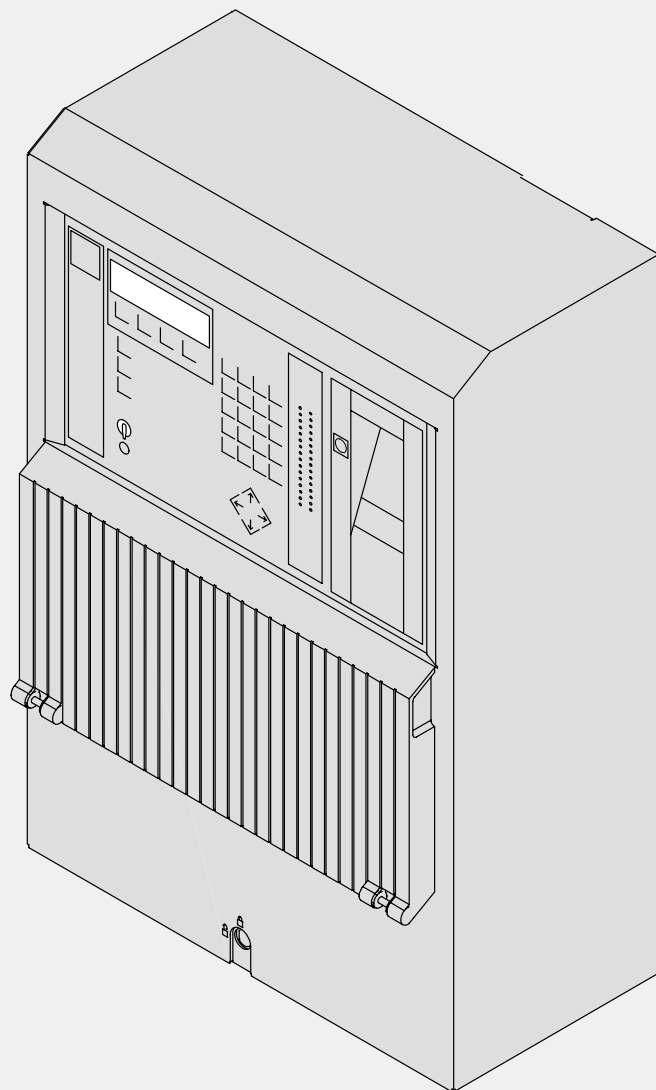


# INSTALLATION MANUAL

## UEZ 2000 LSN – Central Unit for Intrusion Alarms 30.0221.9451 A2



**BOSCH**

610-30.0212.0270-01

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Page: 1



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# 1 Installation Instructions

## 1.1 Notes regarding the installation location and commissioning

### Notes regarding the installation location

- Installation of the devices must occur in dry, maintained interior rooms. The environmental requirements are to be heeded (see Technical Data).
- Ensure that there is a free space of at least 240 mm above the central unit so that the operating panel can be suspended in the parking position.
- There should be a minimum space of 100 mm to the left of the central unit to allow the plugs to be disconnected both at the power supply and at the connection panel (see chapter 5, “Notes Regarding Service and Maintenance”).
- Leave room below or next to the central unit for a power supply that may be required in the future.
- Fasten the central unit to the wall in such a manner that the operating and display elements are at eye level.
- To prevent shortening of the lifetime of the batteries, the central unit should be operated only in locations at normal room temperature.

### Notes regarding proper commissioning

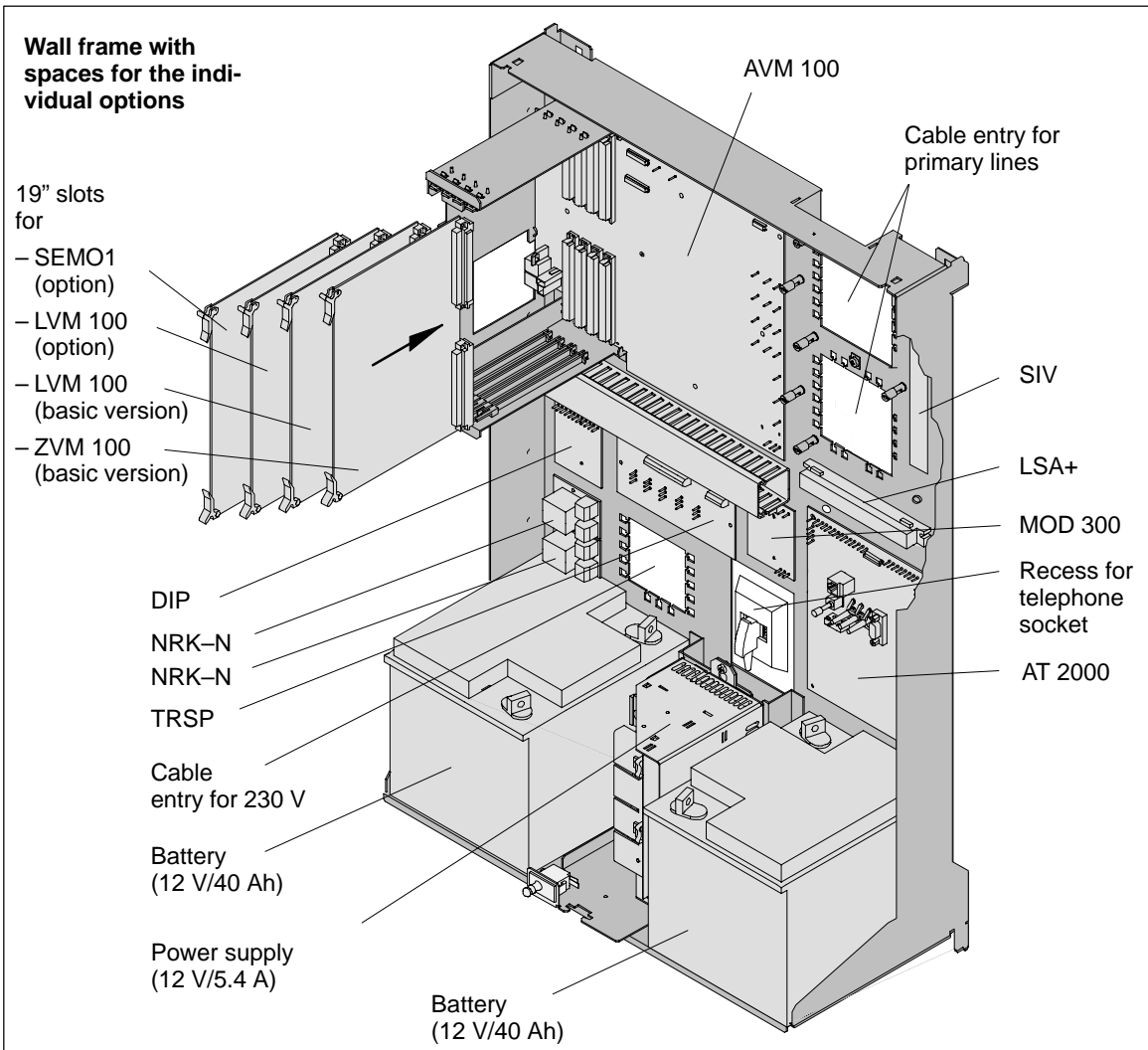
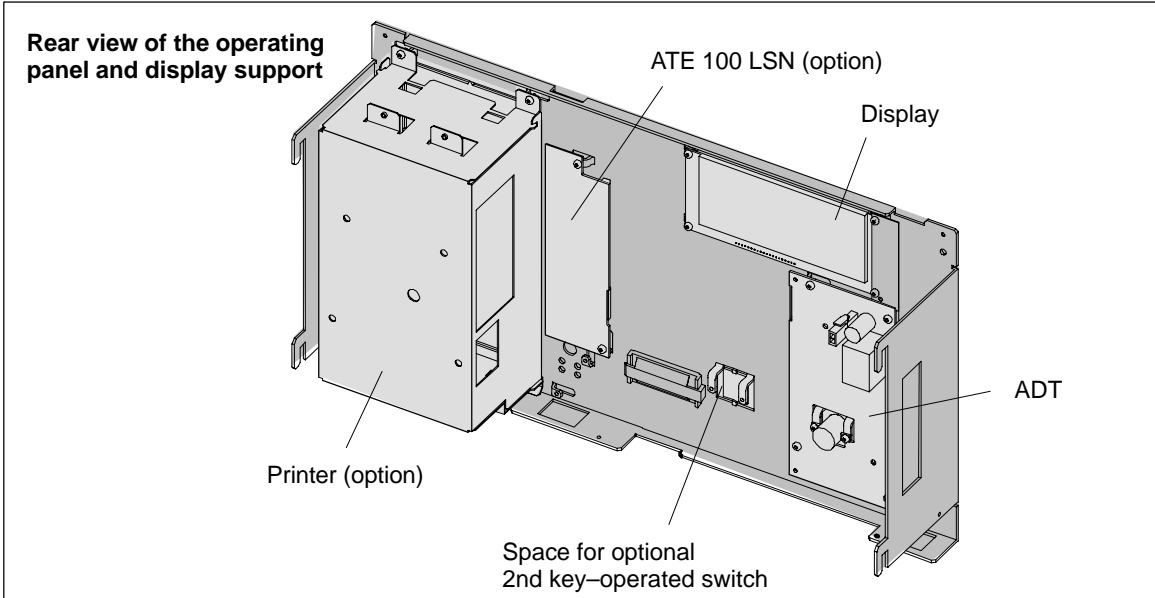
- Use only the installation material recommended by UC–ST; otherwise, error–free functioning cannot be guaranteed.
- When working with the printed circuit boards, the usual precautions for C–MOS technology are to be heeded. To protect the components from static electricity discharge, the installation personnel must discharge themselves. Work on the central unit must only be carried out with a grounding wristlet. This also applies for soldering work.
- The appropriate connection requirements stipulated by the local authorities are to be heeded.

## 1.2 Laws/standards/directives

The device fulfills the following laws/standards/directives:

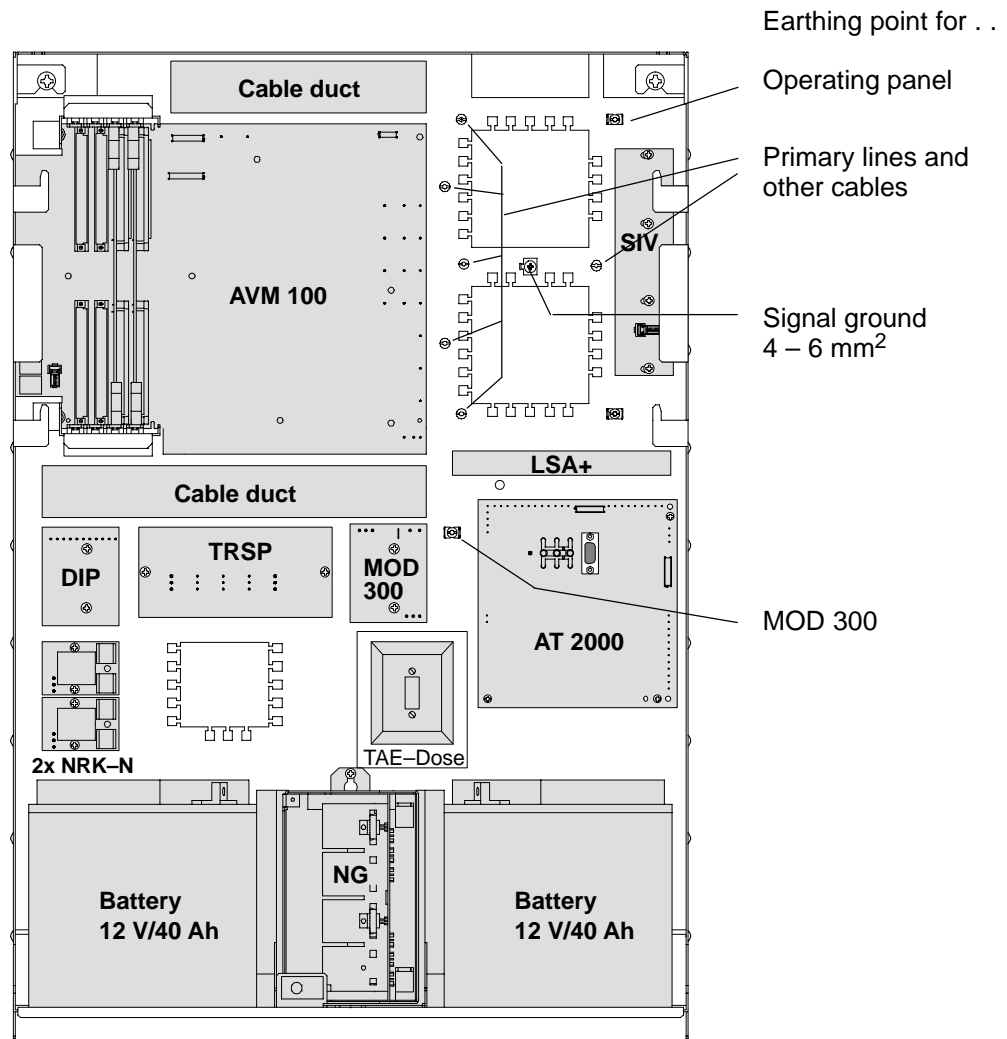
- EMC law based on
  - EN 50081 (interference emission)
  - EN 50082 (interference immunity)
- Low tension directives based on DIN EN 60950
- VDE 0833
- VdS 2252

### 1.3 Arrangement of the components



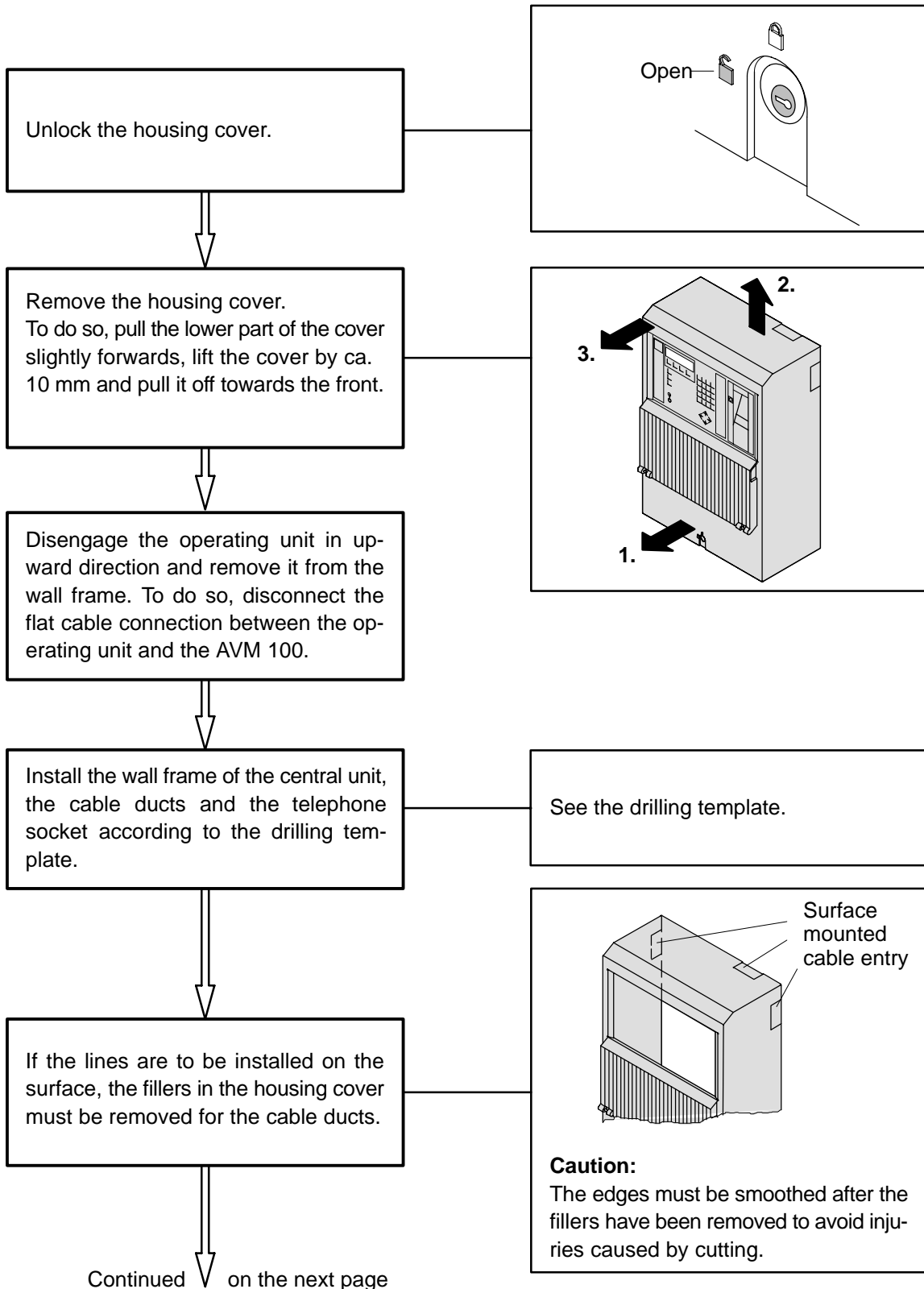
## 1.4 Earthing points of the connection cables

Earth the assemblies/cables at the provided earthing points.

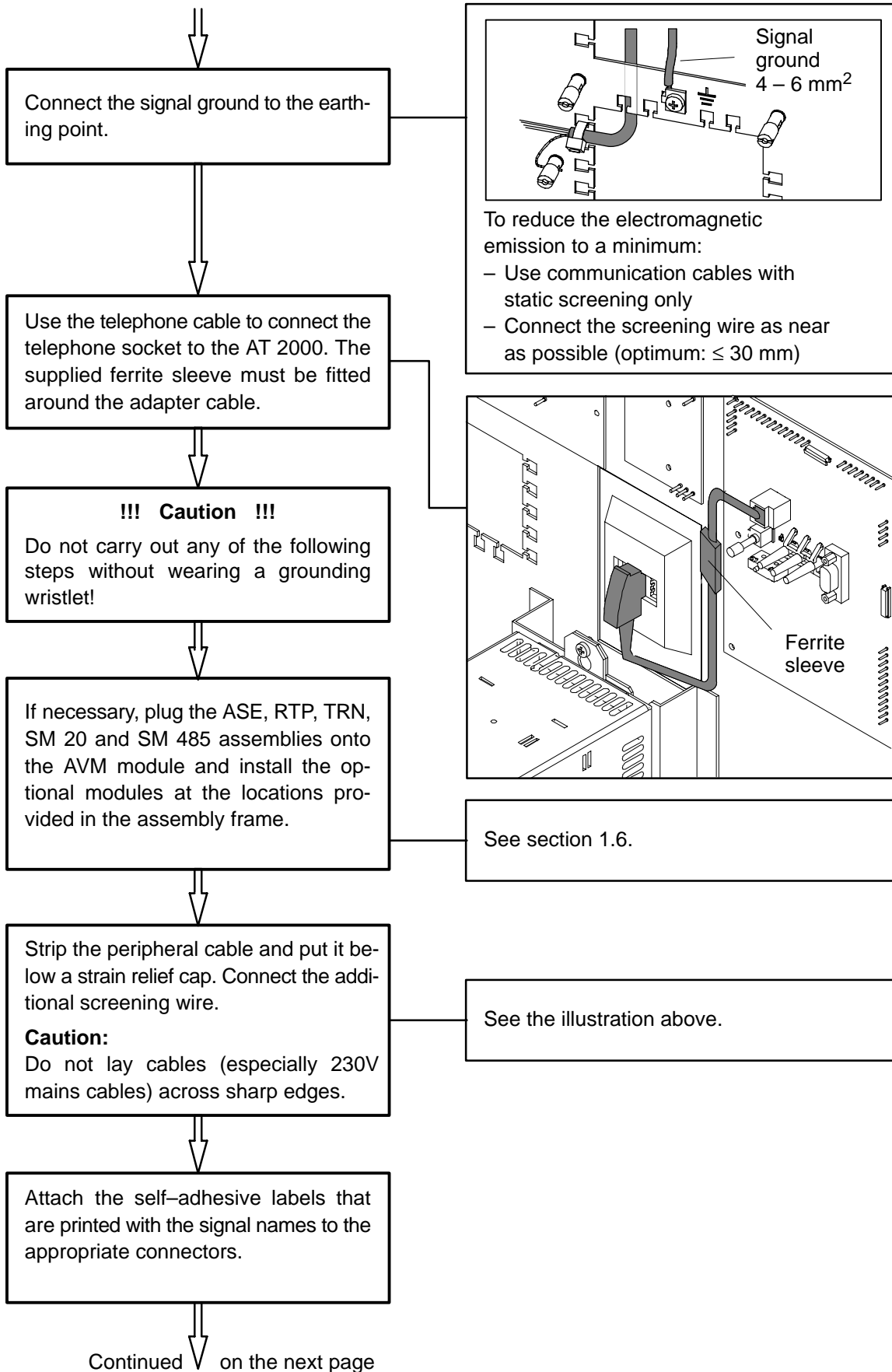


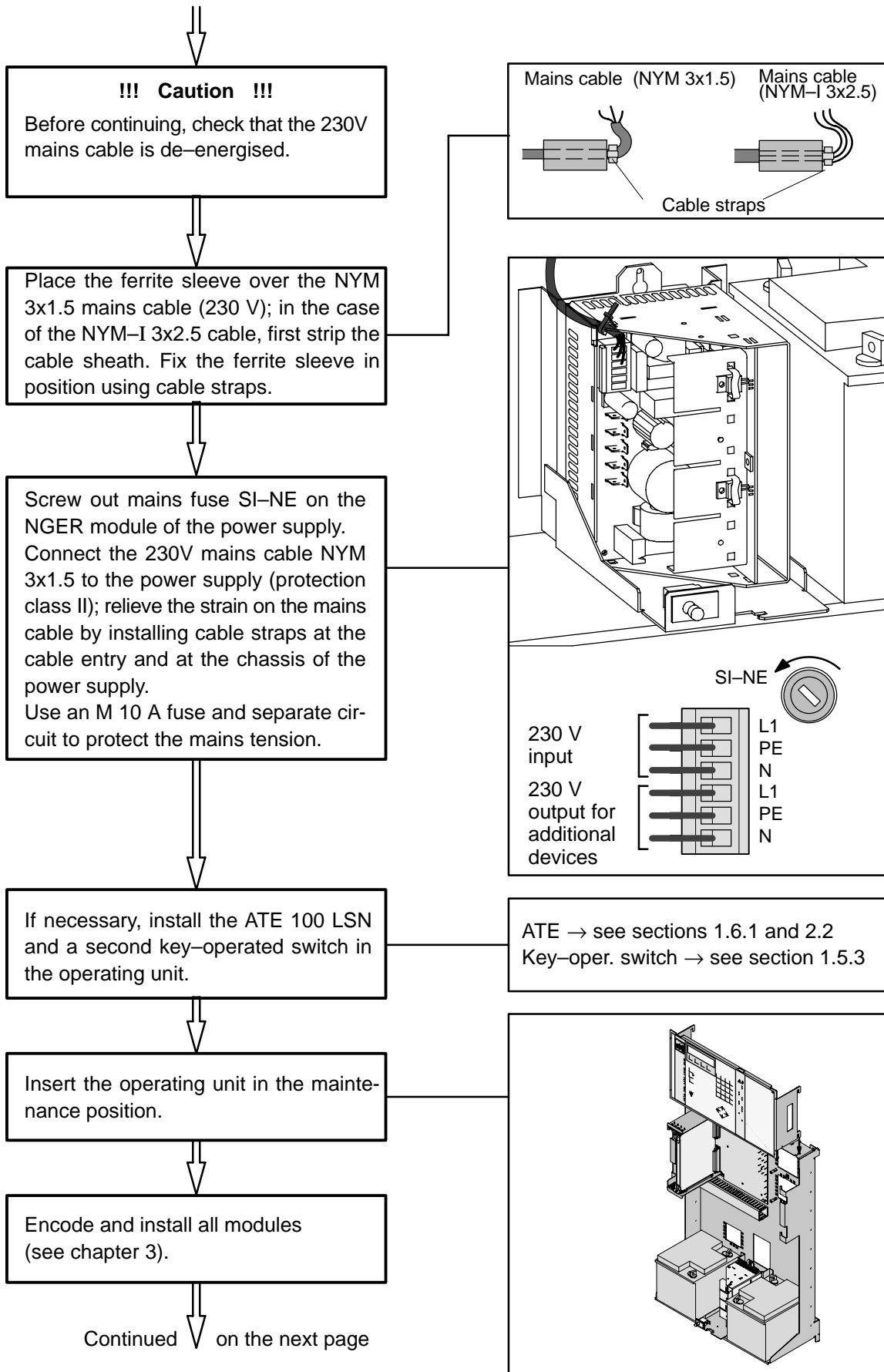
## 1.5 Installation sequence

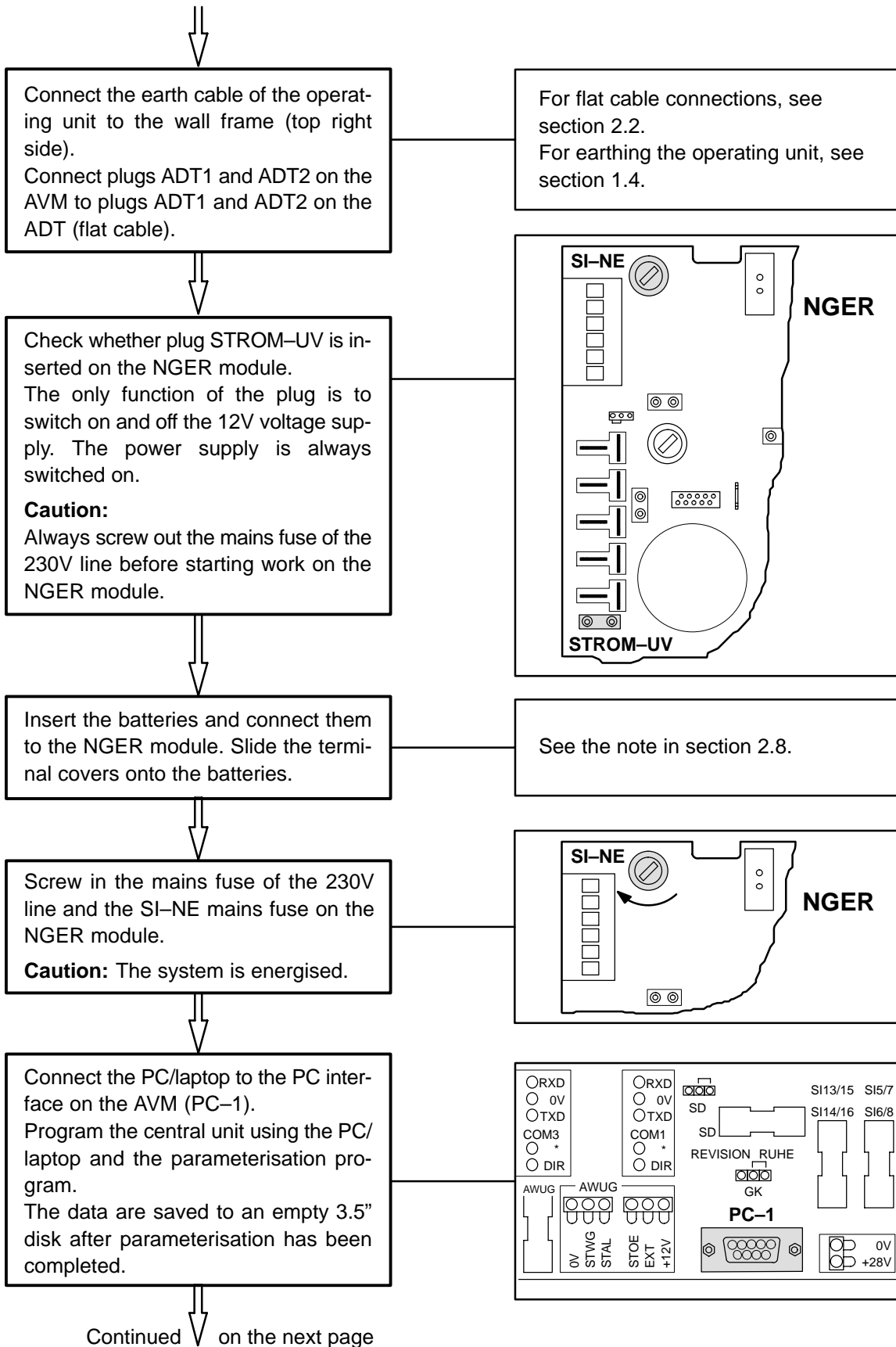
### 1.5.1 Installing the UEZ 2000 LSN system

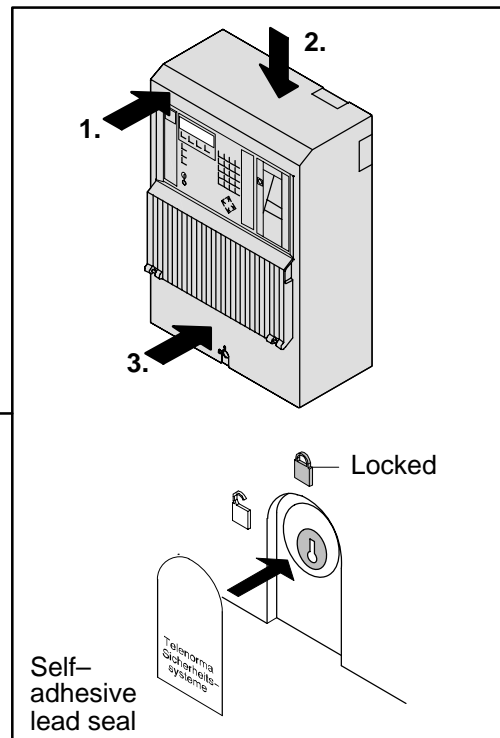
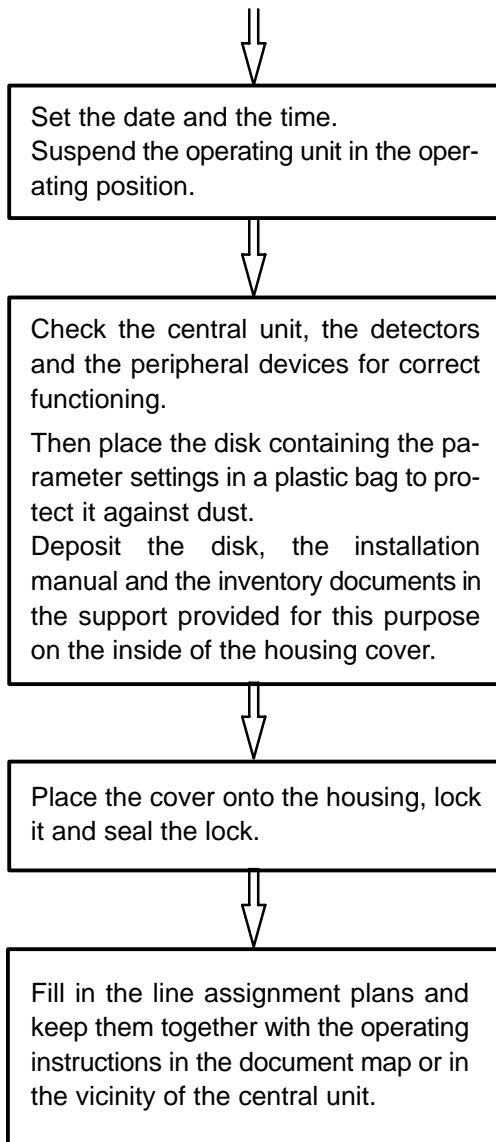








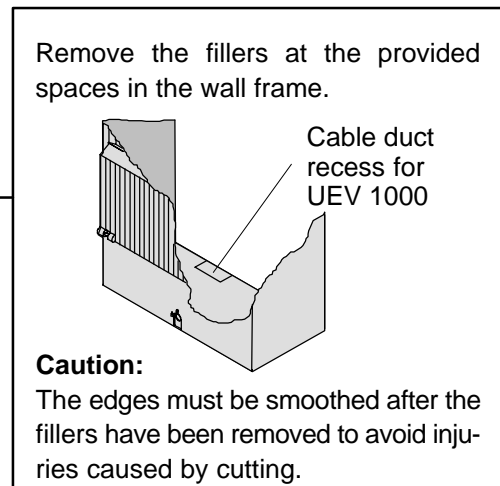




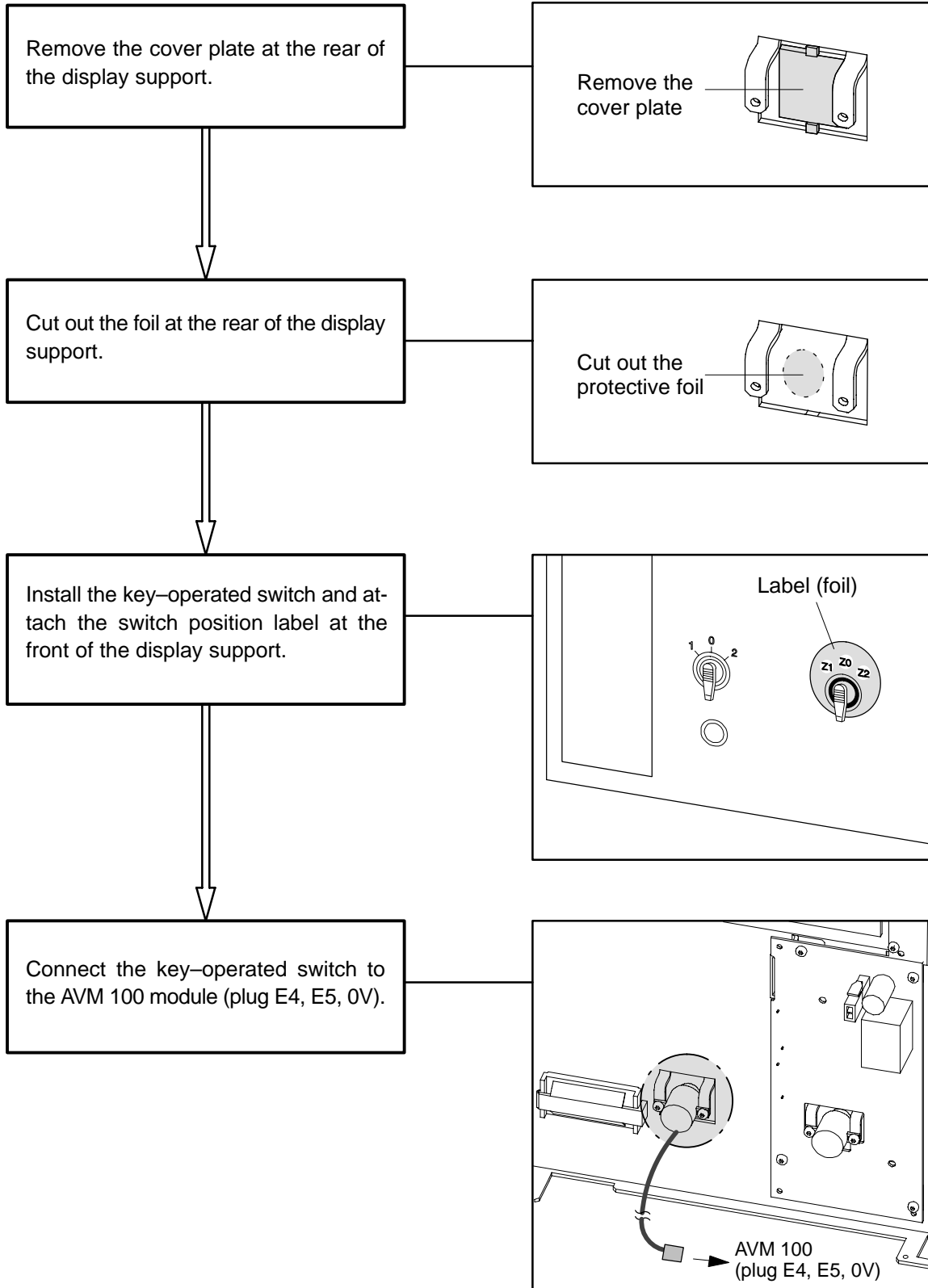
### 1.5.2 Installing an UEV 1000

Use the supplied cable duct if a UEV 1000 unit is to be installed directly below the central unit.

**Note:**  
The cable duct should be installed on the UEZ 2000 LSN before the wall frame is permanently mounted. On the UEZ 2000 LSN side, a ferrite sleeve must be placed over the NYM 3x1.5 mains cable; in the case of the NYM-I 3x2.5 cable, the cable sheath must be stripped beforehand. Fix the ferrite sleeve in position using cables straps.

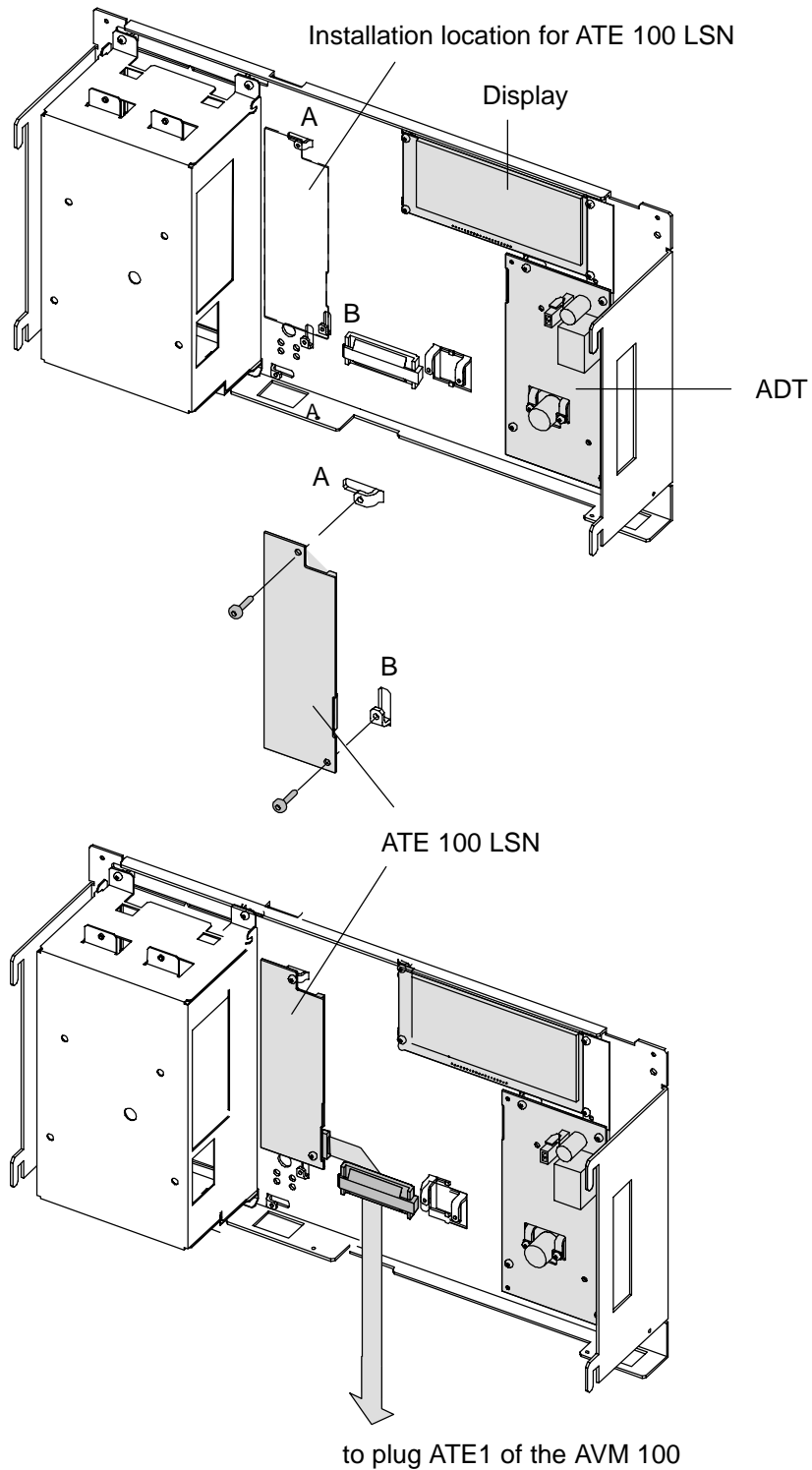


### 1.5.3 Installing a second key-operated switch



## 1.6 Installation of the extension modules

### 1.6.1 Installation of the ATE 100 LSN display tableau

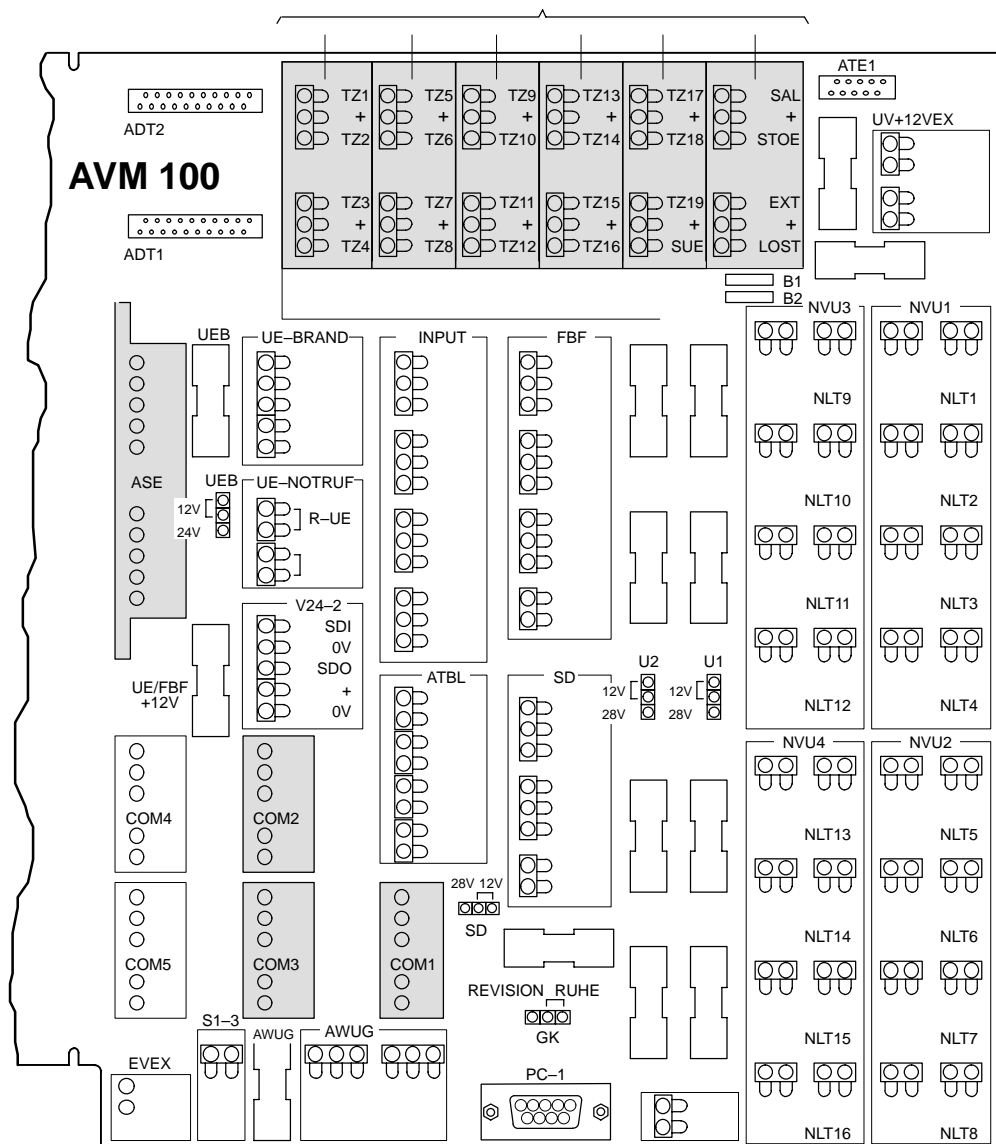


### 1.6.2 Module slots on interface board AVM 100

If required, the ASE, RTP, TRN, SM 20 and SM 485 modules can be plugged onto the appropriate slots of the AVM 100 interface board (component side facing to the right).

In addition, up to 5 TRN modules can be plugged onto printed circuit board TRSP (see section 1.6.3 for the TRSP installation location).

Slots for 6 RTP or 6 TRN modules. Remember that – for mechanical reasons – the TRN module can only be plugged in at the top row.



COM 1 – COM 2: SM 20 or SM 485      max. 5 SM 20 per central unit  
COM 3: SM 20      max. 1 SM 485 per central unit

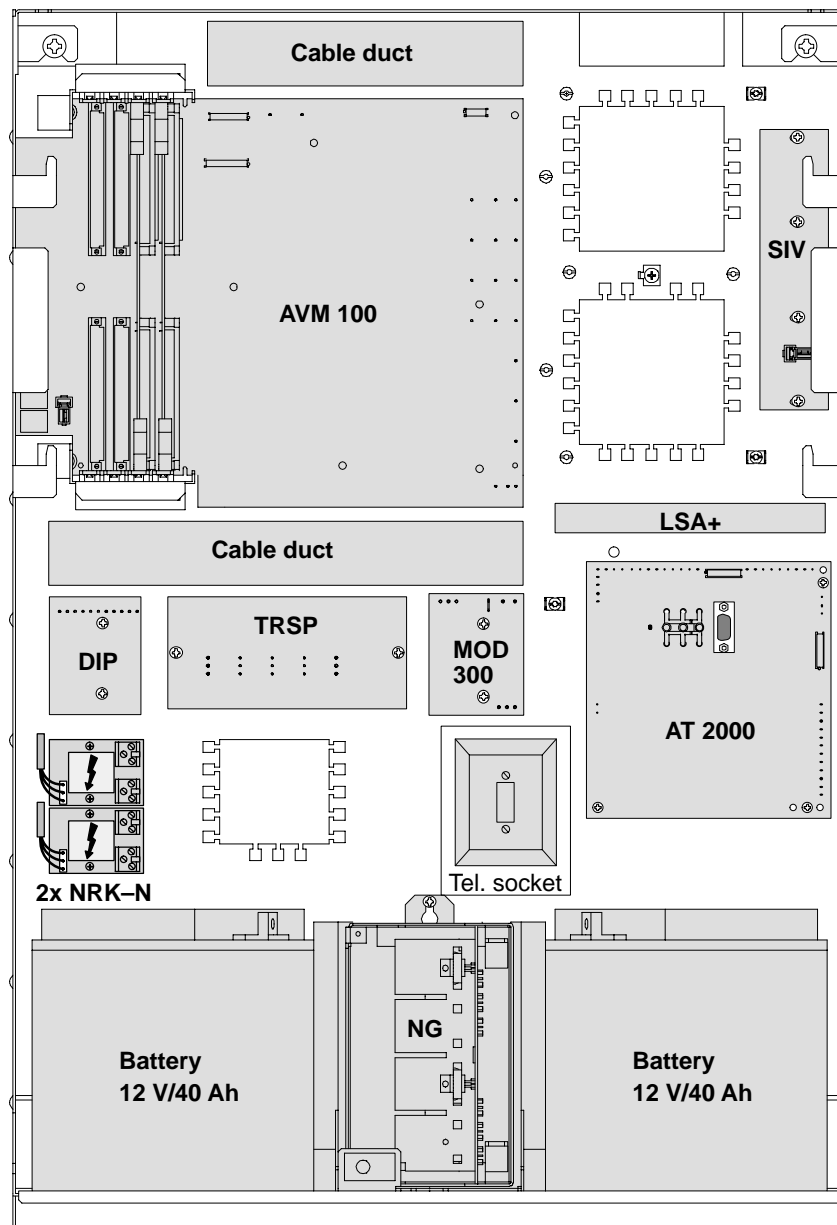
**Note:**  
The +12V voltage supply of the central unit must be interrupted before plugging in or removing the SM 20 and SM 485 modules.

### 1.6.3 Installation of the optional modules AT 2000, MOD 300, TRSP, DIP, SIV and LSA+

When installing the NRK–N module, make sure that the 230V mains supply line is routed through the cable entry to the right of the NRK–N. The sheath of the mains supply line may only be removed shortly before it reaches the terminals (double insulation).

The warning label supplied with the kit must be attached to the relay; when doing so, make sure the vent holes are not covered.

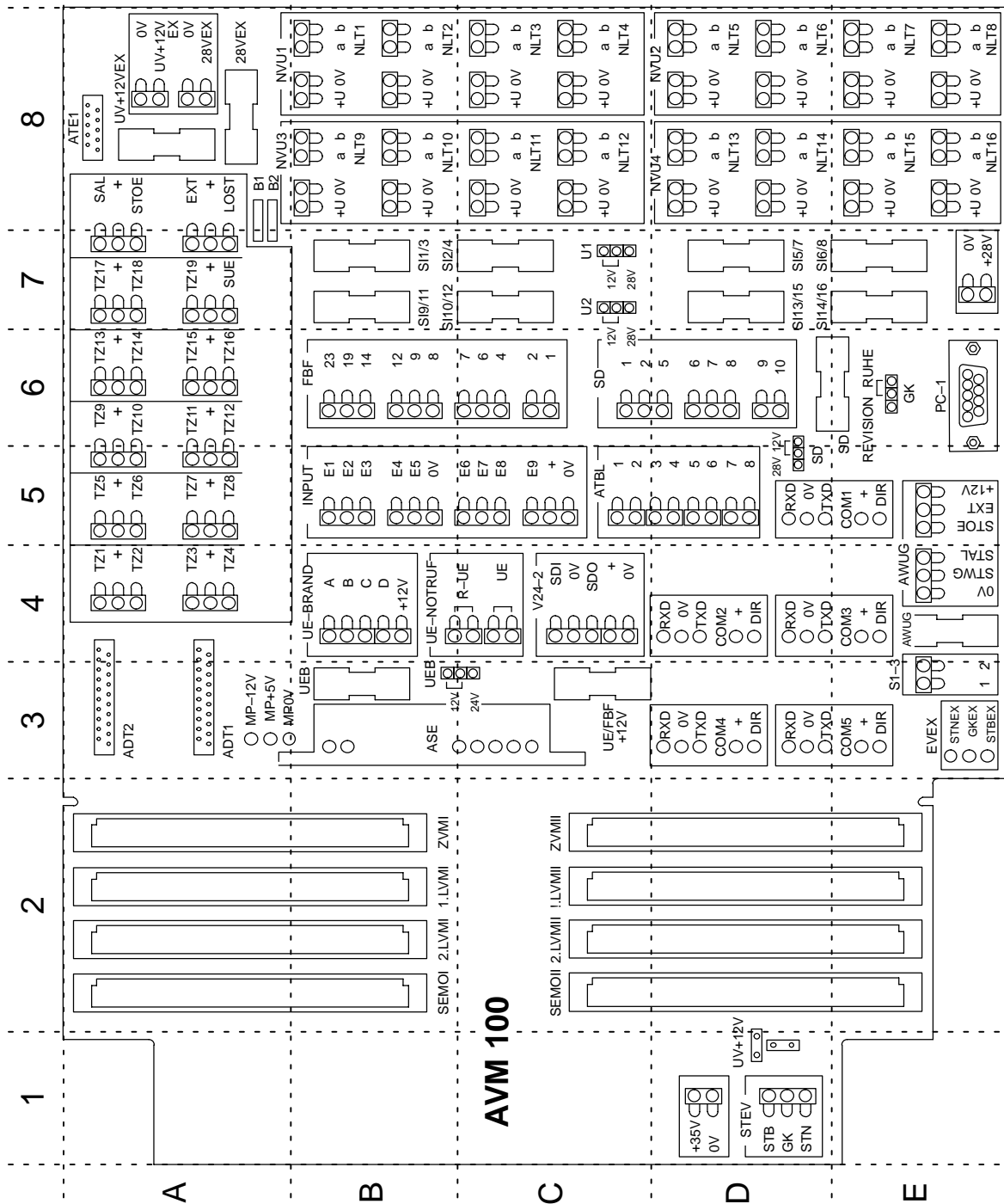
The MOD 300 modem must be connected to earth at the earthing point (located to the right).





## 2 Connections

### 2.1 General overview of the AVM 100 connection board

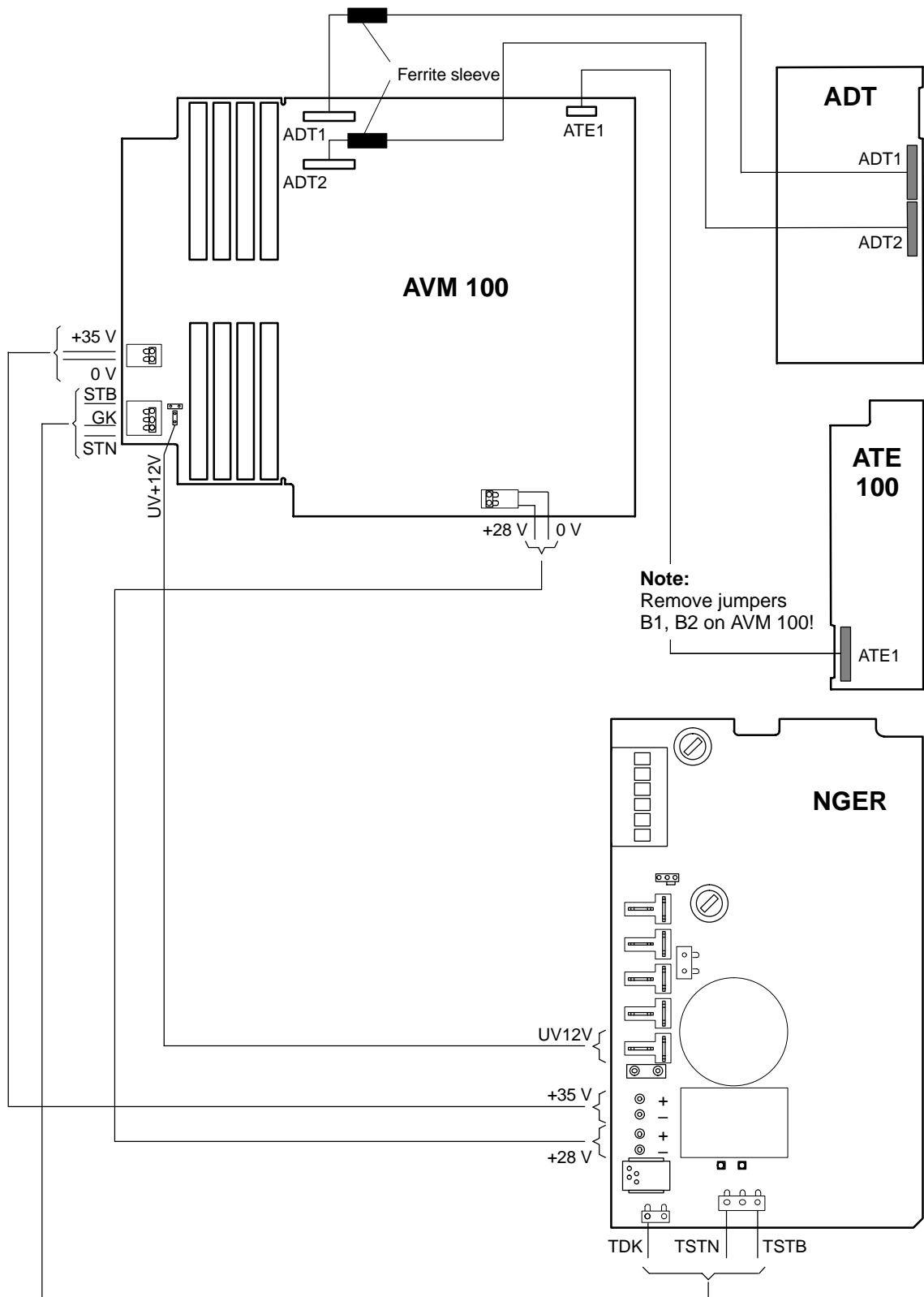


AVM 100 connections	AVM 100 grid	Input/output/jumper (I/O/J)	Function
<b>Printed circuit board slots</b>			
LVMI, LVMII	..... A-E2	.... I/O	... Slots for 2 LVM 100 pcbs
SEMOI, SEMOII	. A-E2	.... I/O	... Slot for SEMO1 pcb
ZVMI, ZVMII	..... A-E2	.... I/O	... Slot for ZVM 100 pcb
<b>LSN</b>			
NLT 1a – 16a	.... B-E8	.... I/O	... a-wire of the LSN elements
NLT 1b – 16b	.... B-E8	.... I/O	... b-wire of the LSN elements
NVU 1 – 4	..... B-E8	.... I/O	... Network processing converters 1 – 4 (max. 2 rings or 4 branches per NVU)
U1	..... C7	..... J	.... Jumper for setting the external supply voltage (12V or 28V) for NVU1/NVU2
U2	..... C7	..... J	.... Jumper for setting the external supply voltage (12V or 28V) for NVU3/NVU4
<b>Parallel ATE 100 LSN display</b>			
ATE1	..... A8	..... I/O	... For connecting the ATE 100 LSN display tableau
B1, B2	..... A8	..... J	.... Jumpers to be removed for ATE 100 LSN
<b>Display/parallel display</b>			
ADT1, ADT2	..... A3	..... I/O	... For connecting ADT
ATBL 1 – 8	..... C/D5	..... I/O	... ATBL interface (external display tableau)
<b>Alarm Transceiver AT 2000</b>			
AWUG	..... E4	..... I/O	... For connecting AT 2000
STAL	..... E4	..... I	.... Selector alarm transmission fault
STOE	..... E5	..... O	.... C-point, AT 2000 $\Sigma$ fault (linked with LOST)
STWG	..... E4	..... I	.... Selector fault (AT 2000)
<b>External sounders/strobes</b>			
ASE	..... B/C3	..... I/O	... Slot for the ASE module (2 primary lines, per primary line max. 2 BES acoustic max. 2 BES acoustic/optic)
<b>Transmission unit</b>			
UE-Notruf	..... B/C4	..... I/O	... UE emergency call control (relay)
R-UE	..... C4	..... -	.... Reference point for the end-of-line resistor for the emergency call transmission unit

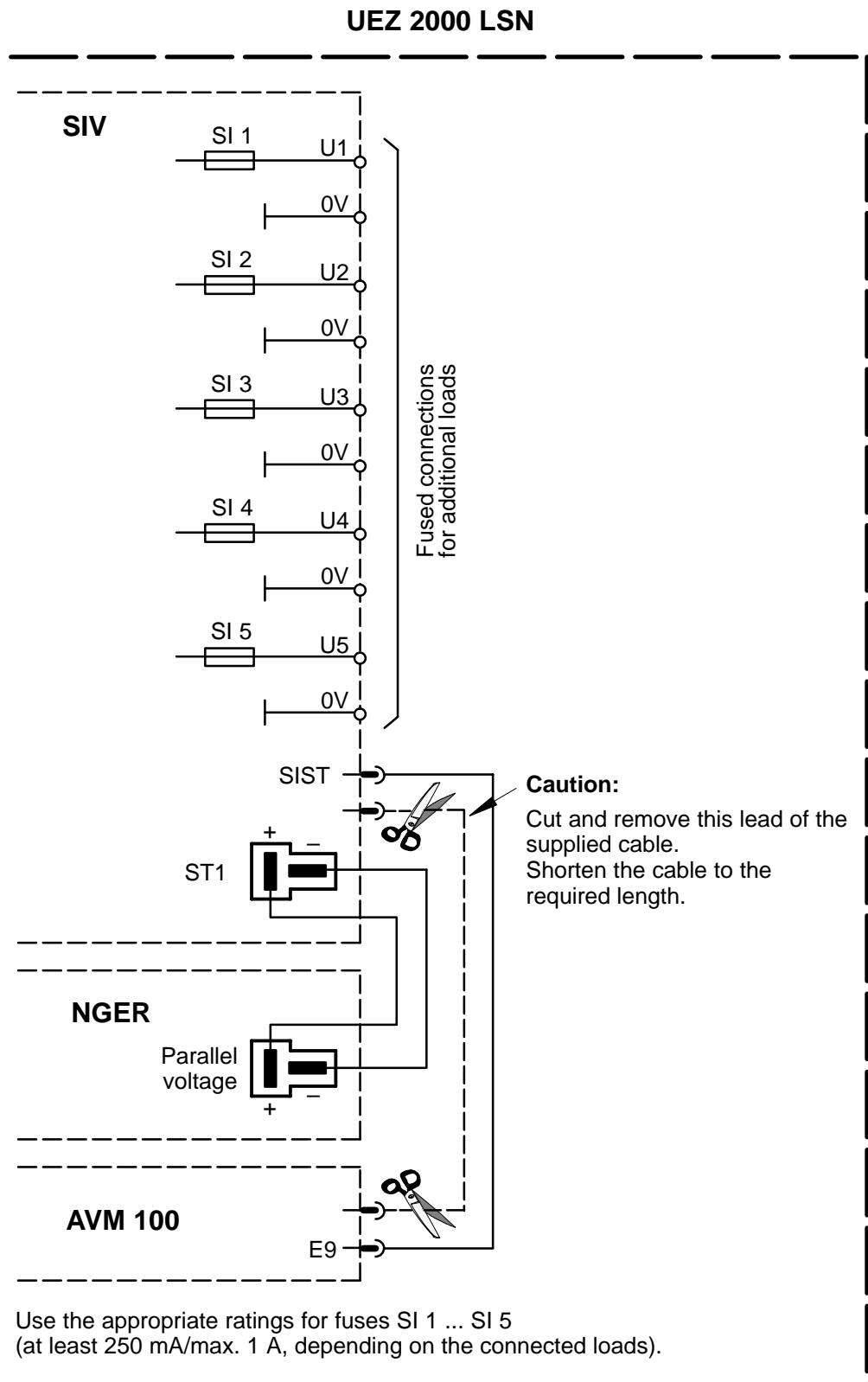
AVM 100 connections	AVM 100 grid	Input/output/jumper (I/O/J)	Function
<b>Interfaces</b>			
COM1 .....	D/E5 .....	I/O ...	RS 485 or 20 mA interface for an SM 485 or SM 20 module (cannot be used if PC-1 is used)
COM2 .....	D4 .....	I/O ...	RS 485 or 20 mA interface for an SM 485 or SM 20 module (cannot be used if V24-2 is used)
COM3 .....	D/E4 .....	I/O ...	20 mA interface for an SM 20 module (cannot be used if S1-3 is used)
COM4 .....	D3 .....	I/O ...	20 mA interface for an SM 20 module (optional via SEMO1)
COM5 .....	D/E3 .....	I/O ...	20 mA interface for an SM 20 module (optional via SEMO1)
PC-1 .....	E6 .....	I .....	For connecting a PC for parameterisation (V.24) (if COM1 is used, it must be enabled before connecting a PC for parameterisation)
S1-3	E3	I/O	Serial S1 interface (cannot be used if COM3 is used)
SDI .....	C4 .....	I .....	V.24 interface IN
SDO .....	C4 .....	O .....	V.24 interface OUT
V24-2 .....	C4 .....	I/O ...	V.24 interface (cannot be used if COM2 is used)
<b>Inputs</b>			
Input E1 – E3 .....	B/C5 .....	I .....	Freely usable inputs for key-op. switch
Input E4 – E5 .....	B/C5 .....	I .....	For a second (built-in) key-operated switch
Input E9 .....	B/C5 .....	I .....	Fuse monitoring for SIV
<b>Outputs</b>			
EXT .....	A8 .....	O .....	C-point, external $\Sigma$ alarm
EXT .....	E5 .....	O .....	C-point, external AT 2000 $\Sigma$ alarm
LOST .....	A8 .....	O .....	C-point, logic fault
SAL .....	A8 .....	O .....	C-point, $\Sigma$ alarm (linked with bypass)
STOE .....	A8 .....	O .....	C-point, $\Sigma$ fault (linked with LOST)
SUE .....	A7 .....	O .....	C-point, central unit buzzer On
TZ1 – TZ19 .....	A4-8 .....	O .....	Programmable C-points for the central unit (RTP and TRN can be plugged in)
<b>Device contact of the central unit</b>			
GK .....	D1 .....	I .....	Device contact of the central unit (connected via the power supply)
GK – INSPECTION ..	E6 .....	I .....	Bypass of device contact during inspection
GK – RUHE .....	E6 .....	I .....	Device contact during system operation

AVM 100 connections	AVM 100 grid	Input/output/jumper (I/O/J)	Function
<b>Power supply</b>			
STB .....	D1 .....	I .....	Battery fault
STN .....	D1 .....	I .....	Mains fault
UV+12V .....	D1 .....	I .....	12V voltage supply, power supply unit
+28 V .....	E7 .....	I .....	28V voltage supply power supply unit
+35 V .....	D1 .....	I .....	35V voltage supply power supply unit
<b>External power supply</b>			
EVEX .....	E3 .....	– .....	For connecting ext. power supply sources
GKEX .....	E3 .....	I .....	Device contact, ext. power supply
STBEX .....	E3 .....	I .....	Battery fault (ext. power supply)
STNEX .....	E3 .....	I .....	Mains fault (ext. power supply)
UV+12VEX .....	A8 .....	I .....	For connecting an external 12V voltage supply
28VEX .....	A8 .....	I .....	For connecting an external 28V voltage supply
<b>Fuses</b> (all fuses = M500)			
AWUG .....	E4 .....	F .....	Fuse for the +12V AT 2000 voltage supply
SI1/3 – SI14/16 ..	B–E7 .....	F .....	Fuse for the external +12V/28V voltage supply for the LSN interface (e.g. SI1/3 for NLT1/3)
UV+12VEX .....	A8 .....	F .....	Fuse for the external 12V voltage supply
28VEX .....	A8 .....	F .....	Fuse for the external 28V voltage supply

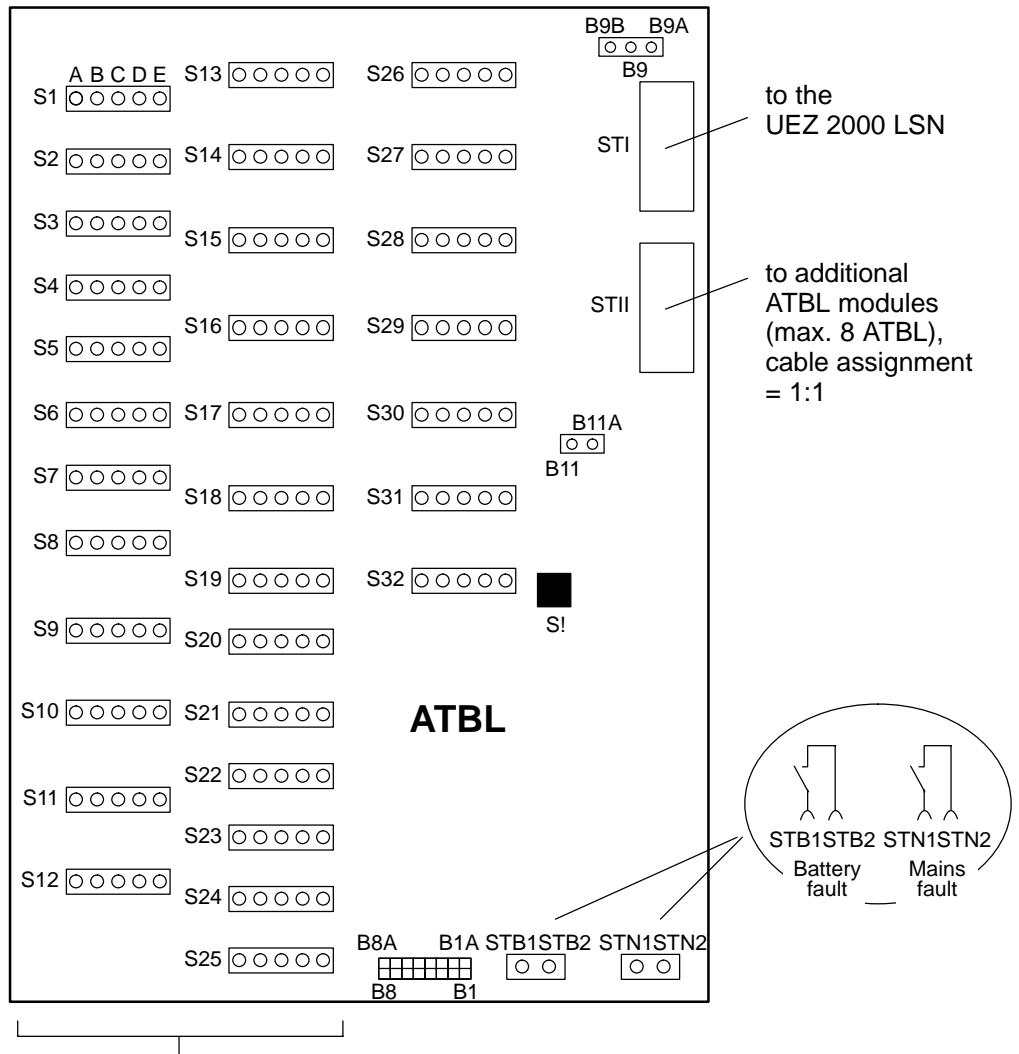
## 2.2 Connecting internal modules



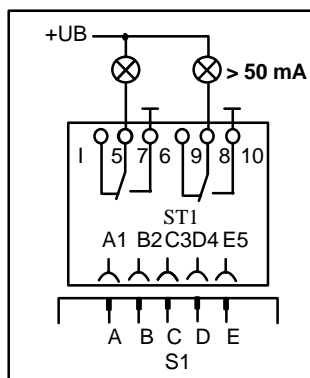
## 2.3 Connecting fuse distributor SIV



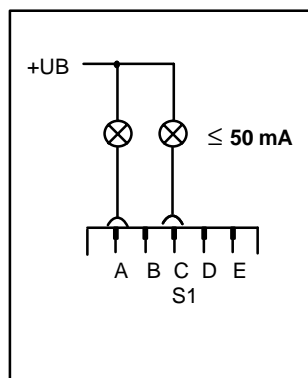
## 2.4 Connecting the ATBL



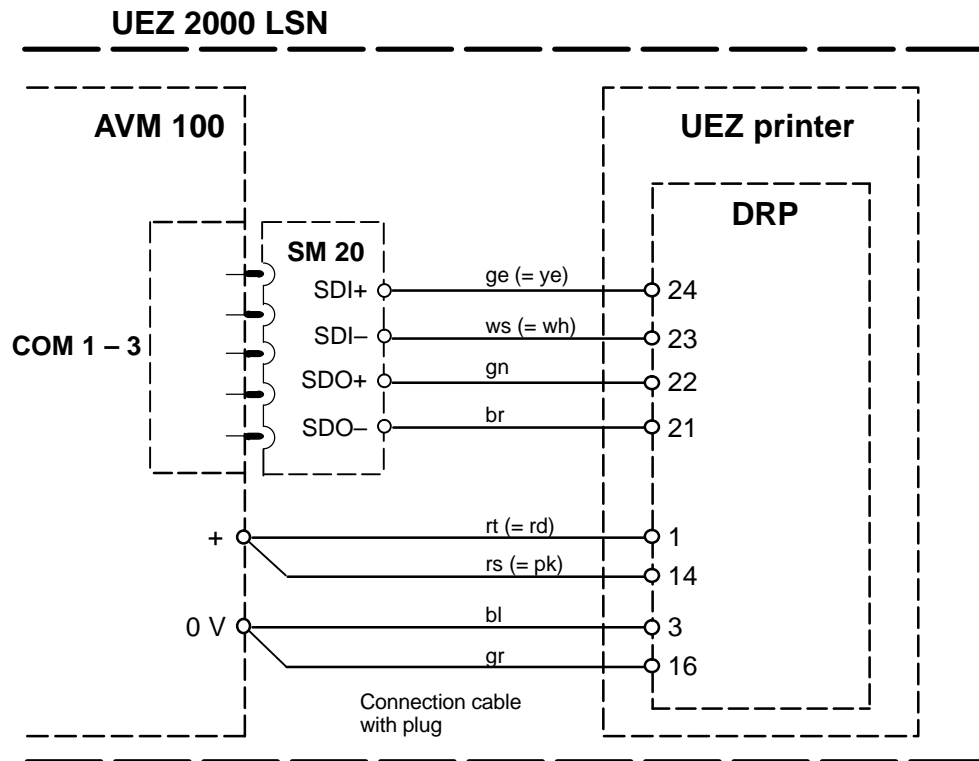
with RTBL



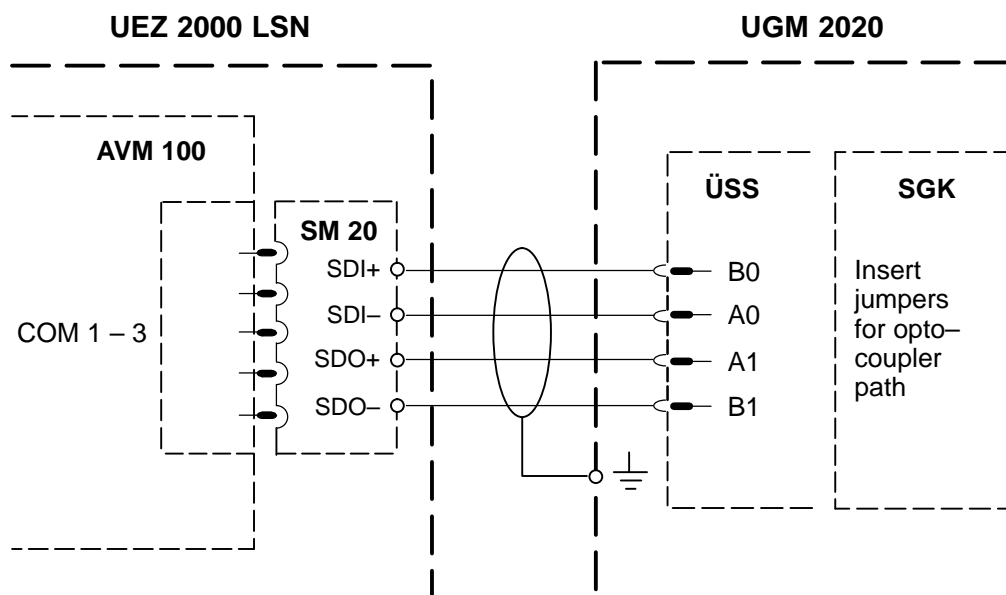
with open collector



## 2.5 Connecting the UEZ log printer



## 2.6 Connecting a Superordinate Central Unit

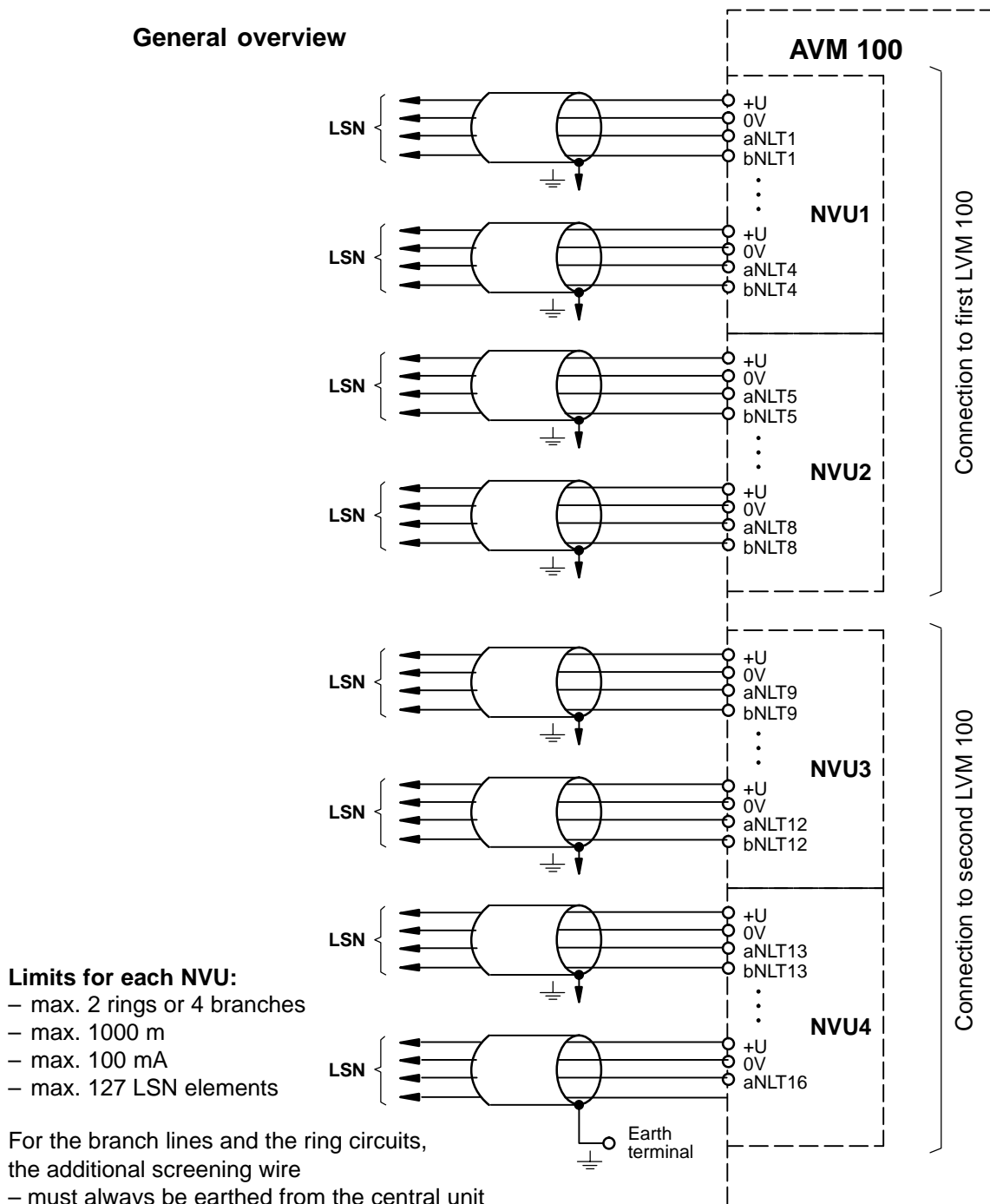


Connect the additional screening wire to UGM 2020 only.  
Installation cable J–Y (St) Y 2x2x0.6



## 2.7 Connecting the LSN elements

### General overview



#### Limits for each NVU:

- max. 2 rings or 4 branches
- max. 1000 m
- max. 100 mA
- max. 127 LSN elements

For the branch lines and the ring circuits,  
the additional screening wire

- must always be earthed from the central unit
- must be routed across the shortest possible distance to the earth terminal
- must be looped through the LSN elements

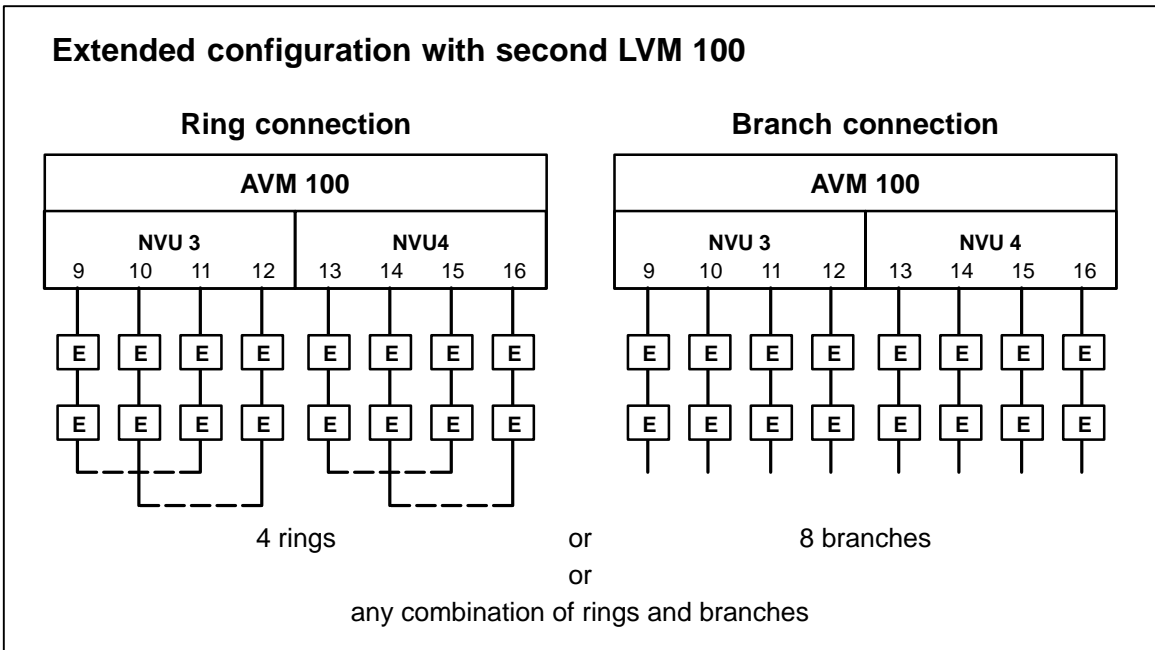
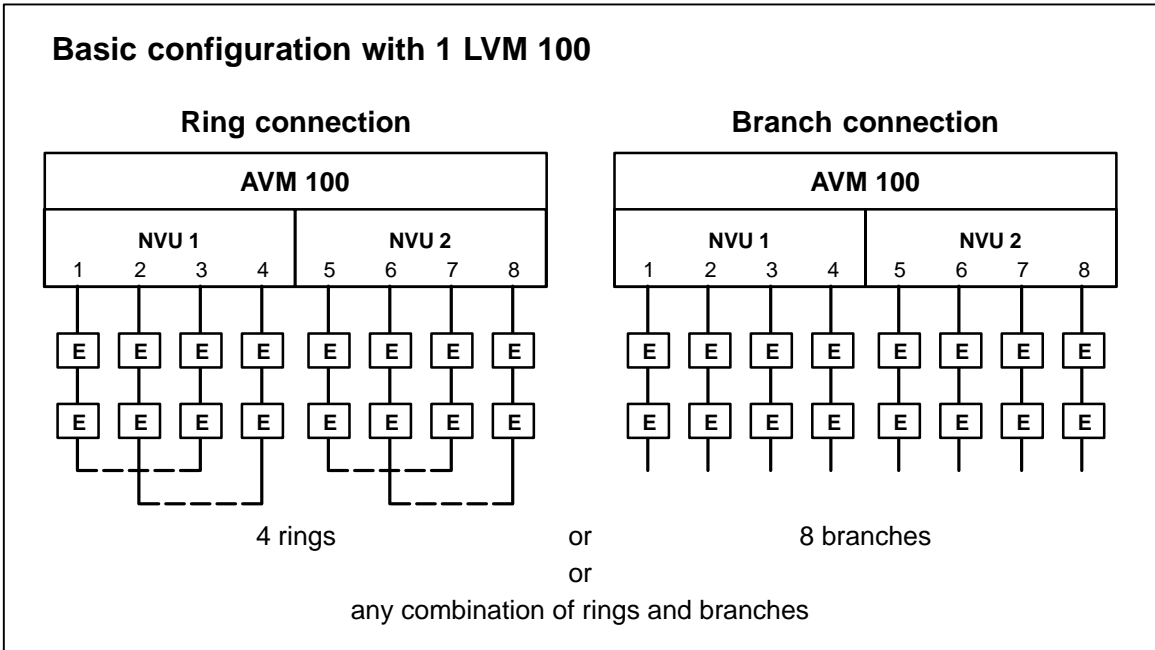
Additional screening connections at other locations are not permitted.

With ring circuits, the add. screening wire must be connected at both ring ends.

#### Note:

If one ring circuit contains several security areas, each area must be separately supplied with tension and secured. For this, the +U/0V connectors of not occupied NVUs can be used. If there are no free connectors available, a fuse distributor SIV will have to be build in.

**Generating ring circuits and branch lines**



**Increased range with ring circuits**

**Increased range with repeater coupler RK 100 LSN**

**Ring connection**

AVM 100

NVU 1      NVU 2

1 2 3 4      5 6 7 8

RK      RK

E      E

E      E

RK connections: 1 → 5 (not with ATE)  
2 → 6  
3 → 7  
4 → 8  
or  
combination incl. rings and branches

**Ring connection**

AVM 100

NVU 3      NVU 4

9 10 11 12      13 14 15 16

RK      RK

E      E

E      E

RK connections: 9 → 13  
10 → 14  
11 → 15  
12 → 16  
or  
combination incl. rings and branches

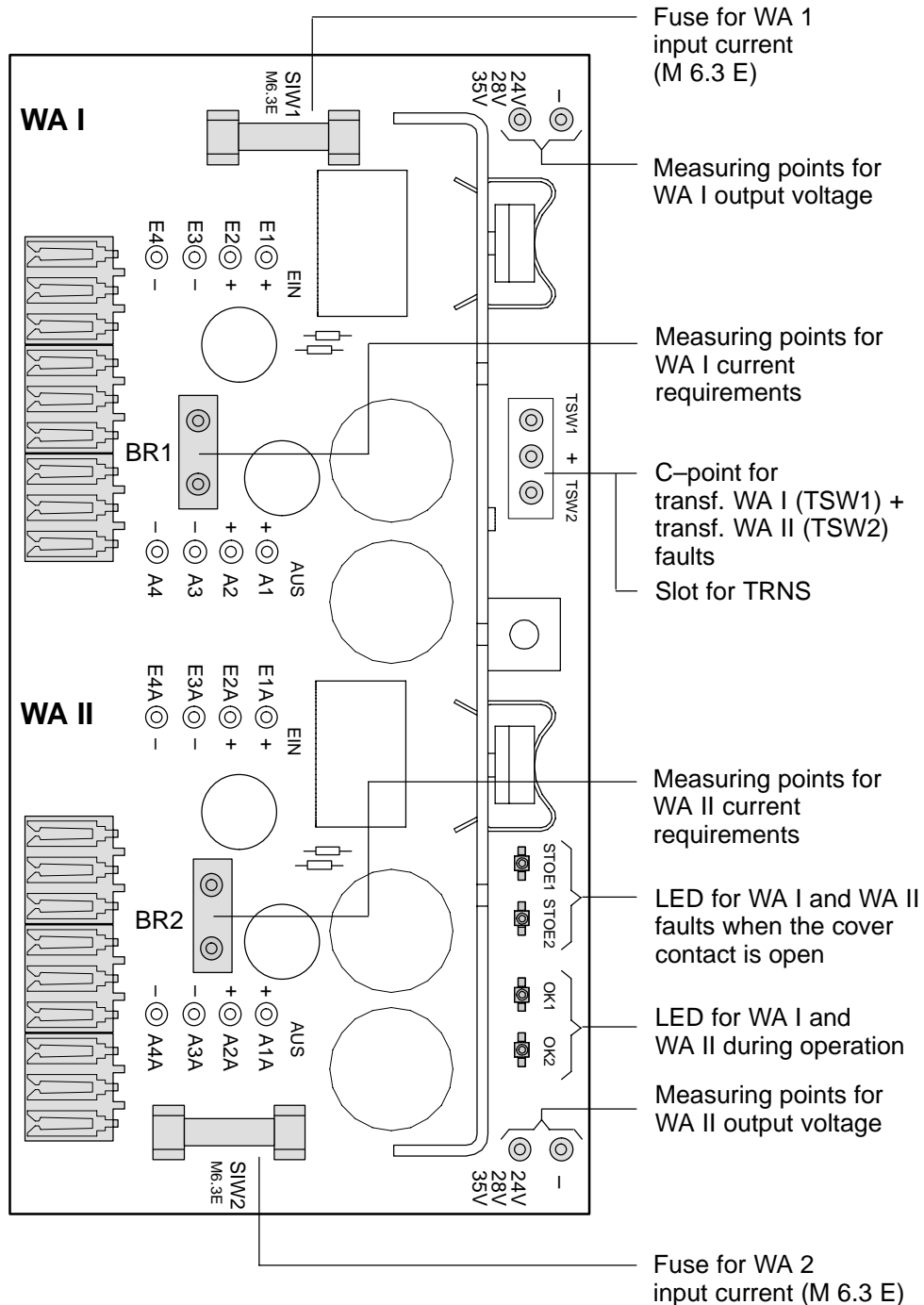
**Attention:**  
Each ring must include 2 RK 100 LSN units. The repeater coupler must always be the first **and** the last element in the ring.  
Remember that, with rings that extend beyond an NVU, all elements of the ring must be taken over by the respective other NVU if an NVU fails.  
Therefore, the following applies for **each NVU**:

Length of all rings from the NVU connection to the last RK + Length of all rings without RK + Length of all branches of an NVU	<b>and</b>	Number of LSN elements of all rings with RK + Number of LSN elements of all rings without RK + Number of LSN elements of all branches
Sum ≤ 1000 m		Sum ≤ 127 LSN elements

**Using RK 100 LSN and ATE 100 LSN**  
If the ATE 100 LSN is to be used, the two jumpers that cause the ATE to be automatically set as the first element in the NLT1 → NLT5 ring must be removed from the connection board. However, as the RK 100 LSN must always be the first **and** the last element in the ring, the repeater coupler must **not** be looped into the ring with the ATE. In this case, the other connections (NLT 2 → 6, NLT 3 → 7, etc.) must be used.



## 2.8.2 Assignments on transformer board NGEW

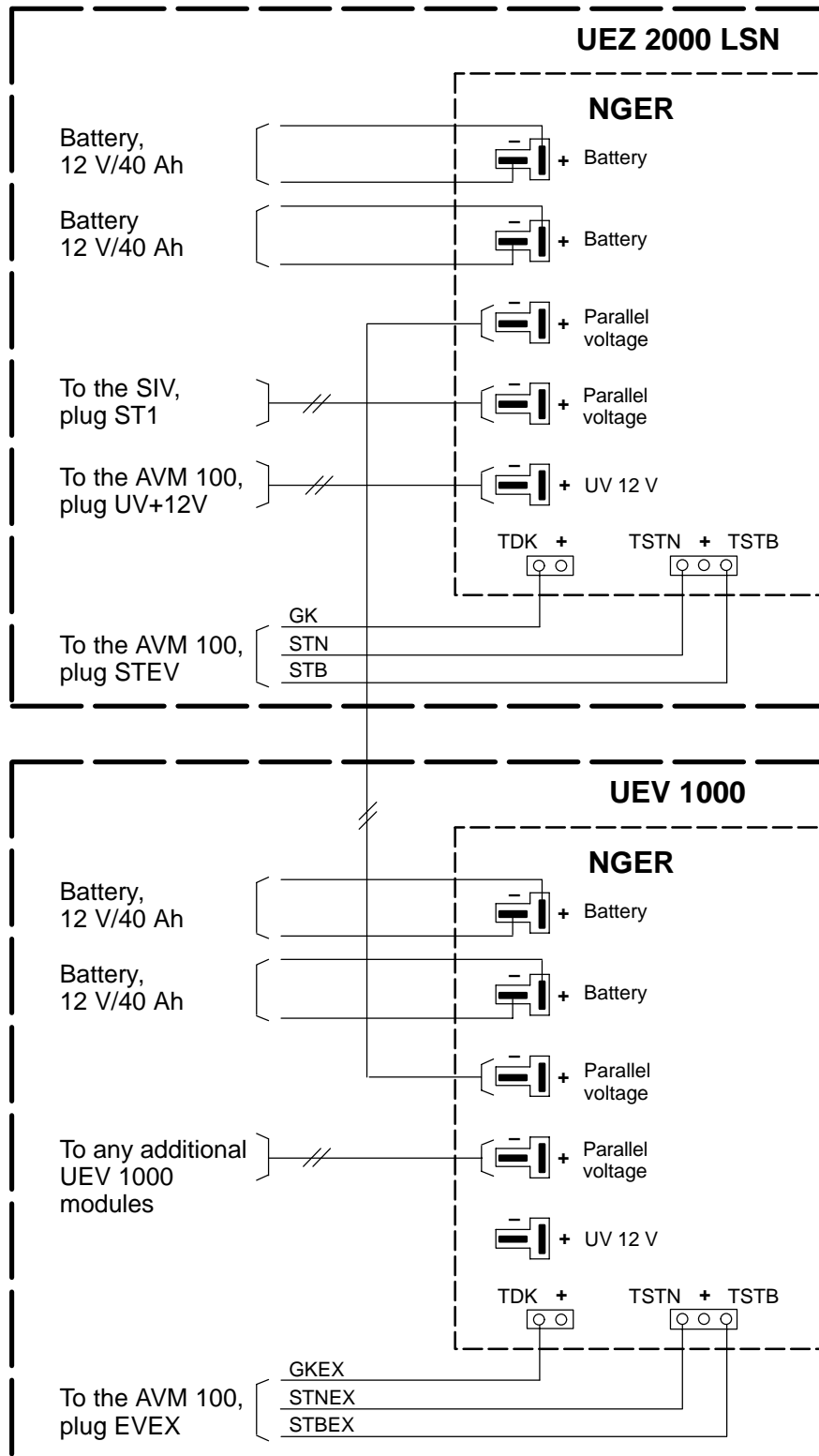


**Note:**

By default, transformer WA I is supplied with +35V and transformer WA II with +28V.

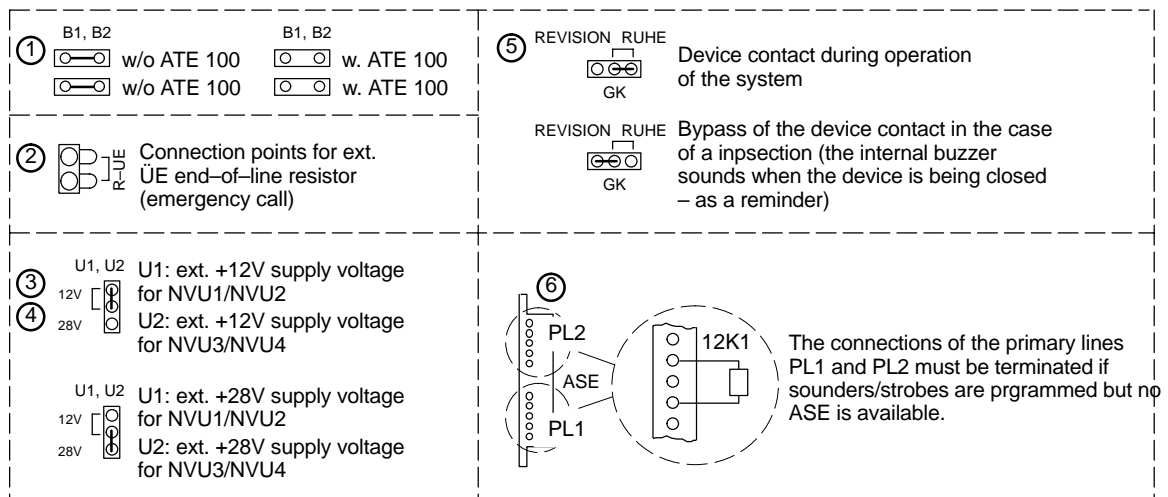
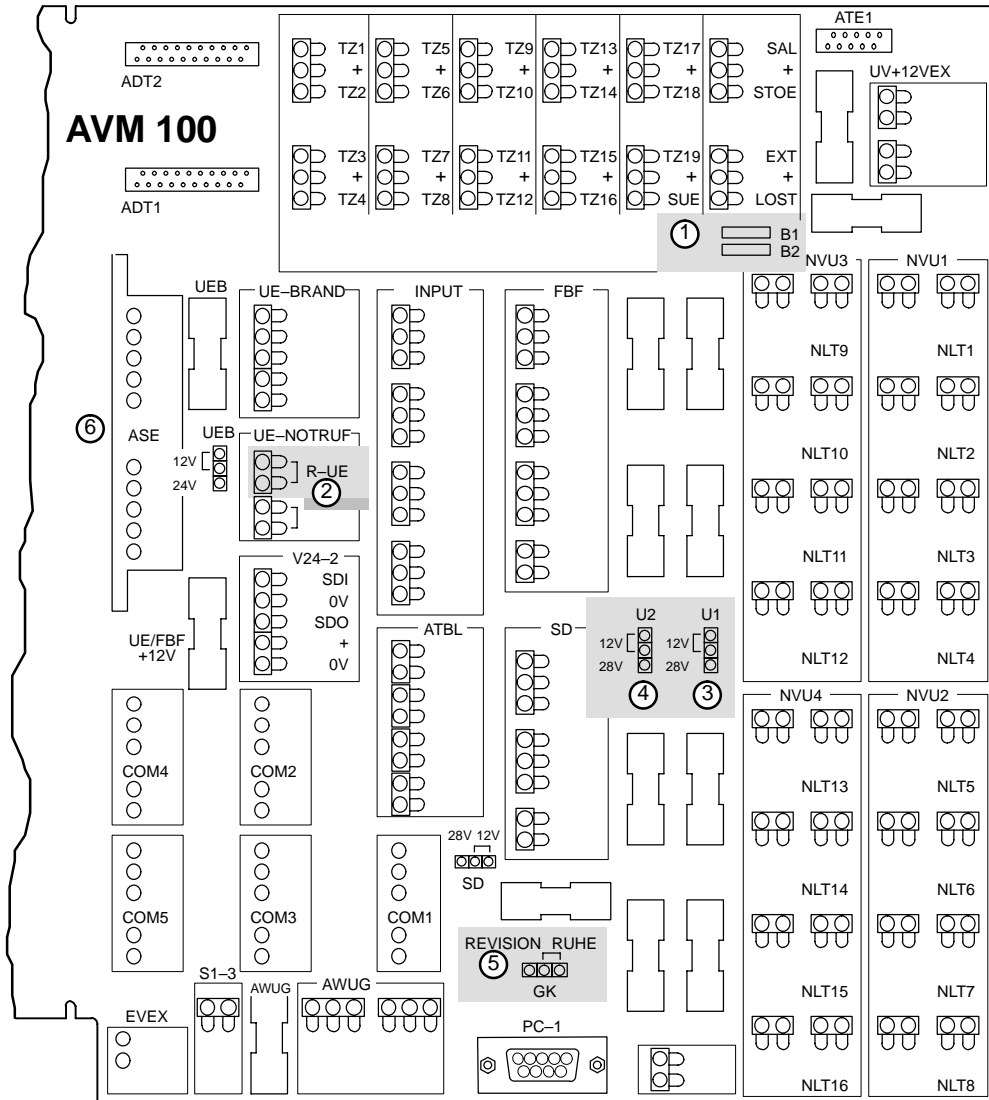
To save energy, transformer WA II should be put out of operation if the 28V voltage is not required. For this purpose, jumper BR2 must be removed.

**2.8.3 Connecting UEZ 2000 LSN and UEV 1000 in parallel / connecting the 12 V/40 Ah batteries**

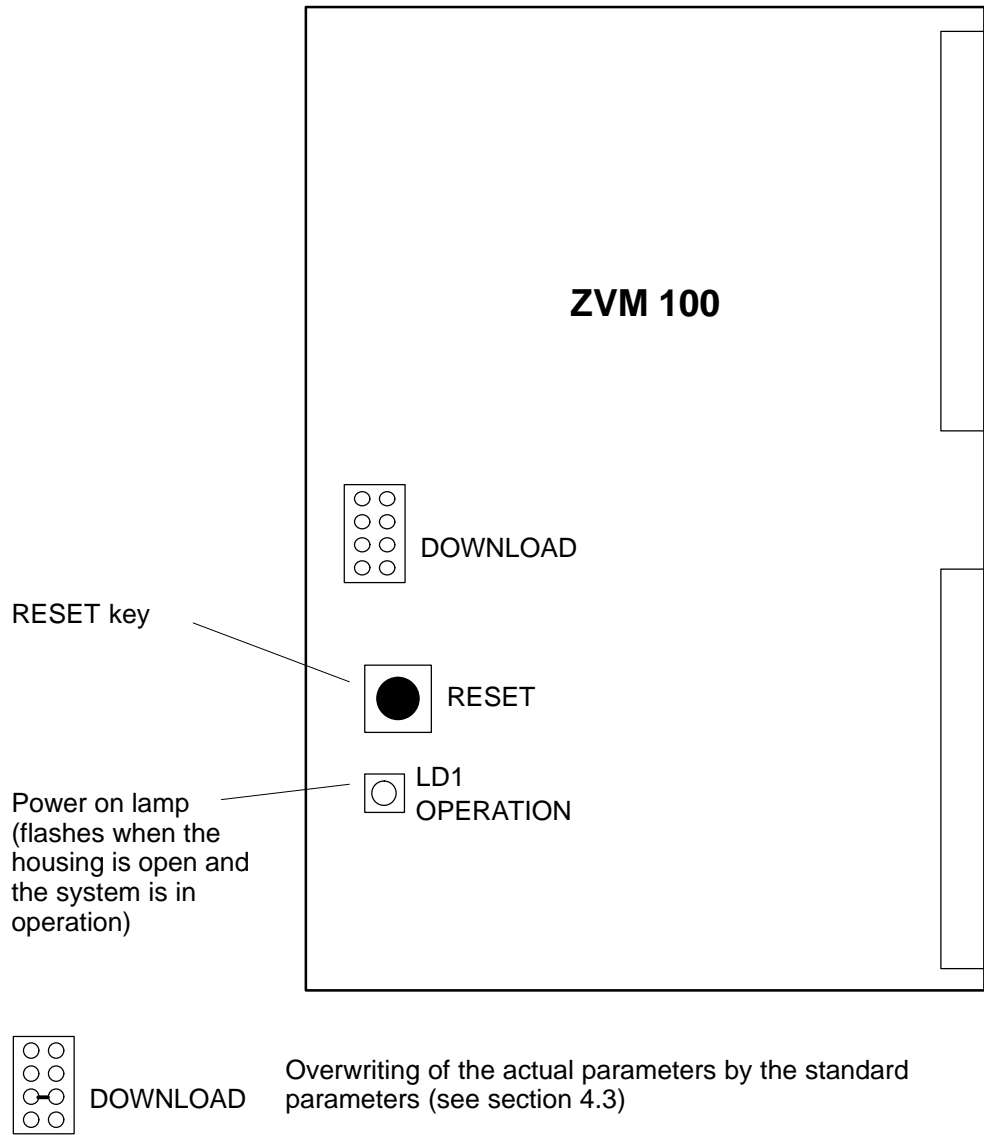


### 3 Encoding

#### 3.1 Interface connections module AVM 100

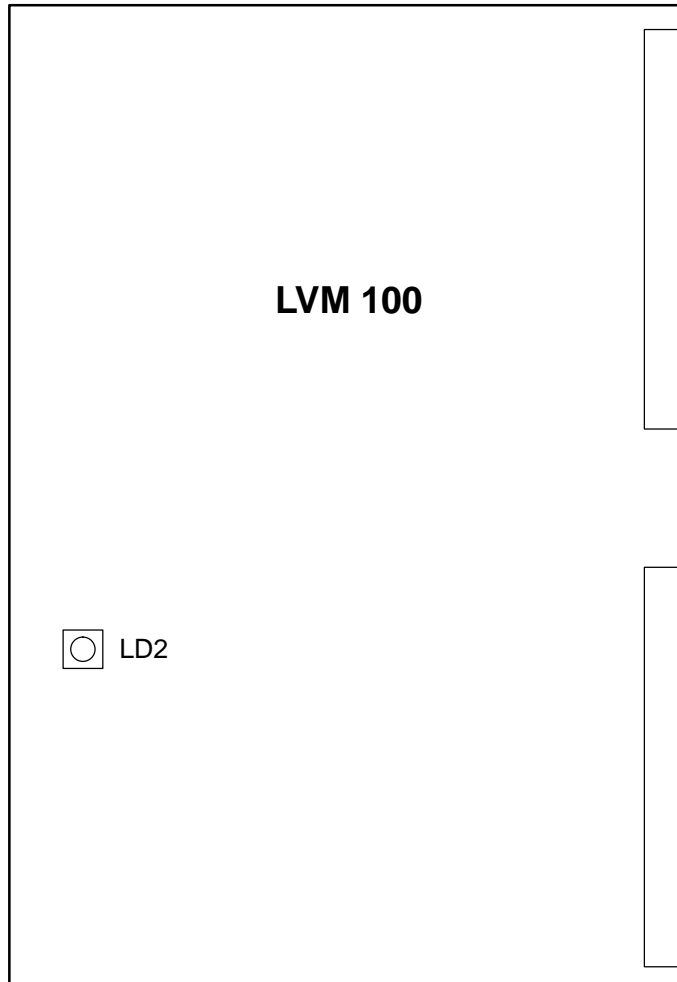


### 3.2 Central unit processing module ZVM 100





### 3.3 Line processing module LVM 100



#### Fault display LD2

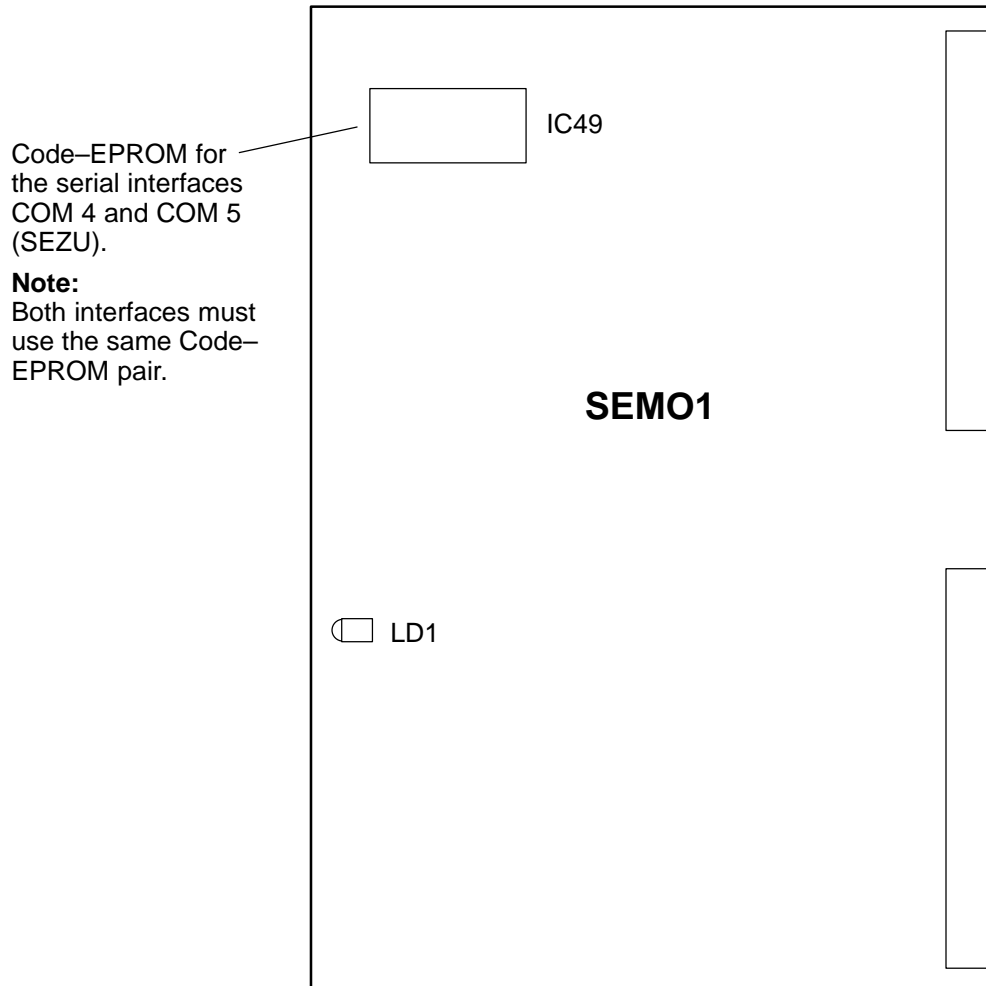
- is permanently lit if the mains power is malfunctioning (watch-dog)
- is permanently lit dimly if the +35V voltage is not available
- flashes once long during data transmission to and from the LVM
- flashes once at short intervals in the stand-by state in the case of LVM 100/LVM100 coupling
- flashes twice at short intervals in case of safety shut-down
- flashes thrice at short intervals and once long in case of module malfunction (observe notes in the module status !)

#### Note:

Always interrupt the +12V supply voltage from the power supply unit to the AVM 100 when plugging in or removing the LVM 100. To do so, pull out the white +12V plug at the power supply unit.

The +35V supply voltage from the power supply unit to the AVM 100 need **not** be interrupted (this applies for LVM 100 modules of edition A.1 or later).

### 3.4 Serial module SEMO1



Code-EPROM for the serial interfaces COM 4 and COM 5 (SEZU).

**Note:**  
Both interfaces must use the same Code-EPROM pair.

Malfunction display LD1

- |                                                                   |                                                                                                    |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| – is lit or dark:                                                 | Hardware malfunction or no connection to the ZVM 100 (exception: shortly lit during commissioning) |
| – slow, even flashing:<br>(once bright and once dark)             | both interfaces are OK                                                                             |
| – fast, even flashing:<br>(once bright, once dark)                | malfunction of both interfaces                                                                     |
| – short flashing:<br>(once short bright and once long dark)       | malfunction of COM 4                                                                               |
| – unsymmetric flashing:<br>(once long bright and once short dark) | malfunction of COM 5                                                                               |

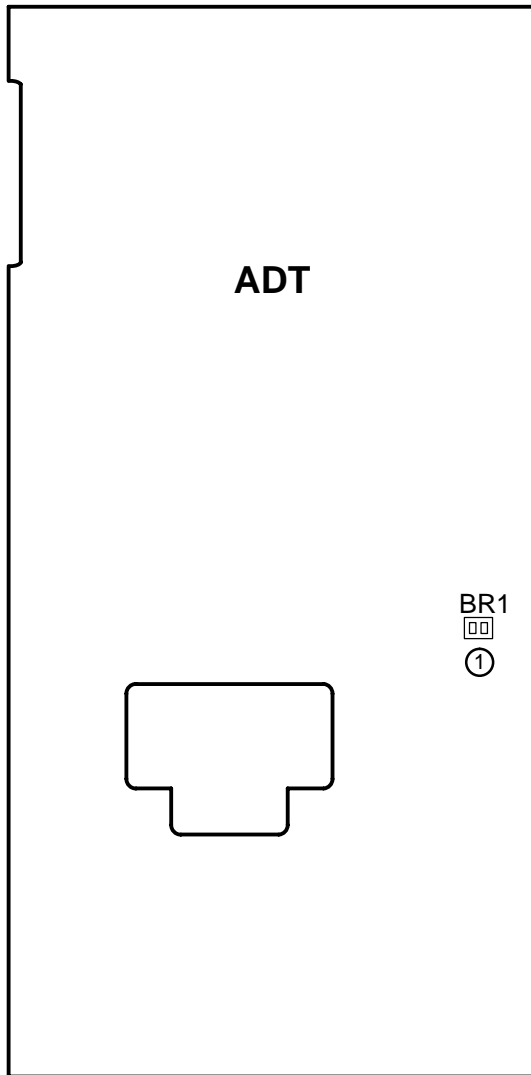
**Note:**

When inserting or removing the LVM 100, the +12V power supply from the mains power to the AVM 100 has to be interrupted. To do this, the white +12 V plug on the mains power unit is to be removed.

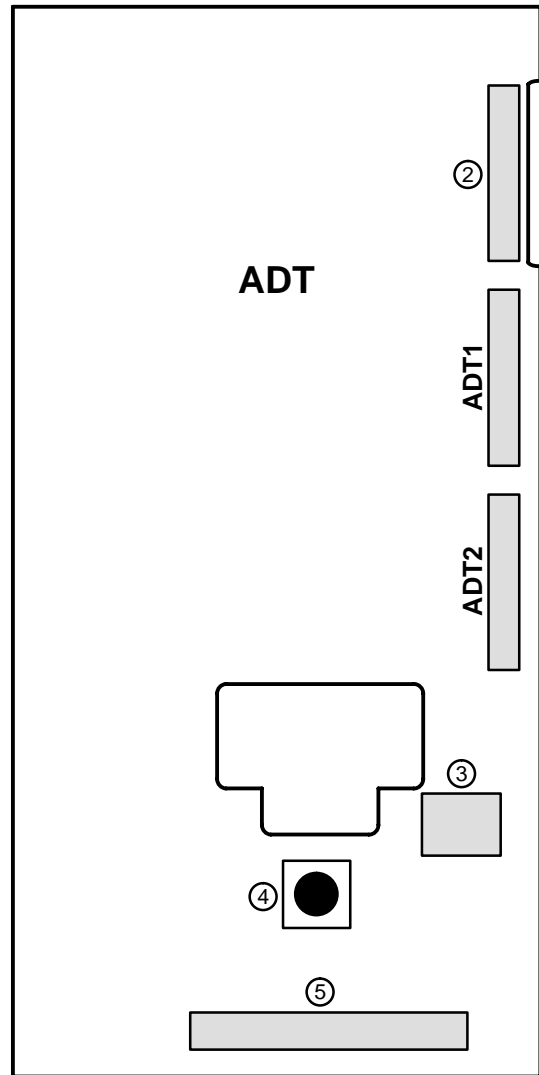
The +35 V power supply from the mains unit to the AVM 100 does **not** need to be interrupted.

### 3.5 Display keyboard ADT

Solder side:



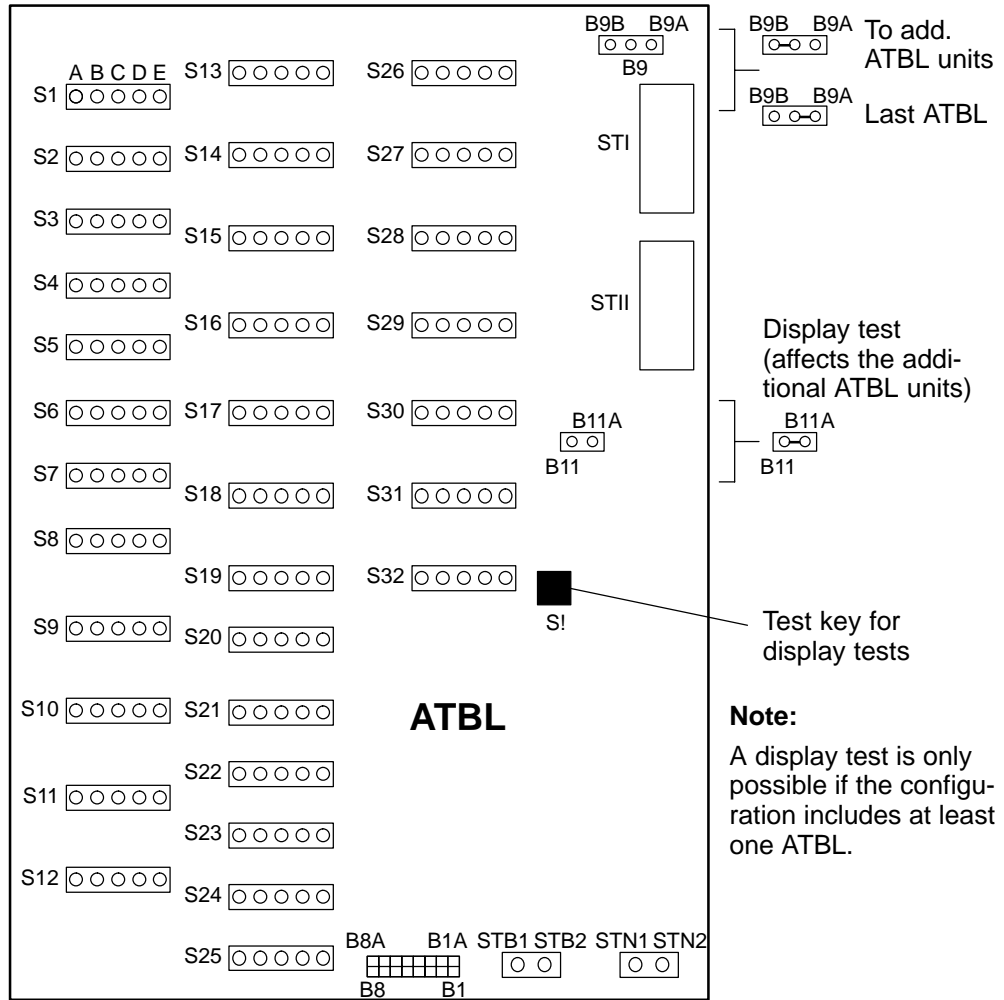
Component side:



- ① With jumper BR1 **not** soldered in:  
If the logic unit fails, the “Fault” and “System” lamps light up, and all of the other lamps go out.  
With jumper BR1 soldered in:  
If the logic unit fails, the “On Service” lamp goes out, and the “Fault” and “System” lamps light up. All of the other lamps remain in their original state.

- ② Port for LC display  
③ Port for key-operated switch  
④ Sealed switch for resetting (General Reset)  
⑤ Port for membrane keyboard

### 3.6 Tableau control module ATBL

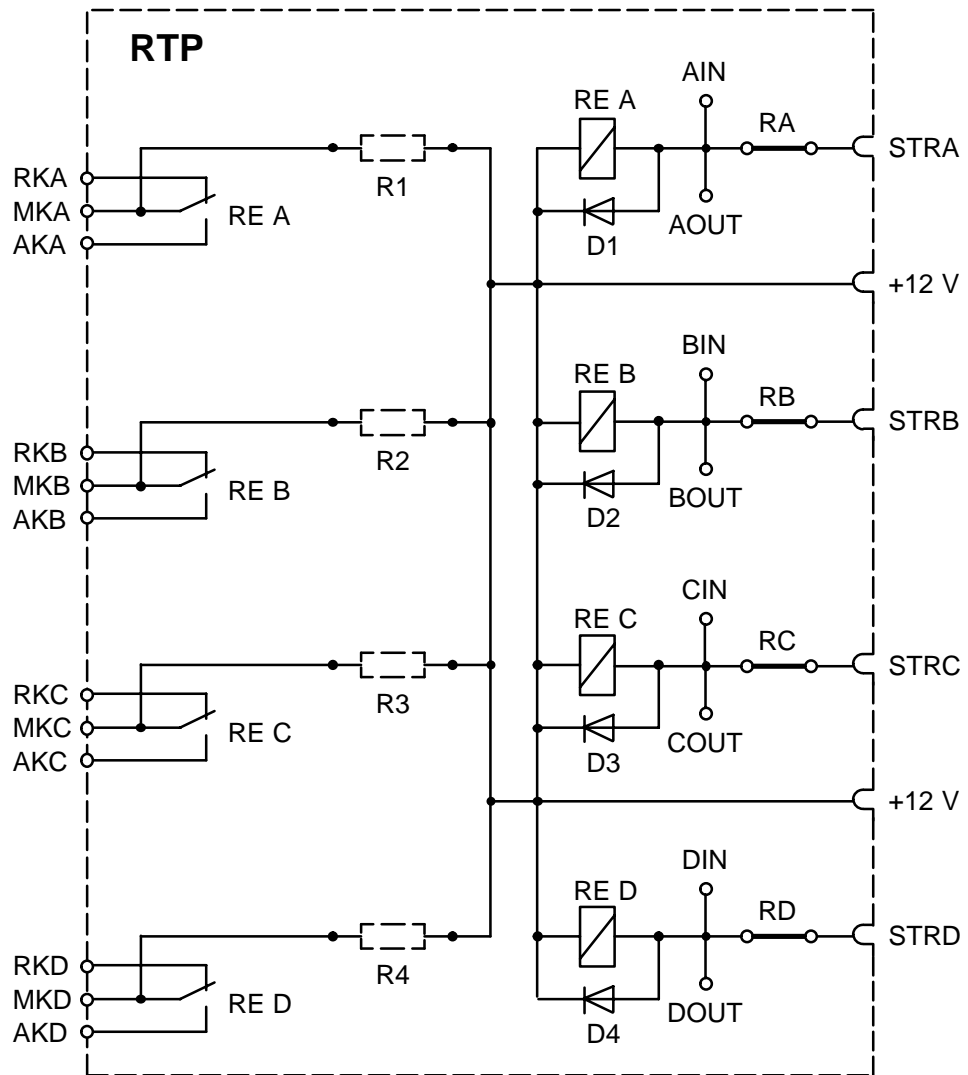


Address settings of the ATBL (max. 8 ATBL per central unit)

Address	8	7	6	5	4	3	2	1
00	-	-	-	-	-	-	-	-
01	-	-	-	-	-	-	-	x
02	-	-	-	-	-	-	x	-
03	-	-	-	-	-	-	x	x
04	-	-	-	-	-	x	-	-
05	-	-	-	-	-	x	-	x
06	-	-	-	-	-	x	x	-
07	-	-	-	-	-	x	x	x

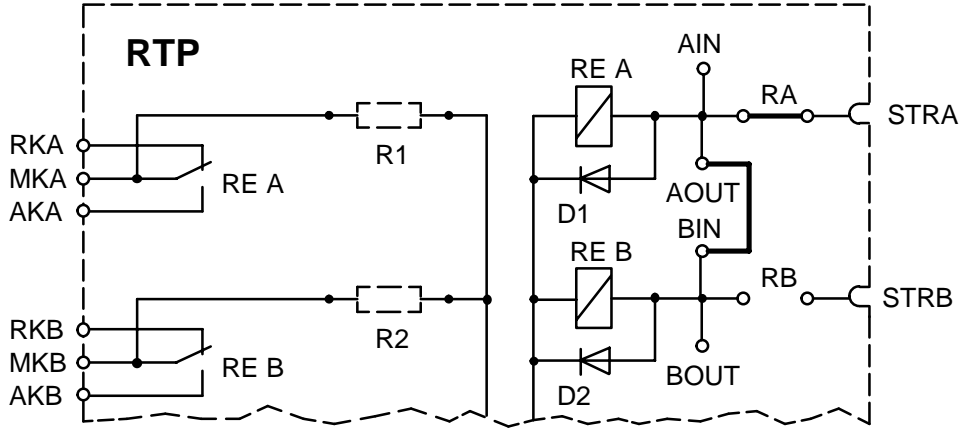
- = open  
x = closed

### 3.7 Relay tableau board RTP



- [ ] Resistors are not fitted
- RK.. NC contact (relay not activated)
- MK.. Centre contact
- AK.. NO contact (relay activated)

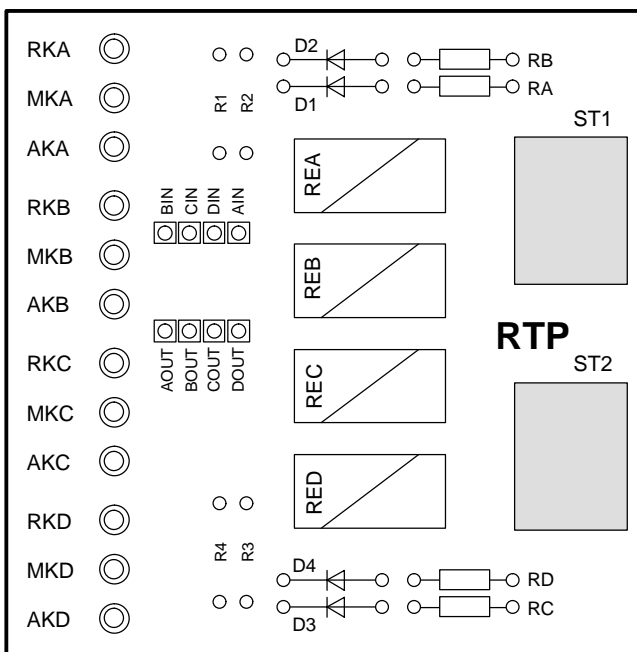
**Example of controlling 2 relays via one tableau point**



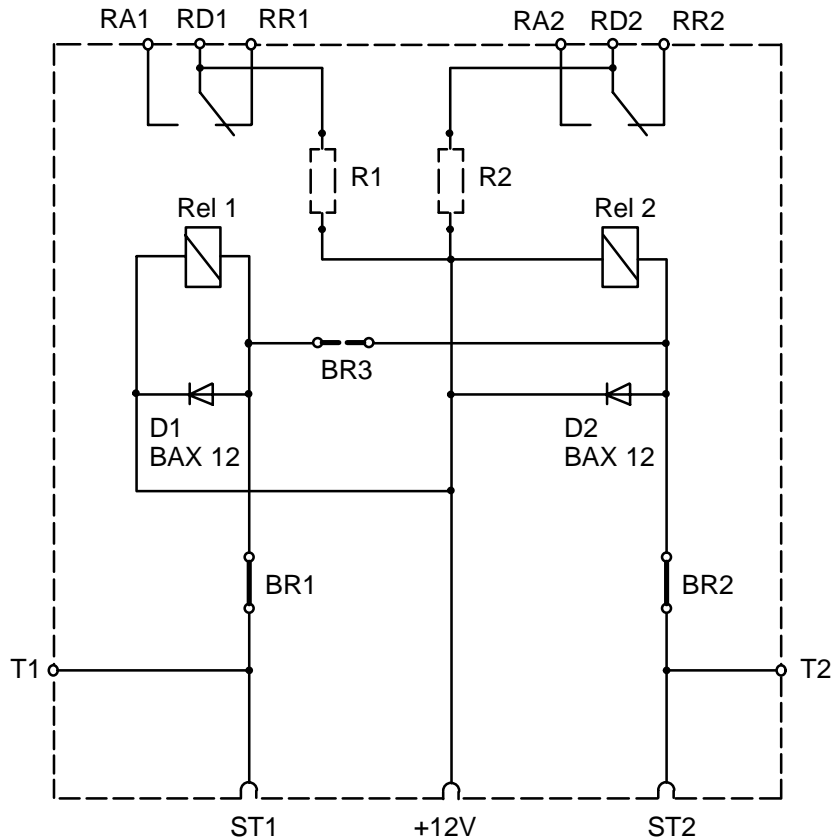
**Jumper assignment:**

Relay control	Remove jumper RB	Solder in jumper AOUT – BIN
Relays A and B via STRA	X	X

**RTP component side:**



### 3.8 Tableau relay module TRN

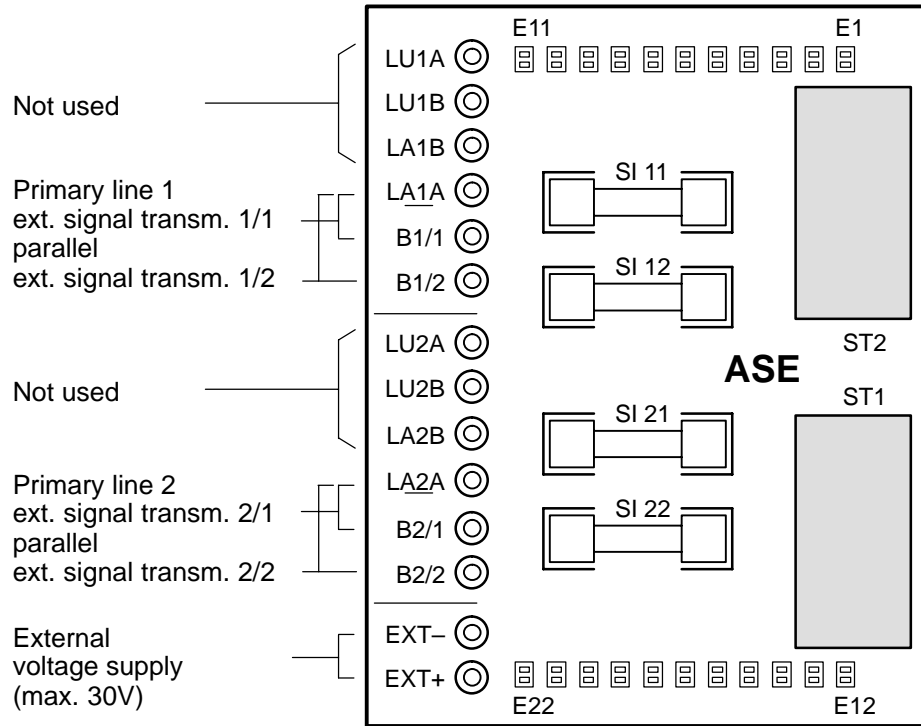


[ ] R1, R2 and jumper BR3 are not fitted.

#### Jumper assignment:

Relay control	Insert jumper BR1	Insert jumper BR2	Insert jumper BR3
Rel 1 via ST1/T1	X	–	–
Rel 1 + Rel 2 via ST1/T1	X	–	X
Rel 2 via ST2/T2	–	X	–
Rel 2 + Rel 1 via ST2/T2	–	X	X

### 3.9 Control driver extension ASE



Each primary line (PL) allows 2 BES (either 2 opt. units or 2 ac. units) to be connected in parallel.

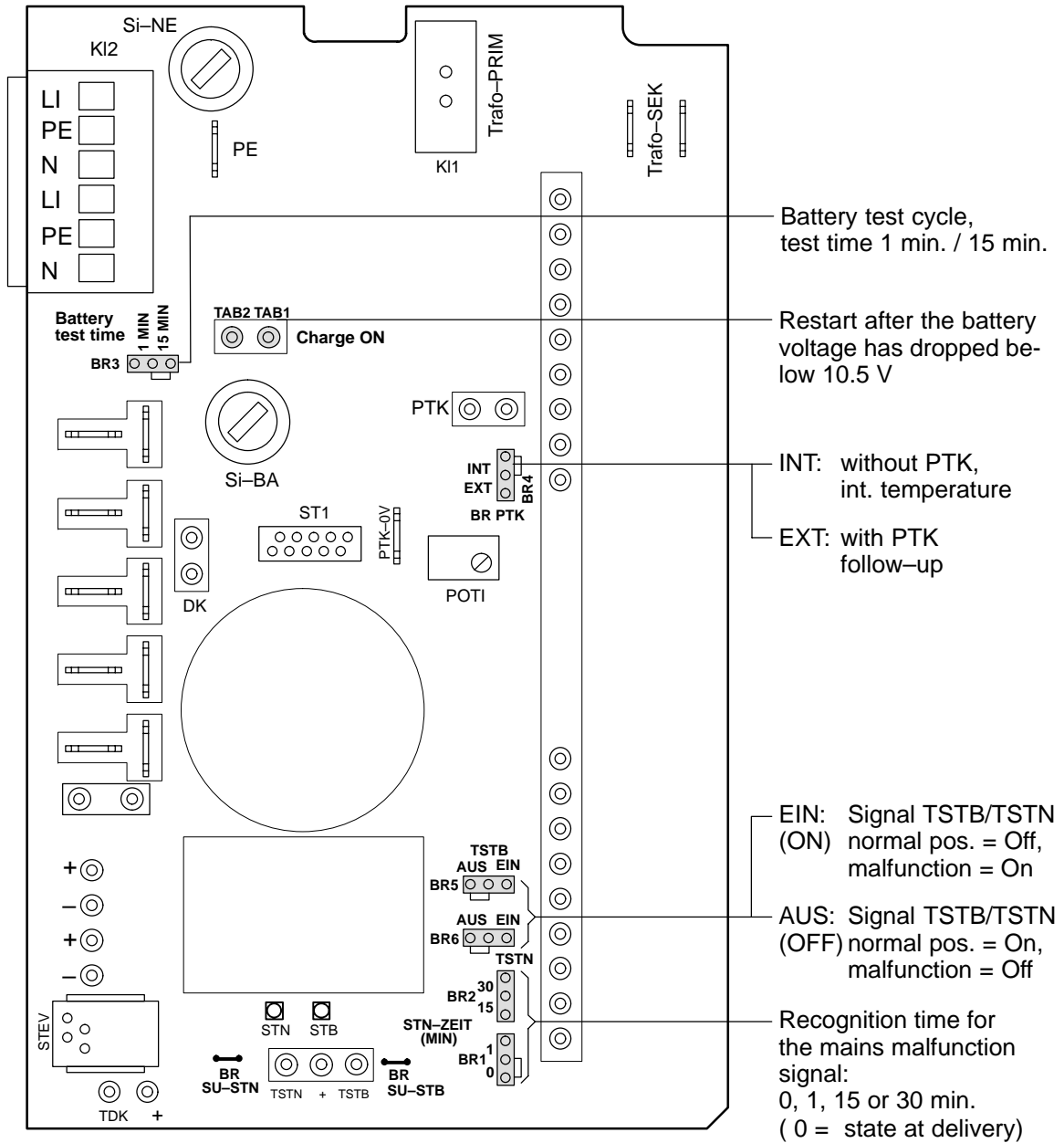
The individual BES are provided with separate fuses on the ASE.

#### Jumper assignment:

External sounders/strobes	Jumpers for BES1/1 and 1/2	Jumpers for BES2/1 and 2/2
BES connection	E1	E12
Internal polarity reversal (12V)	E4 and E11	E15 and E22



### 3.10 Controller module NGER

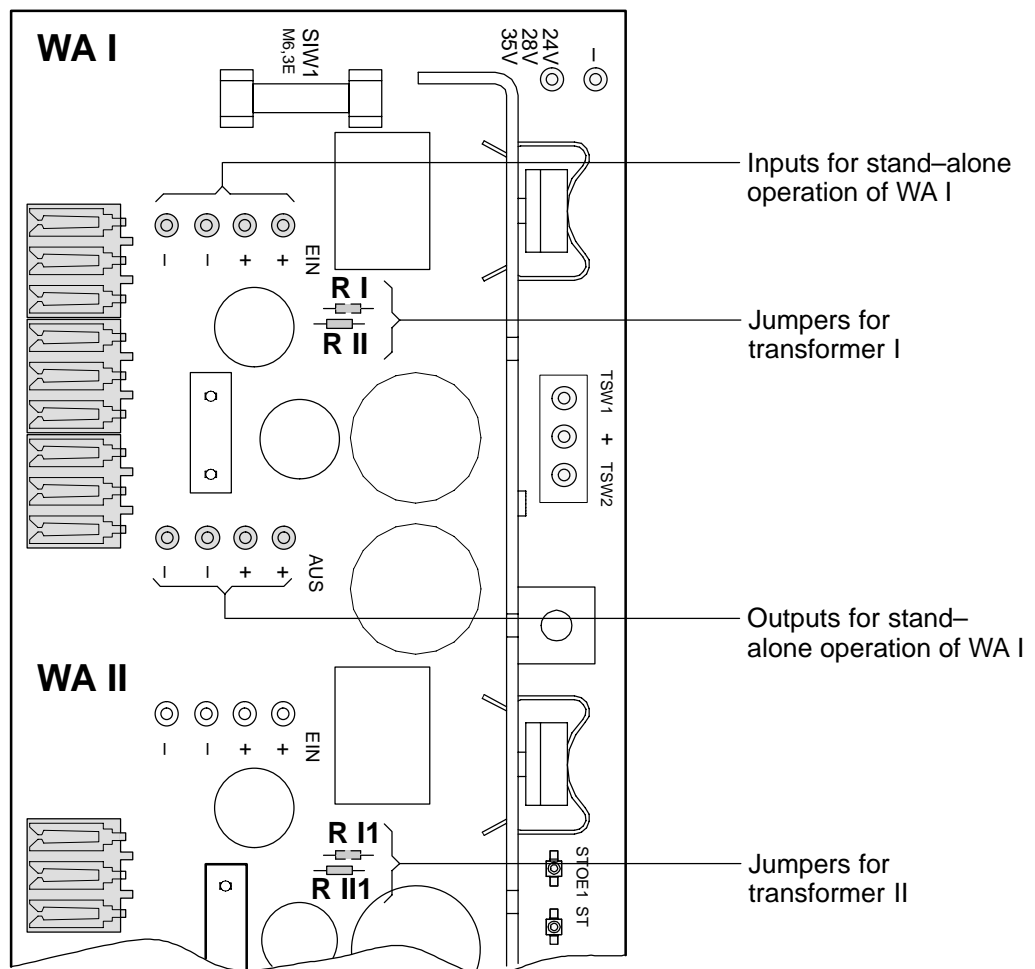


### 3.11 Transformer board NGEW

Setting the output voltage  $U_{Out}$  for WA I and WA II

Output voltage $U_{Out}$	Transformer I Jumpers		Transformer II Jumpers	
	R I	R II	R I1	R II1
28 V	–	X	–	X
35 V	–	–	–	–

State at delivery: Transformer I = 35 V  
Transformer II = 28 V



## 4 Commissioning

### 4.1 General

When starting up the UEZ 2000 LSN, first check

- that all printed circuit boards are plugged in correctly and
- that all cables (NGER – AVM, AVM – ADT connections) are plugged in correctly (the connector designations **must** be identical).

The power supply is permanently in operation (including battery charging) after it has been connected to the mains and the mains fuse (230V supply) has been inserted.

Disconnecting plug “STROM–UV” on the NGER does not have any function with regard to the power supply.

It only interrupts the 12V voltage supply to the AVM 100. The 28V and 35V voltage supplies will **not** be interrupted.

**Attention:**

The “RESET” key on the ZVM 100 can be used to restart the program.

### 4.2 Local Security Network LSN

The following checks must be carried out:

Check . .

- the cable type of the LSN
- the earthing of the central unit
- the earthing of the LSN lines
- the cable length of each NVU
- the LSN data transmission (module status and dynamic data)
- the initialisation starting from the second ring end (in the case of network ring circuits)

## 4.3 Programming

This chapter describes the Software version V26.x of the central unit. The software may be altered by the manufacturer/installer.

### Basic parameters

After the central unit has been switched on for the first time, the basic parameters are automatically loaded into the UEZ 2000 LSN. This process can take several minutes. An appropriate message is shown on the display.

### Restoring the basic parameteres

After inserting the jumper "Download" on the ZVM and subsequent reset of the hardware, the standard parameters are loaded, overwriting the present parameters. After loading the standard parameters, the jumper "Download" has to be removed again.

### Steps to be carried out prior to programming

The central unit recognizes the connection of a PC/Laptop to the PC interface (PC-1). Subsequently, the interface type is automatically changed from COM1 to the programming PC. If another device is already programmed on interface COM1, this information is memorized by the central unit and reestablished on termination of the programming process. This way, an extended reprogramming of the interface is avoided.

Steps to be carried out for the connection of a PC/Laptop:

1. If COM1 is occupied, separate the device from the interface (the interface module need not to be removed).
2. Connect the PC cable to the PC-1 interface on the AVM 100 (9 poles, connection 1:1).
3. Execute the date transmission.
4. Remove the PC cable from the PC-1 interface.
5. Reconnect the device to the COM1 interface.
6. Reset malfunction messages or carry out a hardware reset on the central unit if you have altered the parameters.

### **Setting the system parameters using a PC/Laptop**

(see also the next page, “Important notes for VdS systems”)

The parameters are generated using the WinPara program. To run this program, a PC or laptop with WINDOWS version 3.1 or later must be used. The PC/laptop must have a RAM of at least 4 MB. It is recommended that a mouse be used to operate the program.

To install WinPara under WINDOWS:

- Insert disk 1 into drive A.
- Choose “Execute” in the “File” menu (Program Manager or File Manager).
- Enter “A:\SETUP” in the text box and confirm by pressing OK.
- Follow the instructions of the installation program.
- Start WinPara by double-clicking the icon WinPara in the File Manager.

The “Help” function of WinPara can be used to call up instructions for programming the respective type of the UEZ 2000 LSN system.

These instructions provide further important information for setting the parameters step by step.

### **Note for several detection areas**

- A maximum of 16 detection areas may be generated as main, partial or central area.
- A main area is either a superordinate area of one or more partial areas or one independent area.
- A partial area is a subordinate area of a main or partial area. Each partial area can be linked either “obligatory” or “overlapping”.
- In case there exist several independent area, the central area is that area, in which the central unit is installed. All links to all other main or partial areas are established automatically. These links, however, are not displayed and cannot be changed.

### Important notes for VdS systems

When creating a configuration according to the VdS guidelines, the following restrictions must be heeded for the parameterisation:

- Parameter “Reset variant for lead seal key” (“Rücksetzvariante für Plombentaste”) = no function
- Parameter “Hide display when detector zone is armed” (“Unterdrückung der Anzeige bei scharfem MB”) must be selected.
- Parameter “print when detector zone is armed” (“Drucken bei scharfem MB”) may not be selected.
- Parameter “Multiple detector zones” (“MB übergreifend von ...”) is not permissible when linking detector zones.
- If there are several detector zones that are independent of each other, the central unit must be in a separate central zone.  
Parameter “Type of detector zone” (“Meldebereichsart”) = central zone for the zone of the central unit
- Each independent detector zone must be assigned a separate operating and display panel (e.g. BE 1000).
- A block-type lock must be assigned a combination-encoded arming device GS (with class C only for SG5 and SG6).
- The block-type lock link OR is not allowed.
- With external alarms, the function of the combination-encoded arming device must be deactivated.  
Parameter “Disable combination-encoded arming in case of alarms” (“Aufhebung der GS bei Alarm”) must be selected.
- Combination-encoded arming device GS:  
Parameter “For closing the BS” (“Zum Schließen des BS”) = not applicable  
“For opening the BS” (“Zum Öffnen des BS”) = applicable
- Transmission unit:  
Parameter “Repeated activation” (“Wiederholungsansteuerung”) = for each detector zone and for hold-up,  
parameter “Normal position” (“Ruhelage”) = On,  
“Alarm counter activated” (“Alarmzähleransteuerung”) = 1
- Detector zone:  
Parameter “Detector zone can be disabled” (“Meldergruppe abschaltbar”) must not be selected.

- Acoustic signal transmitter:  
Parameter "Permanent access" ("Dauernsteuerung") must not be selected  
Set access time within a range of 20 to 180 seconds.
- Central tableau:  
If the alarm transmission is carried out via an AWUG instead of an ÜE, the TZ points for hold-up and intrusion alarm must be in normal condition = On and the control must be done via contacts free of potential.
- Parameter "Malfunction processing LSN" ("Störungsbehandlung LSN") = "immediate alert" ("Alarmierung sofort").

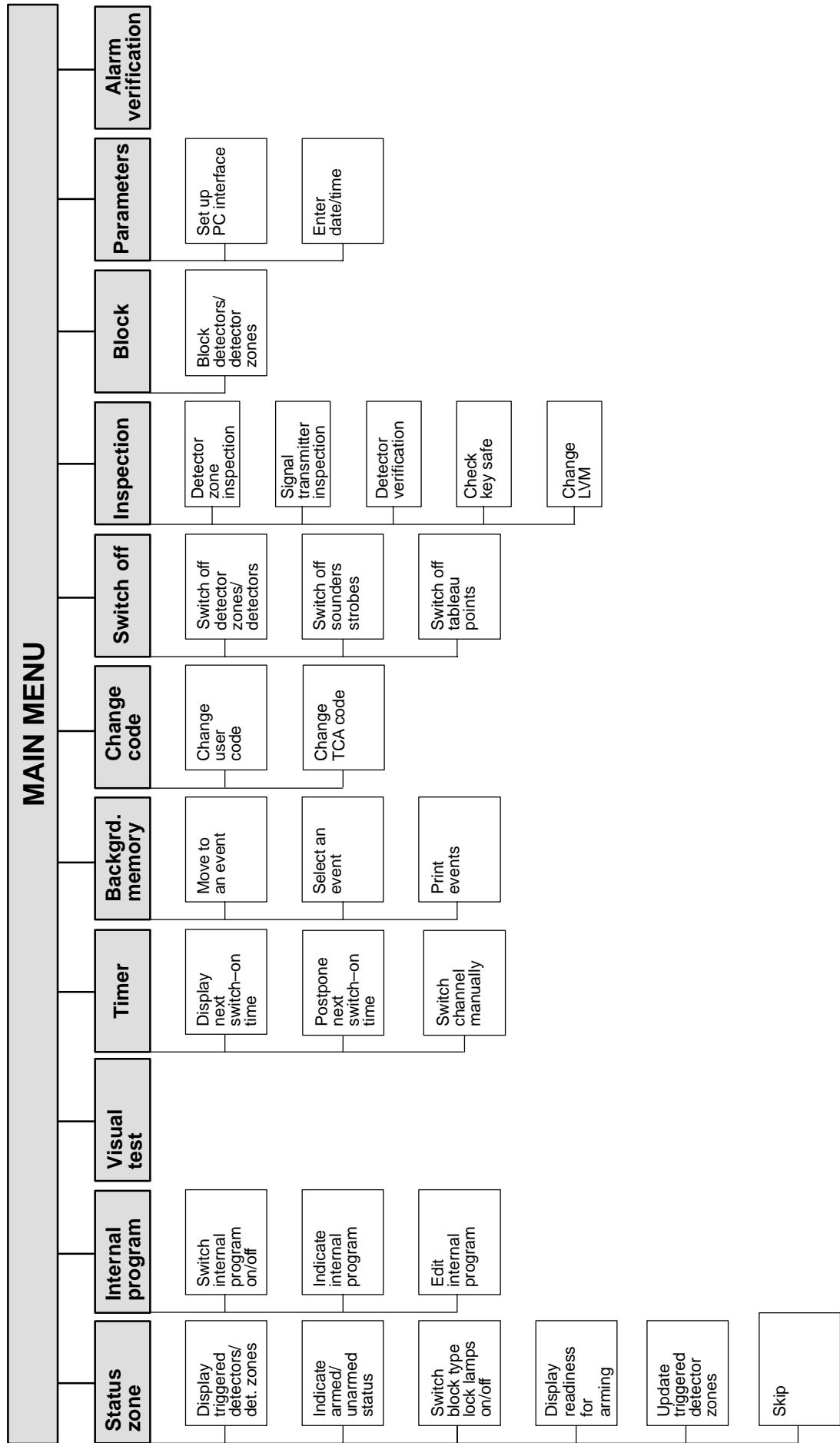
## 4.4 Entering the date/time

The date and time can only be set if the housing cover is open or if the operator is provided with the inspection authorisation.

- Press the key "Code".
- In the main menu (key "F"), call up "System Parameters" → "Date/Time".
- Enter the complete "Date" with the numeric keypad and press key "ENTER ↵".  
If the date need not be altered, key "ENTER ↵" leads directly to the time input.
- Enter the complete "Time" and press softkey "Store".
- In case of erroneous inputs, press key "CE" and repeat input.



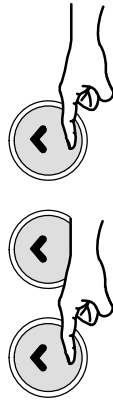
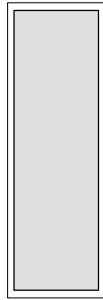
**4.5 Available functions** (see the UEZ Emergency Call Operating Instructions)





## 4.6 Setting up the BE 1000

### ENTERING THE OPERATING UNIT NUMBER

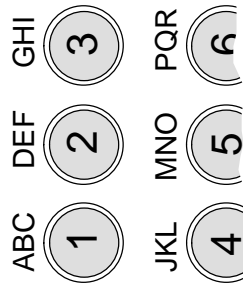
**Calling up the function for entering the address**



⇨ By default, the address is 01.  
If several BE 1000 units are to be used, the address (01 to 29) must be changed since each BE 1000 unit must have a number of its own.

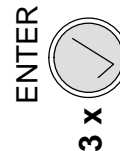
⇨ Press both keys   simultaneously and switch on the power supply for the operating unit.

**Entering the new address**



⇨ Enter the new number as two digits (e.g. 04).

**Confirming the entry**



⇨ Confirm the entry **3 times**.



## 5 Notes regarding service and maintenance

### 5.1 General

Maintenance and inspection work must be carried out at regular intervals and by trained personnel. All works must be carried out in accordance with the regulations stipulated in the DIN VDE 0833.

#### **Suspending the operating unit in the maintenance position**

During maintenance, the operating unit can be suspended in the maintenance position.

#### **Changing the paper reel for the UEZ printer**

To change the paper reel, remove the locking screw for the printer cover on the right-hand side of the printer (see the UEZ printer operating instructions).

#### **Measuring points for the load supply and the transformer supply**

- The power supplied to the system (except for the transformer supply) can be measured on the NGER controller module. For this purpose, jumper “STROM–UV”, which is installed at the factory, must be removed.
- Measuring points for the transformer supplies WA I (+35V; BR1) and WA II (+28V; BR2) are available on the NGEW transformer board.
- Measuring points for –12V (MP–12V) and +5V (MP+5V) are available on the AVM 100.

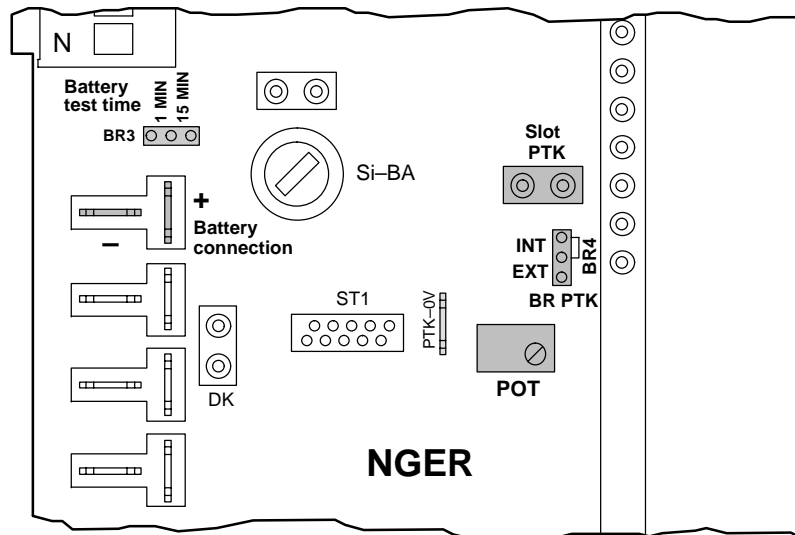
#### **Plugging in and removing printed circuit boards**

Always make sure the +12V supply voltage from the power supply unit to the AVM 100 is interrupted before plugging in or removing printed circuit boards ZVM 100, LVM 100, SM 20 or SM 485. To interrupt the supply voltage, pull out the white +12V connector at the power supply unit. The +35V supply voltage from the power supply unit to the AVM 100 need **not** be interrupted in the case of the LVM 100 (this applies for LVM 100 boards of edition A.1 or later).

## 5.2 Setting and testing the battery charging voltage

### Setting the battery charging voltage

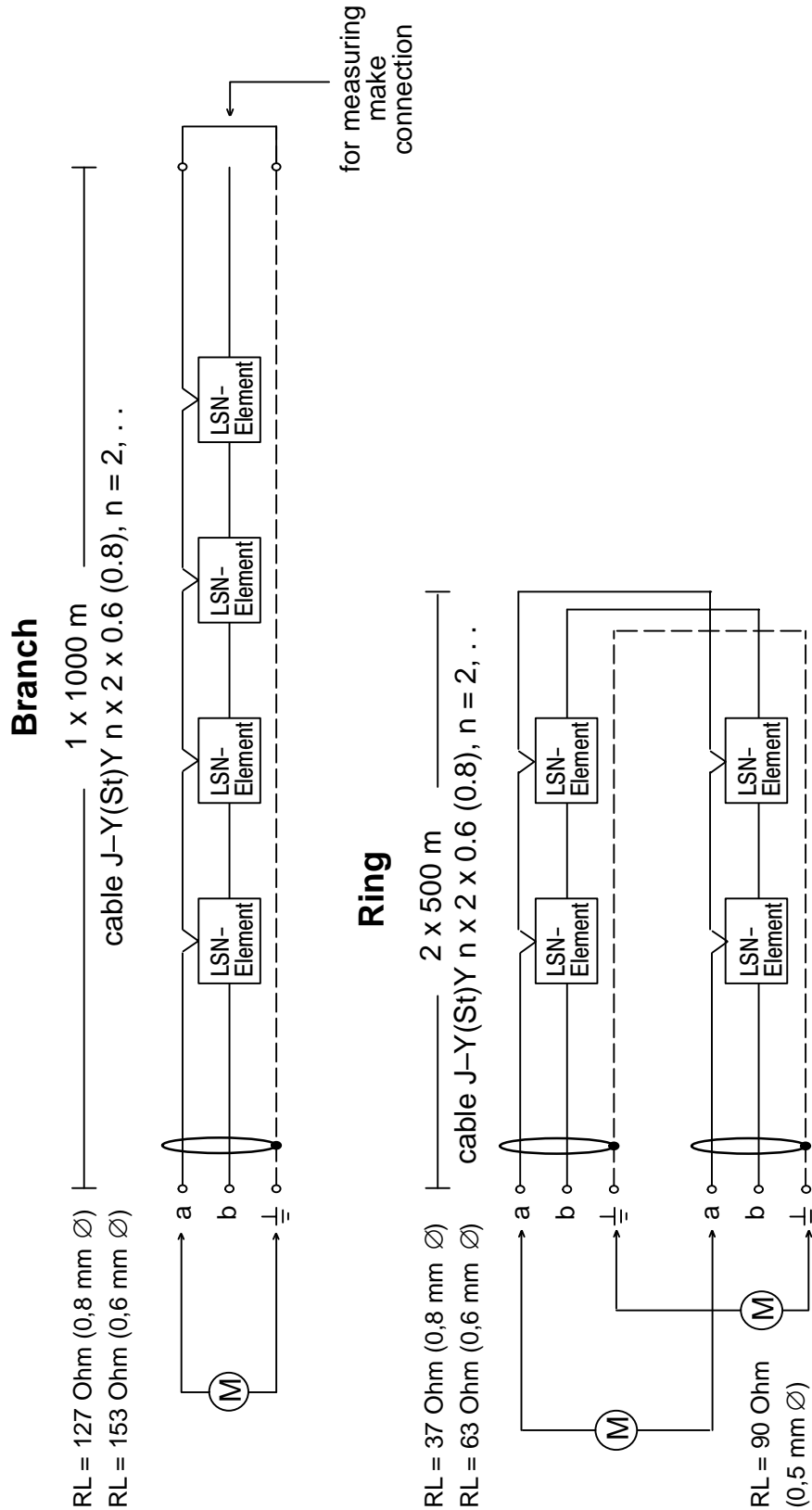
- Disconnect the battery cables.
- Plug in BR 3 (battery test time) at 15 min. (normal position).
- Relocate BR 4 (PTK) from INT to EXT.
- Plug a dummy resistor (1kΩ 1%) onto the PTK slot.
- Connect a (digital) voltmeter to the +/- battery connection.
- Using POT, set the voltage to 13.85 V  $\pm$  0.05.
- Remove the dummy resistor (the voltage drops below 7V).
- Relocate BR 4 (PTK) from EXT to INT.  
(When using an external PTK follow-up module, leave jumper BR 4 in the EXT position and plug the connectors of the PTK follow-up module onto slot PTK.)
- Connect the batteries (the charging voltage is adjusted according to the battery charging state and the ambient temperature).



### Testing the battery charging voltage

- Relocate BR 3 (battery test time) from 15 min. to 1 min.
- Plug BR 3 back onto 15 min. if no fault message is displayed after one minute (battery charging voltage is OK).

### 5.3 Measuring arrangement for fault locating



**Attention:**

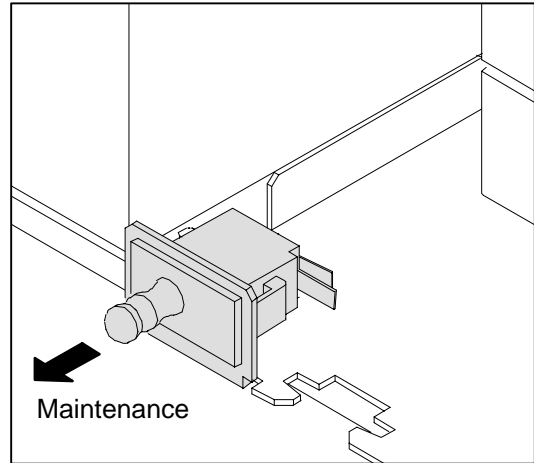
- 1.) The additional screening wire in the central unit must be removed from earth.
- 2.) For safety reasons during the resistor measuring, the connections on the device must be changed once
- 3.) During operation, the additional screening wire may be earthed only on the central unit side.

## 5.4 Housing Contact (maintenance)

The housing contact is closed (normal position) when the housing cover is mounted.

The housing contact opens (sabotage alarm) when the housing cover is removed.

The push-button of the device contact can be pulled out for maintenance purposes. Doing so closes the housing contact again (normal maintenance position).



The sabotage alarm can be reset with General Reset with inspection authorisation or with the lead seal.

## 5.5 Exchange and disposal

**Exchange:** Do not use different types of batteries when replacing them; otherwise, malfunctions may occur. Therefore, only use batteries of the same type and the same age from the same production run.

**Disposal:** Printed circuit boards and batteries that can no longer be used or repaired must be disposed of in an appropriate manner.

## 5.6 Service accessories

Item	Subject No.	OU*	Designation
01	39.0210.2355	1	UEZ 2000 LSN safety lead seal

## 5.7 Documentation

Item	Subject No.	OU*	Designation
11	30.0221.9701	1	Oper. Instructions UEZ Intrusion
12	30.0221.9541	1	Oper. Instructions BE 1000 Intrusion
13	30.0221.9551	1	Operating Instructions UEZ Printer
14	30.0221.8156	1	AHB EMZ/BMZ Connection Manual (Anschaltehandbuch AHB EMZ/BMZ)

## 5.8 Spare parts overview

See after-sales service information KI – 7

## 6 Technical Data

VdS approval number                      Application pending

### 6.1 Dimensions/weights/color of the central unit

Dimensions (H x W x D)	763 x 523 x 301 mm
Weight with power supply	
– without batteries	Approx. 23 kg
– with two 40 Ah batteries	Approx. 49 kg
Color	
– Housing/cover	Light grey
– Display support	NCS 1502 R (white–grey)

### 6.2 Ambient conditions

Ambient temperature	268 K . . . 318 K (–5°C . . . +45°C)
Ambient class	II (VdS 2110)
Degree of protection	IP 40 (EN 60529/DIN VDE 0470 Part 1)
Class of protection	II (DIN VDE 0106 Part 1))
EMC	DIN EN 50130–4 (VDE 08130 Part 1–4)
EMC interference emission	DIN EN 50081–1



## 6.3 Power supply

### General power supply data

Mains voltage	230 V <sub>~</sub> (–15% ... +10%)
Mains cable	NYM 3 x 1.5 mm <sup>2</sup>
Mains frequency	50 Hz
Fuse for mains voltage	M 10 A
Power supply	12 V/5.4 A
Operating voltage	11 V <sub>-</sub> ... 15 V <sub>-</sub> (14 V <sub>-</sub> at 20° C)
Battery capacity	2x 12 V/40 Ah in the central housing
Battery charging voltage	Follow-up depend. on temperature
Power consumption (full load)	Max. 110 VA
Backup time	Max. 60 hours
Power consumption	
– central unit with 2 NVU	1.7 A
– central unit with 4 NVU	2.5 A

### NGER controller unit

Battery charging voltage	Ranging from 0° C to 50° C acc. to the charging curve of the “dryfit” battery (factory setting: 13.80 V at 20° C)
Output voltage	13.2 V at 50° C to 14.5 V at 0° C
Output current (battery charging current + load current)	Max. 5.4 A
Voltage deviation PUV at	
– a load change by 0 ... 100%	1%
– a mains volt. change by –1%	0.2%
Recovery time with load changes	0 ... 100% T <sub>R</sub> 5 ms
Ripple of the output voltage	< 5% ss of +UV
Efficiency of the full load	> 85%
Overvoltage cut-out	> 17 V
Overcurrent limiting	> 6.5 A
Short circuit current	Approx. < 6 A at U <sub>Out</sub> 2 V
Mains failure display	< 130 V <sub>~</sub>
Battery failure display	< 10 V

### **NGEW transformer board**

The NGEW transformer board contains two voltage transformers (WA I and WA II) that are independent of each other.

Input voltage range	10 V ... 17 V
NGER output current	Max. 5.4 A
Configuration with 80 Ah	Max. 1.4 A
Output voltage WA>I/WA II	24 V ( $\pm$ 400 mV) 28 V ( $\pm$ 400 mV) 35 V ( $\pm$ 400 mV)
Output current WA I/WA II	Max. 2 A

The NGEW output current as well as the power requirement from the NGER is to be generated using the planning and current calculation program “UEZPRO”.

#### **Note regarding the power requirement:**

The power requirement can be measured when separating BR 1 for WA I and BR 2 for WA II (see connections section 2.2).

The output of transformer NGEW can be connected in parallel with higher increased current requirements or for distributing the output.

## 6.4 LSN technology

Line voltage	
– standby value	Approx. 30 V <sub>-</sub> (29.9 V ... 30.5 V)
– during sending	Standby value +1.6 V (1.5 V ... 1.7 V) voltage lift
No. of NVU units	Max. 4 network processing con- verters (NVU) with 2 LVM 100 units
No. of rings/branches per NVU	Max. 2 rings or 4 branches
Current delivery per NVU	Max. 100 mA
Cable length per NVU	Max. 1000 m
LSN elements per NVU	Max. 127 (depending on the power consumption)
Installation cables (approved for LSN)	J–Y(St)Y n x 2 x 0.6 or J–Y(St)Y n x 2 x 0.8 (n = 2, ... ) The screening wire (additional wire) must be earthed on the central unit side.

## 6.5 Control of the external sounders/strobes (via ASE)

Principle	Polarity reversal, 2 change–over contacts
Line voltage	Approx. 3.6 V with 1 BES, approx. 2.8 V with 2 BES in parallel
Final resistance	12.1 k $\Omega$ ( $\pm 1\%$ )
Triggering criterion	$\Delta R_E$ : $\pm 40\%$ max.
Lead resistance	
– acoustics	Max. 10 $\Omega$
– optics	Max. 10 $\Omega$
Release delay	Max. 200 ms
Access time	1 – 180 s, permanent
Monitoring	Short circuit, interruption
Max. of connectable units	4 BES, per primary line either max. 2 acoustic units in parallel or max. 2 acoustic/optic units in parallel

## 6.6 Control of the transmission unit

Principle	Potential-free NO contact (opens when triggering occurs)
Max. permissible power	30 W contact load
Max. current	1 A contact load
Max. voltage	42 V contact load
Access time	1 – 250 s, permanent
Final resistance	Depending on the transmission unit
Triggering criterion	Depending on the transmission unit
Lead resistance	Depending on the transmission unit

## 6.7 Switching outputs (exit tableau)

### Outputs of the AVM 100

– Principle	Open collector (short-circuit-proof)
– Max. voltage	UV (11 V ... 15 V)
– Max. current	300 mA

### If RTP/TRN modules are used

– Principle	Change-over contact, potential-free
– Max. permissible power	30 W contact load
– Max. current	1.25 A/24 V
– Max. voltage	42 V/0.7 A

### If NRK-N modules are used

– Principle	Switching contact, potential-free
– Max. permissible power	2400 VA contact load
– Max. current	10 A contact load
– Max. voltage	230 V <sub>~</sub> contact load

## 6.8 Serial interfaces

### 20 mA interface with SM 20 module

Range	Max. 1000 m
Transmission rate	300, 1200, 2400, 9600 bit/s
Installation cable	J–Y (St) Y 2 x 2 x 0.6

### RS 485 interface with SM 485 module (operating panels)

Range	Max. 500 m
Installation cable	J–Y (St) Y 2 x 2 x 0.6

### V24 interface (PC–1 or V24–2)

Range	Max. 25 m
Transmission rate	300, 1200, 2400, 9600 bit/s
Installation cable	J–Y (St) Y 2 x 2 x 0.6

## 6.9 Fuses

### AVM 100

All fuses = M500

### SM 485

– SIUV M500

### NGER

– Si–NE (mains fuse) T 500  
– Si–BA (battery fuse) M 6.3 E

### NGEW

– SIW1 (fuse for transf. I) M 6.3 E  
– SIW2 (fuse for transf. II) M 6.3 E



## 7 List of Abbreviations

ADT	=	Display keyboard
ASE	=	Control group driver extension
ATBL	=	Tableau control
ATE	=	Tableau display extension
AVM	=	Interface connections module
AWUG	=	Automatic dialing and transmission device
DIP	=	Dynamic internal program
EMC	=	Electromagnetic compatibility
ESG	=	External sounder/strobe
EV	=	Power supply
GK	=	Housing contact
LSN	=	Local Security Network
LVM	=	LSN processing module
MG	=	Detector zone
NGER	=	Power supply control unit
NGEW	=	Power supply transformer unit
NLT	=	Network line technology
NRK–N	=	Network relay card for emergency calls
NVU	=	Network processing converter
RTP	=	Relay tableau board
SDI	=	Serial data in
SDO	=	Serial data out
SGK	=	Serial device coupling
SIV	=	Fuse distributor
SM 20	=	Interface module for 20 mA interface
SM 485	=	Interface module for RS 485 interface
SPOK	=	Security engineering – planned – organised – commissioned
STB	=	Battery fault
STN	=	Mains fault
TAE	=	Telecommunication line unit
TRN	=	Tableau relay module
TRSP	=	Tableau relay plug–on board
TSTB	=	Tableau fault – battery
TSTN	=	Tableau fault – mains
ÜE	=	Transmission unit
UEV	=	Universal power supply
UEZ	=	Universal European central unit
ÜSS	=	Overvoltage protection
UGM	=	Universal danger warning system
ZVM	=	Central unit processing module

**BOSCH**

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