

# GEZE SecuLogic

## Emergency exit system

TZ 320

TZ 321

TZ 322

EN Installation  
Wiring diagram  
Commissioning  
Operation

132916-03

# Contents

1	Introduction .....	5
1.1	Symbols and illustrations .....	5
1.2	Validity .....	5
1.3	Product liability .....	5
2	Basic safety notes .....	6
2.1	Intended use .....	6
2.2	Safety notes .....	6
2.3	Installation information .....	6
2.4	Safety-conscious working .....	6
2.5	Inspection of the installed system .....	6
2.6	Maintenance notes .....	6
2.7	Disposal .....	7
3	Normative requirements .....	7
3.1	Door control unit TZ 320 .....	7
3.2	Classification in accordance with DIN EN 13637: 2015 .....	7
3.2.1	GEZE SecuLogic with TZ 320 and FTV 320 or MA 500 .....	7
3.2.2	GEZE SecuLogic with TZ 320 and FTÖ 332 .....	7
3.3	Door control unit TZ 321 .....	8
3.4	Door control unit TZ 322 .....	8
3.5	Emergency exit sign .....	8
4	Abbreviations .....	9
4.1	Colours .....	9
4.2	Abbreviations .....	9
5	Technical data .....	10
5.1	Technical data GEZE SecuLogic emergency exit system .....	10
5.2	Door control unit TZ 32x .....	10
5.2.1	Variants .....	10
5.2.2	Power supply .....	10
5.2.2.1	Variants with integrated power supply .....	10
5.2.2.2	Variants without integrated power supply .....	10
5.2.3	Installation .....	10
5.2.4	Components .....	11
5.2.5	Ribbon cable .....	12
5.2.5.1	Assignment ribbon cable .....	12
5.2.6	Emergency exit sign (FWS) .....	12
5.2.6.1	Variants .....	12
5.2.6.2	Power supply FWS 320 B .....	12
5.2.6.3	Installation .....	12
5.2.7	Key switch SCT 320 .....	12
5.2.7.1	Power supply .....	12
5.2.7.2	Installation .....	12
5.2.7.3	Terminal assignment SCT 320 .....	12
5.2.8	Door controller TST 32x .....	13
5.2.8.1	Variants .....	13
5.2.8.2	Terminal assignment .....	13
5.3	Emergency push button NOT 320 .....	14
5.3.1	Power supply .....	14
5.3.2	Installation .....	14
5.3.3	Terminal assignment .....	14
5.4	Door terminal T 320 .....	14
5.4.1	Power supply .....	14
5.4.2	Installation .....	14
5.4.3	Components .....	15
5.4.4	Ribbon cable .....	16

5.4.5	Emergency exit sign (FWS).....	16
5.4.6	Key switch SCT 320.....	16
5.4.7	Control door terminal TAN 320.....	16
5.4.7.1	Terminal assignment TAN 320 .....	16
5.5	Terminal box KL 220 .....	17
5.5.1	Power supply.....	17
5.5.2	Installation .....	17
5.5.3	Terminal assignment .....	17
6	Installation of door control unit TZ 32x and door terminal T 320 .....	19
6.1	Position of the emergency push button.....	19
6.2	Replacing the lock cylinder .....	19
6.3	Installation UP door control unit and UP door terminal .....	20
6.3.1	Fasten the impact cover to the support ring .....	23
6.3.2	Fastening the key switch .....	23
6.4	Installation AP door control unit and AP door terminal .....	24
6.4.1	Installation of the door control unit in the stainless steel UP or AP box. ....	26
7	Wiring diagram .....	29
7.1	Mains connection of the door control unit TZ 32x .....	29
7.1.1	Power supplies.....	29
7.1.2	Mains connection of the TZ 32x UP variants .....	30
7.1.3	Mains connection of the TZ 32x AP variants .....	30
7.1.4	Mains connection of the TZ 32x variants in the UP or AP stainless steel box.....	30
7.1.4.1	Installation of the mains connection terminal and mains connection.....	31
7.1.5	Uninterruptible power supply STEP UPS .....	32
7.2	Locking mechanism.....	32
7.2.1	Escape door lock FTV 320.....	32
7.2.2	Holding magnet MA 500 .....	33
7.2.3	Emergency exit electric strike FTÖ 332 .....	33
7.2.4	Operation without locking mechanism.....	34
7.3	External / central emergency push button .....	35
7.3.1	External emergency button .....	35
7.3.1.1	Emergency push button NOT 220 .....	35
7.3.1.2	Emergency push button NOT 320.....	36
7.3.1.3	External emergency button in the door terminal T 320.....	36
7.3.2	Central emergency push button .....	37
7.3.2.1	Emergency push button NOT 220 .....	37
7.3.2.2	Emergency push button NOT 320 .....	38
7.3.2.3	Emergency-off panel in the door panel TE 220 .....	39
7.4	External key switch for controlling the door control unit .....	39
7.4.1	Key switch SCT 220 .....	39
7.4.2	Key switch SCT 222 .....	40
7.4.3	Key switch SCT 320.....	41
7.5	Panic lock .....	41
7.5.1	Contact lock IQ lock C.....	41
7.5.2	Lever lock IQ lock EM.....	41
7.5.3	Motor lock IQ lock EL with MST 210 .....	42
7.6	Automatic swing door drive.....	43
7.6.1	Swing door drive Powerturn .....	43
7.6.2	Swing door drive EMD .....	45
7.6.2.1	Operating EMD via internal programme switch.....	45
7.6.2.2	Operating EMD via DPS, TPS or MPS .....	45
7.7	Configurable inputs.....	46
7.7.1	Sabotage.....	47
7.7.2	Short-time unlocking.....	47
7.7.2.1	Key switch SCT 220 .....	47
7.7.2.2	Key switch SCT 221.....	48
7.7.2.3	Number code lock TOPLOCK CTI, CTI B.....	48
7.7.2.4	Number code lock TOPLOCK CTS V, CTS BV .....	49

7.7.3	Emergency unlocking via BMA or RWA.....	49
7.8	Configurable outputs.....	50
7.8.1	Indicator lamp or alarm .....	50
7.9	Terminal box KL220 .....	50
7.10	GEZE bus .....	51
7.10.1	GEZE bus terminating resistor .....	52
7.10.1.1	Door control unit TZ 32x .....	52
7.10.1.2	Master panel MTA 220 (panel TE 220) .....	52
7.10.2	GEZE bus .....	52
7.10.3	Emergency unlocking via GEZE bus.....	52
<b>8</b>	<b>Commissioning .....</b>	<b>53</b>
8.1	Service mode .....	53
8.1.1	Switching service mode on .....	53
8.1.2	Switching service mode off .....	53
8.1.3	Connecting service terminal ST 220 to the door control unit .....	54
8.1.4	Switching the service terminal ST 220 off .....	54
8.1.5	Service menu ST 220 .....	55
8.2	Display of alarms and faults.....	63
8.2.1	Display of alarms.....	63
8.2.2	Display of faults .....	63
<b>9</b>	<b>Operation.....</b>	<b>64</b>
9.1	Signals.....	64
9.1.1	Alarm signals .....	64
9.1.2	Alarm tones.....	64
9.2	Controlling the door control unit via key switch .....	65
9.2.1	Unlocking the door.....	65
9.2.2	Locking the door.....	66
9.2.3	Unlocking the door for a limited time (short-time unlocking) .....	66
9.3	Unlocking the door in an emergency.....	66
9.4	Resetting alarm .....	67
9.4.1	Resetting door alarm .....	67
9.4.2	Resetting disconnection.....	67
9.4.3	Resetting emergency unlocking .....	67
9.4.4	Resetting sabotage alarm .....	67
9.4.5	Acknowledging alarm with key switch .....	68
9.5	Power failure .....	68
9.6	Maintenance.....	68




# 1 Introduction

## 1.1 Symbols and illustrations

### Warning notices




In these instructions, warning notices are used to warn against material damage and injuries.

- ▶ Always read and observe these warning notices.
- ▶ Observe all measures marked with the warning symbol and warning word.

Warning symbol	Warning word	Meaning
	<b>DANGER</b>	Danger to persons. Non-compliance will result in death or serious injuries.
	<b>WARNING</b>	Danger to persons. Non-compliance can result in death or serious injuries.
	<b>CAUTION</b>	Danger to persons. Non-compliance can result in minor injuries.

### Further symbols and illustrations

Important information and technical notes are highlighted to explain correct operation.

Symbol	Meaning
	means "important note" Information to prevent property damage, to understand or optimise the workflows
	means "additional information"
	Symbol for an action: This means you have to do something. If there are several actions to be taken, keep to the given order.

Symbol	Meaning	Use
<b>EltVTR</b>	conforms to EltVTR Directive on the electrical interlocking of doors in escape routes (EltVTR)	Note must always be heeded, if conformity with EltVTR is required.
<b>EN 13637</b>	conforms to DIN EN 13637: 2015 Electrically controlled emergency exit systems for doors on escape routes	Note must always be heeded, if conformity with DIN EN 13637: 2015 is required.

## 1.2 Validity

Valid from software

- TST 320, TST 322      Version V1.1
- TST 321                Version V1.1

## 1.3 Product liability

In compliance with the liability of the manufacturer for his products as defined in the German "Product Liability Act", compliance with the information contained in this brochure (product information and intended use, misuse, product performance, product maintenance, obligations to provide information and instructions) must be ensured. Failure to comply releases the manufacturer from his statutory liability.

## 2 Basic safety notes

To ensure personal safety, it is important to follow these safety instructions. These instructions must be kept.

### 2.1 Intended use

The GEZE SecuLogic emergency exit system has been designed for controlling and monitoring electrically locked escape routes.

### 2.2 Safety notes

- Only specialists who are authorised by GEZE are permitted to carry out installation, commissioning and maintenance.
- If unauthorised changes are made to the system, GEZE cannot be made liable in any way whatsoever for any resulting damages.
- GEZE does not accept any warranty for combinations with third-party products. In addition, only original GEZE parts may be used for repair and maintenance work.
- The connection to the mains voltage must be carried out by a qualified electrician. Perform the mains connection and protective earth connection test in accordance with VDE 0100 Part 600.
- Sabotage-resistant cable laying in accordance with VDE 0833 (AP cables in steel hose)
- Observe the latest versions of guidelines, standards and country-specific regulations, in particular:
  - Directive on electrical interlocking of doors in escape routes
  - DIN EN 13637: 2015 "Electrically controlled emergency exit systems for doors on escape routes"
  - DIN VDE 100-600 "Installation of low-voltage systems - Part 6 Tests"
  - DIN EN 60335-2-103 "Safety of electrical devices for home use and similar purposes, special requirements for drives for gates, doors and windows"
  - Accident-prevention regulations, especially DGUV V1 (BGV A1) "General regulations"
  - DGUV V3 (BGV A3) "Electrical installations and equipment"

**EltVTR**  
**EN 13637**

### 2.3 Installation information

- The GEZE SecuLogic emergency exit system is designed exclusively for use in dry areas.
- Cables laid in accordance with GEZE cable plan.
- Use only the cables specified on the cable plan provided. Cables must be shielded in compliance with the wiring diagram.
- Always use insulated wire-end ferrules for wire cores.
- Insulate wires that are not used.
- Secure loose cables with cable ties.

### 2.4 Safety-conscious working



#### **DANGER**

#### **Danger of fatal injury due to electric shock!**

When an Uninterruptible Power Supply is used, the system will still be under voltage even when disconnected from the mains.

- ▶ Before working on the electrical system, interrupt the power supply (mains and rechargeable battery) and check that no voltage is present.
- ▶ Secure workplace against unauthorised entry

### 2.5 Inspection of the installed system

- ▶ Check the necessary protective earth connection to metal parts that can be touched.
- ▶ Check the doubled/reinforced insulation of the power cables or mains connection.

### 2.6 Maintenance notes

- ▶ Have doors with electric locking mechanisms on rescue routes inspected annually by an expert. This expert must issue a certificate of the recurring inspection, which the operator must submit to the building supervisory authority on request. The inspection can be carried out by GEZE Service within the context of a maintenance contract or by a specialist company authorised by GEZE. The checklists in the log book must be used when the inspection is carried out. GEZE recommends using the log book for documentation of the annual inspection.

## 2.7 Disposal

The GEZE SecuLogic emergency exit system is made of materials that should be recycled. For this purpose, the individual components should be sorted corresponding to material type:

- Aluminium
- Iron (fittings, screws, ...)
- Plastic (housing, ...)
- Electronic parts (locking mechanism, motor gear unit, control unit, power supply, sensors, ...)
- Cables
- Rechargeable battery

The parts can be disposed of at the local recycling depot or by a scrap recycling company. Rechargeable batteries contain pollutants and heavy metals. Do not dispose of these with household waste. Only dispose of rechargeable batteries at the collecting points prescribed by law.

### Information on the German Battery Directive

Batteries and rechargeable batteries supplied by GEZE include a supplementary sheet with information on the provisions of the German Battery Directive regarding the disposal and return of used batteries and rechargeable batteries. These instructions must always be followed and observed.

## 3 Normative requirements

### 3.1 Door control unit TZ 320

The GEZE SecuLogic emergency exit system - TZ 320 - is approved in accordance with

- **EltVTR**

*Directive on the electrical interlocking of doors in escape routes*

and is tested, certified and monitored in accordance with

- **DIN EN 13637: 2015**

*Locks and building hardware - Electrically controlled emergency exit systems for doors on escape routes - Requirements and test methods*

checked, certified and monitored.

### 3.2 Classification in accordance with DIN EN 13637: 2015

#### 3.2.1 GEZE SecuLogic with TZ 320 and FTV 320 or MA 500

<b>EN 13637</b>	3	7	5	0/A/B	1	0	5	5	0	0	B
-----------------	---	---	---	-------	---	---	---	---	---	---	---

GEZE SecuLogic comprising TZ 320 with FTV 320 or MA 500 is an electrically controlled emergency exit system,

- that has been tested with 200 000 cycles,
- for door leaves with a weight of up to 200 kg and a closing force of no more than 25 N
- that is suitable for use on fire protection/smoke protection doors (depending on the certification of the escape door lock)
- IP30, suitable for use inside,
- with a safety/retention force from outside of 5 000 N,
- with a safety/retention force from inside of 5 000 N,
- without time delay,
- without blocking release,
- with a triggering element that is mounted outside the door leaf.

#### 3.2.2 GEZE SecuLogic with TZ 320 and FTÖ 332

<b>EN 13637</b>	3	7	2	0/A/B	1	0	3	3	0	0	B
-----------------	---	---	---	-------	---	---	---	---	---	---	---

GEZE SecuLogic comprising TZ 320 with FTÖ 332 is an electrically controlled emergency exit system,

- that has been tested with 200 000 cycles,
- for door leaves with a weight of up to 200 kg and a closing force of no more than 50 N

- that is suitable for use on fire protection/smoke protection doors (depending on the certification of the escape door lock)
- IP30, suitable for use inside,
- with a safety/retention force from outside of 5 000 N,
- with a safety/retention force from inside of 5 000 N,
- without time delay,
- without blocking release,
- with a triggering element that is mounted outside the door leaf.

### 3.3 Door control unit TZ 321

~~EltVTR~~  
~~EN 13637~~

The GEZE SecuLogic emergency exit system - TZ 321 - with delayed emergency button - does not comply with the requirements of EltVTR or DIN EN 13637: 2015. Use of the TZ 321 in Germany must be applied for by agreement in individual case or project-related construction technique permit in accordance with the relevant regional government building laws (national regulations).

### 3.4 Door control unit TZ 322

~~EltVTR~~  
~~EN 13637~~

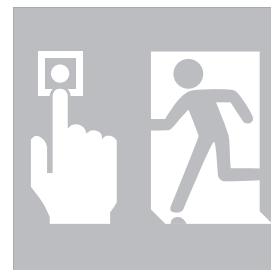
Without an additional external emergency button on the door, the GEZE SecuLogic emergency exit system - TZ 322 - without emergency push button - does not comply with the requirements of EltVTR nor DIN EN 13637: 2015. Use of the TZ 322 without an additional external emergency button on the door in Germany must be applied for by agreement in individual case or project-related construction technique permit in accordance with the relevant regional government building laws (national regulations).

### 3.5 Emergency exit sign

**EltVTR** EltVTR requires this emergency exit sign:



**EN 13637** DIN EN 13637:2015 requires this emergency exit sign:



**EltVTR** The variants of TZ 320 which have been tested in accordance with DIN EN 13637:2015, receive the emergency exit sign with the pictogram in accordance with DIN EN 13637:2015. For operation of these variants in accordance with EltVTR in Germany, an emergency exit sign with the pictogram in accordance with EltVTR must be attached in addition to the pictogram in accordance with DIN EN 13637:2015. The requirement and operation in accordance with EltVTR are defined in the relevant regional government building ordinance.

**EltVTR** The system components permissible in accordance with EltVTR can be found in the current annex to the type examination certificate:



**EN 13637** The configurations tested to DIN EN 13637:2015 are named in the certificate with the respective classification key:





## 4 Abbreviations

### 4.1 Colours

Colour	Description	Colour	Description
BN	brown	PK	pink
BK	black	RD	red
BU	blue	TQ	turquoise
GN	green	VT	violet
GY	grey	WH	white
OG	orange	YE	yellow

### 4.2 Abbreviations

Abbreviation	Description
AC	Alternating current
AP	Surface-mounted installation
BMA	Fire alarm system
CAN	GEZE bus (Controller Area Network)
DC	Direct current
EMA	Burglar alarm system
FF	Finished floor level
LED	Light emitting diode
NC	Potential-free opener contact (normally closed)
NO	Potential-free normally open contact (normally open)
NT	Power supply
PA	Configurable output
PE	Configurable input
RS485	Serial communication
RWA	Smoke/heat extraction system
SA	Sabotage contact
UP	Flush-mounted installation
ZSU	Timer

## 5 Technical data

### 5.1 Technical data GEZE SecuLogic emergency exit system

Temperature	-10 °C ... +55 °C
Storage temperature	-20 °C ... +80 °C
Humidity	up to 85%, non-condensing
Altitude above sea level	max. 3000 m
IP rating (DIN EN 60529)	IP30
Installation	only in dry areas (DIN VDE 0100-200)
electrical safety	DIN EN 62368-1 DIN EN 60950-1
Guidelines	EltVTR DIN EN 13637: 2015

### 5.2 Door control unit TZ 32x




#### 5.2.1 Variants

TZ 320	Door control unit with GEZE bus
TZ 321	Door control unit with GEZE bus and delayed emergency button
TZ 322	Door control unit with GEZE bus without emergency push button
Index B	with illuminated emergency exit sign
Index S	with key switch
Index N	with integrated power supply


#### 5.2.2 Power supply

Mains connection	Fixed connection (installation cable)
Secondary voltage (for external components)	24 V DC $\pm 5\%$ , SELV

##### 5.2.2.1 Variants with integrated power supply

	Power supply	230 V AC $\pm 5\%$ , 50 Hz
	<b>UP variants</b>	
<b>EltVTR</b>	Power supply	NET 320, 750 mA
<b>EN 13637</b>	Power supply	NT 1.1A-24V U P, 1100 mA
	<b>AP variants</b>	
<b>EltVTR</b>	Power supply	NT19.2-24, 800 mA
<b>EN 13637</b>	Power supply	NT 1.1A-24V UP, 1100 mA
	<b>Variants in UP or AP stainless steel box</b>	
<b>EltVTR</b>	Power supply	NET 320, 750 mA
<b>EN 13637</b>	Power supply	NT 1.1A-24V UP, 1100 mA

##### 5.2.2.2 Variants without integrated power supply

Power supply	24 V DC, $\pm 5\%$
	
Power supply	NT6.25A-24 HS, 6250 mA

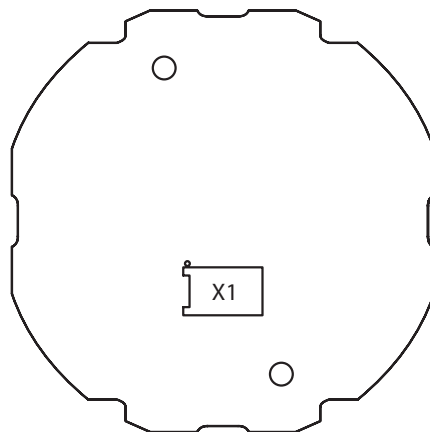
#### 5.2.3 Installation

UP variants	in UP boxes: diameter 60 mm, depth 62 mm
AP variants	in AP-housing: 77 mm x 197 mm x 88 mm (W x H x D)
Variants in stainless steel box	in UP, AP stainless steel box: 78 mm x 240 mm x 69 mm (W x H x D) Front plate: 98 mm x 260 mm x 1.5 mm (W x H x D)

## 5.2.4 Components

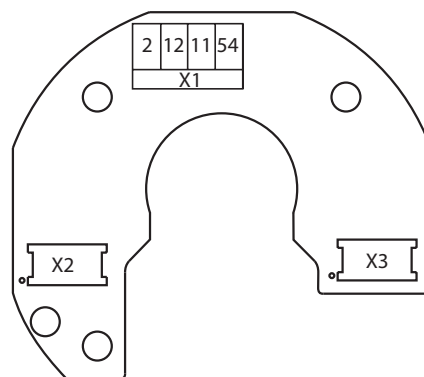
### FWS 320 B

X1 Ribbon cable to SCT 320 or TST 320

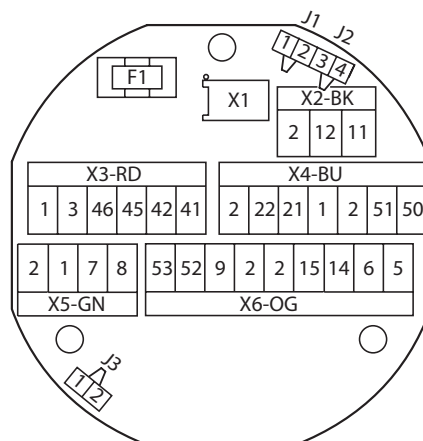
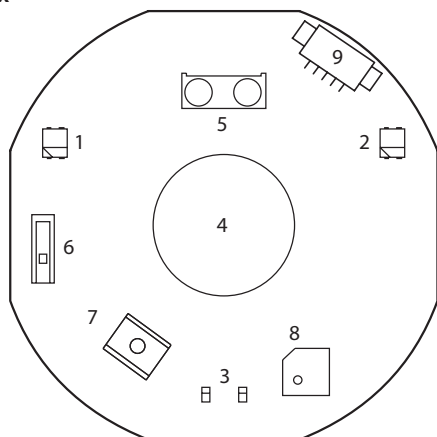


### SCT 320

X1 Key switch  
X2 Ribbon cable to FWS 320 B  
X3 Ribbon cable to TST 320



### TST 32x



- 1 LED – status locking mechanism
- 2 LED – door status
- 3 LED – alarm / fault
- 4 Emergency push button illuminated (not with TST 322)
- 5 Infrared interface for ST 220
- 6 Sabotage contact
- 7 Reset switch
- 8 Buzzer (75 dB at 50 cm)
- 9 Programming interface

- F1 Fuse 24 V  
1.5 A, SMF 125 V, fast-acting, mat. no. 138362
- X1 Ribbon cable to SCT 320 or FWS 320 B
- X2 SCT external
- X3 GEZE bus, supply, T 320, KL 220
- X4 PA
- X5 indirect disconnection
- X6 Locking mechanism inputs, PE
- J1, J2 Indirect disconnection
- J3 GEZE bus terminating resistor

## 5.2.5 Ribbon cable

Ribbon cable, mat. no. 131823

### 5.2.5.1 Assignment ribbon cable

Terminal panel	Terminal	Function
FWS 320 B – X1	1	24V
SCT 320 – X2, X3	2	SCT 320 (unlock, acknowledge alarm)
TST 32x – X1	3	SCT 320 (lock, short-time unlocking, acknowledge alarm)
	4	SCT 320 SA
	5	5V
	6	GND

## 5.2.6 Emergency exit sign (FWS)

### 5.2.6.1 Variants

**EltVTR** FWS, EltVTR, 1 x arrow down, 1 x arrow up, mat. no. 157337  
 FWS, EltVTR, 1 x arrow left, 1 x arrow right, mat. no. 157338  
 FWS 320 B, EltVTR, illuminated, mat. no. 130383



**EN 13637** FWS, EN13673, mat. no. 194035  
 FWS 320 B, EN13673, illuminated, mat. no. 193554



### 5.2.6.2 Power supply FWS 320 B

Power supply	24 V DC, ±10%
--------------	---------------



### 5.2.6.3 Installation

- EltVTR**
- Mount the emergency exit sign near to the emergency push button.
  - The arrow on the emergency exit sign must be pointing towards the emergency push button.
  - The non-illuminated signs can be mounted in the plexiglass bracket, mat. no. 089361.

## 5.2.7 Key switch SCT 320

### 5.2.7.1 Power supply

Power supply	24 V DC, ±10%
--------------	---------------



### 5.2.7.2 Installation

UP variant	in UP boxes: diameter 60 mm, depth 62 mm
AP variant	in AP-housing: 80 mm x 80 mm x 64 mm (W x H x D)

### 5.2.7.3 Terminal assignment SCT 320

Plug-in and screw terminals, max. cable cross-section: 1 mm<sup>2</sup>

Terminal panel	Terminal	Function
X1	2	24V
	12	lock
	11	unlock
	54	SA

## 5.2.8 Door controller TST 32x

## 5.2.8.1 Variants

Door controller TST 320, door controller with GEZE bus, mat. no. 128958

Door controller TST 321, door controller with GEZE bus and delayed emergency button, mat. no. 128960

Door controller TST 322, door controller with GEZE bus, without emergency push button, mat. no. 128959

## 5.2.8.2 Terminal assignment

Plug-in and screw terminals, max. cable cross-section: 1 mm<sup>2</sup>

Terminal panel	Terminal	Function	
X2 - BK	2	24V	
	12	lock, short-time unlocking, acknowledge	
	11	unlock, acknowledge	
X3 - RD	1	GND	
	3	24VDC (supply)	
	46	GEZE bus (CAN-H)	
	45	GEZE bus (CAN-L)	
	42	RS485-A	
	41	RS485-B	
X4 – BU	2	24V	
	22	COM	PA1 max. 1 A, 30 VDC
	21	NO	
	1	GND	
	2	24V	
	51	COM	PA2 max. 1 A, 30 VDC
	50	NO	
	X5 – GN	2	24V
1		GND	
7		indirect disconnection	
8			
X6 – OG	53	PE3	
	52	PE2	
	9	PE1	
	2	24V	
	2	24V	
	15	closed	
	14	locked	
	6	Locking– (GND)	
	5	Locking+ (24V)	

## 5.3 Emergency push button NOT 320

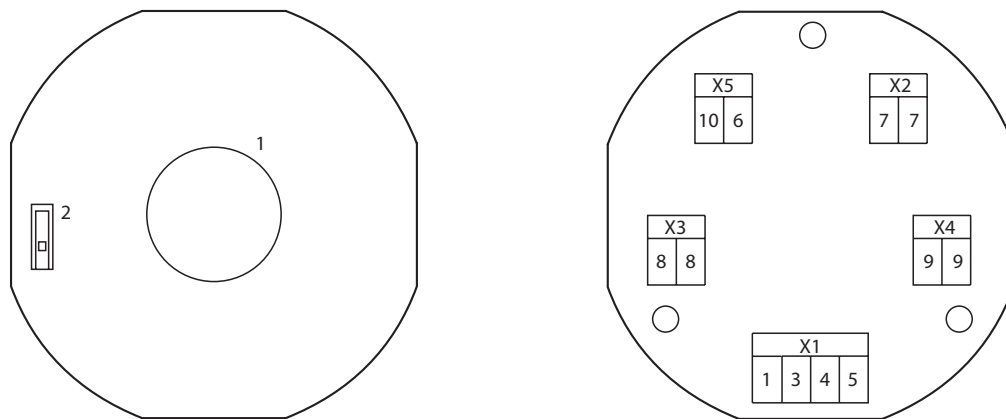
### 5.3.1 Power supply

Power supply	24 V DC, $\pm 10\%$
	

### 5.3.2 Installation

UP variant	in UP box: Diameter 60 mm, depth 62 mm
AP variant	in AP-housing: 80 mm x 80 mm x 64 mm (W x H x D)

### 5.3.3 Terminal assignment



- 1 Emergency push button illuminated  
2 Sabotage contact

Terminal panel	Terminal	Function
X1	1	GND
	3	24VDC (supply)
	4	SA
	5	SA
X2	7	COM1
	7	COM1
X3	8	NO2 (8 and 8 together max. 1A, 30 VDC)
	8	NO2
X4	9	COM2
	9	COM2
X5	10	NC1 (10 and 6 together max. 1A, 30 VDC)
	6	NC1 with terminating resistor 2 k $\Omega$ (10 and 6 together max. 1A, 30 VDC)

## 5.4 Door terminal T 320

### 5.4.1 Power supply

Power supply	24 V DC, $\pm 10\%$
	

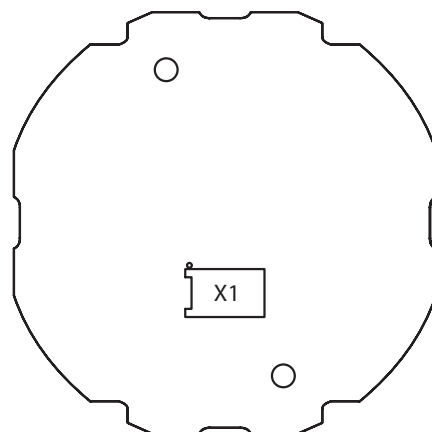
### 5.4.2 Installation

UP variant	in UP boxes: diameter 60 mm, depth 62 mm
AP variants	in AP-housing: 77 mm x 197 mm x 88 mm (W x H x D)

### 5.4.3 Components

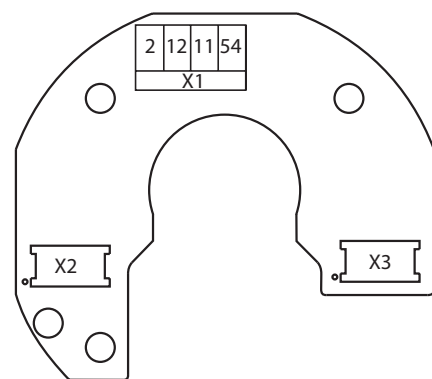
#### FWS 320 B

X1 Ribbon cable to SCT 320 or TAN 320

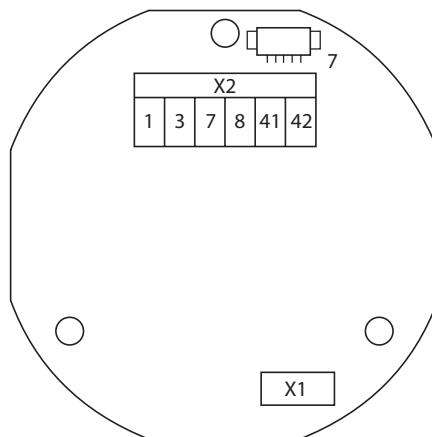
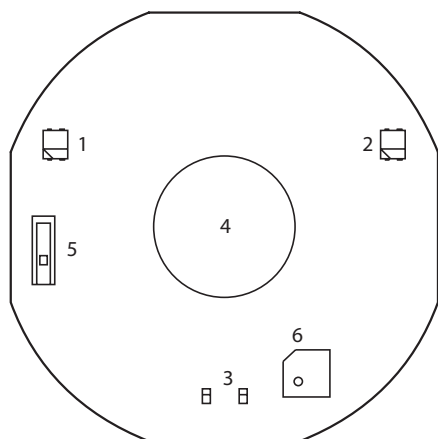


#### SCT 320

X1 Key switch  
X2 Ribbon cable to FWS 320 B  
X3 Ribbon cable to TST 320



#### TAN 320



- 1 LED – status locking mechanism
- 2 LED – door status
- 3 LED – alarm / fault
- 4 Emergency push button illuminated
- 5 Sabotage contact
- 6 Buzzer (75 dB at 50 cm)

- 7 Programming interface
- X1 Ribbon cable to SCT 320 or FWS 320 B

#### 5.4.4 Ribbon cable

see chap. 5.2.5

#### 5.4.5 Emergency exit sign (FWS)

see chap. 5.2.6

#### 5.4.6 Key switch SCT 320

see chap. 5.2.7

#### 5.4.7 Control door terminal TAN 320

Control door terminal TAN 320, mat. no. 141033

##### 5.4.7.1 Terminal assignment TAN 320

Plug-in and screw terminals, max. cable cross-section: 1 mm<sup>2</sup>

Terminal panel	Terminal	Function
X2 - BK	1	GND
	3	24VDC (supply)
	7	indirect disconnection +
	8	indirect disconnection -
	41	RS485-B
	42	RS485-A




## 5.5 Terminal box KL 220

**EltVTR**  
**EN 13637**

Terminal box KL 220 offers 4 additional inputs and 6 additional outputs.

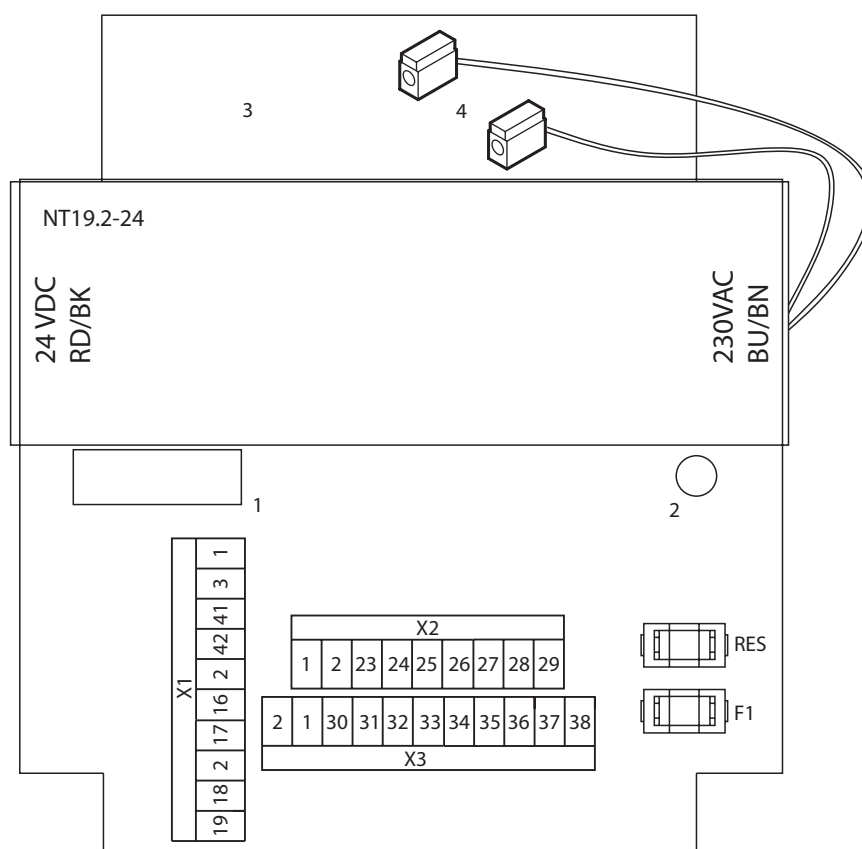
### 5.5.1 Power supply

Mains connection	Fixed connection (installation cable)
Power supply	230 V AC $\pm 10\%$ , 50 Hz 
Power supply	NT19.2-24, 800 mA
Secondary voltage (for external components)	24VDC ( $\pm 5\%$ ), SELV

### 5.5.2 Installation

UP variant	in flush-mounted connection box, 107 x 107 x 57 mm (W x H x D)
AP variants	in AP housing, 113 mm x 113 mm x 58 mm (W x H x D)

### 5.5.3 Terminal assignment



- 1 Sabotage contact
- 2 LED RD – operation
- 3 Mains connection
- 4 Mains connection terminals

- F1 Fuse 24 V  
1.0 A, SMF 125 V, fast-acting, mat. no. 111789
- RES Reserve fuse F1
- X1 Supply, TZ 320,  
Additional PE
- X2 Additional PA
- X3 Additional PA

Plug-in and screw terminals, max. cable cross-section: 1 mm<sup>2</sup>

Terminal panel	Terminal	Function	
X1	1	GND	
	3	24VDC (supply)	
	41	RS485-B	
	42	RS485-A	
	2	24V	
	16	PE1	
	17	PE2	
	2	24V	
	18	PE3	
	19	PE4	
X2	1	GND	
	2	24V	
	23	NO	PA1
	24	COM	max. 1 A, 30 VDC
	25	NO	PA2
	26	COM	max. 1 A, 30 VDC
	27	NO	PA3
	28	COM	max. 1 A, 30 VDC
	29	NC	
X3	2	24V	
	1	GND	
	30	NO	PA4
	31	COM	max. 1 A, 30 VDC
	32	NC	
	33	NO	PA5
	34	COM	max. 1 A, 30 VDC
	35	NC	
	36	NO	PA6
	37	COM	max. 1 A, 30 VDC
	38	NC	

## 6 Installation of door control unit TZ 32x and door terminal T 320

### 6.1 Position of the emergency push button

**EltVTR**

Installation height above FF	850 mm to 1200 mm
Distance to the main closing edge of the door	no requirement

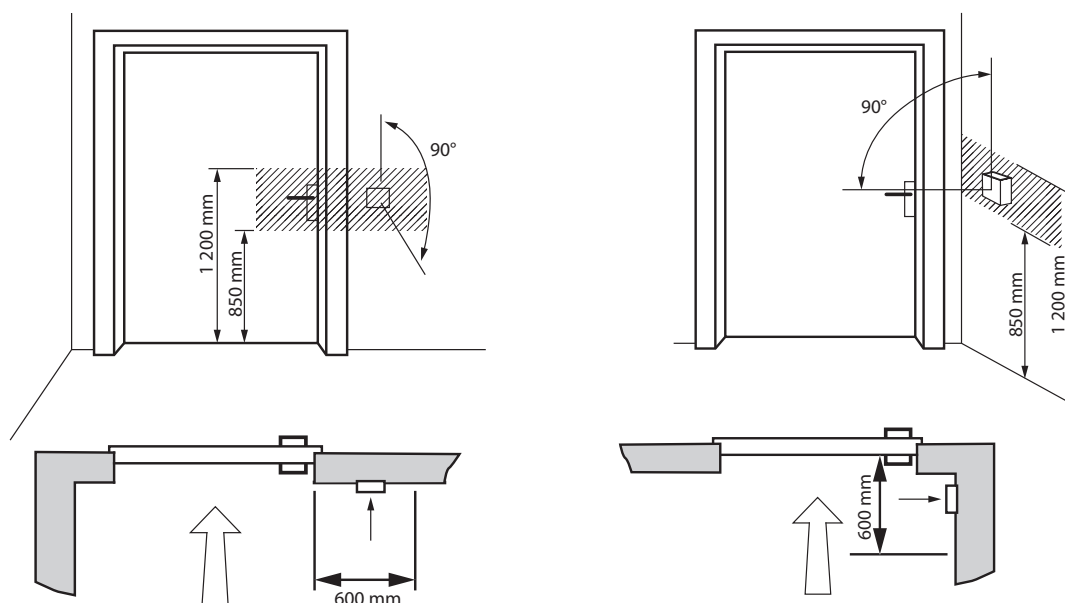


Attach the emergency exit sign in such a way that the arrow is pointing towards the emergency push button.

**EN 13637**

Installation height above FF	800 mm to 1200 mm
Distance to the main closing edge of the door	less than 600 mm

For this reason, GEZE recommends this position for the emergency push button to comply with the requirements from EltVTR and DIN EN 13637:2015:



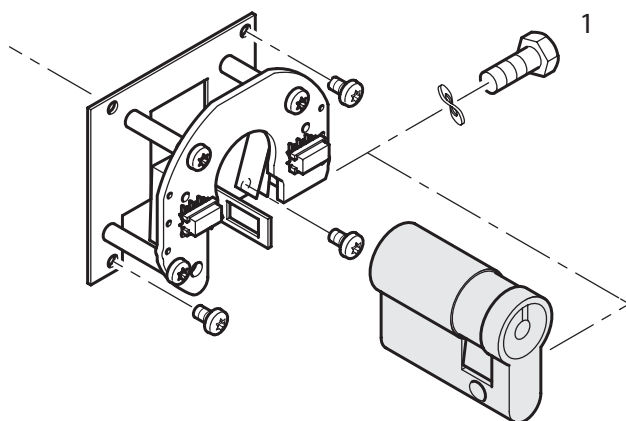
In the case of double-leaf doors, the distance 600 mm refers to the secondary closing edge of the active leaf.

### 6.2 Replacing the lock cylinder



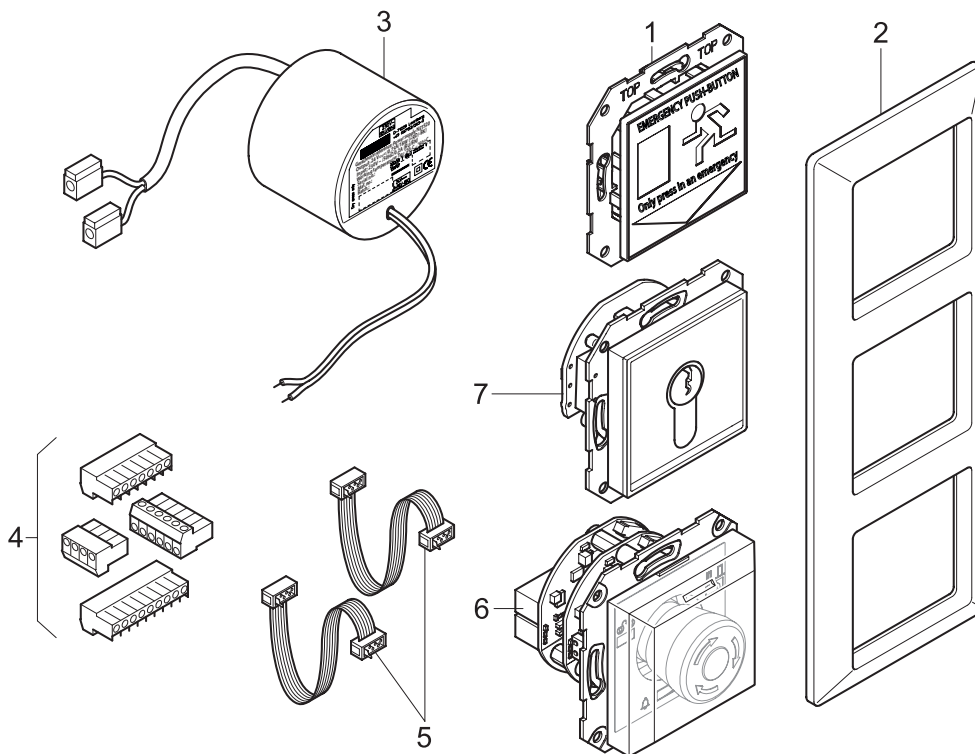
The lock cylinder installed in the door control unit or the door terminal can be replaced by an on-site lock cylinder:

- Euro profile half cylinder / 40 mm (30 mm/10mm) / 8-fold adjustment
- ▶ Undo the cylinder head screw (1),
- ▶ Replace the Euro profile half cylinder and
- ▶ Fasten with cylinder head screw



## 6.3 Installation UP door control unit and UP door terminal

Installation is described using the example of TZ 320 BSN, EltVTR:



- 1 FWS 320 B
- 2 UP frame
- 3 UP power supply
- 4 Terminals
- 5 Ribbon cable
- 6 TST 320
- 7 SCT 320

► Use UP boxes with a depth of 62.5 mm.

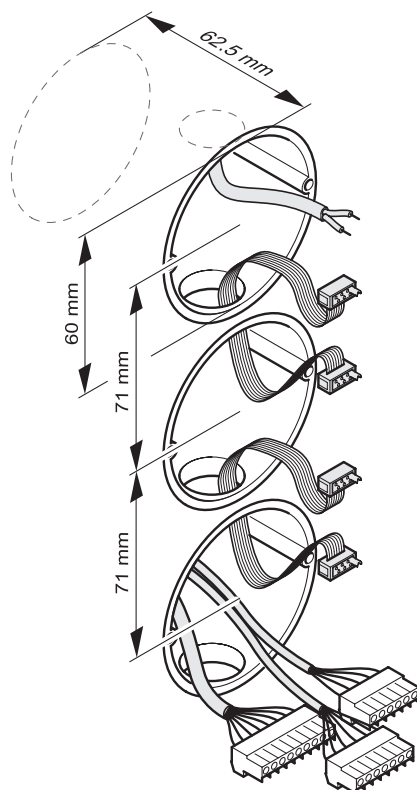


The layout of the assemblies in the UP boxes can be selected as required.  
The following must be heeded:

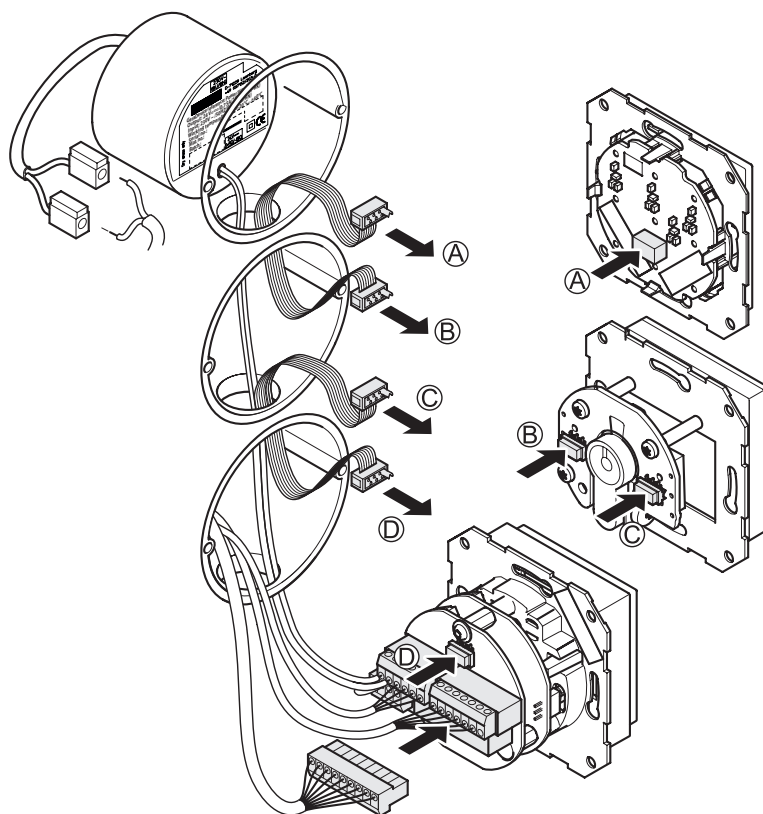
- For position of the emergency push button, see chap. 6.1
- The arrow on the emergency exit sign must be pointing towards the emergency push button.

**EltVTR**

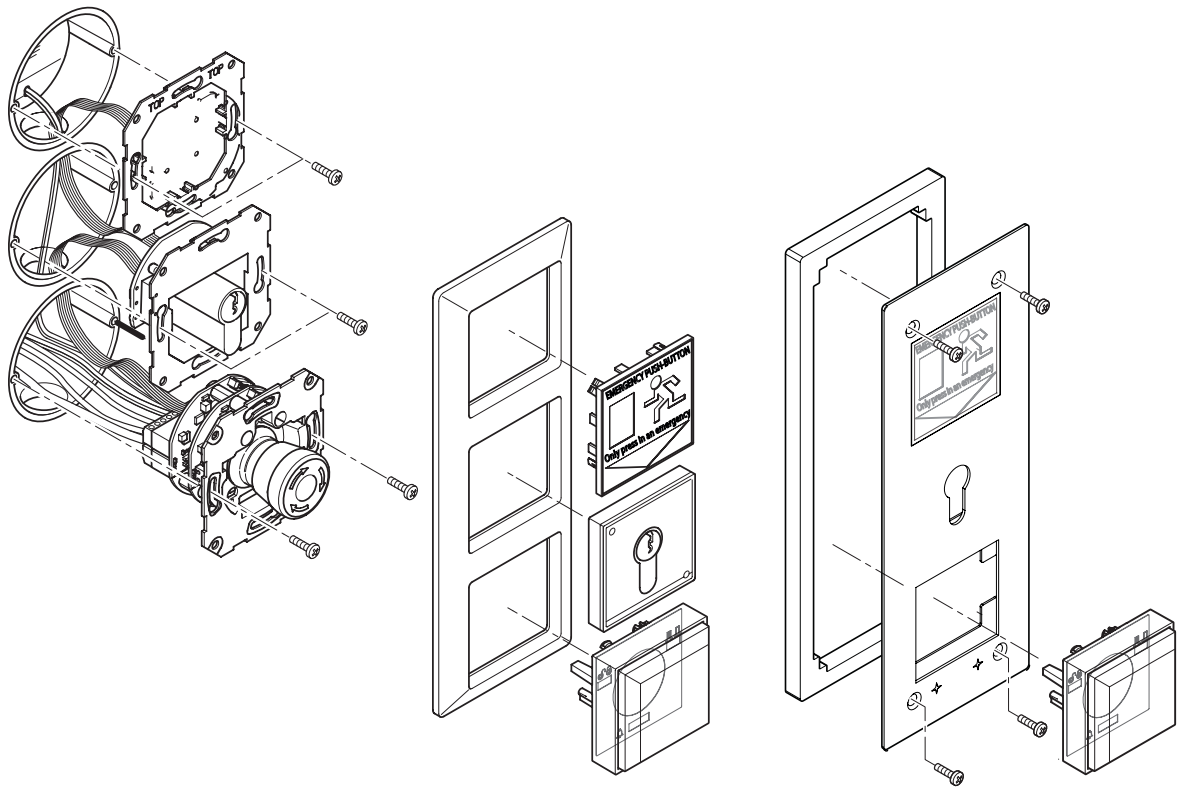
- Route mains connection cable, cables to the external assemblies and ribbon cable in the UP boxes
- Connect external assemblies to the terminals in accordance with the wiring diagram, see section 7.



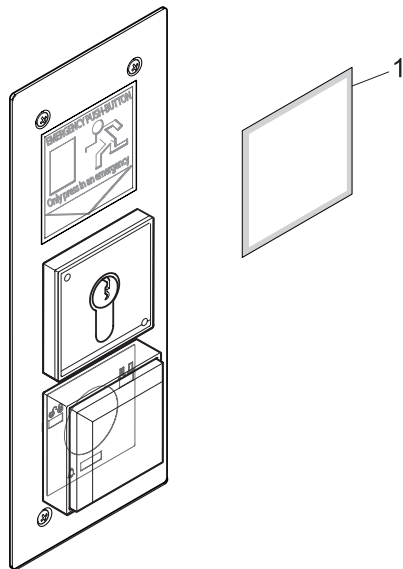
- Connect the power supply in accordance with the wiring diagram (see 7.1.2) and insert behind the emergency exit sign in such a way that the 24 V side (RD, BK) is facing the emergency exit sign.
- Connect TST 320, SCT 320 and FWS 320 B using the two ribbon cables.
- Set jumper to TST 320 in accordance with the wiring diagram (see 7.3 and 7.10.1).
- Plug terminals onto the TST 320.



- Mount assemblies and UP frame or stainless steel front plate.

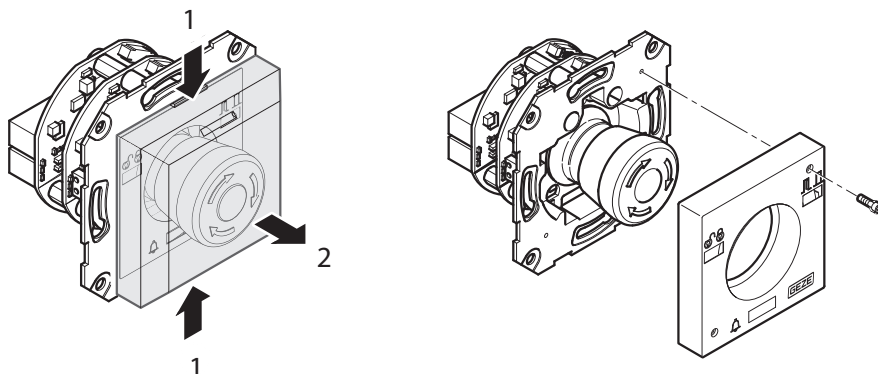


- EltVTR** ► Glue the adhesive frame (1) provided in place.



### 6.3.1 Fasten the impact cover to the support ring

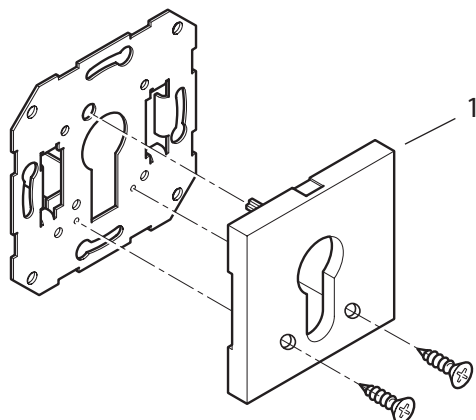
If necessary, the impact cover can be screwed to the support ring:



- ▶ Remove the inner part of the impact cover. To do this, press the inner part together at the two notches (1) and pull it out (2).
- ▶ Screw the lower part of the impact cover to the support ring. There are two holes provided on the support ring and on the lower part of the impact cover (behind the film) for this purpose. Use self-tapping screw 2.2 mm x 9.5 mm.
- ▶ Fit the inner part of the impact cover.

### 6.3.2 Fastening the key switch

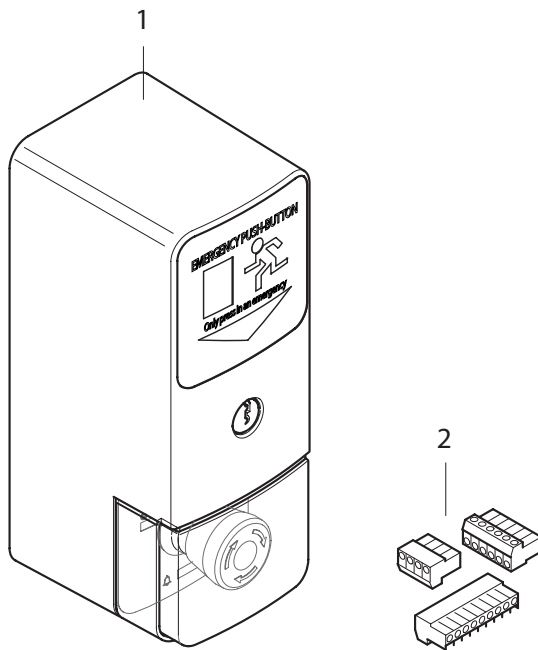
If necessary, the cover (1) of the key switch SCT 320 can be screwed to the support ring:



- ▶ There are two recesses on the back of the cover (1). Drill through the cover at these two spots (Ø 2.5mm)
- ▶ Set the cover (1) in place and screw from the front (recommendation: 2.2 x 13 mm self-tapping screws). The holes in the cover have to be countersunk accordingly for this.

## 6.4 Installation AP door control unit and AP door terminal

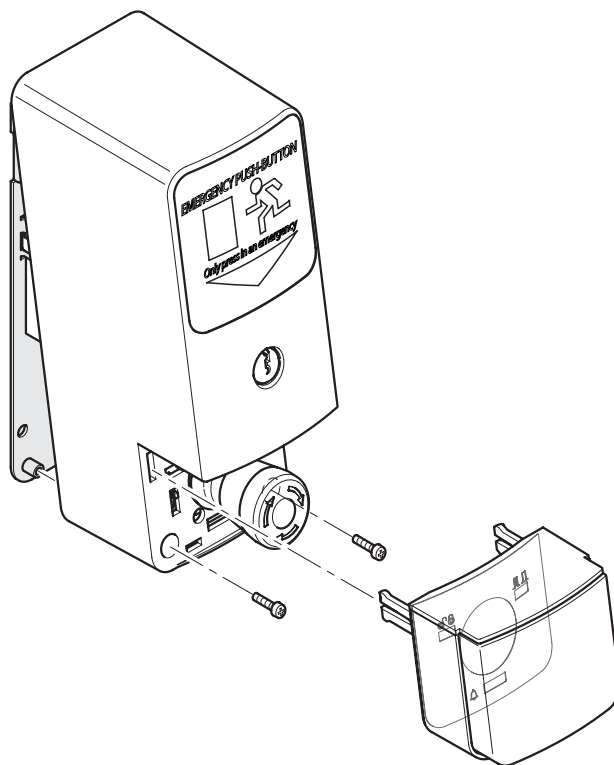
Installation is described using the example of TZ 320 BSN, EltVTR:



**1** Door control unit TZ 320 BSN

**2** Terminals

► Open housing.



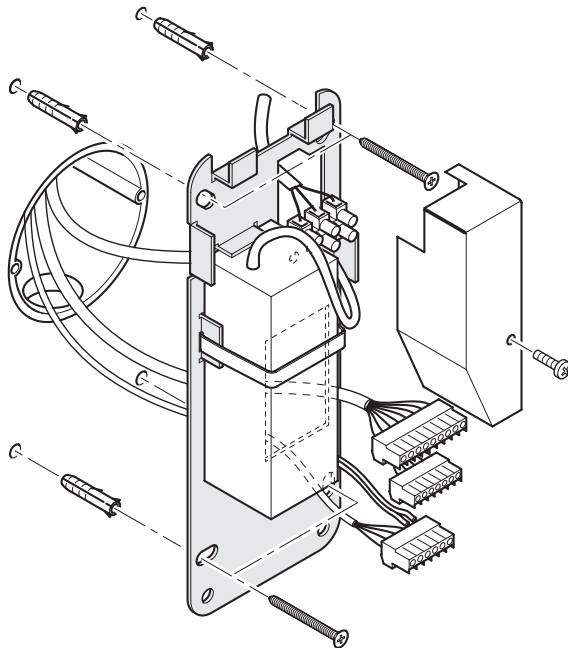


- ▶ Mount wall bracket.

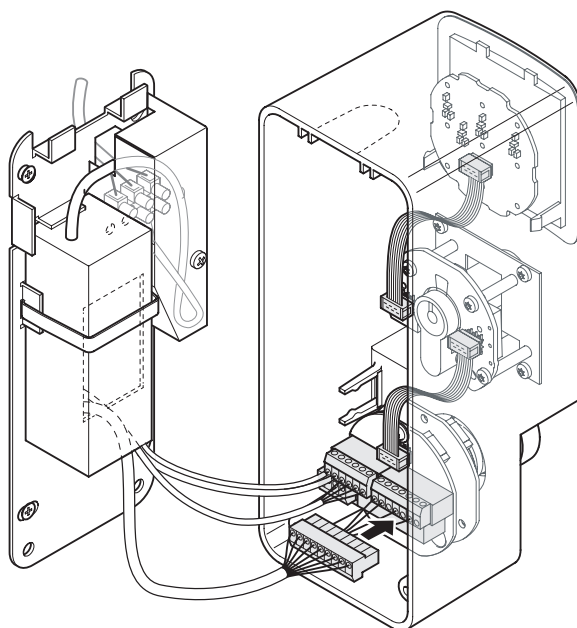


For position of the emergency push button, see 6.1

- ▶ Remove the mains connection cover.
- ▶ Connect the mains cable to the luster terminals in accordance with the wiring diagram, see 7.1.3
- ▶ Mount the cover.
- ▶ Connect external assemblies to the terminals in accordance with the wiring diagram (see section 7).
- ▶ Set jumper to TST 320 in accordance with the wiring diagram (see 7.3 and 7.10.1).



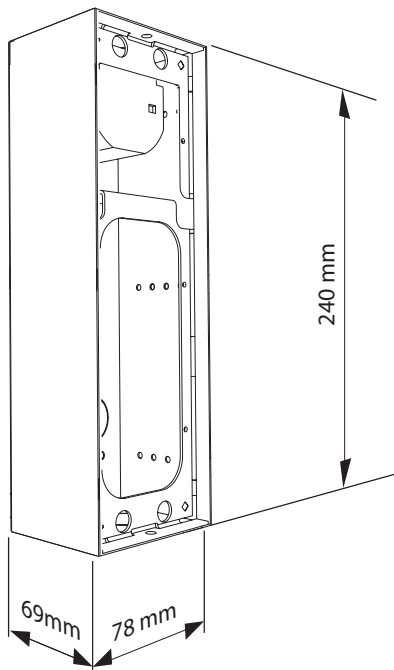
- ▶ Plug terminals onto the TST 320.
- ▶ Hook and screw the housing in place.
- ▶ Insert the emergency push button cover.



#### 6.4.1 Installation of the door control unit in the stainless steel UP or AP box.

Installation of the door control unit is described using the example of TZ 320 BSN, EltVTR.

- Mount UP or AP box.
- Use screws suitable for the substrate (not included in the scope of supply).

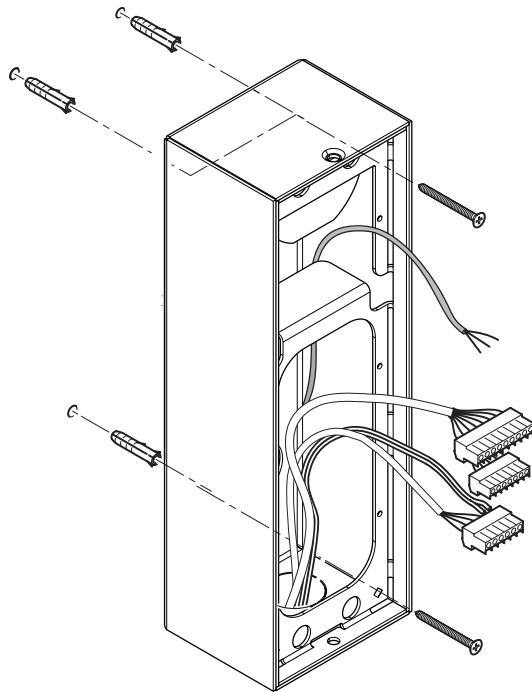


Installation UP/AP box



For position of the emergency push button, see 6.1

- ▶ Line-feed from the rear or from below possible.
- ▶ Route the mains connection cable / cables to the external assemblies in separate holes through the cable bushings.
- ▶ Insert the mains cable approx. 350 mm into the housing with sheath.



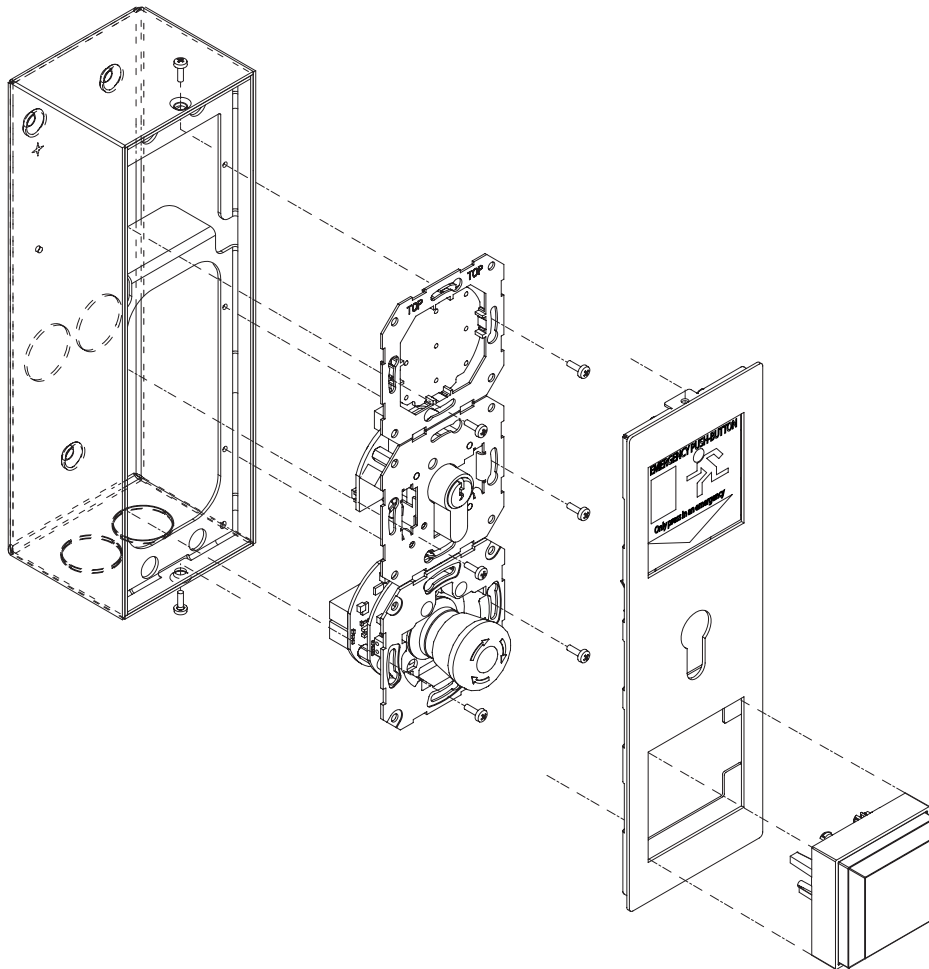
- ▶ Connect the power supply in accordance with the wiring diagram (see 7.1.4) and insert behind the emergency exit sign in such a way that the 24 V side (RD, BK) is facing the emergency exit sign.
- ▶ Remove the cover of the SCT 320.
- ▶ Remove the cover of the FWS 320 B.
- ▶ Connect TST 320, SCT 320 and FWS 320 B using the two ribbon cables.
- ▶ Set jumper to TST 320 in accordance with the wiring diagram (see 7.3 and 7.10.1).
- ▶ Connect external assemblies to the terminals in accordance with the wiring diagram (see section 7).



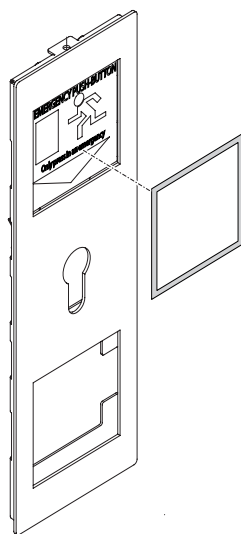
When connecting the cables, make sure that they are only stripped as far as necessary, in order to prevent contact with the metal housing.

---

- Plug terminals onto the TST 320.
- Fasten assemblies on the housing.
- Mount the front plate.
- Plug impact cover to TST 320.



- EltVTR** ► Glue the adhesive frame (1) provided in place



## 7 Wiring diagram

### 7.1 Mains connection of the door control unit TZ 32x



#### **DANGER**

**Danger of fatal injury due to electric shock!**

► Ensure that the connection to the mains voltage is carried out by a qualified electrician.

- Install a mains fuse on site in the form of a miniature circuit breaker. The rated value must be matched to the conductor type, conductor cross-section, type of routing and ambient conditions of the on-site power supply circuit. The automatic cut-out must have at least 4 A and may have maximum 16 A.

#### 7.1.1 Power supplies

The GEZE SecuLogic emergency exit system uses these power supplies:

**EltVTR**  
**EN 13637**

Type	max. current
NET 320, mat. no. 139707	750 mA
NT19.2-24, mat. no. 089862	800 mA
NT1.1A-24V UP, mat. no.151426	1100 mA
NT6.25A-24 HS, mat. no. 192113	6250 mA

During connection of external assemblies to the door control unit the maximum possible current consumption of the power supply used must be taken into account. The different assemblies have these current consumptions:

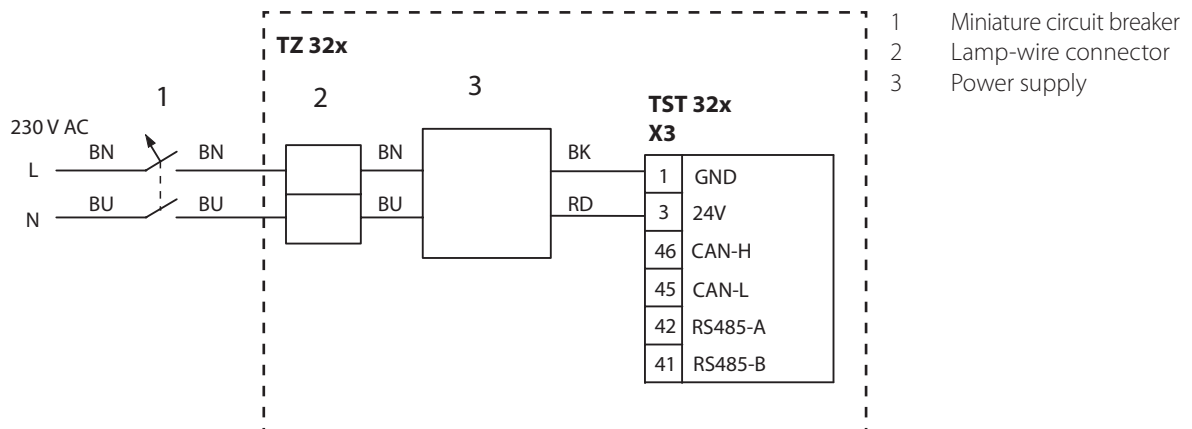
Designation	Designation	Current consumption [mA]
FTÖ 332	Emergency exit electric strike	95
FTV 320	Escape door lock	100 (briefly 240)
FWS 320 B	Emergency exit sign (illuminated)	30
IQ lock EL (MST210)	Motor lock	80 (briefly 250)
IQ lock EM	Lever lock	210
MA 500	Hold-open magnet	250
MTA 220	Master panel	30
NOT 220	Emergency push button	30
NOT 320	Emergency push button	30
NTA 220	Emergency panel	30
RP 220	Relay board	10
SCT 320	Key switch	0
SCT 221	Key switch	0
SCT 222	Key switch	30
SLE 220	Indicator lamp	20
SOLEX 10	Flashlight	90
SQUASHNI	Signal horn	20
STA 220	Slave panel	30
TAN 320	Control unit door terminal	100
TOPLOCK CTI	Number code lock	50
TOPLOCK CTS V	Number code lock	50
TST 32x	Door controller	100
TST 32x	Safety circuit	20
SLH	Multifunctional alarm	35
Repeater	GEZE bus	80




If the power of the power supply integrated in the door control unit is not sufficient, use the external top hat rail power supply NT6.25A-24 HS for supply.

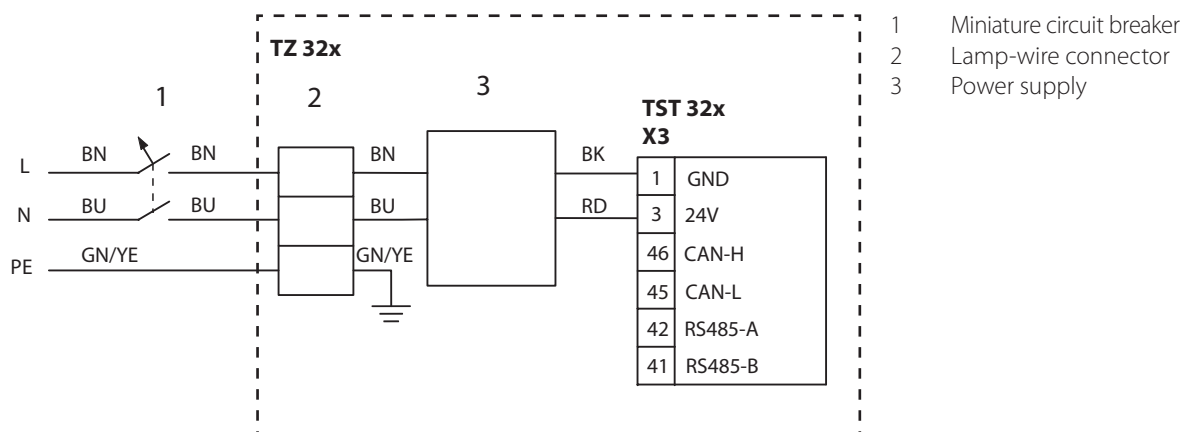
## 7.1.2 Mains connection of the TZ 32x UP variants

 The TZ 32x UP variants are protection class II devices, no protective earth conductor is connected.




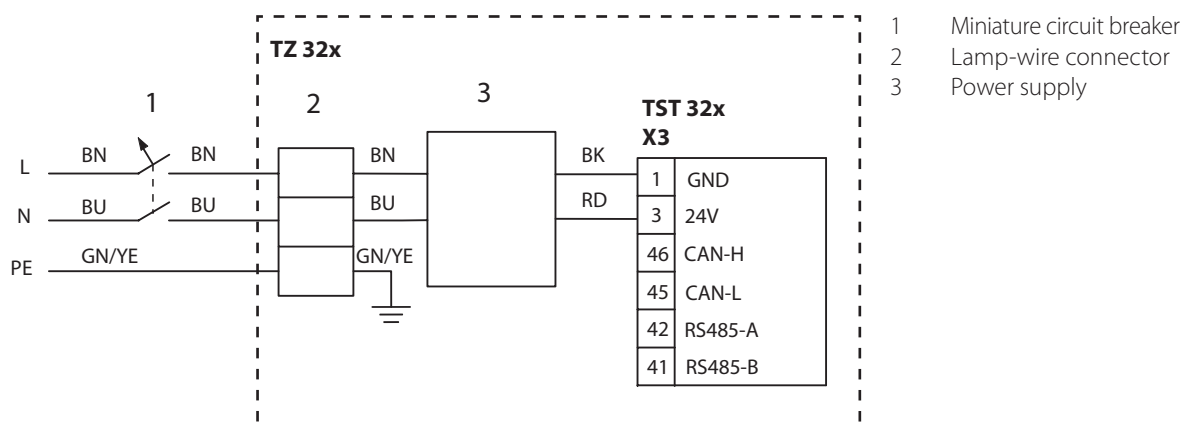
## 7.1.3 Mains connection of the TZ 32x AP variants

 The TZ 32x AP variants are protection class I devices, so connect a protective earth conductor.  
▶ Perform the protective earth connection test in accordance with VDE 0100 Part 600.

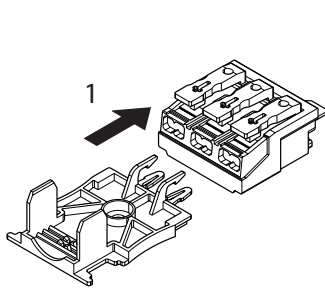


## 7.1.4 Mains connection of the TZ 32x variants in the UP or AP stainless steel box

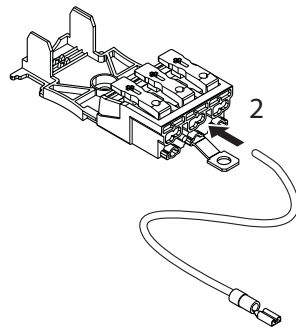
 The TZ 32x variants in the UP or stainless steel box are protection class I devices, so connect a protective earth conductor.  
▶ Perform the protective earth connection test in accordance with VDE 0100 Part 600.



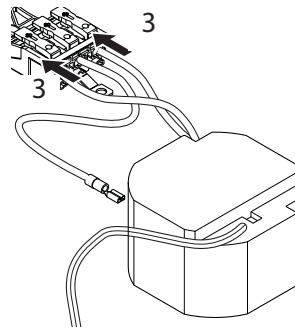
### 7.1.4.1 Installation of the mains connection terminal and mains connection



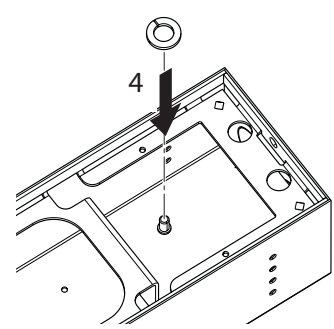
- Insert strain relief plate into the mains connection terminal.



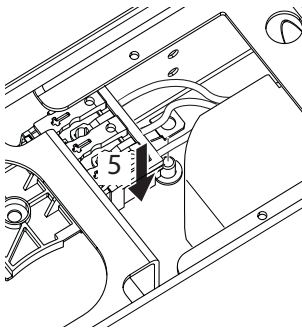
- Connect earthing cable to the mains connection terminal.



- Connect the primary side of the power supply to the mains connection terminal.

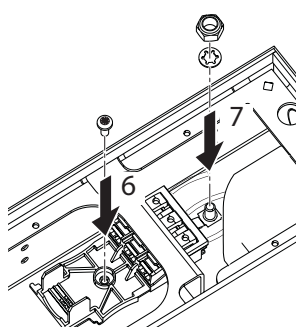


- Fit a split washer over the M4 bolt for earthing.

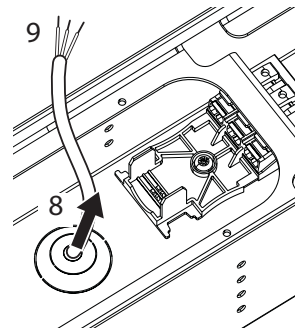


Position the mains connection terminal in the housing:

- Fit the PE contact of the mains connection terminal over the M4 bolt.



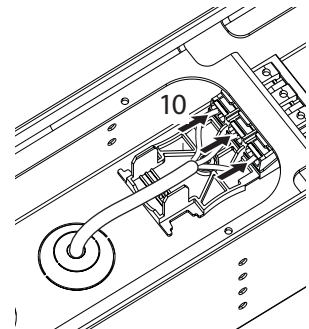
- Fasten the strain relief plate using screw and support.
- Connect PE contact to the housing:
- Position lock washer over PE contact and fasten with nut.



- Route power supply line through the rubber grommet.
- Strip wires.



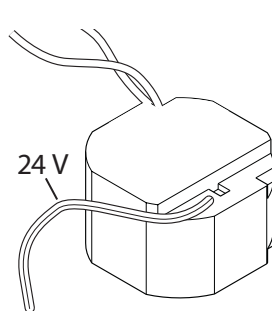
Only strip wires so far that sheath can be clamped in the strain relief.



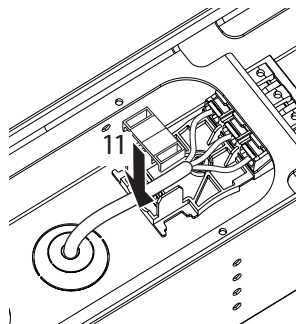
- Connect wires of the power supply line to the mains connection terminal.



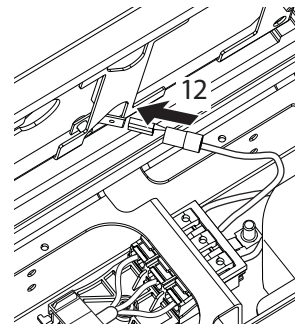
It is best to use pointed pliers to insert the wires into the mains connection terminal.



- Attach the power supply in the housing in such a way that the 24V side (RD, BK) is facing the emergency exit sign.



- Secure the power supply line using the strain relief.



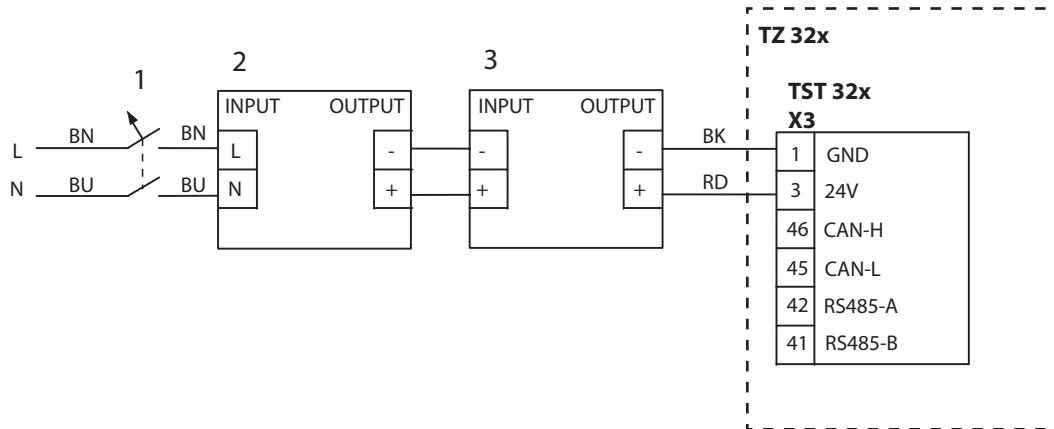
- Insert the tab connector of the earthing cable on the front plate.

## 7.1.5 Uninterruptible power supply STEP UPS

Uninterruptible power supply STEP UPS; 24 V, max. 3A, 46 Wh, mat. no. 193212  
Power supply NT6.25A-24 HS, mat. no. 192113



- Heed the instructions on the supplementary sheet for the uninterruptible power supply STEP UPS.
- The STEP UPS is used to secure the emergency exit even in the event of a power failure.
  - Use the door control units without integrated power supply for this.
  - Use the power supply NT6.25A-24 HS as an external power supply. It can be mounted on the same top hat rail alongside the uninterruptible power supply STEP UPS.
  - The STEP UPS has status contacts (CHARGE, BAT. MODE, ALARM).



- 1 Miniature circuit breaker  
2 NT6.25A-24V HS  
3 STEP UPS

If the STEP UPS has current "I" applied, this results in a buffer time (in hours) following power failure of:  
Buffer time = 1.9 / current I [A]

## 7.2 Locking mechanism



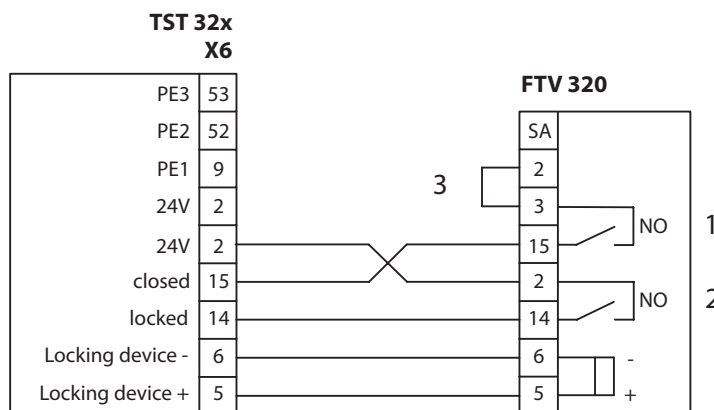
Ensure the locking mechanism is connected correctly (polarity). Otherwise the control unit can become damaged.



In the case of several locking mechanisms, wire the coils in parallel and the feedbacks in series.

### 7.2.1 Escape door lock FTV 320

Heed the installation instructions of the escape door lock FTV 320.

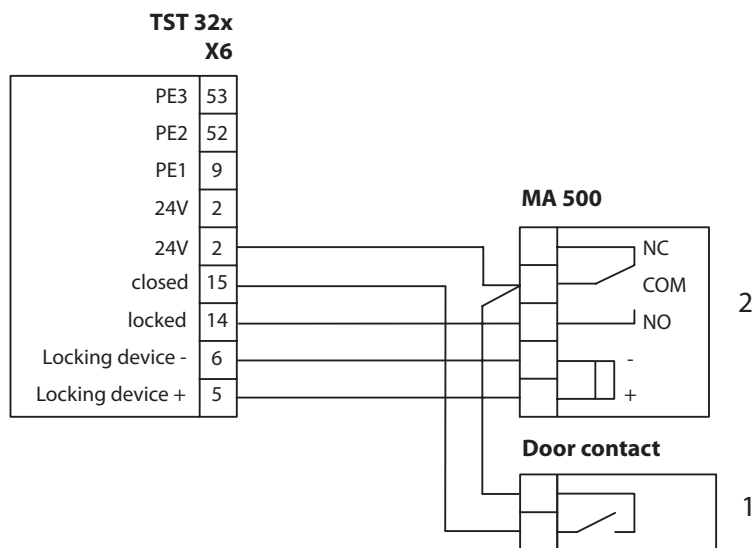


- 1 Door is closed when contact closed  
2 Door is locked when contact closed  
3 State of delivery



## 7.2.2 Holding magnet MA 500

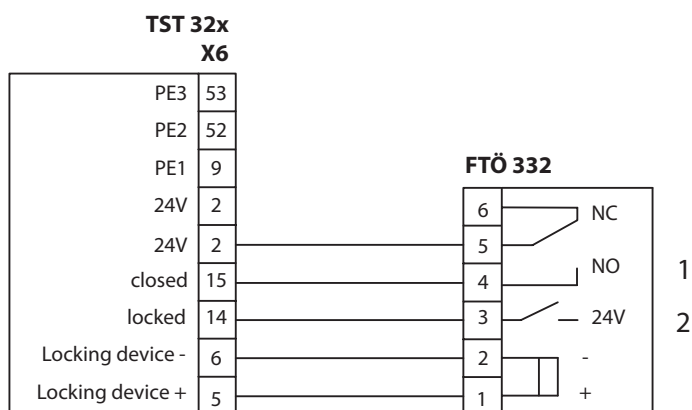
Heed the supplementary sheet for the hold-open magnet MA 500  
 Reed switch contact set, mat. no. 106133



- 1 Door is closed when contact closed
- 2 Door is locked when contact closed

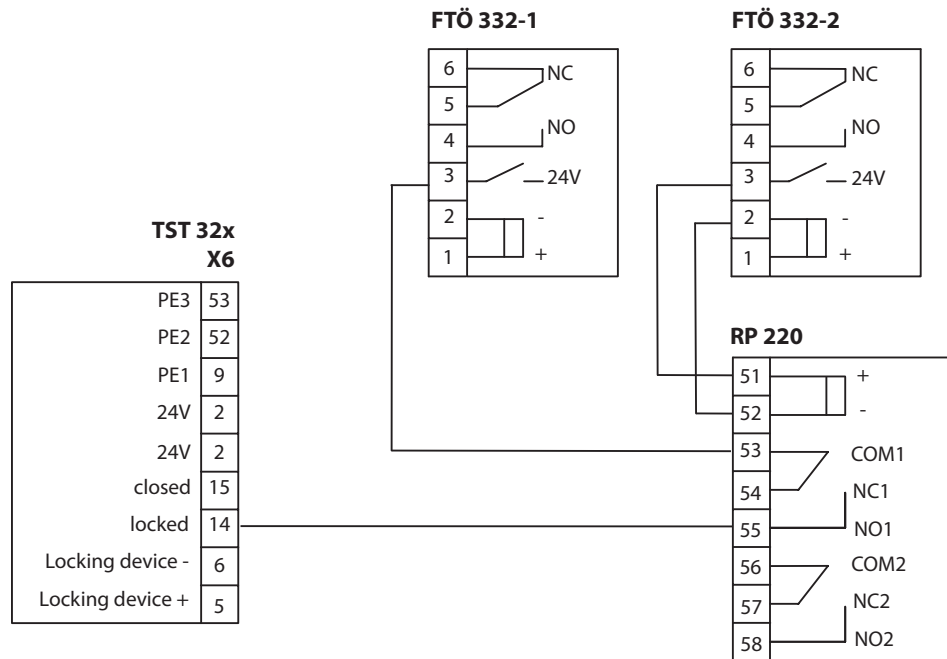
## 7.2.3 Emergency exit electric strike FTÖ 332

Relay board RP 220, mat. no. 102355  
 Heed the installation instructions for the emergency exit electric strike FTÖ 332.



- 1 Door is closed when contact closed
- 2 Door is locked when contact closed

If several emergency exit electric strikes are connected, connect the *locked* messages in series using the relay board RP 220.

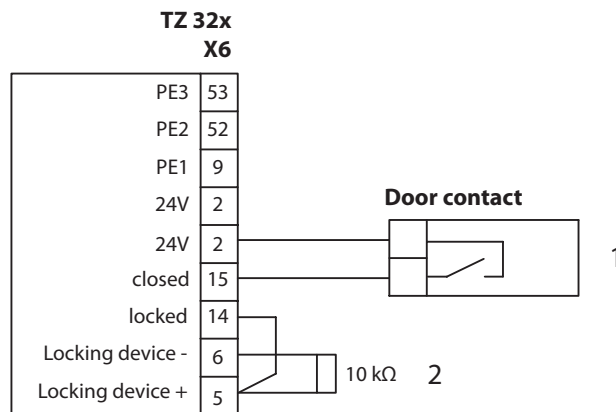


#### 7.2.4 Operation without locking mechanism

Reed switch contact set, mat. no. 106133

Resistor 10 kΩ, mat. no. 139902

If only the door state is to be monitored, it is possible to operate the system without locking.



1 Door is closed when contact closed

2 The door is locked when a voltage of 24V is applied to terminal 5 (simulated *locked* message)

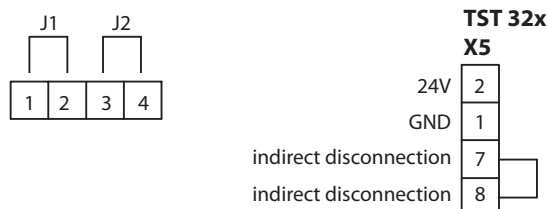
## 7.3 External / central emergency push button

With indirect disconnection

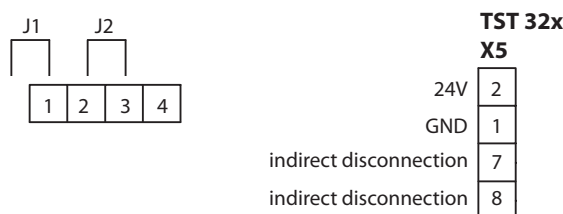
- one or more external emergency buttons which release the locking mechanism safely when actuated can be switched in the safety circuit of a door control unit,
- one or more central emergency push buttons which release all door control units safely when actuated can be switched in the safety circuits of several door control units.

Indirect disconnection is activated with the jumpers J1 and J2 of TST 32x, remove the wire bridge installed between terminals 7 and 8 in the state of delivery:

**no indirect disconnection (factory setting)**



**indirect disconnection**



Route the normally closed contacts of the emergency push buttons in two separate lines. In the connection space for the emergency push buttons additionally insulate the wires to the normally closed contact with insulating hose.



If there are several emergency push buttons, connect the lighting in parallel and the normally closed contacts in series.

### 7.3.1 External emergency button



For the position of the external emergency button on the door see 6.1

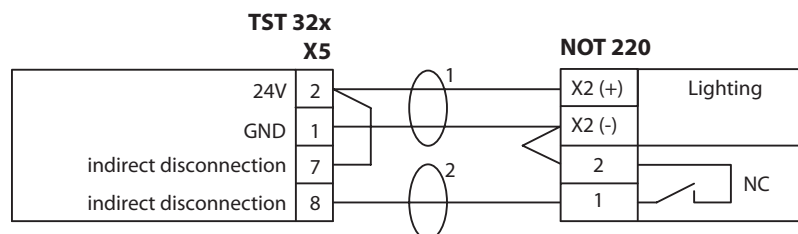
Mount an emergency exit sign directly next to the external emergency button.

The arrow on the emergency exit sign must be pointing towards the emergency push button.

**EltVTR**

#### 7.3.1.1 Emergency push button NOT 220

Heed the supplementary sheet for the emergency push button NOT 220.

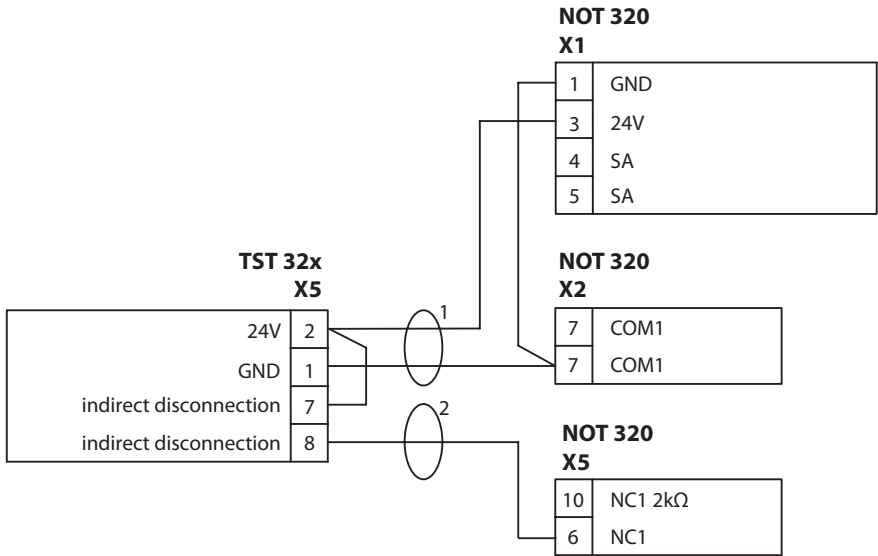


1 Line 1

2 Line 2

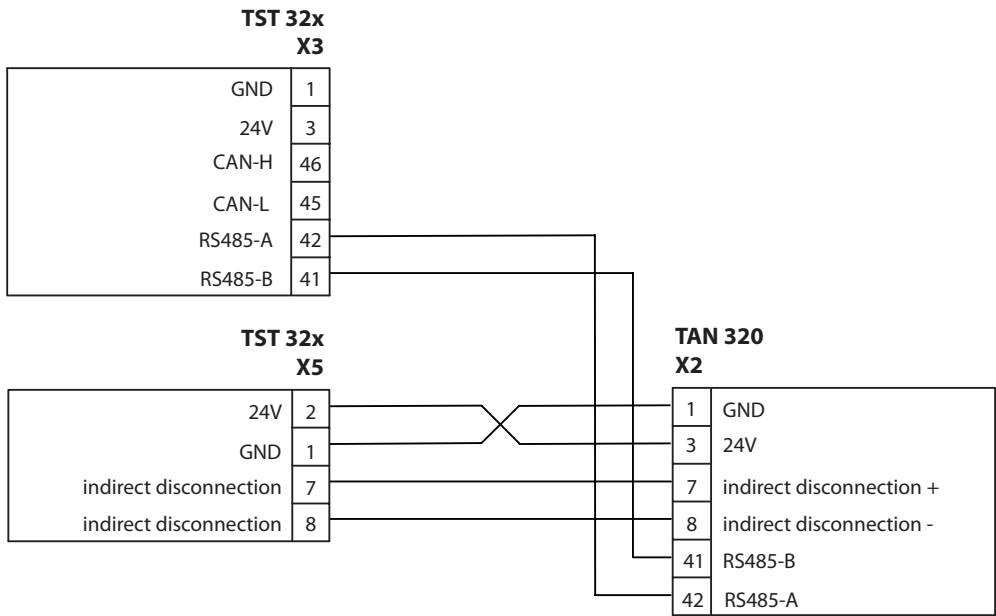
7.3.1.2 Emergency push button NOT 320

Emergency push button NOT 320 see 5.3  
Heed the supplementary sheet for the emergency push button NOT 320.



7.3.1.3 External emergency button in the door terminal T 320

Door terminal T 320 see 5.4  
Heed the supplementary sheet for the door terminal T 320.  
A door terminal connected to the door control unit is automatically detected.



### 7.3.2 Central emergency push button

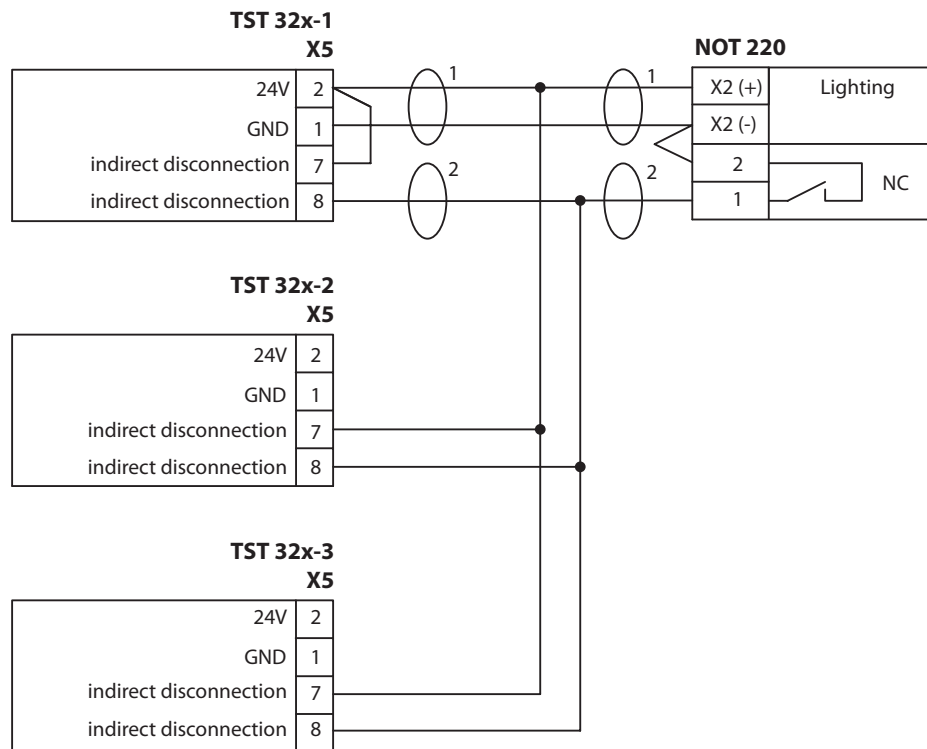


The supply of the safety circuit from the power supply of the first door control unit is shown. The current consumption of every door control unit in the safety circuit must be heeded (see 7.1.1). If necessary, supply the safety circuit through a separate power supply.

The safety circuit must not be longer than 400 m.

#### 7.3.2.1 Emergency push button NOT 220

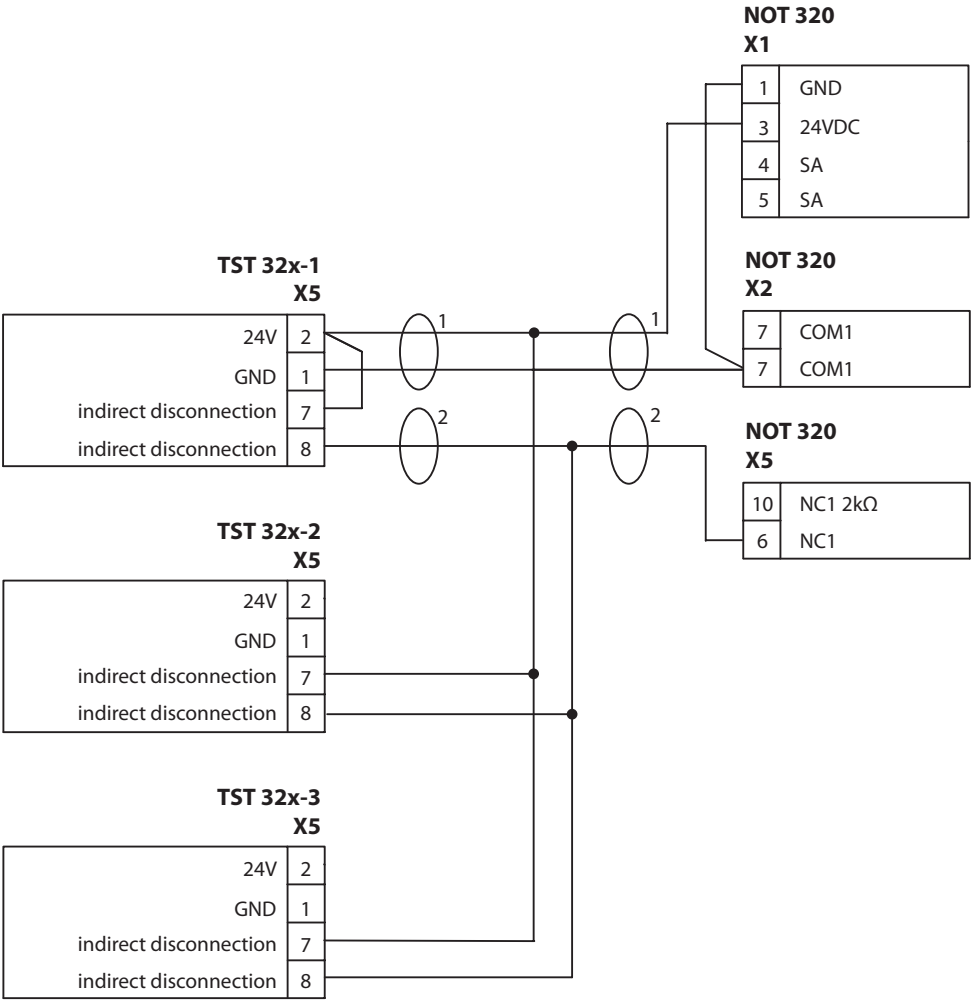
Heed the supplementary sheet for the emergency push button NOT 220.



- 1 Line 1
- 2 Line 2

7.3.2.2 Emergency push button NOT 320

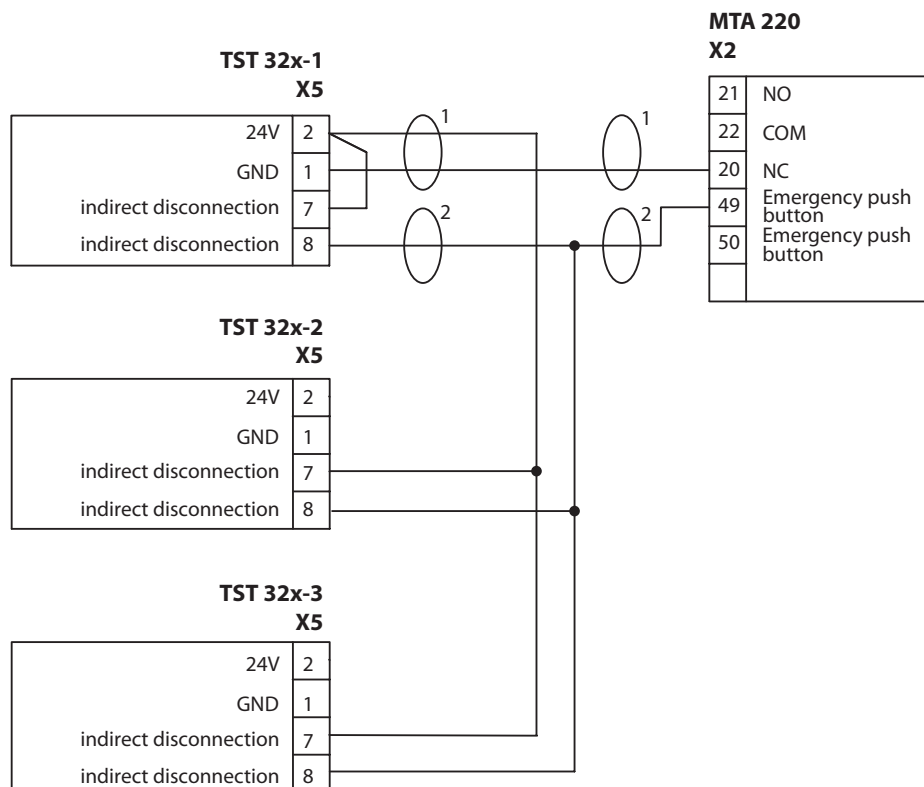
Emergency push button NOT 320 see. 5.3.  
Heed the supplementary sheet for the emergency push button NOT 320.



### 7.3.2.3 Emergency-off panel in the door panel TE 220

**EltVTR**  
**EN 13637**

Heed the supplementary sheet for the door panel TE 220.



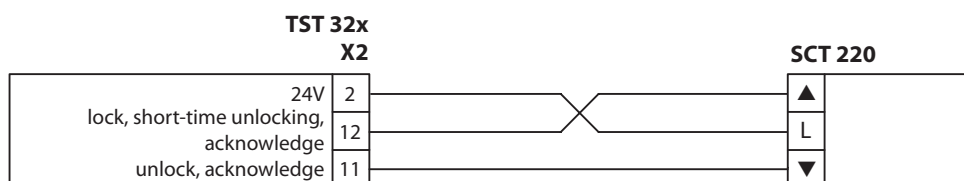
- 1 Line 1
- 2 Line 2

## 7.4 External key switch for controlling the door control unit

### 7.4.1 Key switch SCT 220

One-pole reversible push button (two normally open contacts)

Heed the supplementary sheet for the key switch SCT 220.



## 7.4.2 Key switch SCT 222

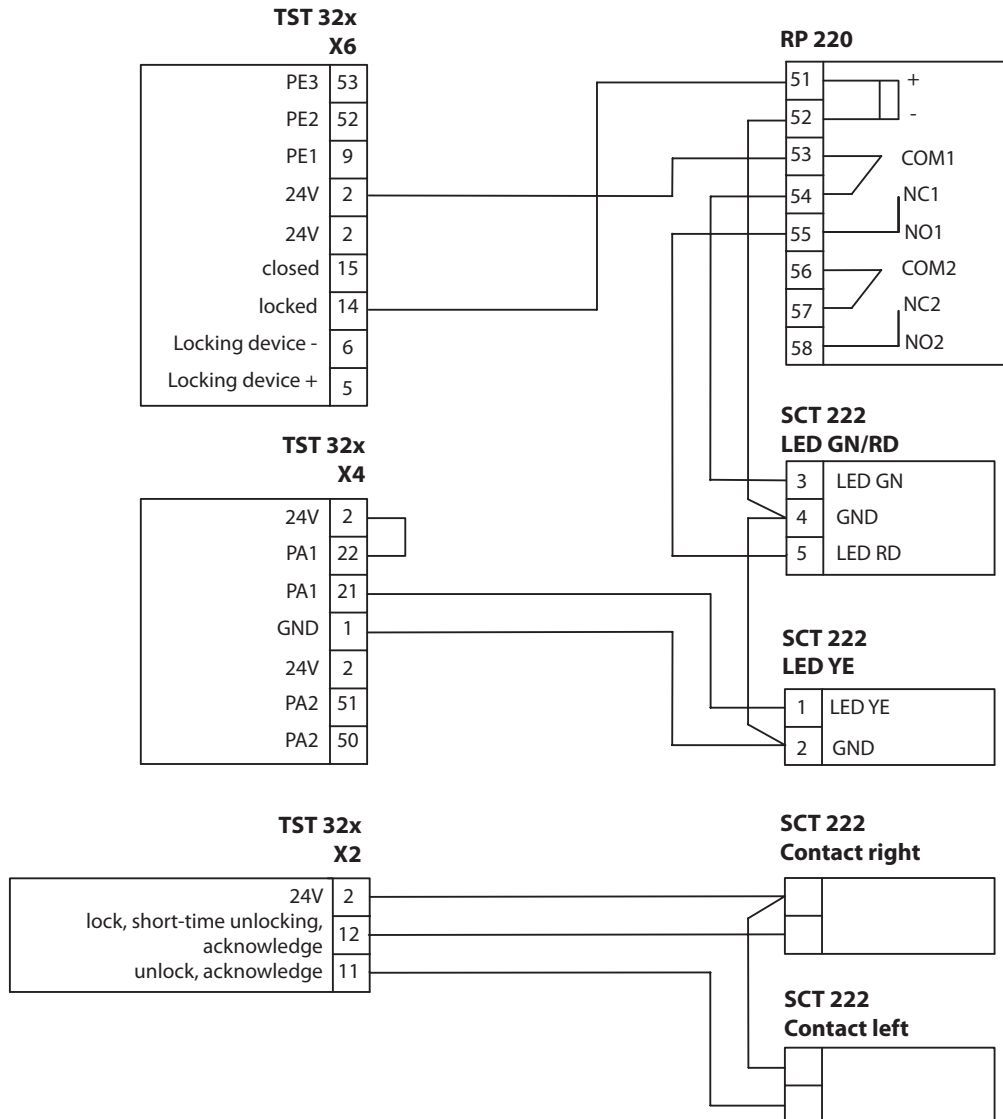
One-pole reversible push button (two normally open contacts) with LEDs

Relay board RP 220, mat. no. 102355

Heed the supplementary sheet for the key switch SCT 222.

The green/red LED indicates the state at the *locked* input of the door controller. Relay board RP 220 is required for this.

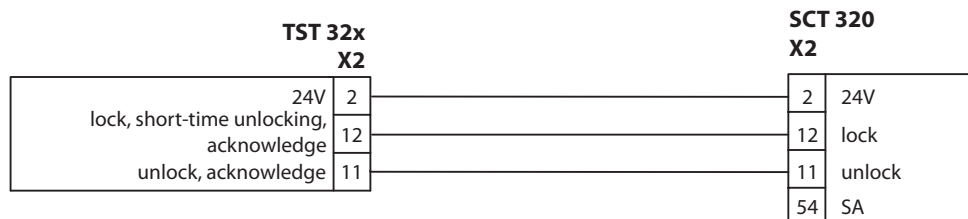
The yellow LED indicates a fault. For this, set the parameter for output PA1 of the door controller to *System fault* and the type of contact to *Normally open contact*.





### 7.4.3 Key switch SCT 320

One-pole reversible push button (two normally open contacts) with sabotage contact key switch SCT 320 see 5.2.7



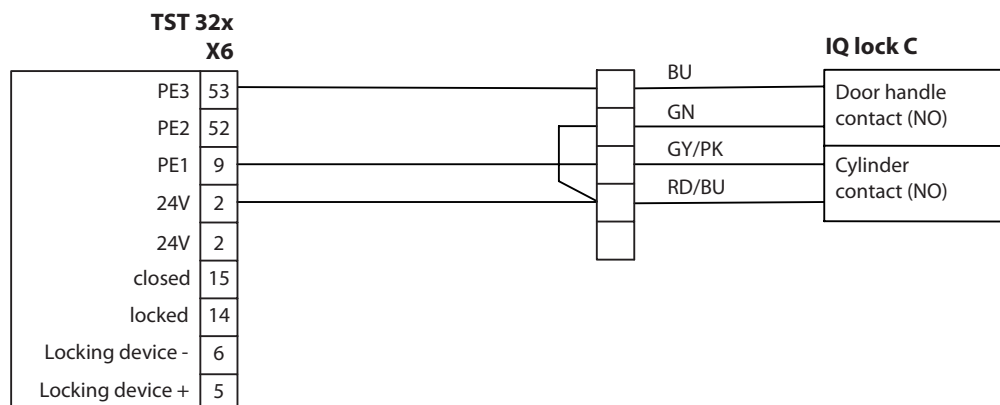
## 7.5 Panic lock

### 7.5.1 Contact lock IQ lock C

Heed the supplementary sheet for the contact lock IQ lock C.

Set the parameter for input PE1 to *Short-time unlocking* (factory setting). Operating the lock cylinder triggers short-time unlocking.

Set the parameter for input PE3 to *Door handle*. Pressing the door handle with the door control unit locked triggers a pre-alarm.



### 7.5.2 Lever lock IQ lock EM

Heed the supplementary sheet for the lever lock IQ lock EM.

Set the parameter for input PE1 to:

- *Short-time unlocking* (factory setting):  
Operating the lock cylinder triggers short-time unlocking.

or

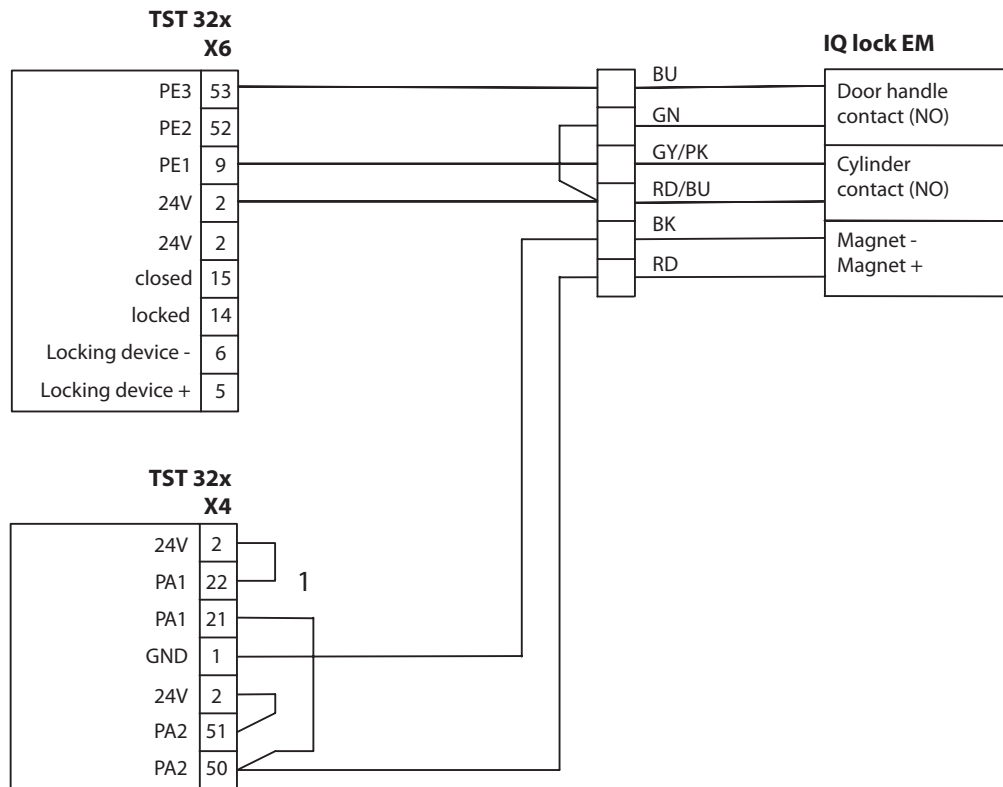
- *Cylinder contact*:  
The door control unit is controlled by the lock cylinder of the IQ lock EM:

	in the state	locked	unlocked	Alarm
Operating lock cylinder				
less than 3 s		Short-time unlocking	-	-
3 s to 9 s		unlock	lock	acknowledge
longer than 9 s		Service mode	Service mode	Service mode

Set the parameter for input PE3 to *Door handle*. Pressing the door handle with the door control unit locked triggers a pre-alarm.

Set the parameter for output PA2

- to *TOE fail-secure* and the type of contact to *Normally open contact* or
- to *Short-time unlocking* and the type of contact to *Normally open contact* in case the IQ lock EM is to be engaged for the duration of short-time unlocking.



- 1 If the IQ lock EM is to be engaged for the duration of unlocking:  
Output PA1 to *BA*. Set the parameter for the *drive* and the type of contact to *normally open contact*.  
In addition, connect output PA1 with the magnetic coil.

### 7.5.3 Motor lock IQ lock EL with MST 210

Heed the supplementary sheet for the motor lock IQ lock EL.

Set the parameter for input PE1 to:

- *Short-time unlocking* (factory setting): Operating the lock cylinder triggers short-time unlocking.

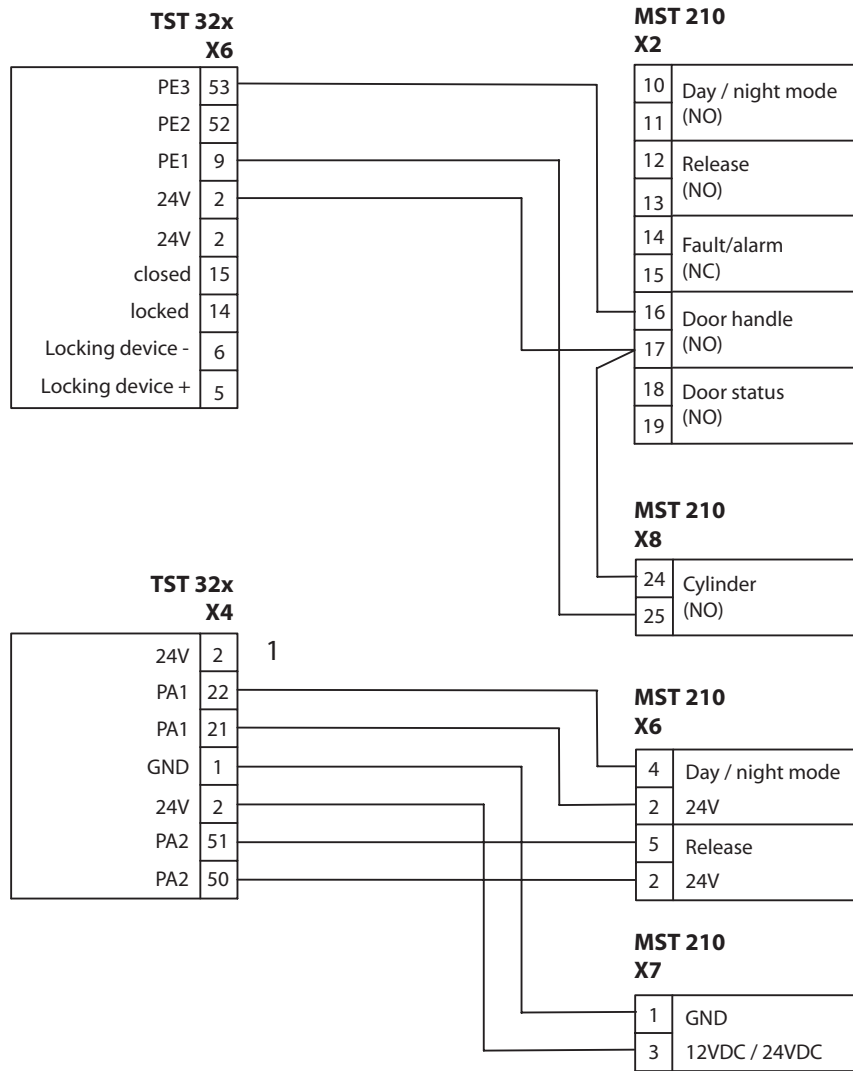
or

- *Cylinder contact*: The door control unit is controlled by the lock cylinder of the IQ lock EL:

	in the state	locked	unlocked	Alarm
Operating lock cylinder				
less than 3 s		Short-time unlocking	-	-
3 s to 9 s		unlock	lock	acknowledge
longer than 9 s		Service mode	Service mode	Service mode

Set the parameter for input PE3 to *Door handle*. Pressing the door handle with the door control unit locked triggers a pre-alarm.

Set the parameter for output PA2 to *TOE fail-secure* and the type of contact to *Normally open contact*.



- 1 If the IQ lock EL is to be in day mode of operation for the duration of unlocking:  
Output PA1 to BA. Set the parameter for the *Drive* and the type of contact to *Normally open contact*.  
In addition, connect output PA1 with the input day/night of MST 210.

## 7.6 Automatic swing door drive

### 7.6.1 Swing door drive Powerturn

Relay board RP 220, mat. no. 102355

The use of the motor lock IQ lock EL is shown in grey on the connection diagram.  
Heed the wiring diagram of the swing door drive Powerturn.  
Heed the supplementary sheet for the motor lock IQ lock EL.

- Set the parameter for output PA1 to *Activ. drive* and the type of contact to *Normally open contact*.
- Set the parameter for output PA2 to *BA. drive* and the type of contact to *Normally open contact*.

Parameter settings of the control unit of the swing door drive (only possible with ST 220 or GEZE connects):

- Set the parameter for the type of contact at input NA to *Normally closed contact*.
- Set the parameter for output PA2 to *Night mode*.

Additional parameter settings on the control unit of the swing door drive if the motor lock IQ lock EL is used:

- Set the parameter for door opener type to *Motor lock*.
- Set the parameter for the bolt input to *Normally closed contact*.
- Set the parameter for output PA2 to *Day/night changeover*.

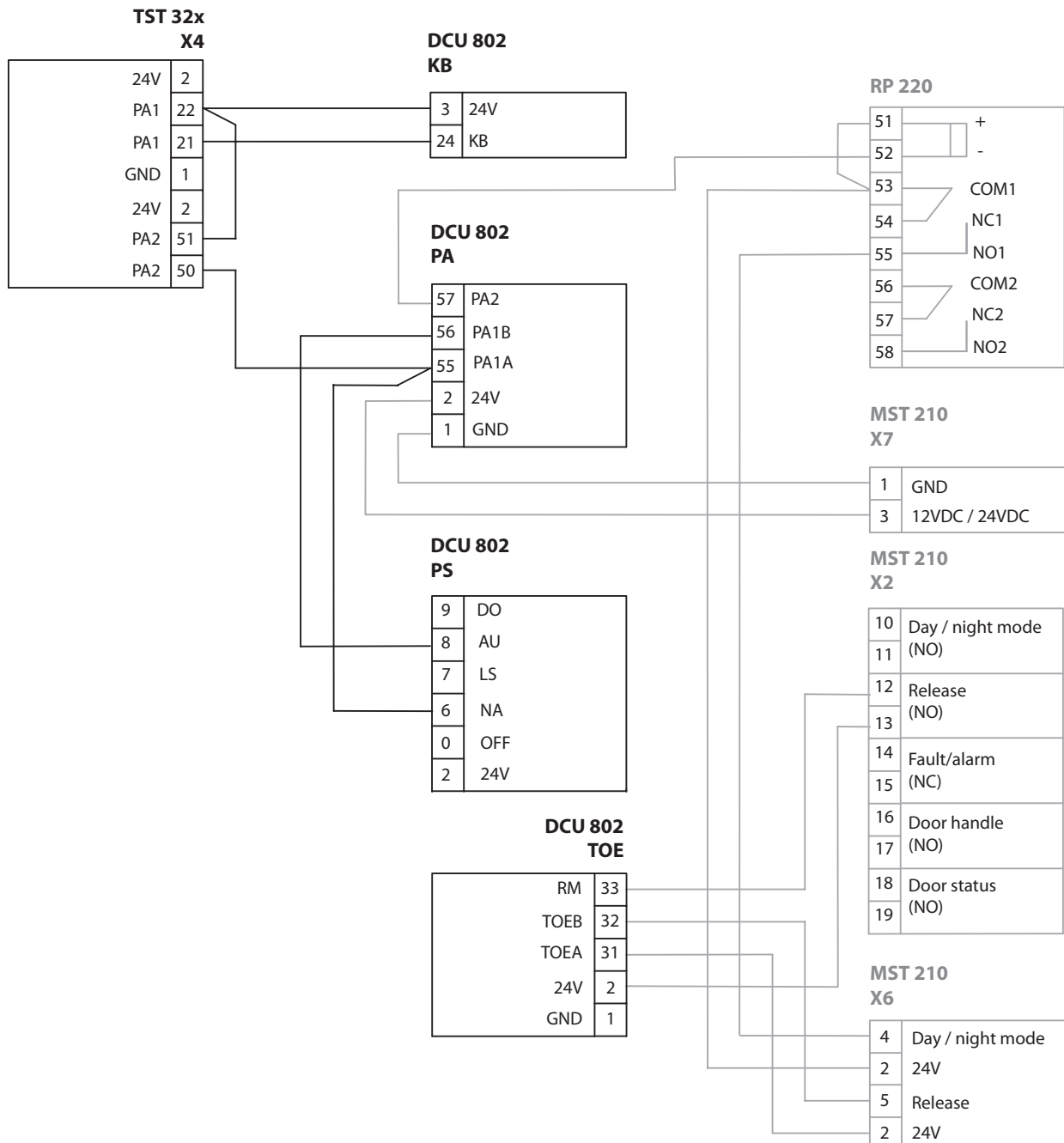
When the door control unit is unlocked, the swing door drive changes to mode of operation AU due to a short pulse and switches the lock to daytime operation. The swing door drive opens via the contact sensor connected. The mode of operation can be changed at the drive.

When the door control unit is locked, the swing door drive changes to mode of operation NA and locks the lock (permanently night).

Short-time unlocking at the door control unit activates the swing door drive via its input KB. The drive unlocks the lock and opens the door. After the hold-open time of the drive has expired, the drive closes the door and locks the lock. For this reason, the parameter *Duration* of the short-time unlocking of the door control unit must be set larger than the parameter *Hold-open time* of input KB of the swing door drive.

If an emergency push button is pressed with the door locked, the drive opens the door.

In the case of 2-leaf doors, connect the door control unit with the control of the active leaf.



## 7.6.2 Swing door drive EMD

Heed the wiring diagram for the swing door drive EMD.

### 7.6.2.1 Operating EMD via internal programme switch

- Set the parameter for output PA1 to *Activ. drive* and the type of contact to *normally open contact*.
- Set the parameter for output PA2 to *BA. drive* and the type of contact to *Normally open contact*.

When the door control unit is unlocked, the swing door drive changes to the mode of operation set at the internal programme switch. The mode of operation can be changed at the internal programme switch.

When the door control unit is locked, the swing door drive changes to mode of operation NA. It is not possible to change the mode of operation at the internal programme switch.

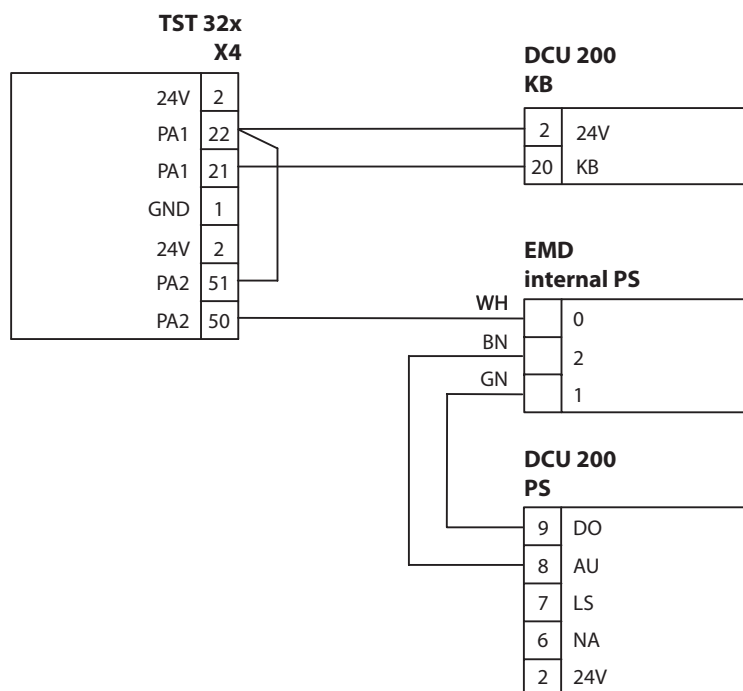
DPS, TPS and MPS do not work.

Short-time unlocking at the door control unit activates the swing door drive via its input KB. The drive opens the door. After the hold-open time of the drive has expired, the drive closes the door. For this reason, the parameter *Duration* of the short-time unlocking of the door control unit must be set larger than the parameter *Hold-open time* of input KB of the swing door drive.

If an emergency push button is pressed with the door locked, the drive opens the door.

Disconnect the internal programme switch of the swing door drive and connect in accordance with connection diagram.

In the case of 2-leaf doors, connect the door control unit with the control of the active leaf.



### 7.6.2.2 Operating EMD via DPS, TPS or MPS

- Set the parameter for output PA1 to *Activ. drive* and the type of contact to *Normally closed contact*.
- Set the parameter for output PA2 to *BA. drive* and the type of contact to *Normally open contact*.

When the door control unit is unlocked,

- the swing door drive remains in mode of operation NA (when DPS or TPS are used)
- the swing door drive changes to the mode of operation set at the MPS (when MPS is used)

The mode of operation of the drive can be changed at the DPS, TPS or MPS.

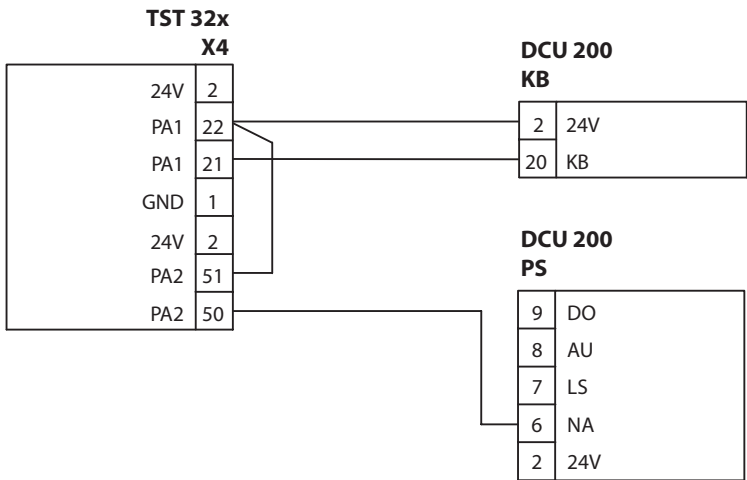
When the door control unit is locked, the swing door drive changes to mode of operation NA.

Short-time unlocking at the door control unit activates the swing door drive via its input KB. The drive opens the door. After the hold-open time of the drive has expired, the drive closes the door. For this reason, the parameter *Duration* of the short-time unlocking of the door control unit must be set larger than the parameter *Hold-open time* of input KB of the swing door drive.

If an emergency push button is pressed with the door locked, the drive opens the door.

Disconnect the internal programme switch of the swing door drive.

In the case of 2-leaf doors, connect the door control unit with the control of the active leaf.



## 7.7 Configurable inputs

The door control unit TZ 32x has two configurable inputs through which different functions can be realised (see 8.1.5). Not all the possible functions are shown here.

The function and type of level of the configurable inputs is set in the service menu.

The functions described are available at all configurable inputs.

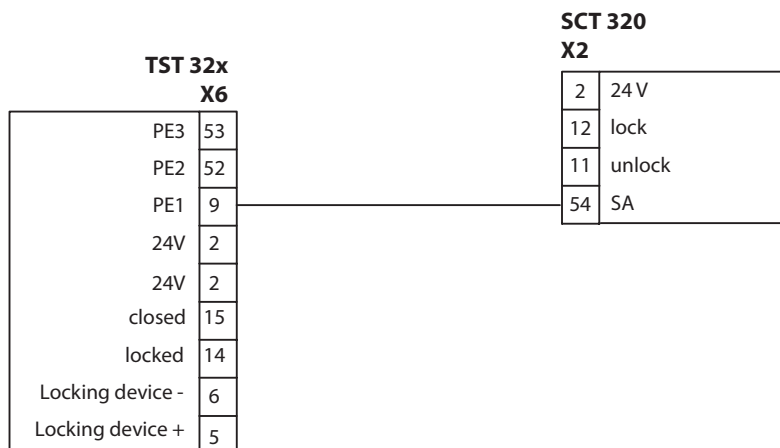
**EltVTR**  
**EN 13637**



Emergency push buttons for releasing the door control unit must be connected to indirect disconnection (see 7.3). Emergency push buttons must not be connected to a configurable input.

### 7.7.1 Sabotage

The example shows the connection of a key switch SCT 320 (sabotage contact) to the door controller. Set the parameter for input PE1 of the door controller to *Sabotage ext.* and the type of level to *Low active*.

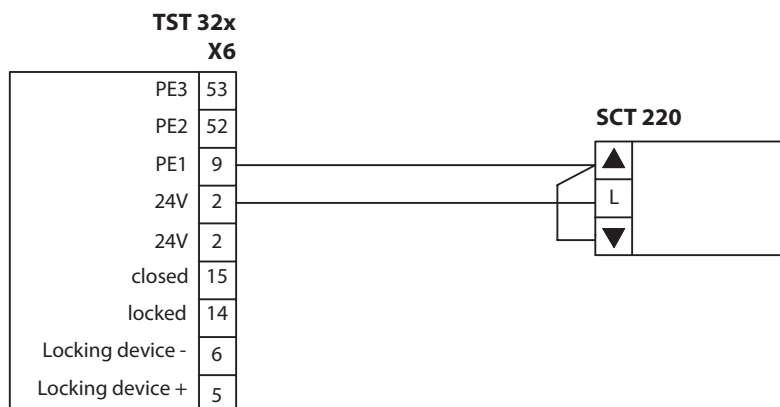


### 7.7.2 Short-time unlocking

Set the parameter for input PE1 of the door controller to *Short-time unlocking* and the type of level to *High active* (factory setting).

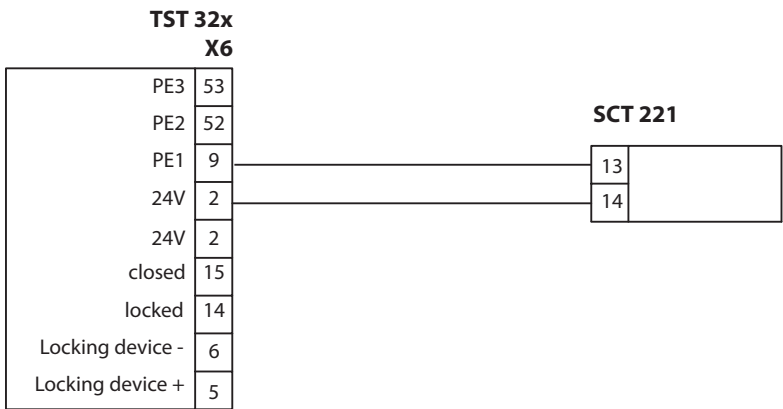
#### 7.7.2.1 Key switch SCT 220

One-pole reversible push button (two normally open contacts)  
Heed the supplementary sheet for the key switch SCT 220



7.7.2.2 Key switch SCT 221

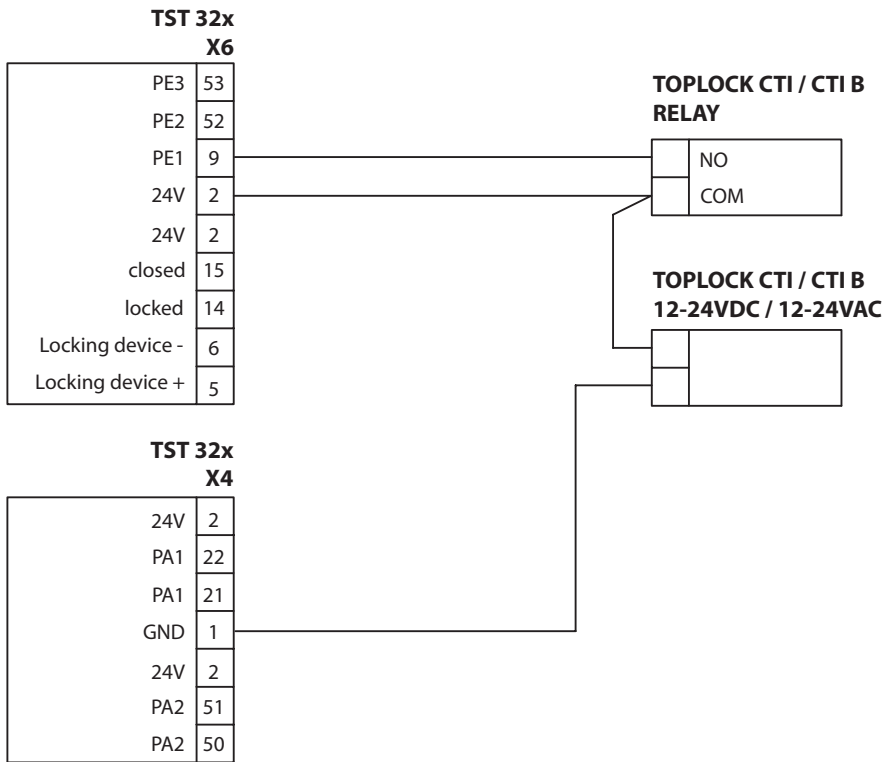
One-pole push button (normally open contact)  
Heed the supplementary sheet for the key switch SCT 221



7.7.2.3 Number code lock TOPLOCK CTI, CTI B

**EltVTR**  
**EN 13637**

Heed the supplementary sheet for the number code lock TOPLOCK CTI resp. TOPLOCK CTI B.





## 7.7.2.4 Number code lock TOPLOCK CTS V, CTS BV

**EltVTR****EN 13637**

Heed the supplementary sheet for the number code lock TOPLOCK CTS V resp. TOPLOCK CTS BV!

**DANGER****Danger of fatal injury due to electric shock!**

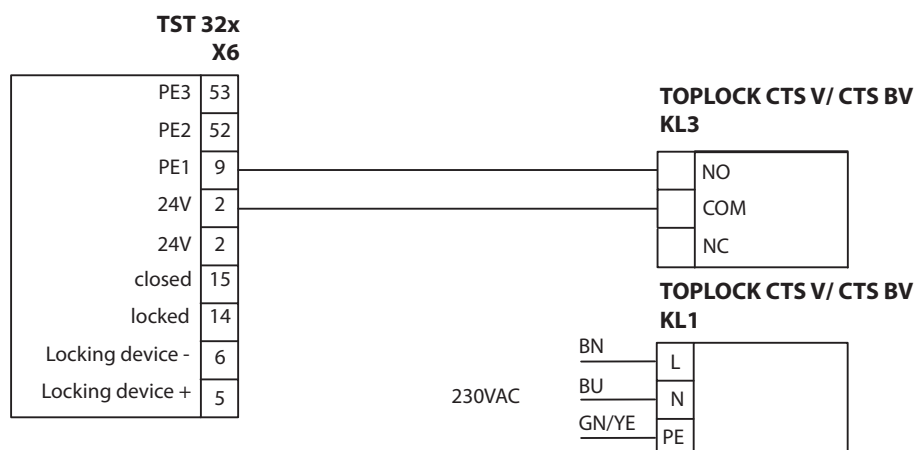
► Ensure that the connection to the mains voltage is carried out by a qualified electrician.

- Install a mains fuse on site in the form of a miniature circuit breaker. The rated value must be matched to the conductor type, conductor cross-section, type of routing and ambient conditions of the on-site power supply circuit.



TOPLOCK CTS is a protection class I device, so connect a protective earth conductor.

- Perform the protective earth connection test in accordance with VDE 0160 Part 600.



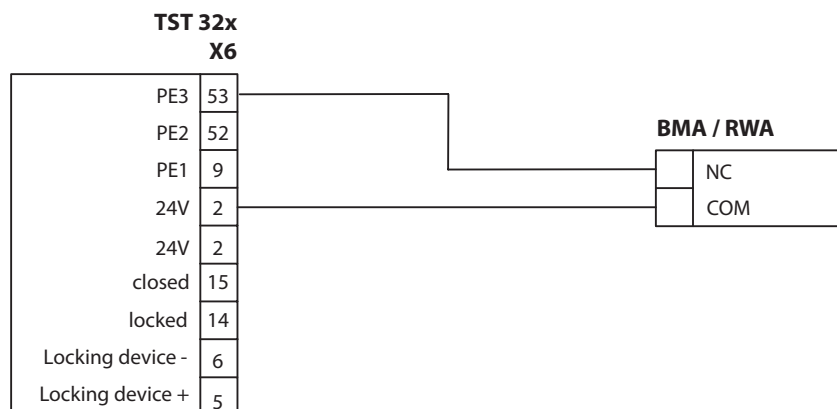
## 7.7.3 Emergency unlocking via BMA or RWA



The local emergency push button on the door is also necessary for unlocking the emergency exit via a BMA.

The alarm contact of a BMA is generally a normally closed contact. Route the two wires of the normally closed contact in separate cables.

Set the parameter for PE3 to *Fire alarm sys.* (factory setting) and the type of level to *Low active*.



## 7.8 Configurable outputs

The door control unit TZ 32x has two configurable outputs through which different functions can be realised (see 8.1.5). Not all the possible functions are shown here.

The function and type of contact of the configurable outputs is set in the service menu.

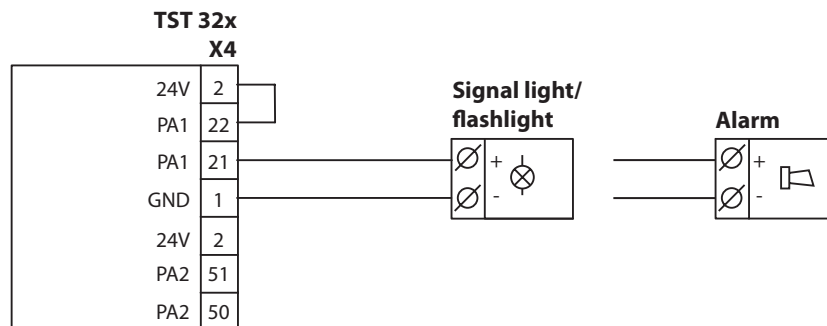
The functions described are available at all configurable outputs.

### 7.8.1 Indicator lamp or alarm

Heed the supplementary sheet for the indicator lamp or the alarm.

Set the parameter for output PA1 to *Alarm* and the type of contact to *Normally open contact* (factory setting).

If the connected an alarm should not sound permanently, set the parameter for output PA1 to *Externalalarm* and the type of contact to *Normally open contact*.



## 7.9 Terminal box KL220

**EltVTR** Terminal box KL 220 offers 4 additional inputs and 6 additional outputs.

**EN 13637** Terminal box KL 220 see 5.5.

The function and type of level of the additional inputs as well as the function and type of contact of the additional outputs is set in the service menu (see 8.1.5).

! Emergency push buttons for releasing the door control unit must be connected to indirect disconnection (see 7.3). Emergency push buttons must not be connected to a configurable input.

Heed the supplementary sheet for the terminal box

A terminal box connected to the door control unit is automatically detected.



**DANGER**

**Danger of fatal injury due to electric shock!**

► Ensure that the connection to the mains voltage is carried out by a qualified electrician.

► Install a mains fuse on site in the form of a miniature circuit breaker. The rated value must be matched to the conductor type, conductor cross-section, type of routing and ambient conditions of the on-site power supply circuit.



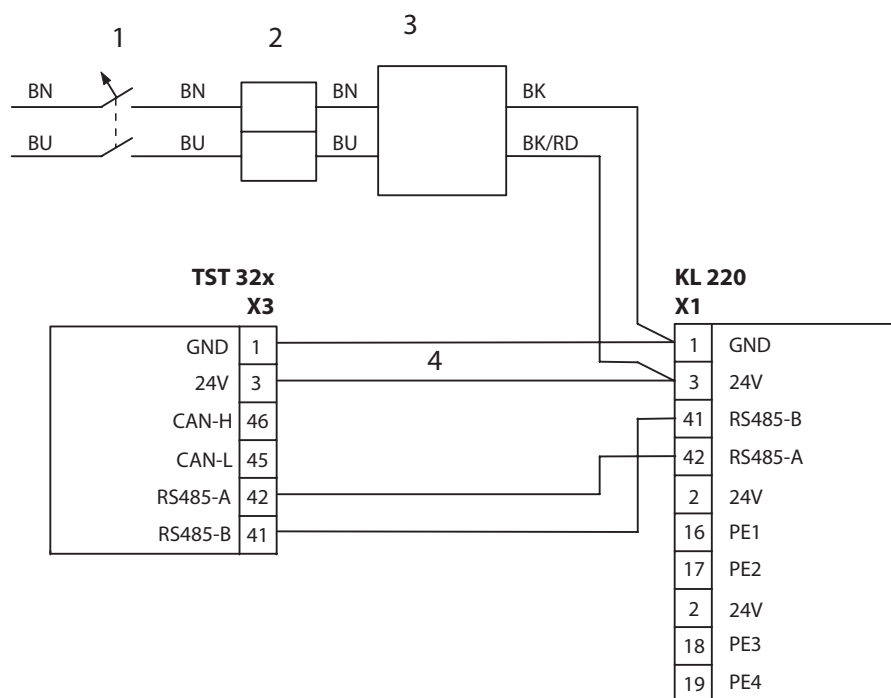
The terminal box KL 220 is a protection class II device, no protective earth connector is connected.



**DANGER**

**To disconnect the mains voltage from the safety extra low voltage, the mains-side wires and the mains connection terminals must be laid into the mains connection space (see 5.5) between the power supply and the housing.**

The power supply NT19.2-24 is integrated in the terminal box. This can also be used to supply the door control unit (shown here, heed current consumption of the assemblies used, see 7.1.1).



- 1 Miniature circuit breaker
- 2 Mains connection terminals
- 3 NT19.2-24
- 4 If the door control unit has its own power supply, only set up the GND connection between door control unit and terminal box.

## 7.10 GEZE bus

GEZE bus repeater, mat. no. 142499

Several door control units TZ 32x and panels TE 220 communication via the GEZE bus.

A maximum of 63 devices can be connected to the GEZE bus, a maximum of 5 of these may be panels TE 220.

Each device must have an unambiguous address. The address is set in the service menu of the door control unit TZ 32x or the master panel MTA 220 - parameter *Bus address*.

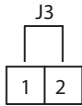
The GEZE bus is a bus in line structure – all the devices are arranged in a line, branch lines are not permissible.

The GEZE bus must not be longer than 900 m. Repeaters can be used to extend the maximum length by a further 900 m.

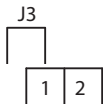
## 7.10.1 GEZE bus terminating resistor

### 7.10.1.1 Door control unit TZ 32x

**J3** Bus terminating resistor, see 5.2.4



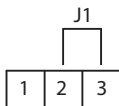
GEZE bus terminating resistor set (state of delivery)



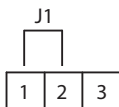
GEZE bus terminating resistor not set

### 7.10.1.2 Master panel MTA 220 (panel TE 220)

Heed the supplementary sheet for the door panel TE 220.



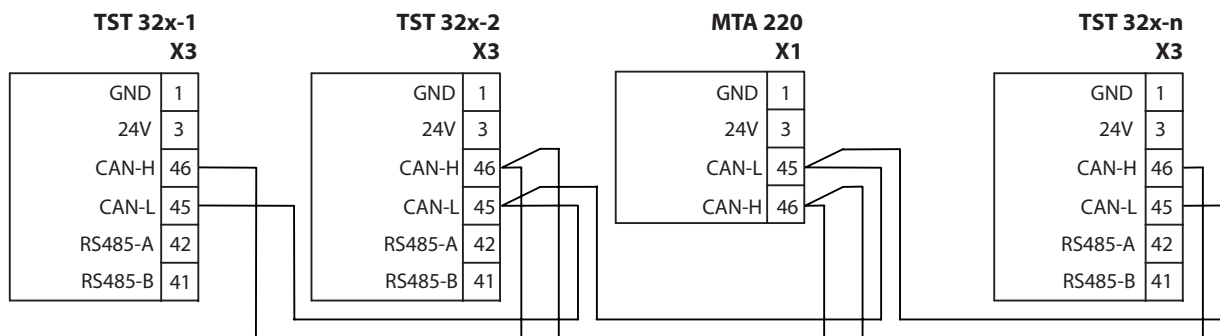
GEZE bus terminating resistor set



GEZE bus terminating resistor not set (state of delivery)

## 7.10.2 GEZE bus

Activate the terminating resistor at the first and last device on the GEZE bus.



### 7.10.3 Emergency unlocking via GEZE bus

Heed the supplementary sheet for the door panel TE 220



The local emergency push button on the door is also necessary for emergency unlocking of the emergency exit via a door panel and GEZE bus.

If there is a door panel with an emergency-off panel connected to the GEZE bus, emergency unlocking is triggered via the GEZE bus when the emergency push button is pressed.

Every door control unit can be configured at the GEZE bus as to whether the door control unit responds to the emergency unlocking and unlocks (service menu, parameter *Emergency unlocking*).

## 8 Commissioning

### 8.1 Service mode

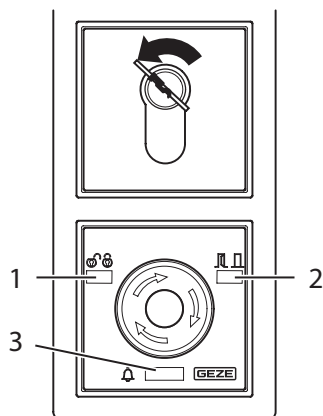
In service mode, the parameters for the door control unit can be set using service terminal ST 220 and a diagnosis can be carried out.

#### 8.1.1 Switching service mode on



It is only possible to switch service mode on when neither an alarm nor emergency unlocking is queued.

- ▶ Insert the key in the lock of the key switch.
- ▶ Turn the key to the left and hold it for about ten seconds.



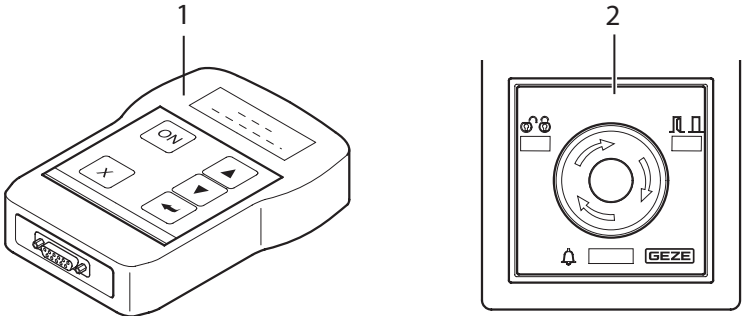
In service mode LED 2 lights up green. LEDs 1 and 3 do not light up.

#### 8.1.2 Switching service mode off

- ▶ Do not make any entries for three minutes or select *End service mode* in the service menu. The door control unit is back in normal state.

8.1.3 Connecting service terminal ST 220 to the door control unit

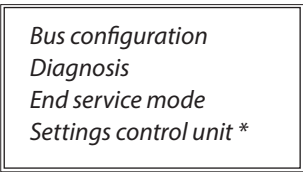
Heed the supplementary sheet for the service terminal ST 220  
The service terminal is connected to the door control unit via an infrared interface.



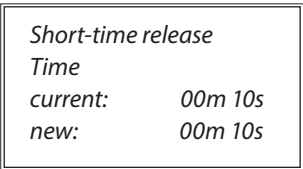
- 1 ST 220
- 2 Door control unit

Service terminal ST 220		
Key	Name	Function
	ON button	Switch on
	ESC button	Go back one menu level without applying the new value
	UP button	Go up one line or increase number value
	DOWN button	Go down one line or decrease number value
	ENTER button	Select or apply new value.

- Hold the ST 220 in front of the door controller cover and press the ON button for about one second. The service terminal is switched on.
- Press the ESC button. The first level of the service menu is displayed:



Use the UP, DOWN and ENTER buttons to select and change the required parameter.  
\* indicates the current position in the menu.  
e.g.:



Use UP and DOWN to select the new time and confirm with the ENTER button.

8.1.4 Switching the service terminal ST 220 off

- Do not press any buttons for two minutes.

The ST 220 is switched off.

## 8.1.5 Service menu ST 220

The door control unit is configured via the service menu of the ST 220 and the memory with alarms and error messages can be read out. To do this, change the door control unit to service mode and connect the service terminal to the door control unit.

1st level	2nd level	3rd level	4th level	5th level	6th level	Selection (factory setting)	Comments
Setting control unit	Short-time unlocking	Duration	Change value			1 s ... <b>10 s</b> ... infinite	Duration of short-time unlocking
		Abort	Selection			Yes No	End the short-time unlocking by closing the door. If Abort = No, the duration of short-time unlocking may not be infinite.
		Retriggering	Selection			Yes No	Extend short-time unlocking by repeat short-time unlocking
	Alarm configuration	Times	Pre-alarm time	Change value		0 s ... <b>10 s</b> ... 3 min	After short-time unlocking has expired, an acoustic signal (pre-alarm) begins if the door has not been closed yet. If the pre-alarm time has elapsed and the door is still not closed, door alarm is triggered.
			Alarm time	Change value		10 s ... <b>30 s</b> ... 2 min Permanent alarm	Alarms (door alarm, disconnection, sabotage) sound for the set alarm time. This is followed by a pause of 2 min. Then the alarm sounds again.
		Buzzer	Pre-alarm buzzer	Volume Pre-alarm	Change value	0 ... <b>15</b>	Pre-alarm
				Pre-alarm melody	Selection	Permanent tone 4s permanent tone 2s permanent tone 4 beeps <b>2 beeps</b>	
			Alarm buzzer	Volume Alarm	Change value	0 ... <b>15</b>	Door alarm, disconnection
				Alarm melody	Selection	Permanent tone <b>4s permanent tone</b> 2s permanent tone 4 beeps 2 beeps	
			Sabotage buzzer	Volume Sabotage	Change value	0 ... <b>15</b>	Sabotage alarm
				Sabotage melody	Selection	Permanent tone 4s permanent tone 2s permanent tone <b>4 beeps</b> 2 beeps	
		Interruption ZSU	Selection			Yes	When a timer is active (internal or at an input) the door control unit can be locked. If the door control unit is unlocked again, the timer becomes effective again. To be able to interrupt the timer on national holidays, one input must be configured to national holiday and a switch must be connected to this.
						No	When a timer is active (internal or at an input) the door control unit cannot be locked (except when input EMA becomes active).

1st level	2nd level	3rd level	4th level	5th level	6th level	Selection (factory setting)	Comments			
	Param. inputs	Control unit input 1	Configuration TZ1	Selection		Sabotage ext.	Sabotage alarm and message - level			
						Unlock	System goes into unlocked state - flank			
						Lock	System goes into locked state - flank			
						Short-time unlocking	System goes into short-term unlocked state - flank			
						Burglar alarm sys.	EMA message becomes active. System is locked with priority. Authorised passage is no longer possible, disconnection and emergency unlock- ing are still possible. Several door control units can be locked via bus function - level			
						Timer	ZSU message becomes active. System goes into unlocked state: Several door control units can be unlocked via bus function - level			
						Fire alarm sys.	BMA message becomes active. System is emer- gency unlocked. Several door control units can be unlocked via bus function - level			
						Cylinder cont.	Input for lock with cylinder contact for control- ling the door control unit or acknowledgement of alarms (for door control units without key switch, 1-box solution) - length of contact is evaluated			
						Door handle	Input for door handle contacts for triggering a pre-alarm when the door handle is pressed - level			
						National holiday	Timer is switched off - level			
						Lock level	Door locks as soon as input is active. Door unlocks as soon as the input is no longer ac- tive. If the system is locked before the input is activated, it remains in the locked state when the signal goes (application e.g. for dementia control) - level			
						External fault	If the input is active, the fault is signalled both optically and acoustically and the signal is out- putted to the bus system (application e.g. over- riding fault signal of a UPS system) - level			
						Group lock	System goes into locked state. Several door control units can be locked via bus function - flank			
						Group unlock	System goes into unlocked state. Several door control units can be unlocked via bus function - flank			
						Acknowledge alarm				
							Level: as long as input active Flank: as soon input becomes active			
						Type of level TZ1	Selection		High active	Input active (is evaluated) when 24 VDC are applied (normally open contact)
							Low active		Input active (is evaluated) when 0 VDC are ap- plied (normally closed contact)	
							Deactivated		No evaluation of the input	
			Control unit input 2	Configuration TZ2	Selection		Short-time unlocking	cf. Control unit input 1		
				Type of level TZ2	Selection		High active	cf. Control unit input 1		
			Control unit input 3	Configuration TZ3	Selection		Fire alarm sys.	cf. Control unit input 1		
				Type of level TZ3	Selection		High active	cf. Control unit input 1		
Param. outputs	Control unit output 1	Configuration TZ1	Selection		Door state	Contact is closed when door is closed.				
					BA. drive	Contact is closed when door control unit is per- manently unlocked.				
					Activ. drive	Contact closes for 3 seconds when short-time unlocking has been triggered (even if system is unlocked). In the case of disconnection or emergency unlocking the contact remains closed until the alarm is ended.				
					Alarm	Contact closes with all alarms (except pre- alarm).				
					Disconnection	Contact closes when the emergency push button is pressed on the TZ 320 and indirect disconnection.				



1st level	2nd level	3rd level	4th level	5th level	6th level	Selection (factory setting)	Comments
						<i>Activ. direct</i>	Contact closes when the emergency push button is pressed on the TZ 320.
						<i>Activ. indirect</i>	Contact closes with indirect disconnection.
						<i>Door alarm</i>	Contact closes when the door hold-open time is exceeded, the pre-alarm time has elapsed or the door is broken open.
						<i>Sabotage alarm</i>	Contact closes when an input sabotage becomes active or if a sabotage contact is triggered on TZ 320, KL 220, SCT 320 or T 320.
						<i>Pre-alarm</i>	Contact closes for the set time when the door hold-open time is exceeded.
						<i>System fault</i>	Contact closes with system fault.
						<i>Signal lamp red</i>	When interlocking door system function is activated: Contact is closed when door is blocked by interlocking door system.
						<i>Signal lamp green</i>	When interlocking door system function is activated: Contact is closed when door is not blocked by interlocking door system.
						<i>TOE fail-secure</i>	Contact closes for 3 seconds when short-time unlocking has been triggered (even if system is unlocked). In the case of disconnection or emergency unlocking the contact remains closed until the alarm is ended.
						<i>Locked</i>	Contact is closed when the system is locked.
						<i>Emergency push button</i>	Contact is closed as long as the emergency push button on TZ 320 is pressed.
						<i>Short-time unlocking</i>	Contact is closed when the system is short-term unlocked.
						<i>Group alarm</i>	Contact closes when an alarm is triggered on the bus line of a door control unit (except for pre-alarm).
						<i>Group mess. locked</i>	Contact closes when all the door control units on the bus line are locked.
						<i>Group mess. closed</i>	Contact closes when all the door control units on the bus line are closed.
						<i>Group fault</i>	Contact closes when a fault is queued on the bus line of a door control unit.
						<i>External alarm</i>	Contact closes during alarms for the set alarm time. External alarms behave in the same way as the internal buzzer of TZ 320.
			<i>Type of contact TZ1</i>	<i>Selection</i>		<i>Normally closed contact</i> <b>Normally open contact</b> <i>Deactivated</i>	NC NO no activation of the output
							The configurations are explained for the normally open contact type of contact. For outputs with changeover contacts, the normally open contact type of contact is shown on the wiring diagram. If an output is configured as a normally closed contact, it takes approx. 1 s for the normally closed contact type of contact to be activated after switch-on.
			<i>Delay</i>	<i>Selection</i>		<i>0 s</i> ... <b>5 s</b>	Only at control unit output 1: Activation of the output is delayed, deactivation is immediate. If activation drops during the delay time, the output is not activated.
							<div> <div>Activation</div> </div> <div> <div>Activation</div> </div>
	<i>Control unit output 2</i>		<i>Configuration TZ2</i>	<i>Selection</i>		<b>TOE fail-secure</b>	cf. Control unit output 1
			<i>Type of contact TZ2</i>	<i>Selection</i>		<b>Normally open contact</b>	cf. Control unit output 1

1st level	2nd level	3rd level	4th level	5th level	6th level	Selection (factory setting)	Comments
	<i>Em. unlock config.</i>	<i>Selection</i>				5 s ... 10 min <b>Permanent alarm</b>	The functions emergency unlocking via bus and emergency unlocking via BMA can be reset automatically after the configured time. Automatic resetting of the emergency unlocking via BMA is only permissible after a minimum duration of 60 s in accordance with DIN EN 13637:2015.
	<i>Terminal box</i>	<i>Available</i>	<i>Selection</i>			Yes <b>No</b>	Terminal box KL 220 for additional inputs or outputs. The door control unit automatically detects a connected terminal box
		<i>Param. inputs</i>	<i>Terminal box input 1</i>	<i>Configuration KL1</i>	<i>Selection</i>	<b>Burglar alarm sys.</b>	cf. Control unit input 1
				<i>Type of level KL1</i>	<i>Selection</i>	<b>High active</b>	cf. Control unit input 1
			<i>Terminal box input 2</i>	<i>Configuration KL2</i>	<i>Selection</i>	<b>Timer</b>	cf. Control unit input 1
				<i>Type of level KL2</i>	<i>Selection</i>	<b>High active</b>	cf. Control unit input 1
			<i>Terminal box input 3</i>	<i>Configuration KL3</i>	<i>Selection</i>	<b>Unlock</b>	cf. Control unit input 1
				<i>Type of level KL3</i>	<i>Selection</i>	<b>High active</b>	cf. Control unit input 1
			<i>Terminal box input 4</i>	<i>Configuration KL4</i>	<i>Selection</i>	<b>Lock</b>	cf. Control unit input 1
				<i>Type of level KL4</i>	<i>Selection</i>	<b>High active</b>	cf. Control unit input 1
		<i>Param. Outputs</i>	<i>Terminal box output 1</i>	<i>Configuration KL1</i>	<i>Selection</i>	<b>BA. Drive</b>	cf. Control unit output 1
				<i>Type of contact KL1</i>	<i>Selection</i>	<b>Normally open contact</b>	cf. Control unit output 1
			<i>Terminal box output 2</i>	<i>Configuration KL2</i>	<i>Selection</i>	<b>Activ. drive</b>	cf. Control unit output 1
				<i>Type of contact KL2</i>	<i>Selection</i>	<b>Normally open contact</b>	cf. Control unit output 1
			<i>Terminal box output 3</i>	<i>Configuration KL3</i>	<i>Selection</i>	<b>Locked</b>	cf. Control unit output 1
				<i>Type of contact KL3</i>	<i>Selection</i>	<b>Normally open contact</b>	cf. Control unit output 1
			<i>Terminal box output 4</i>	<i>Configuration KL4</i>	<i>Selection</i>	<b>Door state</b>	cf. Control unit output 1
				<i>Type of contact KL4</i>	<i>Selection</i>	<b>Normally open contact</b>	cf. Control unit output 1
			<i>Terminal box output 5</i>	<i>Configuration KL5</i>	<i>Selection</i>	<b>Sabotage alarm</b>	cf. Control unit output 1
				<i>Type of contact KL5</i>	<i>Selection</i>	<b>Normally open contact</b>	cf. Control unit output 1
			<i>Terminal box output 6</i>	<i>Configuration KL6</i>	<i>Selection</i>	<b>System fault</b>	cf. Control unit output 1
				<i>Type of contact KL6</i>	<i>Selection</i>	<b>Normally open contact</b>	cf. Control unit output 1
	<i>Door terminal</i>	<i>Available</i>	<i>Selection</i>			Yes <b>No</b>	Door terminal T320 as an additional operating interface on bi-directional escape routes. A door control unit is always necessary for the use of a door terminal. The door control unit automatically detects a connected door terminal.
	<i>Sabotage contacts</i>	<i>Control unit</i>	<i>Selection</i>			Yes <b>No</b>	
		<i>SCT</i>	<i>Selection</i>			Yes <b>No</b>	
		<i>Terminal box</i>	<i>Selection</i>			Yes <b>No</b>	
		<i>Door terminal</i>	<i>Selection</i>			Yes <b>No</b>	
	<i>Automatic Invers</i>	<i>Selection</i>				Yes <b>No</b>	If a GEZE swing door drive Invers is connected, yes must be configured. Activation of the emergency exit electric strike is through the swing door drive.
	<i>Timer</i>	<i>Timer 1</i>	<i>Time start</i>	<i>Start hours</i>	<i>Change value</i>	0 ... 23	Time at which the timer becomes active. During these times the door control unit is in unlocked state. The signal can be forwarded to further door control units via the bus line.
				<i>Start minutes</i>	<i>Change value</i>	0 ... 59	

1st level	2nd level	3rd level	4th level	5th level	6th level	Selection (factory setting)	Comments
			Time end	End hours	Change value	0 ... 23	Time at which the timer becomes Inactive
				End minutes	Change value	0 ... 59	
			Days	Monday	Selection	<b>Activated</b> Not active.	Days on which the set times are effective
				Tuesday	Selection	<b>Activated</b> Not active.	
				Wednesday	Selection	<b>Activated</b> Not active.	
				Thursday	Selection	<b>Activated</b> Not active.	
				Friday	Selection	<b>Activated</b> Not active.	
				Saturday	Selection	Activated <b>Not active.</b>	
				Sunday	Selection	Active <b>Not active.</b>	
		Timer 2					cf. Timer 1
		Timer 3					cf. Timer 1
	SCT configuration	Selection				<b>Yes</b> No	Unlock with SCT permitted / not permitted The function of getting to the service mode via the key switch is retained even with key switch deactivated.
System settings	Time/date	Time	Hours	Change value		0 ... <b>13</b> ... 23	If several door control units are connected to one another via the bus, the changed data are applied by all the door control units connected.
			Minutes	Change value		0 ... <b>30</b> ... 59	
		Date	Days			<b>1</b> ... 31	
			Month			1 ... <b>7</b> ... 12	
			Year			0 ... <b>11</b> ... 99	
		Day of the week	Change value			Monday	
						Tuesday	
						Wednesday	
						Thursday	
						<b>Friday</b>	
						Saturday	
						Sunday	
		Autom. change	Change value			<b>Yes</b> No	Summer/winter time
	Language	Selection				<b>German</b> English	
	Default settings	Selection				Execute	

1st level	2nd level	3rd level	4th level	5th level	6th level	Selection (factory setting)	Comments
<i>Bus configuration</i>	<i>Bus address</i>	<i>Change value</i>				<b>0</b> ... <b>63</b>	0 No connections to the bus A bus address may only occur once on a bus line. Bus addresses already assigned are skipped in the service menu. If the bus addresses are assigned before the bus connection is switched on, bus addresses can be assigned multiple times. An error message will then occur.
	<i>Burglar alarm system</i>	<i>EMA group 1:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	Signals from a burglar alarm system, fire alarm system or timer can be sent to the bus via a door control unit and control several door control units at the same time. At the door control unit where the signal is connected, the setting M. bus function must be made. The signal is then sent to the bus. All further door control units which are to respond to this signal must be set to the bus function on.
		<i>EMA group 2:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	
		<i>EMA group 3:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	
		<i>EMA group 4:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	
		<i>EMA group 5:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	
	<i>Fire alarm system</i>	<i>BMA group 1:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	5 groups each can be formed for EMA, BMA and ZSU on the bus. Each group then has exactly one control unit with M. bus function. Every control unit which is to respond to the signal of this master control unit must be configured with bus function on with the same group.  If the master function is assigned twice in one group, a system fault will occur due to multiple assignment.
		<i>BMA group 2:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	
		<i>BMA group 3:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	
		<i>BMA group 4:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	
		<i>BMA group 5:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	
	<i>Timer</i>	<i>ZSU group 1:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	
		<i>ZSU group 2:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	
		<i>ZSU group 3:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	
		<i>ZSU group 4:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	
		<i>ZSU group 5:</i>	<i>Selection</i>			<b>Bus function off</b> <i>Bus function on M.bus function</i>	
	<i>Emergency unlocking</i>	<i>Selection</i>				<i>Emergency unlocking permitted via bus</i> <b>Yes</b> <b>No</b>	It is possible to set every door control unit to respond to the bus signal when the emergency push button is pressed on the control panel TE 220. Emergency unlocking via bus does not comply with the requirements of safe disconnection and unlocking. A safety circuit (7.3.2) must be used for the safe disconnection from a central unit.
	<i>Interlocking door system</i>	<i>Type of interlocking door system</i>	<i>Selection</i>			<b>deactivated</b>	
						<i>Passive</i>	In the basic state, all the doors are not locked, but closed. If one of these doors is opened, it locks all the other doors in the security interlocking door group via the bus. These can then not be opened even using short-time unlocking. Passive locks cannot prevent two or more doors from being opened at the same time.

1st level	2nd level	3rd level	4th level	5th level	6th level	Selection (factory setting)	Comments
						<i>active</i>	In the basic state, all the doors are locked and closed. Only one door at a time in the security interlocking door group can be unlocked short-term. This prevents the short-time unlocking of another door in the security interlocking door group via the bus. If a door is permanently unlocked, the interlocking function is switched off at this door. The interlocking function is switched back on again by locking the door.
							The doors must be locked when the interlocking door system is put into operation. Emergency unlocking is possible at any time. The emergency push button only acts on the respective door.
		<i>Assignment</i>	<i>Security interlocking door group 1:</i>	<i>Selection</i>		<i>assigned</i> <b>Yes</b> <b>No</b>	Ten security interlocking door groups each with up to 63 devices can be formed within one bus line. If active and passive interlocking door systems are mixed within one security interlocking door group: - The opening of a passive door blocks the short-time unlocking of the active doors. - The short-time unlocking of an active door locks all the passive doors.
			<i>Security interlocking door group 2:</i>	<i>Selection</i>		<i>assigned</i> <b>Yes</b> <b>No</b>	
			<i>Security interlocking door group 3:</i>	<i>Selection</i>		<i>assigned</i> <b>Yes</b> <b>No</b>	
			<i>Security interlocking door group 4:</i>	<i>Selection</i>		<i>assigned</i> <b>Yes</b> <b>No</b>	
			<i>Security interlocking door group 5:</i>	<i>Selection</i>		<i>assigned</i> <b>Yes</b> <b>No</b>	
			<i>Security interlocking door group 6:</i>	<i>Selection</i>		<i>assigned</i> <b>Yes</b> <b>No</b>	
			<i>Security interlocking door group 7:</i>	<i>Selection</i>		<i>assigned</i> <b>Yes</b> <b>No</b>	
			<i>Security interlocking door group 8:</i>	<i>Selection</i>		<i>assigned</i> <b>Yes</b> <b>No</b>	
			<i>Security interlocking door group 9:</i>	<i>Selection</i>		<i>assigned</i> <b>Yes</b> <b>No</b>	
			<i>Security interlocking door group 10:</i>	<i>Selection</i>		<i>assigned</i> <b>Yes</b> <b>No</b>	
		<i>Re-locking</i>	<i>Change value</i>			<b>0 s</b> <b>1 s</b> <b>...</b> <b>5 min</b>	In order to balance pressure in an interlocking door system it can be necessary for the interlocking door system to remain locked for a certain time after passage. If the opened door of a security interlocking door group is closed again, all the door control units in the group go into the state <i>Interlocking door system occupied</i> for the time set. Different times can be set at the door control units of one group. The re-locking time of the door control unit that has been opened always applies. Re-locking also becomes active if a door has been short-term unlocked but not opened.
	<i>Group lock/unlock</i>	<i>Selection</i>				<i>permitted via bus</i> <b>Yes</b> <b>No</b>	All the door control units on one bus line can be unlocked or locked via inputs of one door control unit. For this, the inputs to which the signals are connected must be configured to Group unlock or Group lock. The door control unit sends the signals to the bus. In the factory setting, each door control unit on the bus responds to these signals. This function must be deactivated at a door control unit which is not to respond to these signals. Unlocking and locking this door control unit via the panel TE 220 is then no longer possible either.

1st level	2nd level	3rd level	4th level	5th level	6th level	Selection (factory setting)	Comments
<i>Diagnosis</i>	<i>Alarm memory</i>	<i>Display list</i>					Alarm and error messages are saved in the alarm memory of the door control unit and can be read out using the service terminal. The service terminal shows the last 20 alarm and error messages with date, time and reason.
						<i>DOOR</i>	Alarm messages: Door alarm
						<i>SK</i>	Failure safety circuit
						<i>NT-TZ</i>	Direct disconnection (emergency push button) of the door control unit
						<i>NT-TT</i>	Indirect disconnection (emergency push button) of the door terminal
						<i>IDIR</i>	Indirect disconnection
						<i>NEBUS</i>	Emergency unlocking via bus through the emergency push button on control panel TE 220
						<i>SB-TZ</i>	Sabotage of door control unit
						<i>SB-SCT</i>	Sabotage of key switch
						<i>SB-TT</i>	Sabotage of door terminal
						<i>SB-KL</i>	Sabotage of terminal box
						<i>SB-PE</i>	Sabotage of configurable input
						<i>INVAL</i>	invalid
<i>End service mode</i>	<i>Version</i>	<i>Display</i>				<i>KL485</i>	Error messages: Communication problems door control unit-terminal box
						<i>TT485</i>	Communication problems door control unit-door terminal
						<i>POWER</i>	Power restored
						<i>CLOCK</i>	Problems with time or date
						<i>EEPROM</i>	Fault in data memory
						<i>INVAL</i>	invalid
							Example - the alarm memory contains three messages:
						<i>260422 0944 DOOR</i>	- A door alarm was triggered on 26.04.2022 at 09:44 h.
						<i>260422 0943 NT-TZ</i>	- The emergency push button of the door control unit was pressed on 26.04.2022 at 09:43 h.
						<i>080322 1608 POWER</i>	- The power supply was switched on on 08.03.2022 at 16:08 h.
						<i>000000 0000</i>	
							Press the Enter button to leave service mode.

## 8.2 Display of alarms and faults

In normal operation, queued alarms and faults are indicated on the service terminal.

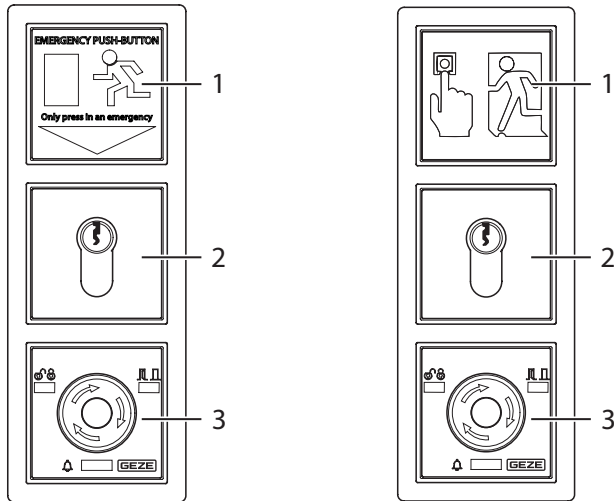
### 8.2.1 Display of alarms

Display on ST 220	Cause	Measure
<i>Door alarm</i>		
<i>Door not closed</i>	Closed message missing	Close door Check door contact
<i>Door not locked</i>	Locked message missing	Check locking element
<i>Sabotage alarm</i>		
<i>Sabotage contact TZ</i>	Sabotage contact of door control unit not closed	Close contact Acknowledge alarm after sabotage time has elapsed
<i>Sabotage contact SCT</i>	Sabotage contact of key switch not closed	
<i>Sabotage contact KL</i>	Sabotage contact of terminal box unit not closed	
<i>Sabotage contact TT</i>	Sabotage contact of door terminal not closed	
<i>Sabotage contact EXT</i>	External sabotage contact active	
<i>Sabotage time running</i>	Sabotage time not elapsed	
<i>Emergency unlocking</i>		
<i>via bus</i>	Emergency unlocking through panel TE 220	Pull emergency push button on the panel
<i>by BMA (bus)</i>	Emergency unlocking through BMA bus function	Check BMA and switch off signal for emergency unlocking Check input of corresponding door control unit
<i>Indir. disconnection</i>		
<i>NT TT pressed</i>	Indirect disconnection through door terminal	Reset emergency push button on the door terminal
<i>Fuse defective</i>	Fuse F1 is defective	Replace fuse (GEZE ID no. 138362)
<i>Dir. disconnection</i>		
<i>NT TZ pressed</i>	Direct disconnection through internal emergency push button	Reset emergency push button on door control unit
<i>SK failed</i>		
<i>Normally closed contact NT failed</i>	Normally closed contact of the internal emergency push button has failed	Check emergency push button Connect locking element Press reset button for one second Replace door control unit
<i>RM int. NT missing</i>	Feedback for internal emergency push button is missing	Press internal emergency push button Replace door control unit
<i>Relay 1 sticking</i>	Relay 1 in the safety circuit is sticking	Replace door control unit
<i>Relay 2 sticking</i>	Short circuit in the supply line of the locking element	Check the supply line of the locking element for short circuit (if relays click) locking element connected with wrong polarity Connect FTÖ 332 with RP 220 Press the reset button for one second Acknowledge alarm
<i>Program memory</i>	Microcontroller defective	Replace door control unit
<i>Acknowledge alarm</i>	Alarm not acknowledged	Eliminate cause of alarm and acknowledge alarm

### 8.2.2 Display of faults

Display on ST 220	Cause	Measure
<i>Locked</i>	Locked message despite no power supply	Check contact of the locking element and replace if defective
<i>24V_EXT missing</i>	No external power supply	Check external power supply Replace fuse
<i>KL communication</i>	Connection with terminal box disrupted	Check connection door control unit-terminal box Switch terminal box off and on again via service menu Replace terminal box
<i>Bus signal missing</i>	Bus signal disrupted	Check bus connection
<i>Bus address. double</i>	Address in the bus system occupied more than once	Change bus address
<i>Time/date invalid</i>	Invalid values for time or date	Correct data
<i>2 M. in BMA group</i>	Two active masters in one BMA group	Switch master group off in one control unit
<i>2 M. in EMA group</i>	Two active masters in one EMA group	Switch master group off in one control unit
<i>2 M. in ZSU group</i>	Two active masters in one ZSU group	Switch master group off in one control unit

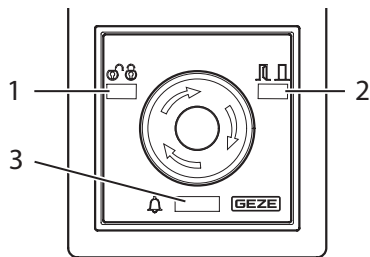
9 Operation



- 1 Emergency exit sign
- 2 Key switch
- 3 Control unit with emergency push button

9.1 Signals

9.1.1 Alarm signals

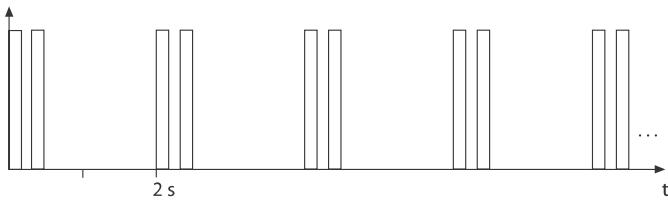
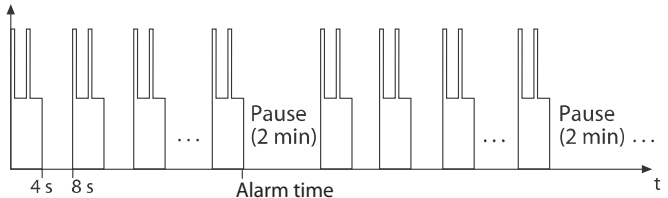
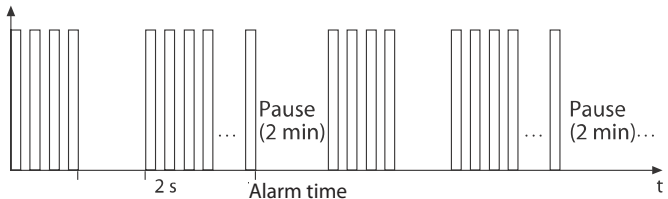


No.	Display	Colour	Meaning
1		Red	Locked
		Red flashing (every second)	Interlocking door system occupied
		Red flashing (every 2 seconds)	Locked by EMA
		Red flashing (3 seconds on, 1 second off)	Locked level
		Green	Unlocked, service mode
		Green flashing (every second)	Short-time unlocking
		Green flashing (every 2 seconds)	Unlocked by timer
		Green flashing (3 seconds on, 1 second off)	Passive interlocking door system
2		Red	Door closed
		Green	Door open
3		Yellow	Alarm
		Yellow flashing (every second)	Pre-alarm
		Yellow flashing	Fault

9.1.2 Alarm tones

The acoustic signals of the different alarms can be set during commissioning. The factory setting is shown here.



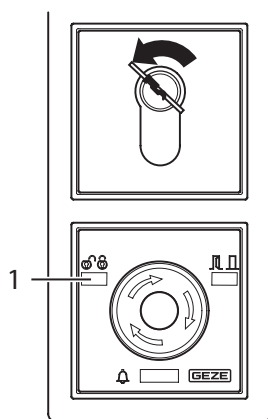
Alarm	Signal horn
Pre-alarm	2 beeps 
Alarm -Door alarm -Emergency push button pressed -Emergency unlocking via BMA, RWA	4 seconds permanent tone 
Sabotage alarm	4 beeps 

## 9.2 Controlling the door control unit via key switch

Control of the door control unit is possible using the integrated or an external key switch, if available.

### 9.2.1 Unlocking the door

- Turn the key to the left and hold it for about one second.  
LED 1 lights up green. The door is unlocked.

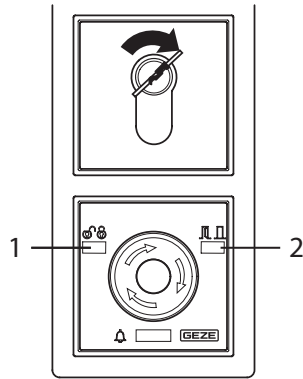


Through the unlocking, an interlocking function switched on at this door is switched off.

### 9.2.2 Locking the door

**!** The door is unlocked and closed, otherwise short-time unlocking or pre-alarm is triggered.

- ▶ Turn the key to the right.  
LEDs 1 and 2 light up red. The door is locked.



Through the locking mechanism, an interlocking function switched off at the door is switched on.

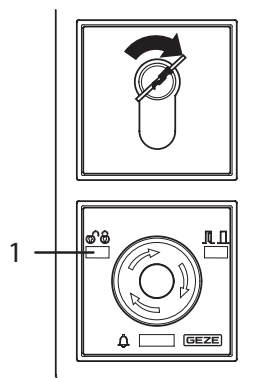
### 9.2.3 Unlocking the door for a limited time (short-time unlocking)

During short-time unlocking, the door is unlocked for a settable time (parameter *Duration* of short-time unlocking). After this time has expired the door is locked again.

- If the door is not closed after this time has expired, a pre-alarm is triggered.
- If the door is closed before the release time has expired, the door is locked again (parameter *Short-time unlocking/Abort/Yes*).
- If a short-time unlocking is triggered again during this time, the time is restarted (parameter *Short-time unlocking/Retriggering/Yes*).

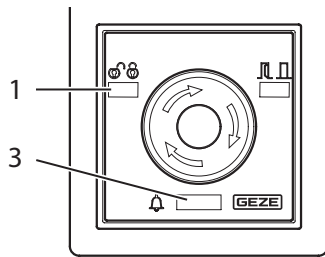
**!** Door is locked.

- ▶ Turn the key to the right.  
LED 1 flashes green, the door is unlocked for the set time.



## 9.3 Unlocking the door in an emergency

- ▶ Actuating the internal or external emergency button  
Actuation of the internal emergency push button or external emergency button switches off the door locking mechanisms, the door can be opened. At the same time, an alarm is triggered.



LED 1 lights up green and LED 3 lights up yellow.

If a connected BMA is tripped, the door is also unlocked (emergency unlocking) and an alarm is triggered.

## 9.4 Resetting alarm

An alarm is queued until the cause of the alarm is eliminated and the alarm has been acknowledged.

The cause of the alarm can be read out with ST 220. As soon as the alarm can be acknowledged, the ST 220 indicates *Acknowledge alarm*.

### 9.4.1 Resetting door alarm

The door alarm is triggered if the door is not closed after the *Pre-alarm time* has elapsed.

- ▶ Close door.
- ▶ Acknowledge alarm via:
  - the key switch (see 9.4.5).
  - the input *Short-term unlocking*.
  - the functions *Lock* or *Unlock* on the door panel TE 220.

### 9.4.2 Resetting disconnection

Disconnection is the safety-related switch-off of the locking mechanism by actuating an emergency push button.

- ▶ Reset emergency push button:
  - Remove the cover from the emergency push button.
  - Turn the emergency push button to the right.
  - The emergency push button jumps back.
  - Fit the cover.
- ▶ Acknowledge the alarm via the key switch (see 9.4.5).

### 9.4.3 Resetting emergency unlocking

Emergency unlocking is the unlocking of the door by a BMA or RWA or via the GEZE bus.

- ▶ Reset the cause of emergency unlocking.
- ▶ Acknowledge alarm via:
  - the key switch (see 9.4.5).
  - the functions *Lock* or *Unlock* on the door panel TE 220

### 9.4.4 Resetting sabotage alarm

Sabotage alarm is triggered if the housing of a system component is opened.



A sabotage alarm cannot be acknowledged until 30 seconds after the cause of the alarm has been eliminated.

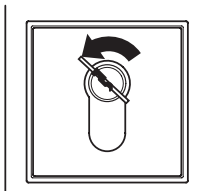
- ▶ Close housing.
- ▶ Acknowledge alarm via:
  - the key switch (see 9.4.5).
  - the functions *Lock* or *Unlock* on the door panel TE 220.

### 9.4.5 Acknowledging alarm with key switch

- To acknowledge the alarm and lock the door, turn the key to the right.



- To acknowledge the alarm and unlock the door, turn the key to the left and hold it for about one second.



## 9.5 Power failure

If the power supply is not buffered via an uninterruptible power supply, the door is not monitored and can be passed through in the event of a power failure.

The GEZE SecuLogic emergency exit system saves the mode of operation currently set so that this is active again after the power supply has been restored:

Mode of operation before power failure	Mode of operation after power failure
Locked	Locked
Locked by EMA	According to signal <i>Burglar alarm sys.</i> Signal active: locked by EMA Signal inactive: locked
Permanent unlocking	Permanent unlocking
Short-time unlocking	Locked
Unlocked by timer	According to signal <i>Timer</i> Signal active: unlocked Signal inactive: locked
Service mode	Service mode

## 9.6 Maintenance

**EltVTR** The following routine maintenance checks must be carried out by the operator or an authorised representative at intervals of no longer than one month:

**EN 13637**

- Unlock the locking mechanisms to make sure they are not blocked.
- Check that the door has not had any locking mechanisms fitted to it later.
- Check that the door opening is free of obstacles that could prevent the door opening completely.

Once a year, check whether all the components of the emergency exit comply with the list of approved components originally delivered with the system.

Have doors with electric locking mechanisms on rescue routes inspected annually by an expert. This expert must issue a certificate of the recurring inspection, which the operator must submit to the building supervisory authority on request. The inspection can be carried out by GEZE Service within the context of a maintenance contract or by a specialist company authorised by GEZE.







**Germany**

GEZE Sonderkonstruktionen  
GmbH  
Planken 1  
97944 Boxberg-Schweigern  
Tel. +49 (0) 7930 9294 0  
Fax +49 (0) 7930 9294 10  
E-Mail: sk.de@geze.com

GEZE GmbH  
Niederlassung Süd-West  
Tel. +49 (0) 7152 203 594  
E-Mail: leonberg.de@geze.com

GEZE GmbH  
Niederlassung Süd-Ost  
Tel. +49 (0) 7152 203 6440  
E-Mail: muenchen.de@geze.com

GEZE GmbH  
Niederlassung Ost  
Tel. +49 (0) 7152 203 6840  
E-Mail: berlin.de@geze.com

GEZE GmbH  
Niederlassung Mitte/Luxemburg  
Tel. +49 (0) 7152 203 6888  
E-Mail: frankfurt.de@geze.com

GEZE GmbH  
Niederlassung West  
Tel. +49 (0) 7152 203 6770  
E-Mail: duesseldorf.de@geze.com

GEZE GmbH  
Niederlassung Nord  
Tel. +49 (0) 7152 203 6600  
E-Mail: hamburg.de@geze.com

GEZE Service GmbH  
Tel. +49 (0) 1802 923392  
E-Mail: service-info.de@geze.com

**GEZE GmbH**  
Reinhold-Vöster-Straße 21–29  
71229 Leonberg  
Germany

**Austria**

GEZE Austria  
E-Mail: austria.at@geze.com  
www.geze.at

**Baltic States**

GEZE GmbH Baltic States office  
E-Mail: office-latvia@geze.com  
www.geze.com

**Benelux**

GEZE Benelux B.V.  
E-Mail: benelux.nl@geze.com  
www.geze.be  
www.geze.nl

**Bulgaria**

GEZE Bulgaria - Trade  
E-Mail: office-bulgaria@geze.com  
www.geze.bg

**China**

GEZE Industries (Tianjin) Co., Ltd.  
E-Mail: chinasales@geze.com.cn  
www.geze.com.cn

GEZE Industries (Tianjin) Co., Ltd.  
Branch Office Shanghai  
E-Mail: chinasales@geze.com.cn  
www.geze.com.cn

GEZE Industries (Tianjin) Co., Ltd.  
Branch Office Guangzhou  
E-Mail: chinasales@geze.com.cn  
www.geze.com.cn

GEZE Industries (Tianjin) Co., Ltd.  
Branch Office Beijing  
E-Mail: chinasales@geze.com.cn  
www.geze.com.cn

**France**

GEZE France S.A.R.L.  
E-Mail: france.fr@geze.com  
www.geze.fr

**Hungary**

GEZE Hungary Kft.  
E-Mail: office-hungary@geze.com  
www.geze.hu

**Iberia**

GEZE Iberia S.R.L.  
E-Mail: info@geze.es  
www.geze.es

**India**

GEZE India Private Ltd.  
E-Mail: office-india@geze.com  
www.geze.in

**Italy**

GEZE Italia S.r.l.  
E-Mail: italia.it@geze.com  
www.geze.it

GEZE Engineering Roma S.r.l.  
E-Mail: roma@geze.biz  
www.geze.it

**Poland**

GEZE Polska Sp.z o.o.  
E-Mail: geze.pl@geze.com  
www.geze.pl

**Romania**

GEZE Romania S.R.L.  
E-Mail: office-romania@geze.com  
www.geze.ro

**Russia**

OOO GEZE RUS  
E-Mail: office-russia@geze.com  
www.geze.ru

**Scandinavia – Sweden**

GEZE Scandinavia AB  
E-Mail: sverige.se@geze.com  
www.geze.se

**Scandinavia – Norway**

GEZE Scandinavia AB avd. Norge  
E-Mail: norge.se@geze.com  
www.geze.no

**Scandinavia – Denmark**

GEZE Danmark  
E-Mail: danmark.se@geze.com  
www.geze.dk

**Singapore**

GEZE (Asia Pacific) Pte, Ltd.  
E-Mail: gezesea@geze.com.sg  
www.geze.com

**South Africa**

GEZE Distributors (Pty) Ltd.  
E-Mail: info@gezesa.co.za  
www.geze.co.za

**Switzerland**

GEZE Schweiz AG  
E-Mail: schweiz.ch@geze.com  
www.geze.ch

**Turkey**

GEZE Kapı ve Pencere Sistemleri  
E-Mail: office-turkey@geze.com  
www.geze.com

**Ukraine**

LLC GEZE Ukraine  
E-Mail: office-ukraine@geze.com  
www.geze.ua

**United Arab Emirates/GCC**

GEZE Middle East  
E-Mail: gezeme@geze.com  
www.geze.ae

**United Kingdom**

GEZE UK Ltd.  
E-Mail: info.uk@geze.com  
www.geze.com



Tel.: 0049 7152 203 0  
Fax.: 0049 7152 203 310  
www.geze.com