE300 displays and central functions																	
	Not armed	Internal ON	External ON	Sensor functionality check	Message type	Autom. message display (priority)	Autom. display only in code mode	LED on BE300	Buzzer on BE300	Display in 'Triggerings'	Display in 'View detectors'	Display in 'Sensor func. check' menu	Repeated control operations possible	Message suppression through 'Function'	Door/route detector (with 'Function')	Reset necessary	Tamper reset necessary (installer)	Background memory	Alarm counter	Override code switching unit	Shutdown, skip	
Neg. acknowledgement	x				Transm.f.	4		g	x	x	x					x	x					x
		x			Transm.f.	4		g	x	x	x					x	x					x
			x		Transm.f.	4		g	x	x	x					x	x					x
				x	Transm.f.	4		g	x	x	x					x	x					x
Medical	x				Medicine	5			x	x	x			x	x	x						x
		x			Medicine	5			x	x	x			x	x	x						x
			x		Medicine	5			x	x	x			x	x	x						x
				x	Medicine	5			x	x	x			x	x	x						x
Detection area	x				Not armed	0																
		x																				
			x		Armed	0				x	x						x	x				
				x	Sens.chk.	5					x	x										
Shutdown	x				Shutdown	0				x	x											
		x			Shutdown	0				x	x											
			x		Shutdown	0				x	x											
				x	Shutdown	0					x	x										
Skip	x				Skip	0				x	x											
		x			Skip	0				x	x											
			x		Skip	0				x	x											
				x	Skip	0					x	x										
Internal ON	x																					
		x			ON	5																
			x																			
				x																		
Parameterisation	x				Param	5																
		x																				
			x																			
				x	Param	5																
Routine call	x				Routcall	5																
		x			Routcall	5																
			x		Routcall	5																
				x	Routcall	5																

11 Abbreviation list

AT	Alarm Transceiver
ATB	Indicator board
AWUG	Auto dialler
BE	Keypad
BS	Module
DIN	Deutsches Institut für Normung
ESG	External sounder / flash unit
GK	Tamper contact
GLT	DC circuit technology
GMA	Security system
KD	Junction box
LSN	Local SecurityNetwork
NAK	Branch coupler
NBS	Intrusion block-type lock
NKK	Contact coupler
NNK	Intrusion coupler
NVK	Arming device coupler
PL	Primary line
TAE	Telecommunication connection unit
UAE	Universal connection unit
ÜE	Transmission unit
VDE	Verband Deutscher Elektrotechniker
VdS	VERBAND DER SCHADENVERSICHERER e.V.

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Issue: 2
As at: Sept. 01