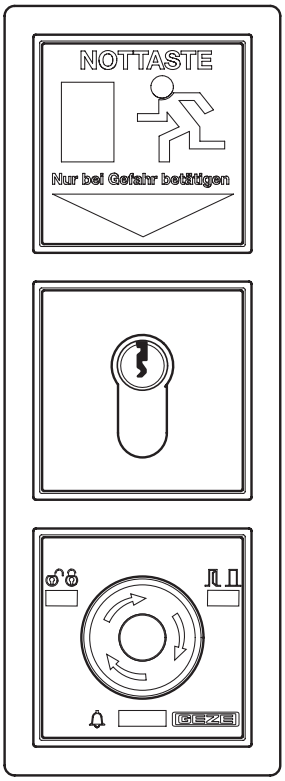

GEZE SECULOGIC TZ300

Emergency Exit System Door Control Unit

EN Installation and Commissioning Instructions with Wiring Diagram

GEZE

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1 About this document

These instructions describe the installation and commissioning of the GEZE TZ300 door control unit.

1.1 Product description

The GEZE door control unit is part of the SecuLogic emergency exit system. It is designed for controlling and monitoring electrically interlocked emergency exit doors. It secures doors along emergency exit routes against unauthorized access. At the same time the built-in emergency stop pushbutton allows instant passage in the event of an emergency.
Through a built-in interface a smoke and heat extraction, burglar alarm or hazard alert system can be connected, which unlocks the door in an emergency to allow an escape from the building.
External signal transmitters, such as alarm bells or warning lights can be connected as well as an alarm signalling interface to the building services management system. Built-in buzzers and LEDs provide visual and audible indication when an alarm has been triggered.

1.2 Related documents

All components are supplied with data sheets containing their technical specifications. These data sheets, as well as further documentation, is available on the Internet under www.geze.de/SecuLogic.

1.3 Key to symbols

Warning
In these instructions, warnings are used to warn against material damage and injuries.
- ▶ Always read and observe these warnings.
- ▶ Follow all instructions marked with the warning symbol and the word WARNING.

Warning symbol	Warning	Meaning
	**WARNING**	Danger for people. Serious or fatal injury can occur if these instructions are not observed.

Further symbols used in these instructions
Important information and technical notes are emphasised to illustrate the correct operation.

Symbol	Meaning
	means “Important note”
	means “Additional information”
▶	Symbol for a user action. Observe the sequence if there are several action steps.

1.4 Abbreviations

Abbreviation	Meaning
AKRR	Feedback contact interlocked (actuated by the anchor)
BLE220	Flashlight
BMA	Fire detection system
FS	Latch lock
FTÖ	Emergency exit door opener
GCDU100	Single-door unit
GCDU200	Door unit
GCFP401	Fingerprint
GCRR200	RFiD card reader
GCVR200	RFiD card reader
GLT	Building services management
GMA	Hazard alert system
IQ Lock C	Self-locking contact lock
IQ Lock EL	Self-locking motor lock
IQ Lock EM	Self-locking lever lock
IQ Lock M	Self-locking mechanical panic lock
KZF	Short-term release
MA500	Holding magnet
NC	Floating NC (normally closed) contact
NO	Floating NO (normally open) contact
NOT320	Emergency button
PSU	Power supply unit
OKFF	Upper edge of finished floor
RR	“Door closed” feedback contact (actuated through sliders on the latch)
RWA	Smoke and heat extraction system
SCT221	Key-operated pushbutton, single-pole pushbutton (NO), extendable to single-pole reversing (two NO)
SCT222	Key switch with LED indicator, single-pole reversing (two NO)
SCT320	Key switch, single-pole reversing (two NO)
SHB220	Alarm bell with flashlight
SLE220	Signal lamp
SLH220	Alarm bell
TZ300S	Door control unit with key switch (connection through ribbon cable)
TZ300S	Door control unit with key switch and built-in PSU
ZSU	Timer

2 Safety and responsibility

The GEZE door control unit has been designed according to the latest technical standards and acknowledged safety rules and regulations. Dangers can, nevertheless, occur in its installation and use. You must therefore observe the following instructions.

2.1 General safety instructions

- Installation, commissioning and repairs must be performed only by GEZE-authorized specialists.
- Use only genuine GEZE parts for repairs.
- GEZE accepts no liability for damage arising from unauthorized modifications to the installation.
- Primary building safety measures must be taken by the owner.
- Cables must be laid according to standards VDE 0100 and VDE 0815.
- To prevent unauthorized access, never leave the key in the key switch.
- Doors with electrical locks along escape routes should be inspected annually by a specialist. The specialist must issue a certificate verifying the periodic inspection, which the owner must submit to the building inspectorate on request. The inspection can be performed by a GEZE service technician or a GEZE-authorized service provider as part of a maintenance contract.
- In addition, GEZE recommends a monthly inspection of the emergency exit system for visible damage and faults by the owner. Any identified damage or faults must be rectified immediately by a GEZE service technician or a GEZE-authorized service provider.

Intended use
The GEZE door control unit is intended for controlling and monitoring electrically locked emergency exits. Third-party products must be used only after consultation with GEZE.

Improper use
Improper use includes the connection of any products that are not expressly approved by GEZE.

2.2 Target readership and qualifications

Installation, assembly, commissioning and repairs must be performed only by GEZE-authorized specialists.

2.3 Product liability

- According to manufacturers' liability for their products as defined in the German product liability act, the information contained herein and in the associated installation instructions and wiring diagrams (product information and intended use, incorrect use, product performance, product maintenance, obligation to inform and obligation to provide instruction) must be observed. Non-observation frees the manufacturer from their liability.
- Installation, function testing and maintenance must be performed only by GEZE-authorized personnel. GEZE accepts no liability for damage arising from unauthorized modifications to the installation.
- A combination with third-party devices invalidates GEZE's warranty. For repair and maintenance, use only original GEZE parts.

3 Installation and assembly

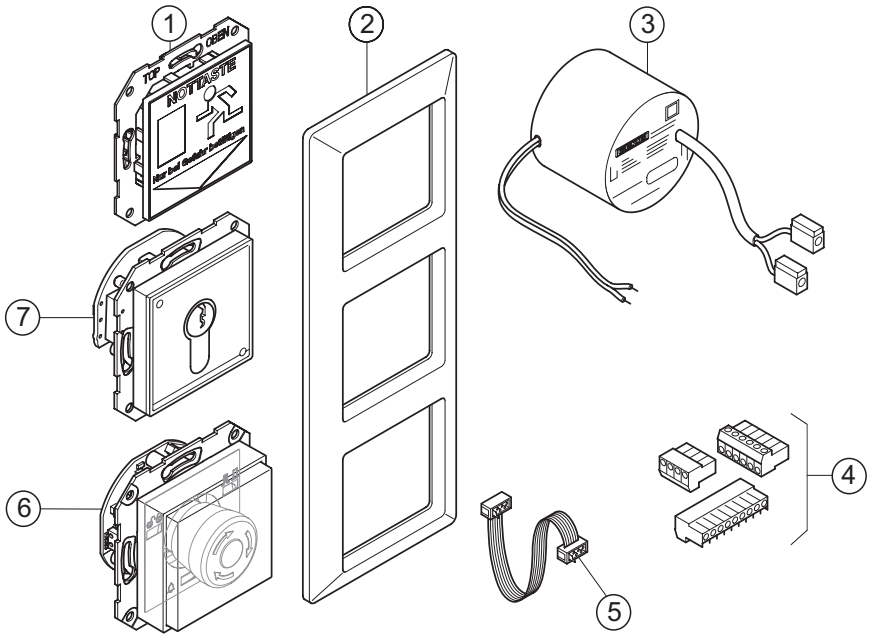
WARNING!
Risk of death through electric shock.
- ▶ Installation and assembly must be performed only by GEZE-approved specialist personnel.
- ▶ Check that all cables are voltage-free before installation.

3.1 Preconditions

- Cables are routed according to GEZE cabling diagram
- Miniature circuit-breakers as primary, mains-side disconnectors
- Observation of standards VDE 0100 und VDE 0815 for laying cables
- Tamper-proof cable routing according to VDE 0833 (surface-mounted cables in steel conduit)
- For flush-mounted cabling, flush-mounted sockets (depth 62.5 mm) at a mounting height of 850 mm from floor surface and up to 1200 mm for the emergency button

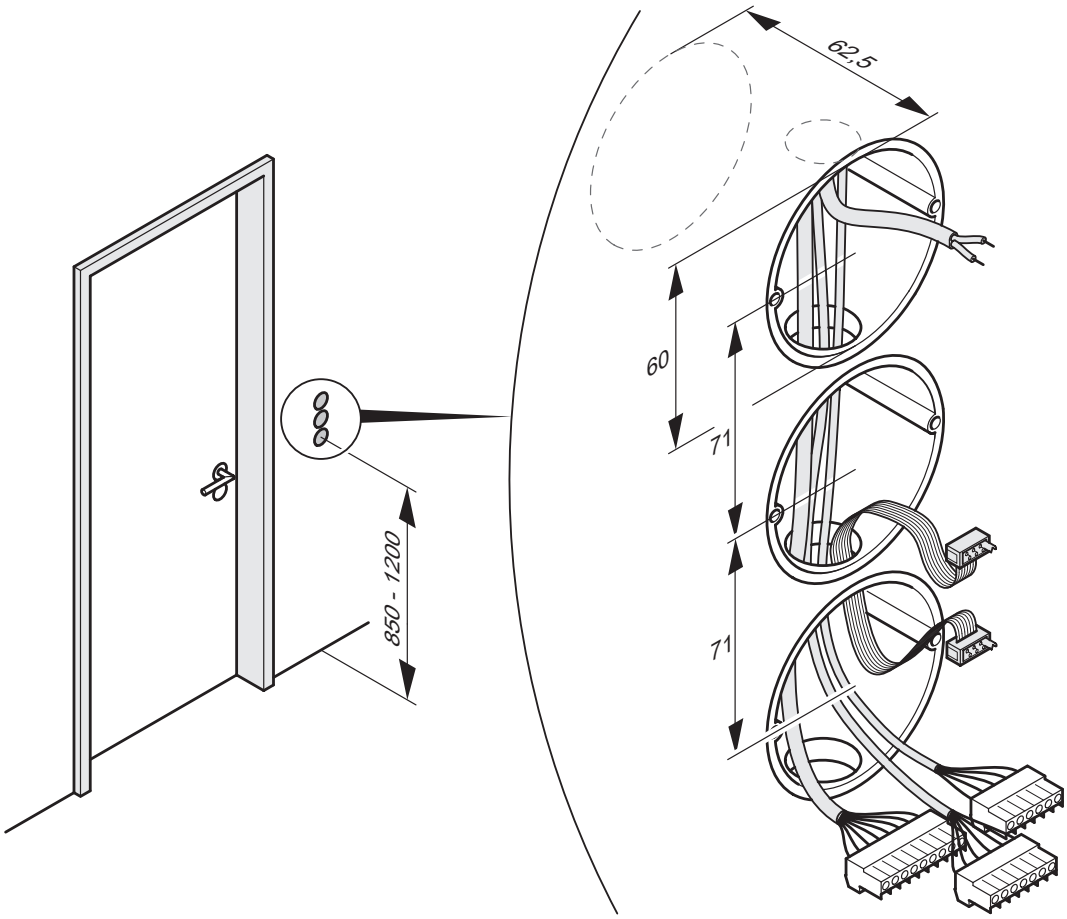
3.2 Installing the flush-mounted door control unit

These instructions describe the recommended installation of the a flush-mounted door control unit using the TZ300SN as an example.



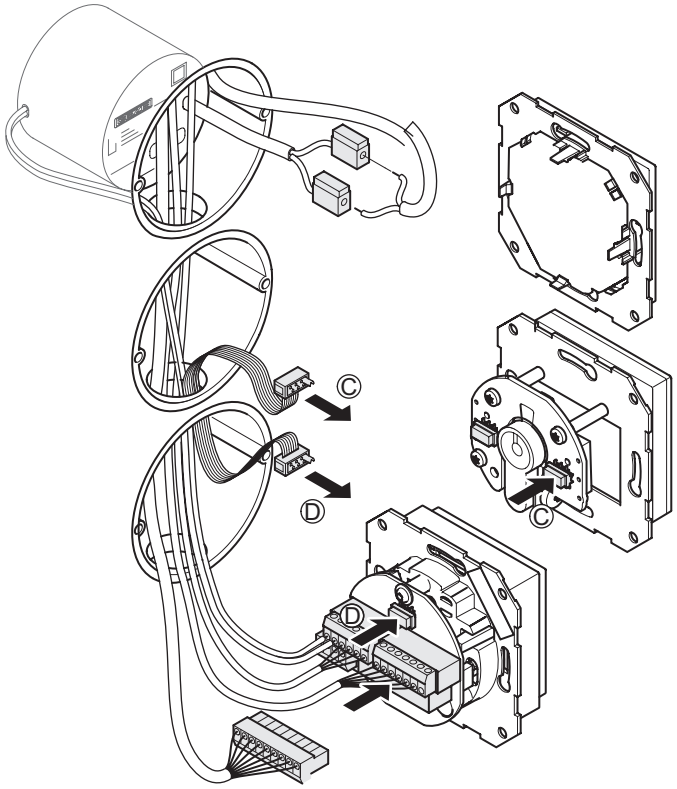
1 Emergency exit label
2 Frame
3 PSU NET220
4 Terminal blocks
5 Ribbon cable
6 Control unit with emergency pushbutton TST300
7 Key switch SCT320

- Lay mains cable and ribbon cable in the flush-mounted sockets.
- Connect cable to terminal blocks according to wiring diagram.

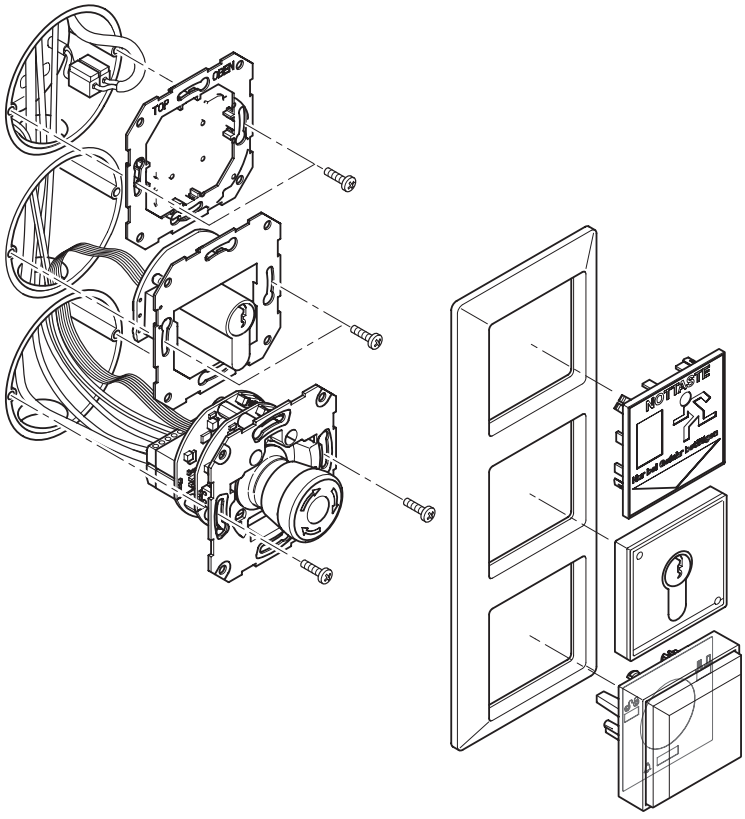


- Connect and fit the PSU.
- Connect the key switch door control module with the ribbon cable.

▶ Fit the terminal blocks to the back of the door control unit.

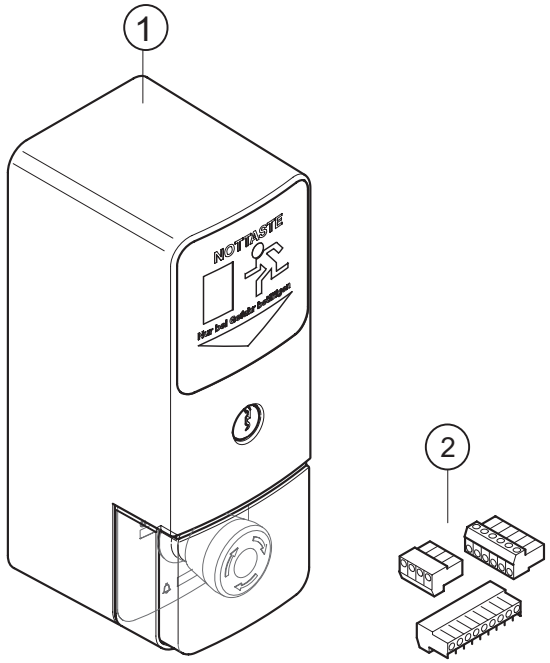


▶ Fit the door control unit.
▶ Fit the green adhesive frame.



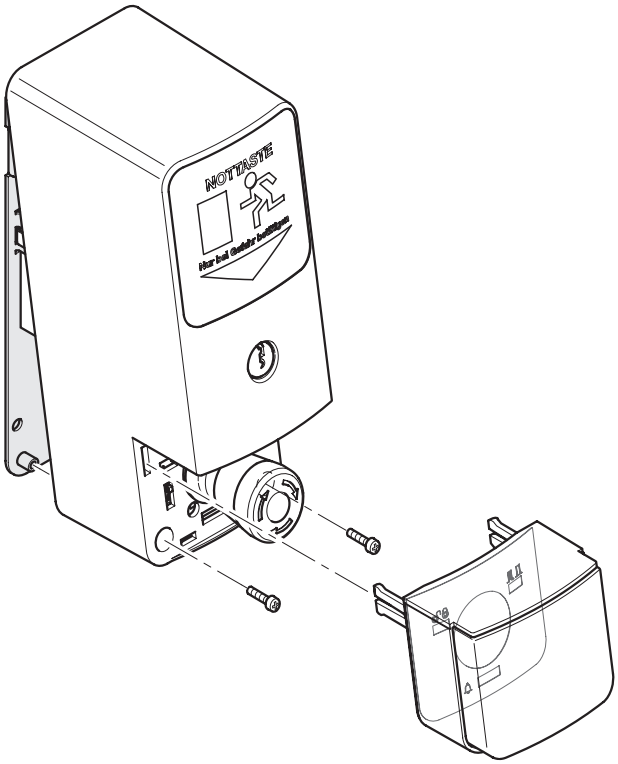
▶ Test the unit's function.

3.3 Fitting the surface-mounted door control unit

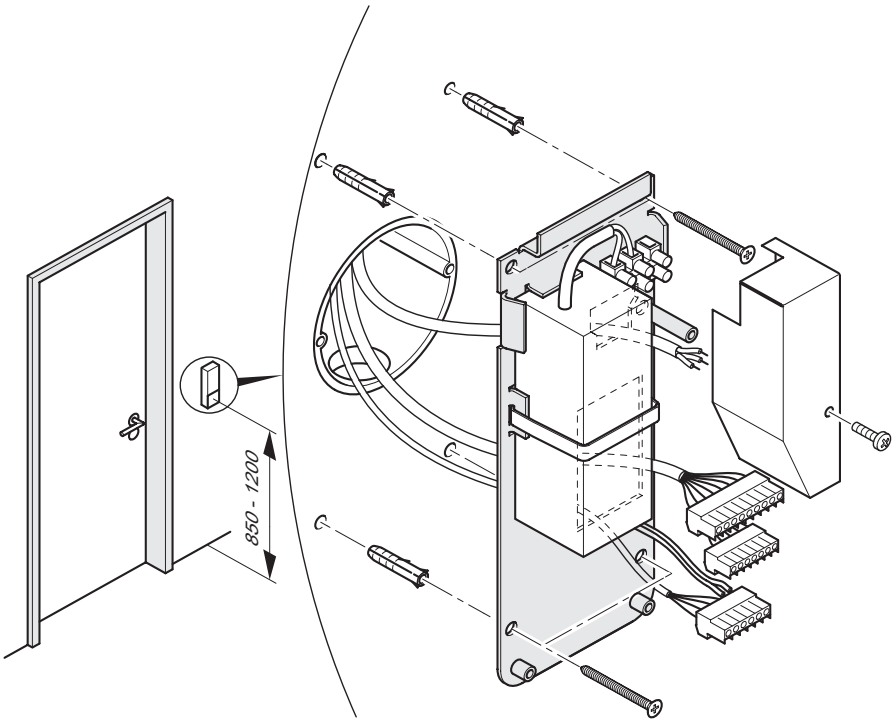


1 Door control unit TZ300SN
2 Terminal blocks

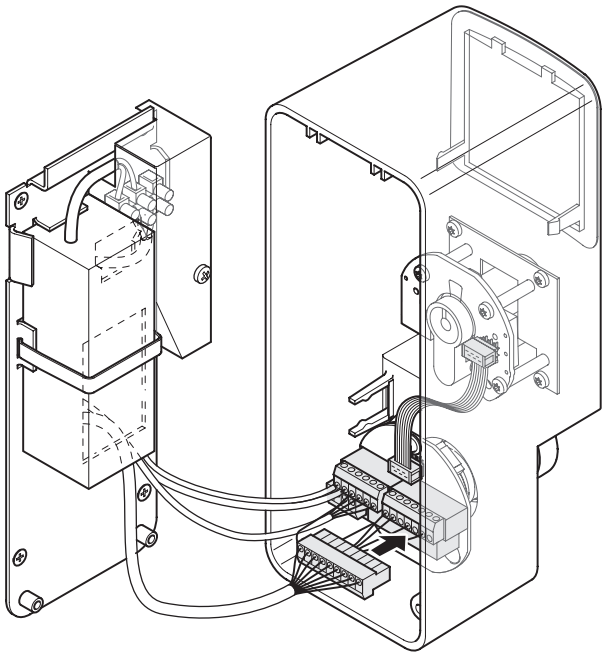
▶ Open the housing.



- Fit the wall-mounting bracket near the door (height of emergency button: 850 mm – 1200 mm from floor surface).



- Take off the mains connection cover.
- Connect the 230 V cable to the screw terminals of the PSU and refit the cover.
- Connect cable to terminal blocks according to wiring diagram.
- Fit the terminal blocks to the back of the door control unit.
- Secure loose cables with cable ties.



- Hook in housing and secure with screws.
- Fit the cover of the emergency button.
- Test the unit's function.
- Apply the labels "EMERGENCY" and "Press only in emergency" in the required language on the provided fields on the emergency exit sign. The required adhesive labels are supplied separately in English, French, German and Norwegian.

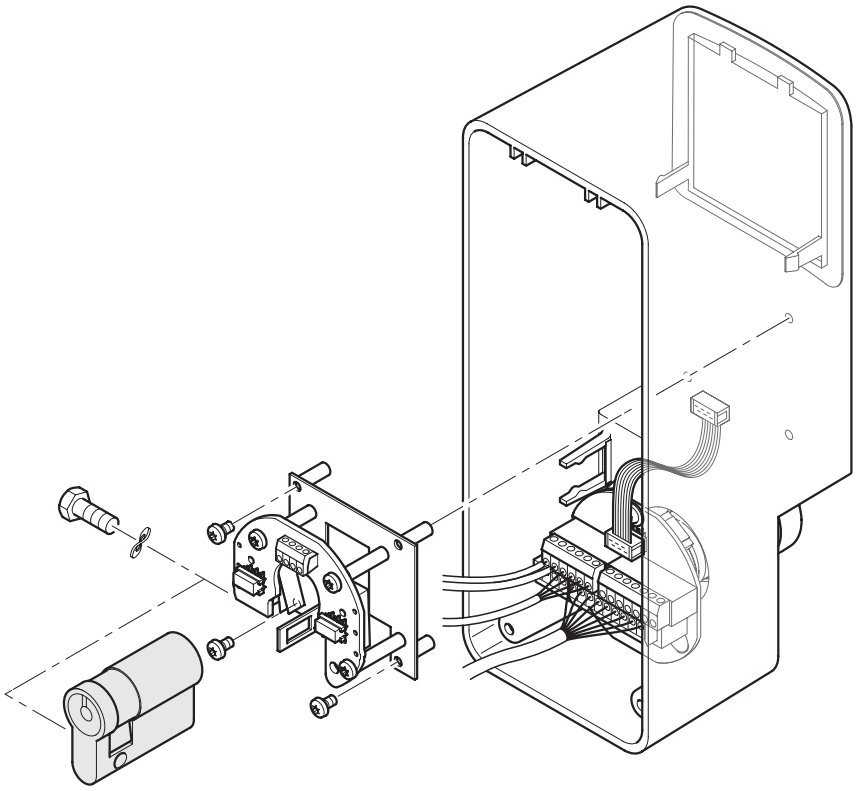
3.4 Replacing the lock cylinder

The lock cylinder must fulfil the following requirements:
- Profile half-cylinder, 40 mm (30/10)
- Eight-way adjustable

- ▶ When the plant is in operation, disable tamper switch.
- To do this, turn key to left for ten seconds. Right LED lights up green. The left LED goes out. Tamper alarm function is disabled for two minutes.
- ▶ Take housing off the wall bracket.
- ▶ Unscrew key switch.
- ▶ Release cap screw and remove the lock cylinder.

3.5 Fitting a safety cylinder, length 40/10

If using a safety cylinder with 50 mm (40/10), use the spacers between key switch and housing.
Fit the spacers before the carrier plate; this moves the complete fixture to the back by 10 mm.
The spacer set is not included as standard with the door control unit.
The set also contains four longer screws, which must be used instead of the existing screws.



- ▶ Replace the lock cylinder.
- ▶ Fit a new lock cylinder and secure with cap screw.
- ▶ Reassemble the door control unit in reverse order to disassembly.
- ▶ Test the unit's function.

4 Commissioning

4.1 Preconditions

Doors with electrical locks along escape routes must be taken into operation after the manufacturer has certified their suitability for the intended purpose. In addition, the correct installation and correct function of the electrical lock must be verified by a specialist.

4.1.1 Tamper switch TST300

When operating voltage is applied to the TZ300, a tamper alarm is triggered if the emergency button's hood is not fitted.

4.1.2 Tamper switch SCT320 (on UP only)

When operating voltage is applied to the TZ300, a tamper alarm is triggered if the emergency button's hood is not fitted. If the tamper switch of the key switch is not to be evaluated, you must fit a jumper between terminals 2 and 54.

4.1.3 Disabling the tamper alarm

For maintenance, the tamper alarm can be disabled for a limited time. To do this, turn the built-in key switch to the left for about ten seconds. This disables the tamper alarm for about two minutes. While it is disabled, the right LED is lit green and the left LED is off.
To reenable the tamper alarm before the two minutes are up, turn the built-in key switch to the right. The door control unit is then unlocked. To lock it, turn the key switch to the right again.

4.2 Settings

No settings can be made or changed on the door control unit. All values, such as short-term release, cancelling, pre-alarm, etc. are permanently set.

4.3 Description of basic functions

4.3.1 Short-term release (KZF)

Short-term release releases the emergency door protection for a limited time. During this time, access through the door is possible without triggering an alarm. It is activated with the built-in key switch or an external actuator connected to the short-term release input.
The short-term release duration is about 20 seconds.

4.3.2 Cancellation of short-term release

When short-term release is active, the door locks prematurely when it is closed before the short-term release time has expired. This prevents unauthorized access through the door after an authorized person has gone through.

4.3.3 Retriggering on short-term release

If the short-term release function is triggered again while the function is still active, the short-term release period starts again.

4.3.4 Pre-alarm

If the door is passed through after the short-term release time has expired, an audible signal is issued to warn the user that the short-term release time has expired. The pre-alarm duration is **60 seconds**. If the door is closed while a pre-alarm is active, the door is locked again automatically and the pre-alarm is reset.

4.3.5 Door alarm

If the pre-alarm time is exceeded, the door alarm is triggered. This must then be reset with the built-in key switch or with a new short-term release command. If the door is closed while the door alarm is active, it locks and can be unlocked again only after the alarm has been reset (except when the emergency button is pressed or emergency unlocking is triggered). The door alarm is also triggered when the door is opened forcefully.

4.3.6 Unlocked

The power supply to the locking element is permanently interrupted. The door can be passed through without triggering an alarm.

4.3.7 Locked

The locking element is energized through the door control unit. The emergency door protection is active and unauthorized people can open the door only by pressing the emergency button, which triggers an alarm.

4.3.8 Emergency unlocking

The TZ300 can be unlocked in an emergency by the fire detection, burglar alarm or hazard alert system. This is a non-safety-relevant interruption of the power supply to the locking element.
When the BMA, GMA or RWA signal is cancelled, the alarm is automatically reset after 60 seconds.

4.3.9 Direct unlocking (according to EltVTR)

Safety-relevant interruption of the power supply to the electrical lock through an NC contact when the emergency button is pressed.

4.4 Fire detection system (BMA), hazard alert system (GMA), smoke and heat extraction system (RWA)

4.4.1 Alarm triggers

If the BMA, GMA or RWA signal of a door control unit is applied, it is unlocked and a local alarm is triggered (audible through built-in buzzer and visual through built-in LED). The system remains unlocked as long as the signal is applied and until the alarm has been reset. See 4.4.3, “Resetting the alarm”.
The alarm is triggered through a floating NC contact. If no BMA, GMA or RWA exists, a 2K resistor must be fitted across the Fire Detection System input (terminals 2 and 10, orange terminal field. This is the as-supplied state.
If a BMA or GMA system is connected, the 2K resistor at the emergency unlocking input of the TZ300 (terminals 2 and 10) must be removed and connected in series with the NC contact of the BMA or GMA.

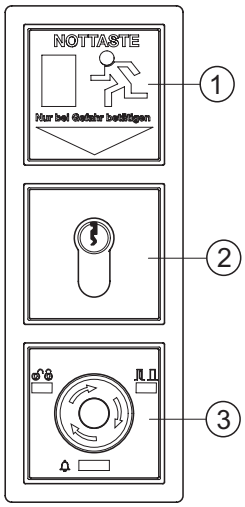
4.4.2 Cable monitoring according to prEN 13637

For installations according to prEN 13637 the cable between fire detection system and door control unit must be monitored. A 2k resistor must be fitted in series with the NC contact at the fire detection system output for this purpose.

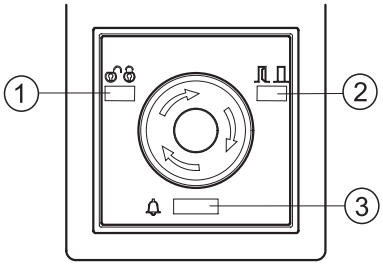
4.4.3 Resetting/acknowledging the alarm

When the BMA signal is cancelled, the alarm is automatically reset after 60 seconds. The visual and audible signal at the TZ300 goes out and the door control unit locks the door.
The system can be reset before the 60 seconds have expired with the built-in key switch of the TZ300.
To unlock the system after a reset, turn the key to the left for more than one second.
To lock the system after a reset, turn the key to the right.

5 Operation



1 Emergency exit label
2 Key switch
3 Control unit with emergency button



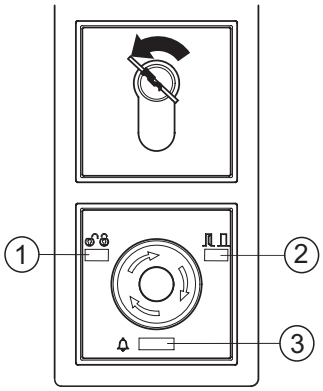
1 "Locked" LED
2 "Door state" LED
3 "Alarm" LED

No.	Indicator	Colour	Meaning
1		Red	Locked
		Green	Unlocked
		Green flashing (every second)	Short-term release
2		Red	Door closed
		Green	Door open
3		Yellow	Alarm
		Yellow flashing (every second)	Pre-alarm
		Yellow flashing	Fault

5.1 Controlling door control unit TZ300 with the key switch

Unlocking the door
When the system is unlocked, the locking elements are disabled and the door can be opened.

▶ Turn the key to the left and hold it for about one second.

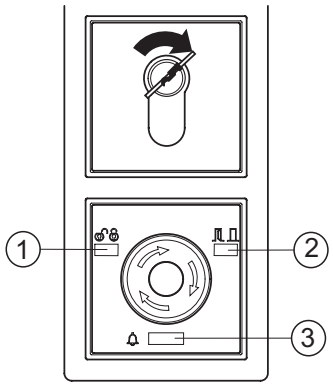


LED 1 lights up green. The door is unlocked.

Locking the door
When the system is unlocked, the locking elements are enabled and the door can not be be opened.

Preconditions:
The door is closed; otherwise a pre-alarm is triggered.

▶ Turn the key to the right.



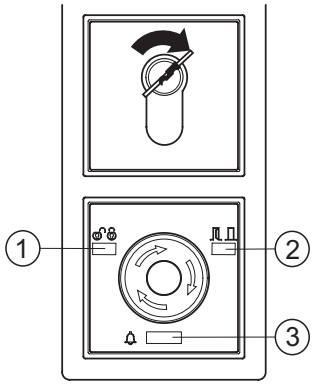
LEDs 1 and 2 light up red. The door is locked.

Unlocking the door temporarily (short-term release = 20 seconds)
With the short-term release function, the door can be unlocked with the key switch for 20 seconds. When this time has expired, the door is locked again.

- If the door is not closed after short-term release time has expired, a pre-alarm is issued.
- If the door is closed after the short-term release time has expired, the door is locked again.
- If the short-term release function is triggered again while the function is still active, the short-term release period starts again (is retriggered).

Precondition:
The door is locked.

▶ Turn the key to the right.

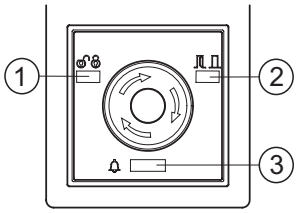


LED 1 flashes green. The door remains unlocked for the set period of 20 seconds. On cancellation the LED lights up red.

5.2 Opening doors in emergencies and triggering alarm

When the emergency button is pressed the door's locking elements are de-energized and the door can be opened (direct unlocking).
If a connected fire detection or similar system triggers, the locking elements are de-energized automatically to release the door (emergency unlocking).

▶ Press the emergency button.



LED 1 lights up green and LED 3 lights up yellow. The door is unlocked.
The alarm is triggered.

5.3 Cancelling alarms

Alarms of the door control unit remain active until their cause has been eliminated and the alarm is acknowledged at the door control unit. (Exception: emergency unlocking through BMA,GMA or RWA, after which the alarm is automatically reset after 60 seconds; see section 4.4.3.)

5.3.1 Resetting emergency button

When the emergency has passed, the emergency button must be reset.

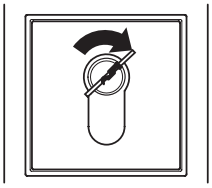
- Remove emergency button cover.
- Turn emergency button to the right.
  The emergency button returns to its normal state.
- Refit the cover.
- Acknowledge the alarm.

5.3.2 Acknowledge alarm

Precondition:
The alarm cause has been eliminated.

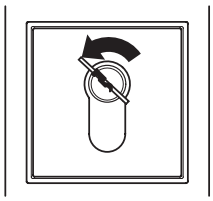
To acknowledge the alarm and lock the door

- Turn the key to the right



To acknowledge the alarm and unlock the door

- Turn the key to the left



The door alarm can also be acknowledged through the **short-term release** input.

A tamper alarm can be acknowledged only 30 seconds after the alarm cause has been eliminated.
For the duration of the tamper alarm the TZ300 remains locked. It can, however, be unlocked with the emergency button.

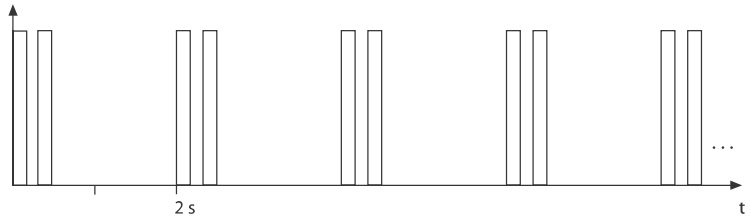
If the alarm can not be acknowledged with the key switch, a new alarm may be active. If, for example, the cover was not refitted after resetting the emergency button, a tamper alarm is triggered when emergency unlocking is acknowledged, and the door control unit locks the door.
This is indicated by a change in the sound of the audible signal.

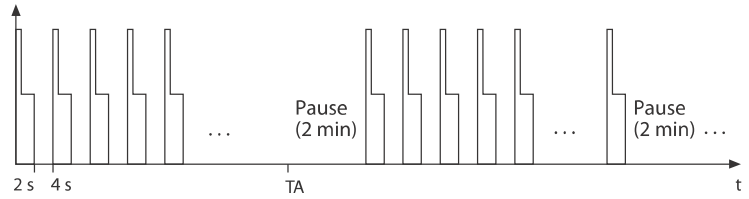
5.4 Alarm signal

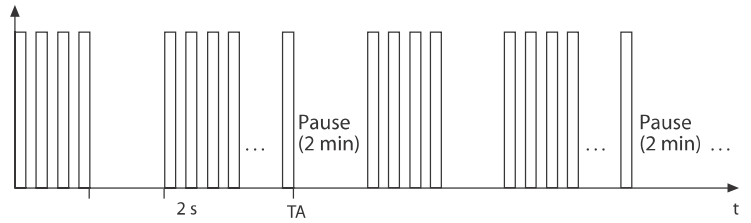
Misuse of the system and emergency situations are indicated by a built-in buzzer and yellow alarm LED 3.

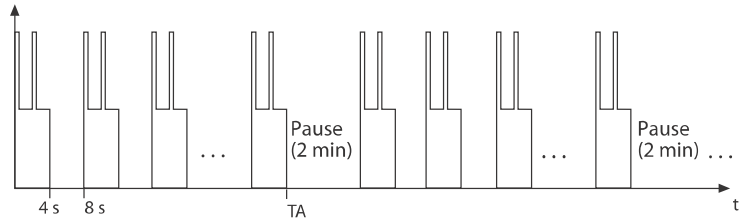
An alarm can, in principle, be acknowledged only when its cause has been removed.

Alarm	Alarm LED	Alarm bell
Pre-alarm	Yellow flashing light (1 s on, 1 s off)	Acoustic signal, 2 beeps
Door alarm	Yellow continuous light	Acoustic signal, 2 seconds continuous
Tamper alarm	Yellow continuous light	Acoustic signal, 4 beeps
Alarm - Unlocking through emergency button - Triggering trough BMA/GMA	Yellow continuous light	Acoustic signal, 4 seconds continuous
System fault	Yellow flashing light at 2 second interval	No acoustic signal









5.5 Removing alarms and system faults

Alarm state	Cause of alarm	Elimination of alarm cause
Pre-alarm	Door not closed after unlocking period has expired. No closed signal	▶ Close door. ▶ Unlock door.
Door alarm	No closed signal	▶ Close door. ▶ Check door contact.
	No locked signal	▶ Check locking element.
Tamper alarm	Tamper switch of door control unit not closed (on UP only).	▶ Close contact. ▶ Fit cover. ▶ After suppression time,acknowledge alarm.
	Key switch tamper switch not closed.	
Alarm	Emergency button of TZ300 pressed (direct unlocking).	▶ Reset door control unit emergency button.
	Fuse in TST300 blown.	▶ Check fuse. ▶ Replace fuse.
	Emergency unlocking through connected BMA, GMA or RWA.	▶ Check BMA, GMA or RWA and switch off emergency unlocking signal. ▶ Check input of affected door control unit.
	2K resistor between terminals 2 and 10 not set and no BMA, GMA or RWA connected.	▶ Fit a 2K resistor between terminals 2 and 10.
	Locking element connected with reversed polarity. Emergency button LED goes on and off. Other LEDs remain off. (With PSUs NET220 und NT19.2-24. With larger PSUs the fuse blows.)	▶ Immediately isolate from the power supply and connect correctly.
	Locking element not connected.	▶ Connect locking element.
	Jumper on FTÖ331U was not removed. FTÖ332 is connected without RP220. Short-circuit in the supply line of the lockingelement.	▶ Remove jumper on FTÖ331. ▶ Check locking element supply line for short-circuit. ▶ Connect FTÖ332 with RP220. ▶ Press emergency button. ▶ Release (pull out) emergency button.
	Controller defective	▶ Replace door control unit.

When the alarm cause has been remedied, the alarm must be acknowledged with the built-in key switch.

5.6 Mains failure

When mains power is restored, the door control unit is always in operating state Locked.
If an alarm is active when mains power is restored, the door control unit is in operating state Alarm.

Operating mode before mains failure	Operating mode after mains failure
Locked	Locked
Permanent unlocking	Locked
Short-term release	Locked
Alarm	Alarm or acknowledge alarm if cause no longer exists

6 Wiring diagram

6.1 General information

Unless otherwise stated, the wiring diagrams apply to surface-mounting versions and flush-mounting versions from TS300, software version 1.0.

6.2 Markings

The wiring in these wiring diagrams are marked as follows:

Colour	Former designation to DIN 47002	New designation to DIN IEC 757	Colour	Former designation to DIN 47002	New designation to DIN IEC 757
Black	sw	BK	Blue	bl	BU
Brown	br	BN	Violet	vi	VT
Red	rt	RD	Grey	gr	GY
Orange	or	OG	White	ws	WH
Yellow	ge	YE	Pink	rs	PK
Green	gn	GN	Turquoise	tk	TQ

6.3 Current consumption

When connecting external devices, observe the overall power consumption.

- Output rating for external devices through standard PSU:
  - Flush-mounted version (NET220): 24 V DC, max. 350 mA
  - Surface-mounted version (NT19.2-24): 24 V DC, max. 650 mA
- Output rating for external devices through external PSU (Net24-5, Logo): 0.8 A

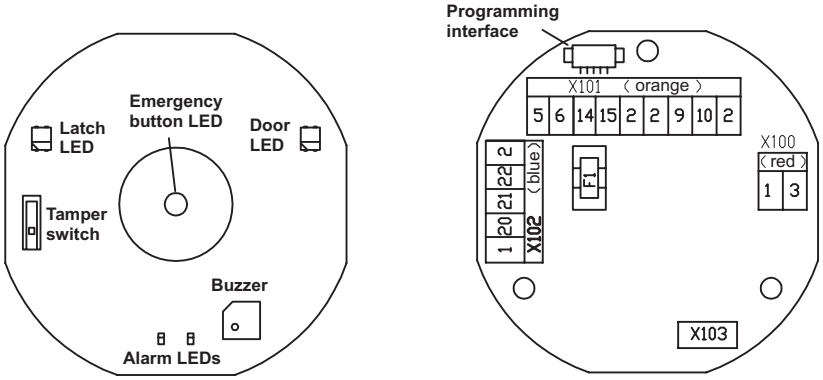
Consumer	Consumption in mA (approx.)	Consumer	Consumption in mA (approx.)
Door control unit TZ300	120	Numerical code lock CTI / CTS V	50
Control module TST300	100	Signal lamp SLE220	85
		Flashlight BLE220	90
		Alarm bell with flashlight	110
Holding magnet MA500	250	Alarm bell SLE220	16
Emergency exit door opener FTÖ331	160	Key switch with LED SCT222	30
Emergency exit door opener FTÖ332	105		
Relay card RP220	10	Fingerprint reader GCFP401	200
		Card reader GCRR200	100
Single-door unit GCDU100	30	Card reader GCVR200	100
Door unit GCDU200	120	Smoke switch RS5	19
Master unit GCMU200	120		
GCMDU200	120	IQ Lock EM / EM DL, 24 V version	210
Master unit GCMU524	130	IQ Lock EL / EL DL with controller MST210	250

6.3.1 Examples for calculating the total power consumption

Example 1: Single-leaf emergency door with 1×TZ300SN UP (120 mA), 1× FTÖ331 (160 mA) and 1× SLE220 (85 mA). Total current consumption of all devices = 365 mA; external devices = 245 mA (without TZ300)
Conclusion: PSU NET220 with 500 mA of the TZ300SN UP is sufficient.

Example 2: Two-leaf emergency door with TZ300SN AP (120 mA), 2× MA500 (250 mA), SCT222 (30 mA) and RP220 (10 mA) IQ Lock EM DL 24V (210 mA)
Total current consumption of all devices = 870 mA; external devices = 750 mA (without TZ300)
Conclusion: PSU NT19.2-24 with 800 mA of the TZ320SN AP is not sufficient.
Solution 1: For IQ Lock EM DL, use separate PSU (NT6.3-24, 260 mA, No. 109637)
Solution 2: Use TZ300S without PSU and draw power from external PSU.
(e.g. NT24-5, 24 V, 5 A No. 111182 or Siemens Logo 24 V, 1.3 A, No. 078401)

6.4 Door control units



6.4.1 Door control unit TZ300 (terminals, fuses)

Fuse

Name	Value	Meaning
F1	1.5 A, SMF 125 V, quick-acting	24 V external

Operator control and display elements

- Latch LED
- Door LED
- Alarm LED
- Buzzer (75 dB at about 50 cm distance)

Technical specifications

Current consumption: 100mA

Supply voltage for external devices:

- with standard PSU of the TZ300: UP: NET220, max. 350 mA; AP: NT19.2-24, max. 650 mA
- with external PSU: max. 800 mA (use only GEZE-approved PSUs)

Terminal assignment

Max. cable cross-section for screw and plug-in terminals: 1 mm²

		Terminal	Function	
X103	blade terminal for GEZE key switch			
X100	red terminal field	1	Supply GND	
		3	24 V DC supply	
X101	orange terminal field	5	Locking element, +, 24 V DC	
		6	Locking element, -, GND	
		14	Door locked feedback	
		15	Door closed feedback	
		2	24 V DC	
		2	24 V DC	
		9	Brief unlocking input	
		10	Emergency unlocking input	
		2	24 V DC	
X102	Blue terminal field	2	24 V DC	
		22	NO, alarm output	Max. 1 A, 24 V DC
		21	Com, alarm output	
		20	NC, alarm output	
		1	GND	

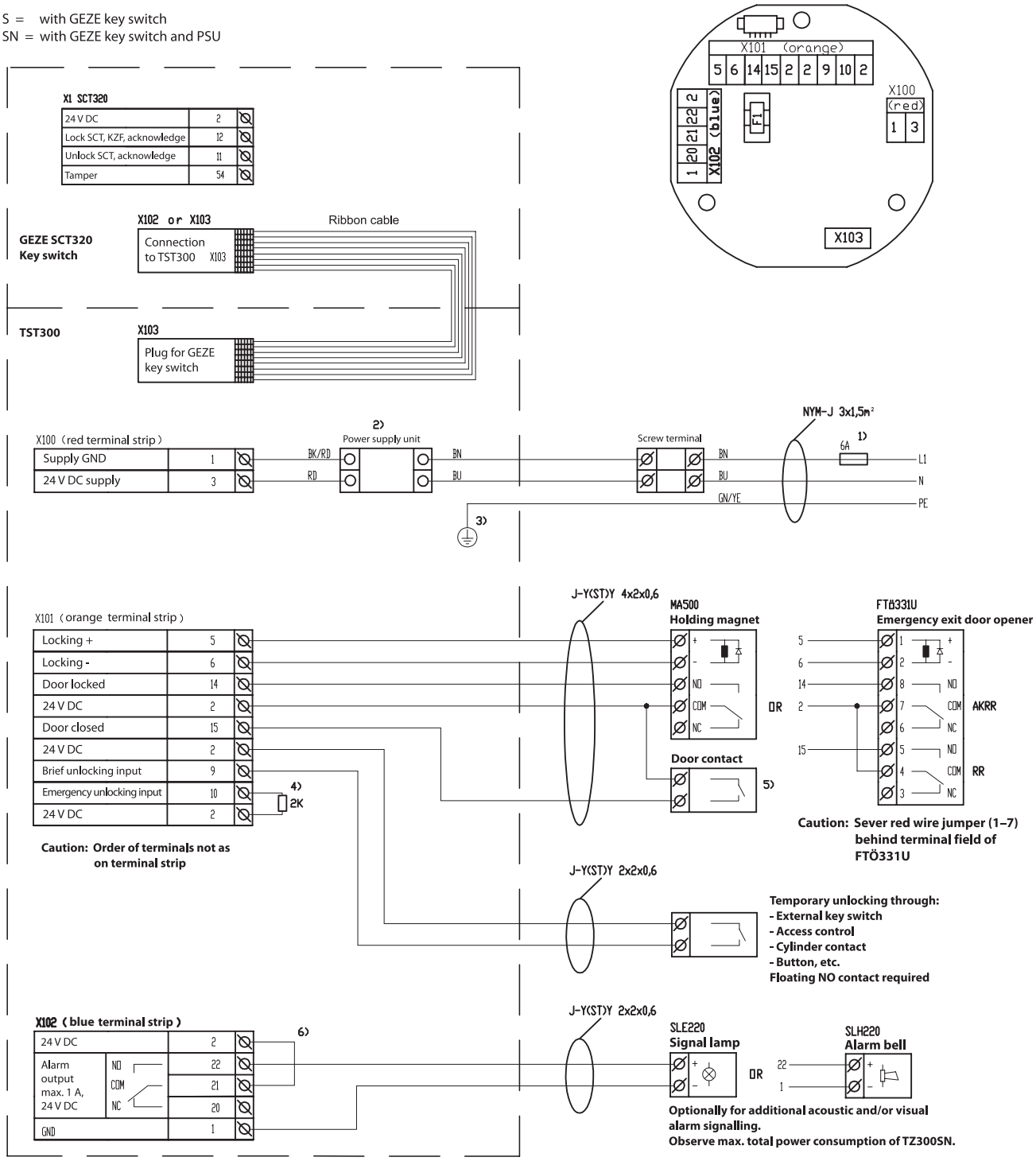
6.4.2 Notes about the wiring diagram

The notes apply for the following wiring diagram of the various versions of the TZ300.

1) Building mains fuse.
2) The primary and secondary sides must be spatially separated. For the TZ300S the PSU must be fitted externally.
3) TZ300SN UP: Protection class II, PE (protective earth) conductor is not connected.
   TZ300SN AP: Protection class I with PE conductor testing according to VDE0100.
4) In delivery state the 2K resistor is fitted.
   When connecting a BMA, GMA or RWA, remove the resistor and connect it in series with the NC contact of the BMA, GMA or RWA (see plan "Emergency unlocking through BMA, GMA or RWA").
5) Contact closed when door closed.
6) When a GEZE alarm bell or siren is fitted, a jumper must be set.

6.4.3 Door control unit TZ300S, TZ300SN

S = with GEZE key switch
SN = with GEZE key switch and PSU

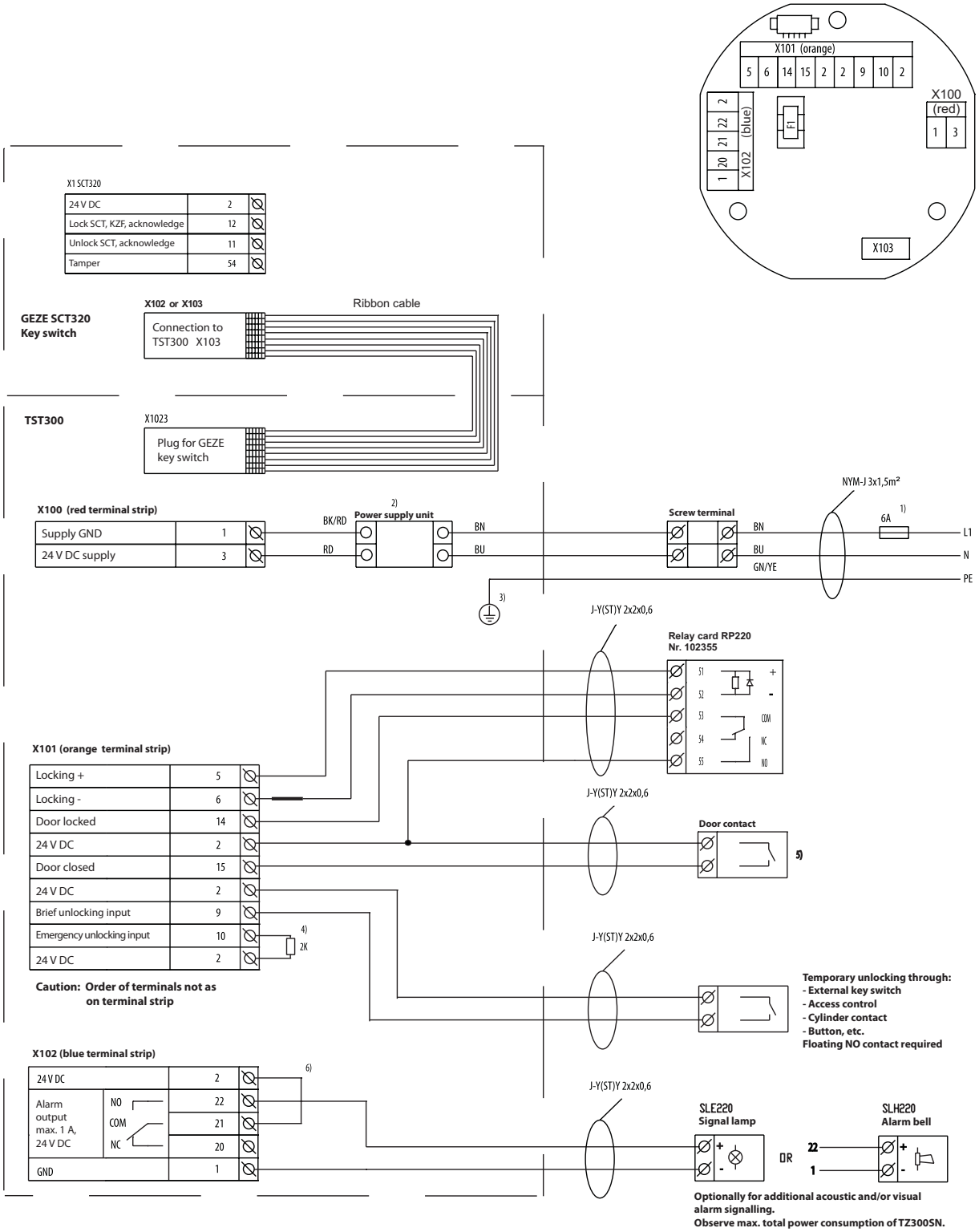


For notes about the wiring diagram, see section 6.4.2

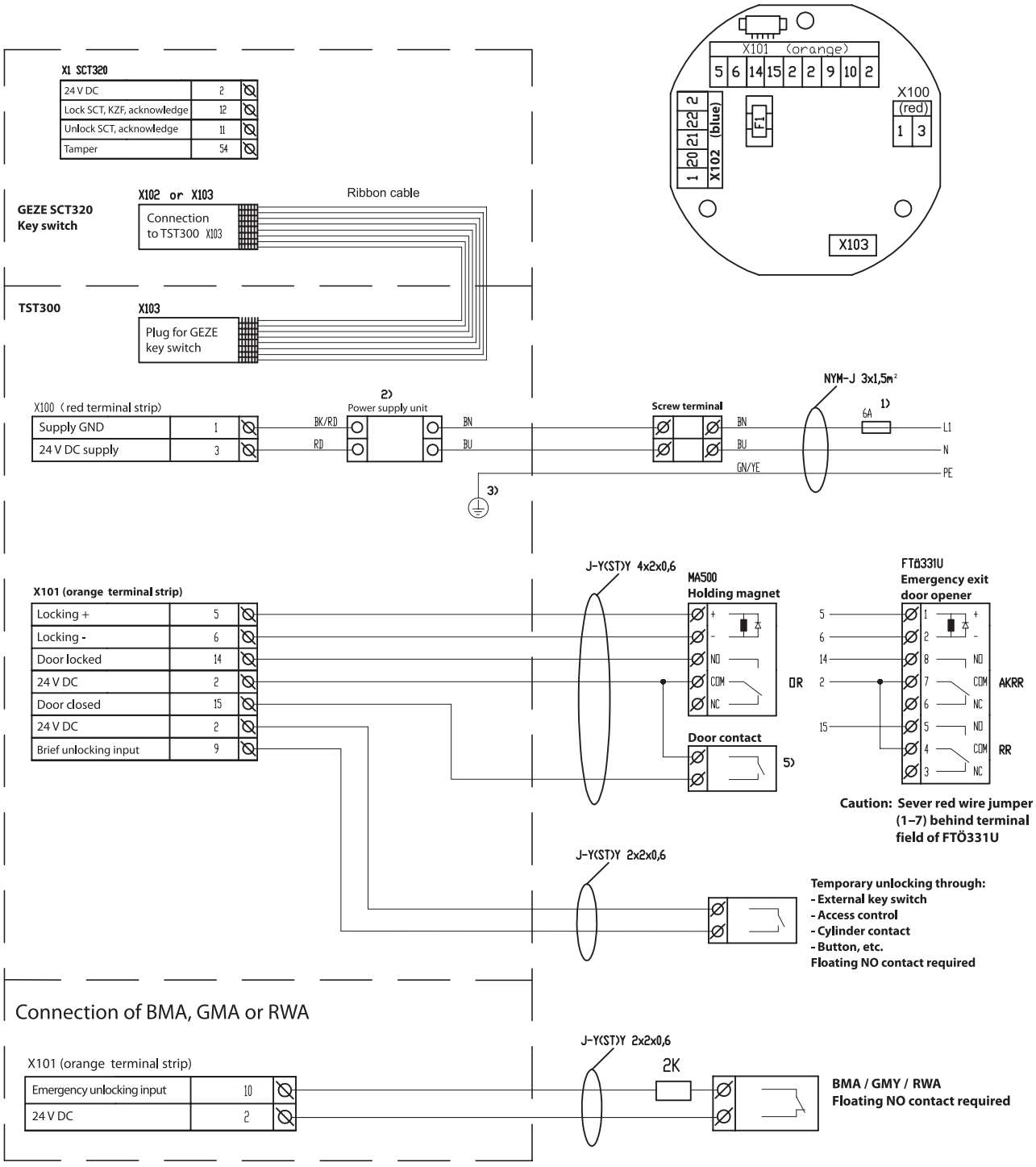
6.4.4 TZ300SN, TZ300S: Door monitor without locking element

For use, for example, as door monitor

Function:
The door can be opened at any time through the panic handle.
Opening the door without authorization triggers the door alarm, which, in turn, triggers a visual and acoustic alarm through the built-in signal generators. The door alarm remains active until the door is closed again and the alarm is reset with the built-in key switch or through the Short-term release input.
Authorized access is possible with short-term release function or by permanently unlocking the door.



6.4.5 Emergency unlocking through BMA, GMA or RWA

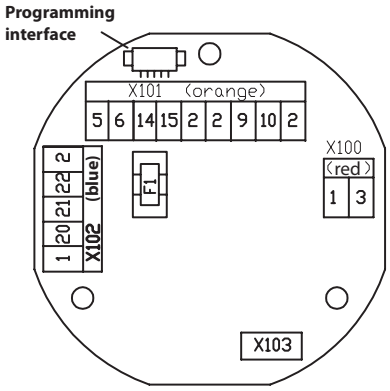


If a BMA, GMA or RWA system is connected, the 2K resistor fitted to terminals 2 and 10 of the TZ300 must be removed and connected in series with the NC contact of the triggering device.
The alarm automatically resets after 60 seconds when its cause has been removed (contact closed again).

For notes about the wiring diagram, see section 6.4.2

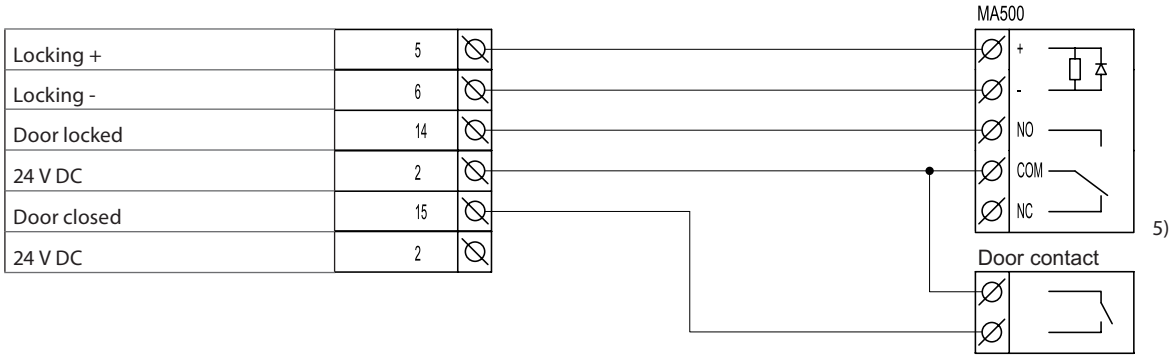
6.5 Locking elements

If the door has several unlocking elements, connect the coils in parallel and the feedback signal cables in series.



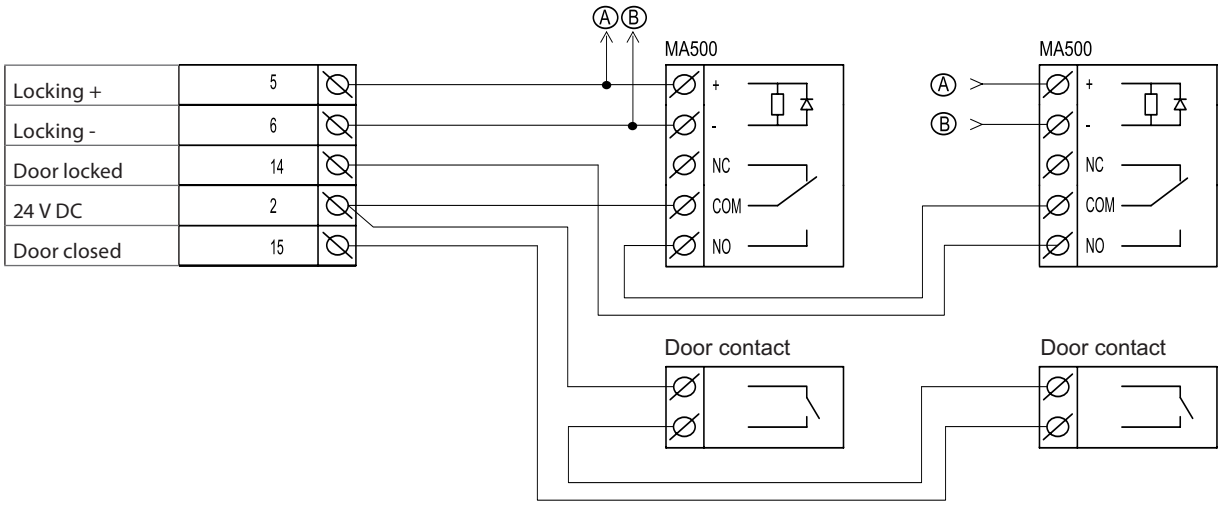
6.5.1 Holding magnet MA500 (single-leaf doors)

TST300 - X101 (orange terminal strip)

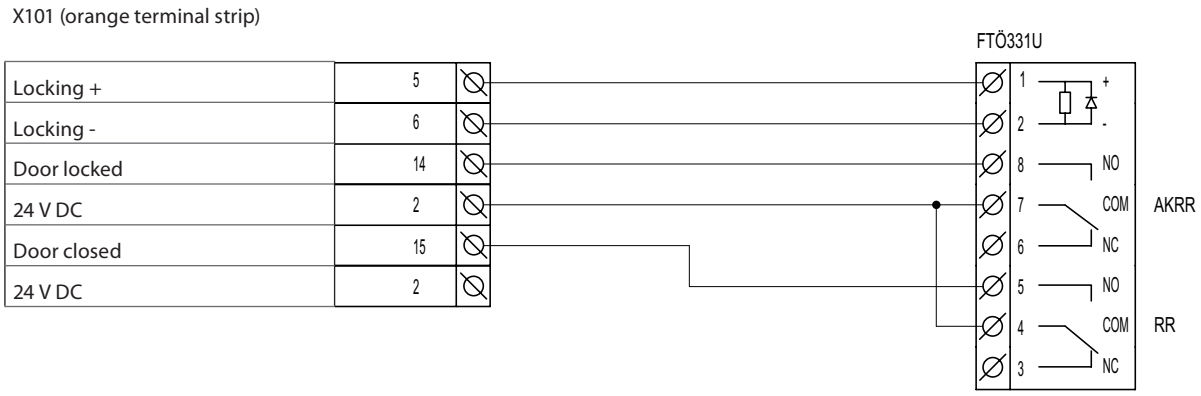


6.5.2 Holding magnet MA500 (two-leaf doors)

TST300 – X101 (orange terminal strip)

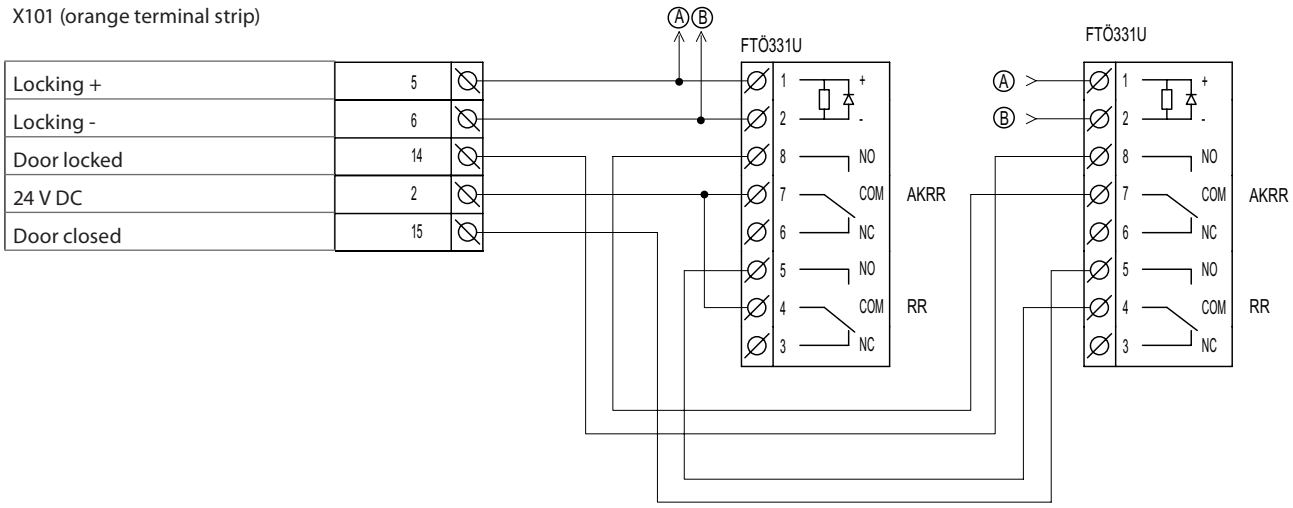


6.5.3 Emergency door opener TYP331U DIN right/left (single-leaf doors)



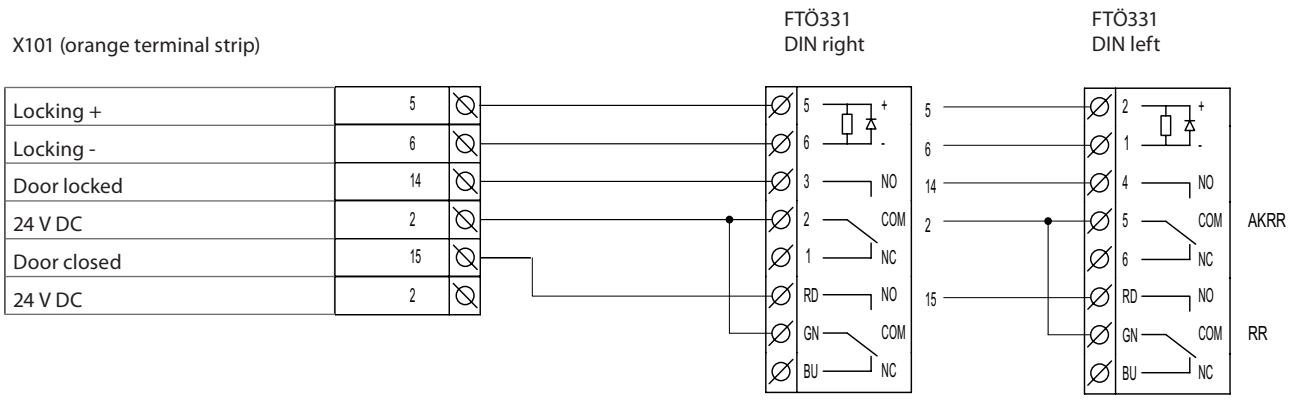
▶ Caution: Sever red wire jumper (1–7) behind the terminal field of the FTÖ331U.

6.5.4 Emergency door opener TYP331U DIN right/left (two-leaf doors)



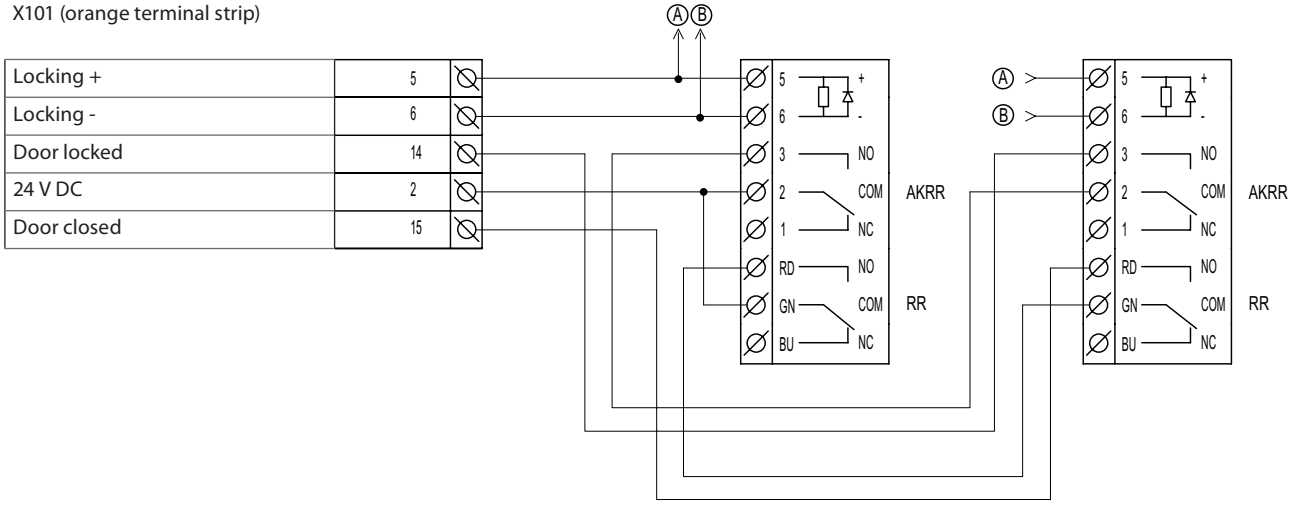
▶ Caution: Sever red wire jumper (1–7) behind the terminal field of the FTÖ331U.

6.5.5 Emergency door opener TYP331 DIN right/left (single-leaf doors)

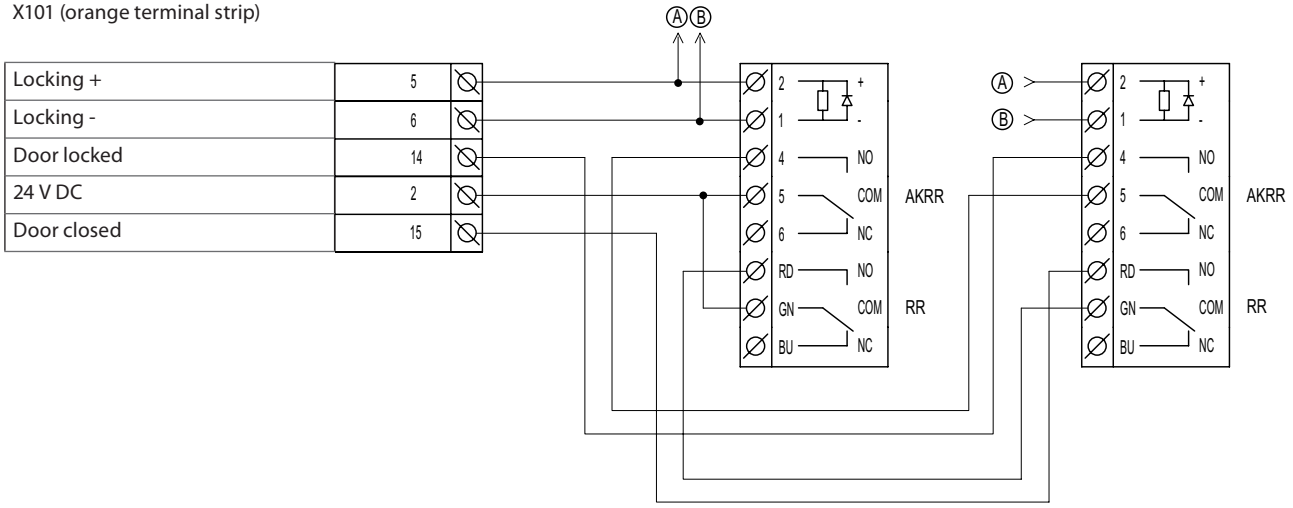


For notes about the wiring diagram, see section 6.4.2

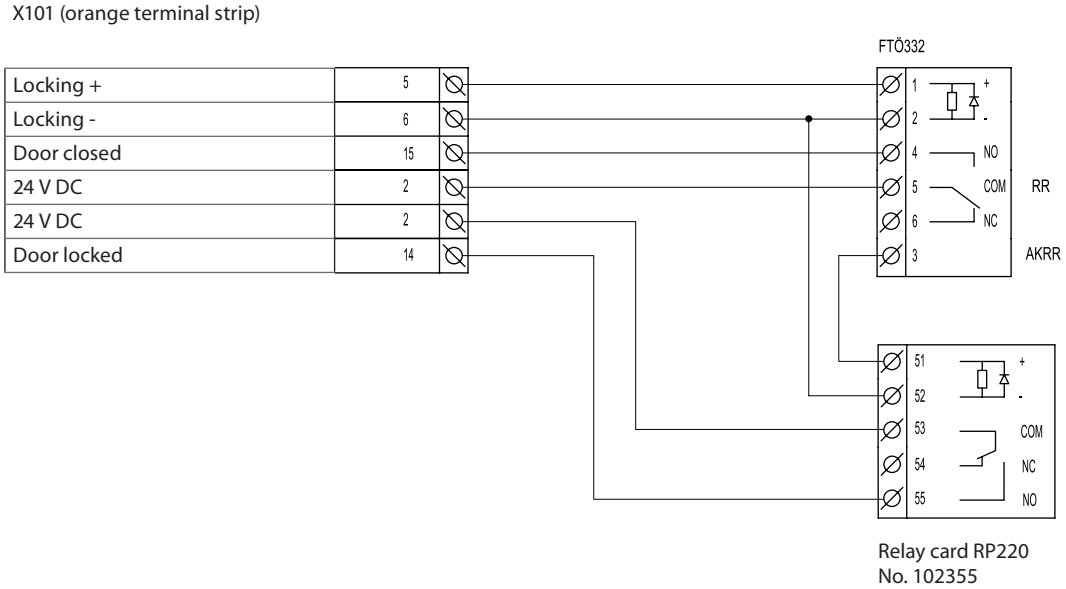
6.5.6 Emergency door opener TYP331 DIN right (two-leaf doors)



6.5.7 Emergency door opener TYP331 DIN left (two-leaf doors)

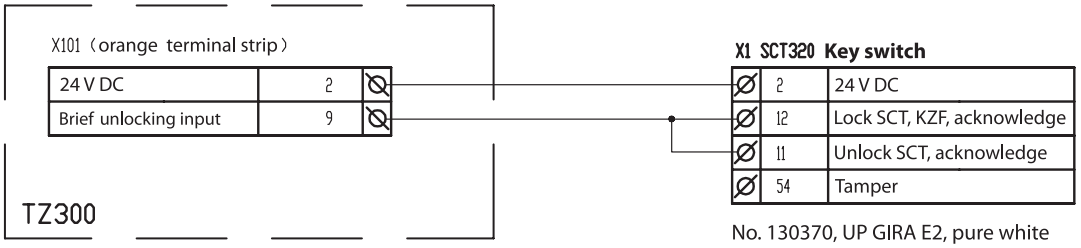


6.5.8 Emergency door opener TYP332 (1-leaf doors)



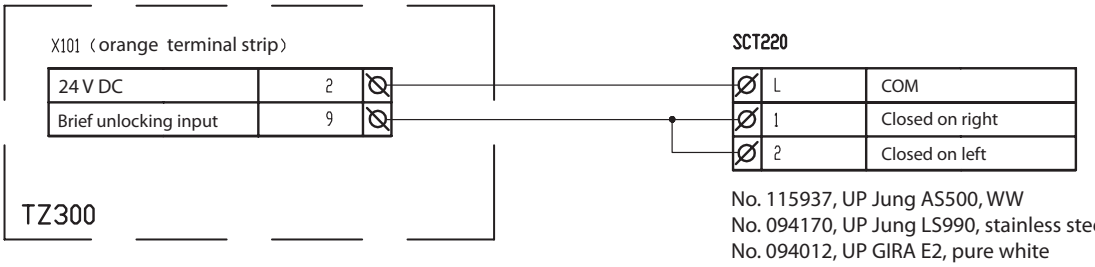
6.6 Key switch

6.6.1 Key switch SCT320 to short-term release



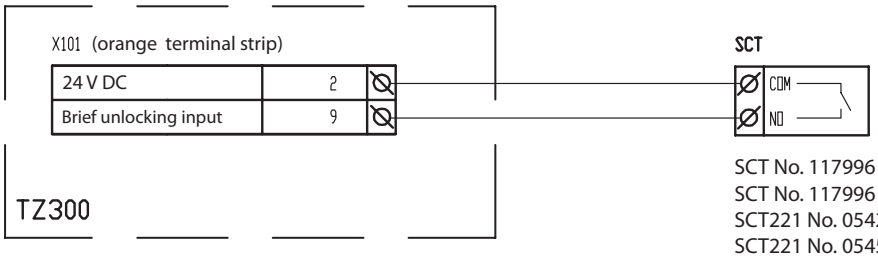
No. 130370, UP GIRA E2, pure white
No. 132278, UP GIRA E2, anthracite
No. 131984, UP Jung AS500, WW

6.6.2 Key switch SCT220 to short-term release



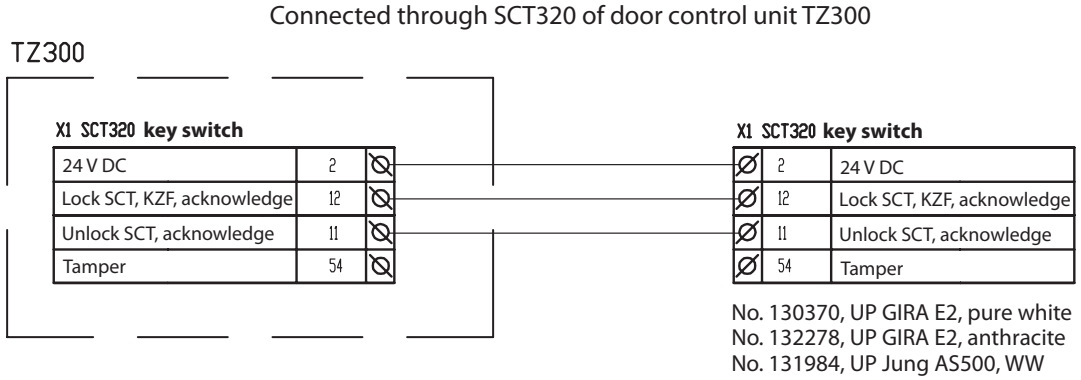
No. 115937, UP Jung AS500, WW
No. 094170, UP Jung LS990, stainless steel
No. 094012, UP GIRA E2, pure white

6.6.3 Key switch SCT221/SCT to short-term release



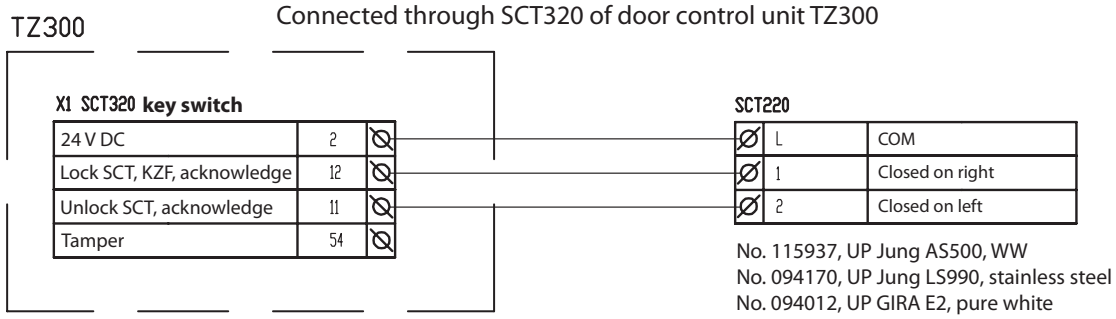
SCT No. 117996 + 024467 UP AS500
SCT No. 117996 + 024467 + 120503 AP AS500
SCT221 No. 054240 + 024467 without PHZ UP
SCT221 No. 054532 + 024467 without PHZ AP
SCT221 No. 054245 + 024467 with PHZ UP
SCT221 No. 054533 + 024467 with PHZ AP

6.6.4 Key switch SCT320 for external control – unlocking, locking, short-term release unlocking and acknowledging alarms



No. 130370, UP GIRA E2, pure white
No. 132278, UP GIRA E2, anthracite
No. 131984, UP Jung AS500, WW

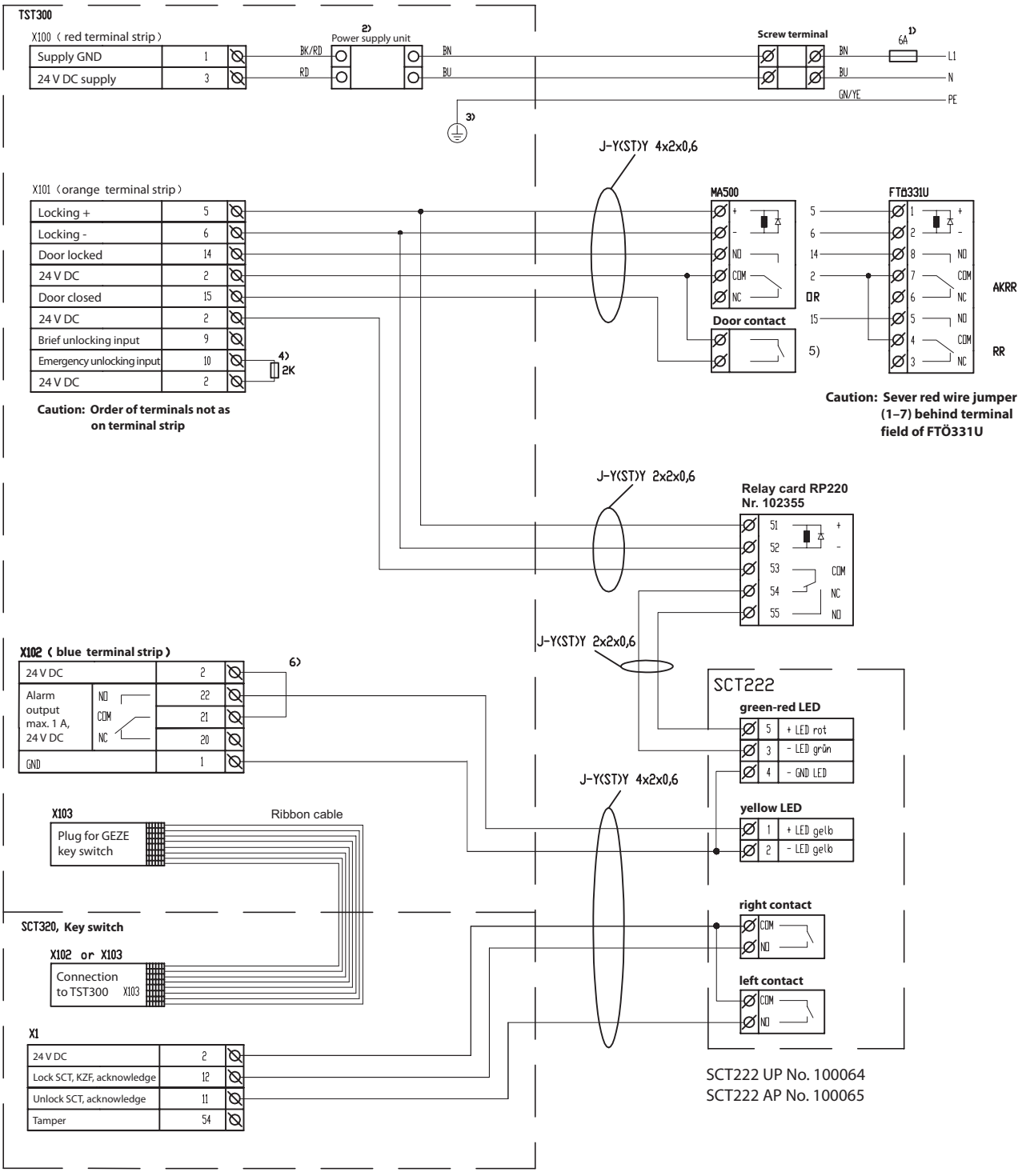
6.6.5 Key switch SCT220 for external control – unlocking, locking, short-term release and acknowledging alarms



No. 115937, UP Jung AS500, WW
No. 094170, UP Jung LS990, stainless steel
No. 094012, UP GIRA E2, pure white

6.6.6 Key switch with indicator SCT222

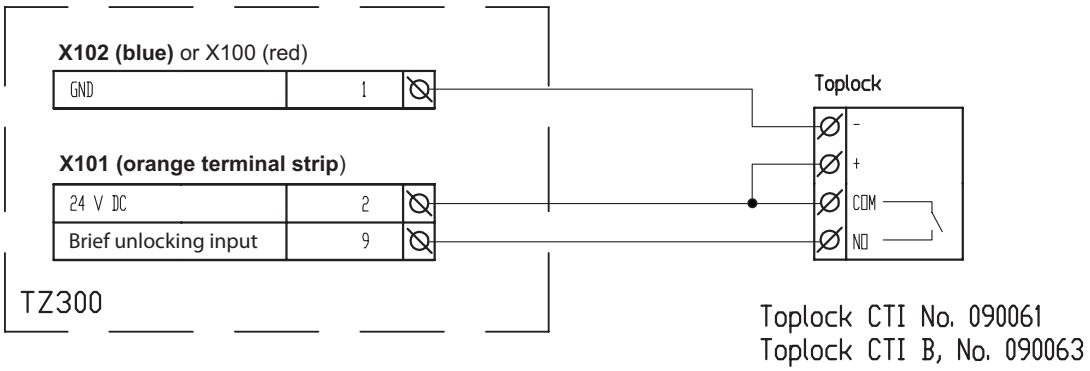
For connecting the SCT222, relay card RP220 is required in addition.



For notes about the wiring diagram, see section 6.4.2

6.7 Access control

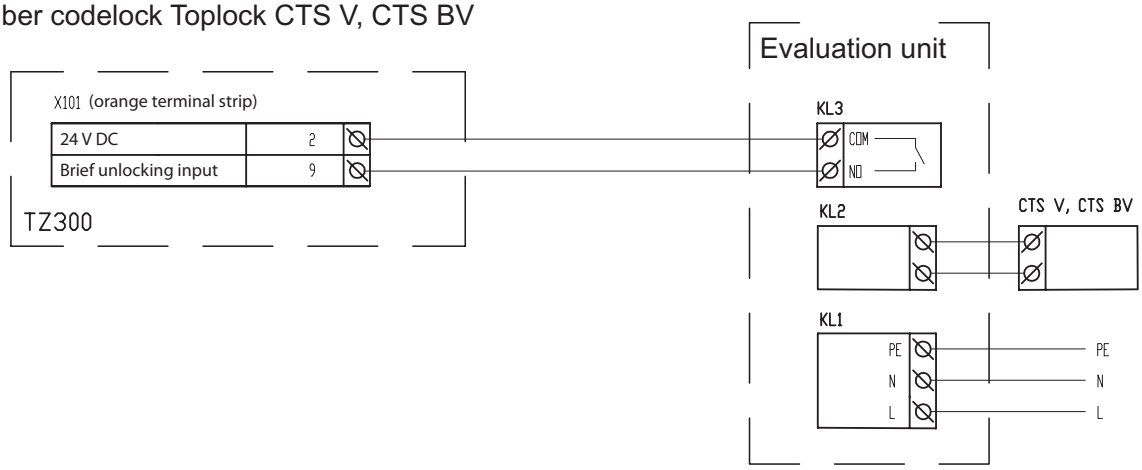
6.7.1 Numerical code lock Toplock CTI, CTI B



Toplock CTI No. 090061
Toplock CTI B, No. 090063

6.7.2 Numerical codelock Toplock CTS V, CTS BV

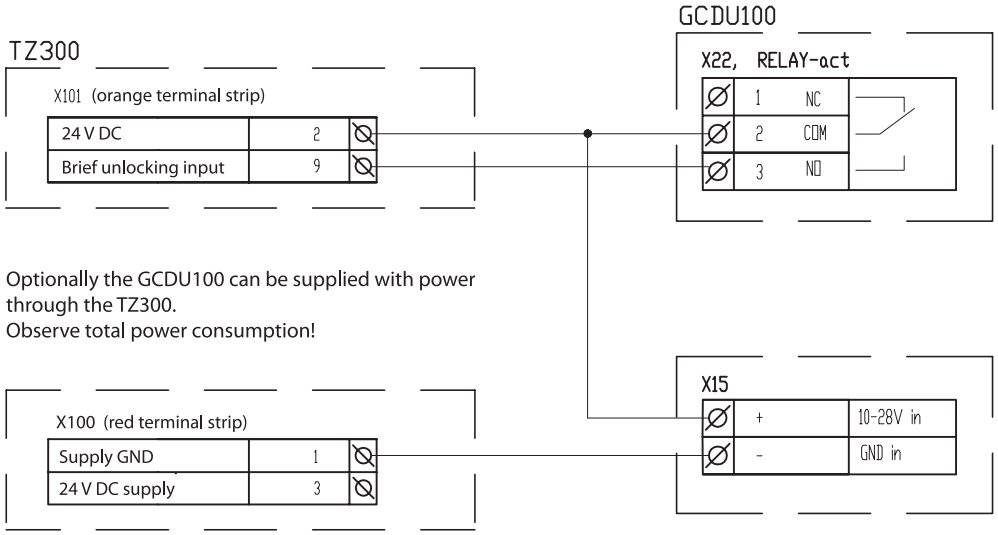
Number codelock Toplock CTS V, CTS BV



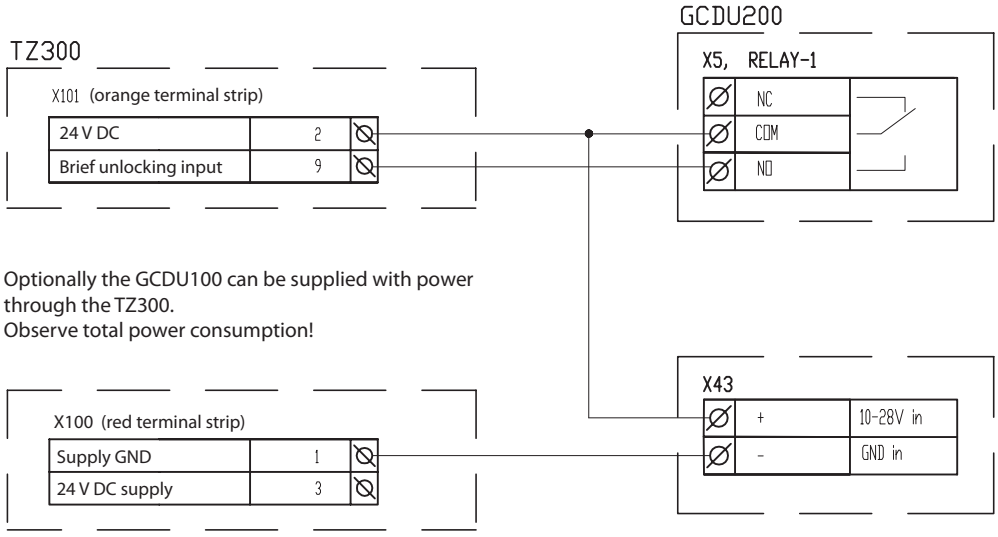
Toplock CTC V No. 090077
Toplock CTS BC No. 090079

6.7.3 Access control

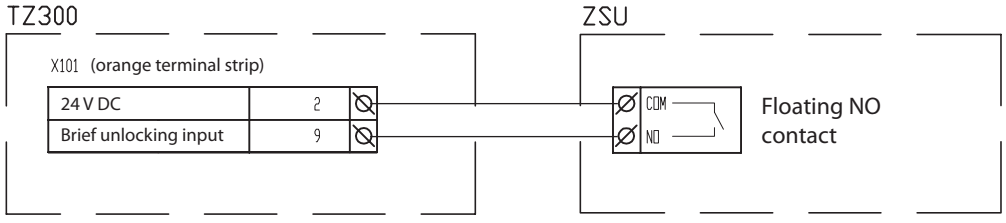
Single-door control unit GCDU100



Door control unit GCDU200



6.8 Timer

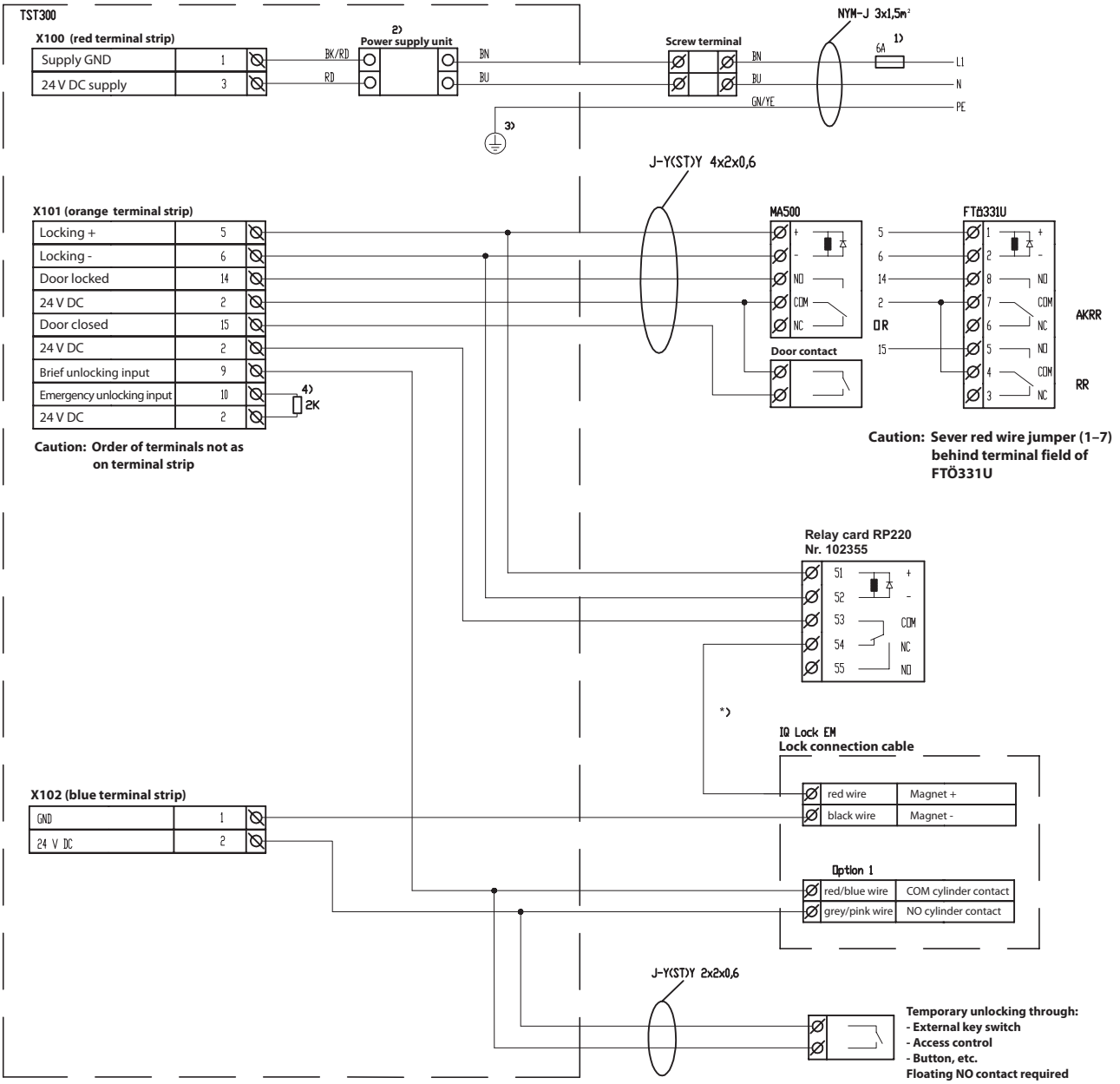


The door control unit is temporarily unlocked for the duration of the contact.

6.9 IQ Lock EM, lever locks

6.9.1 IQ Lock EM power from TZ300

For connecting the IQ Lock EM, relay card RP220 is required in addition.



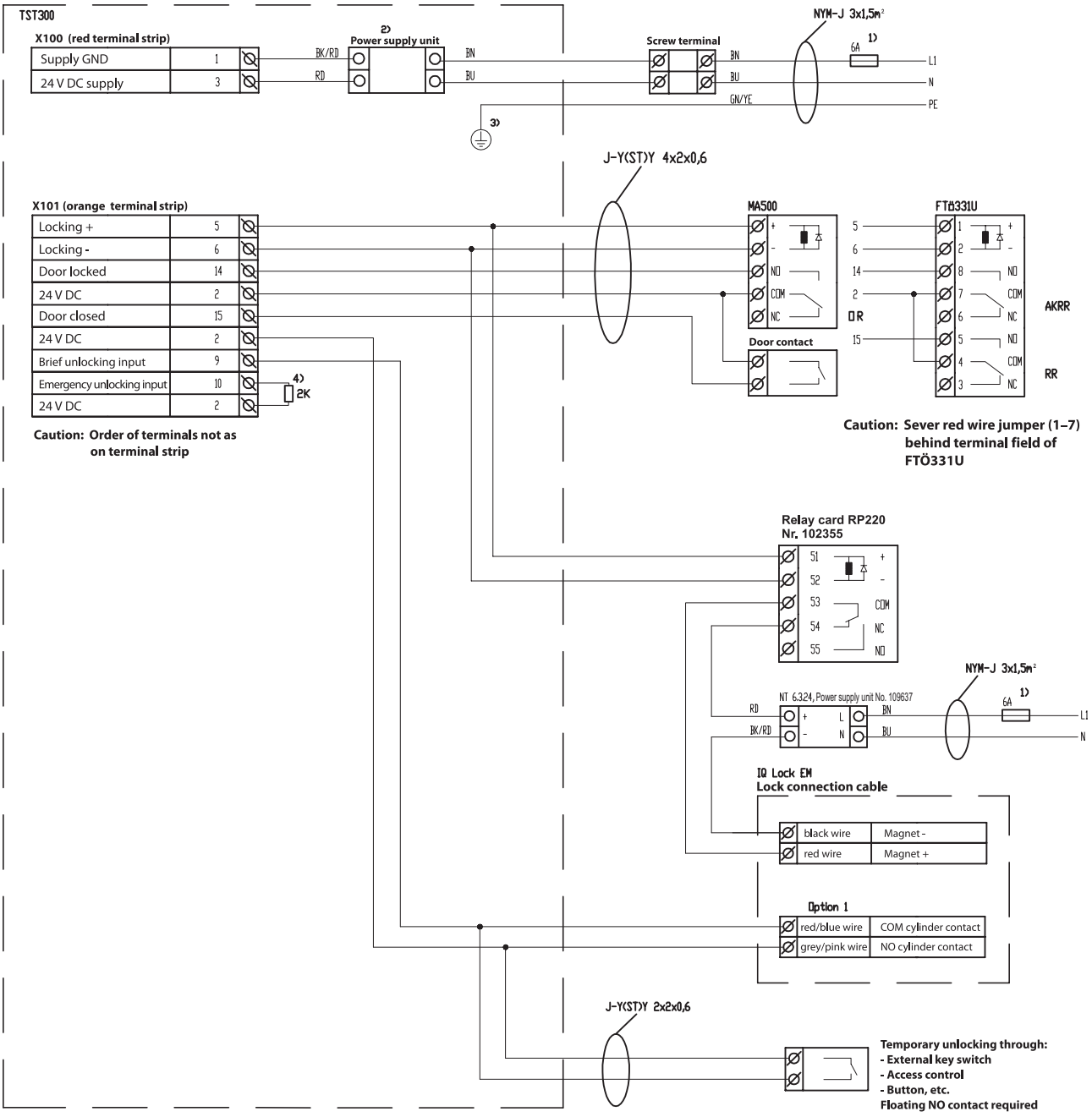
Function:
When the TZ300 is locked, the outer lever handle of the IQ Lock EM is disengaged.
When the TZ300 is temporarily or permanently unlocked, the outer lever handle is engaged.

Option 1:
When the cylinder contact of IQ Lock is connected to the Temporary Unlocking input, cylinder operation through the key triggers temporary unlocking.
At the same time, the TZ300 engages the outer lever handle.

*) Observe total power consumption of the TZ300.
If necessary, use a separate power supply unit.

6.9.2 IQ Lock EM power from separate PSU

For connecting the IQ Lock EM, relay card RP220 is required in addition.



Function:
When the TZ300 is locked, the outer lever handle of the IQ Lock EM is disengaged.
When the TZ300 is temporarily or permanently unlocked, the outer lever handle is engaged.

Option 1:
When the cylinder contact of IQ Lock is connected to the Temporary Unlocking input, cylinder operation through the key triggers temporary unlocking.
At the same time, the TZ300 engages the outer lever handle.

For notes about the wiring diagram, see section 6.4.2

7 Appendix

7.1 Commissioning check list

	Yes	No	Not fitted
Power supply OK			
Upper edge of all emergency buttons between 850 and 1200 mm from floor surface			
All emergency button labels applied			
Cables laid according to DIN VDE 0833, tamper-protected			
All screws of magnet mounting tightened			
Rubber buffers on screws of magnetic disc OK			
Magnet surfaces cleaned			
Door passage lights at least 2000 mm			
Emergency door opener fitted correctly and tamper-protected			
All cables connected, exposed cables insulated			
Emergency button illumination working			
“Emergency button” function OK			
Tamper switches working correctly			
Unlocking through key switch is working correctly			
Locking through key switch is working correctly			
Feedback from magnet and/or door opener working correctly			
Additional door contacts working correctly			
Door Leaf Open/Closed LED working correctly			
Door Locked/Unlocked LED working correctly			
Alarm/Fault LED working correctly			
2K resistor correctly set if BMA, GMA or RWA connected			
Magnets working; door openers are locking			
All access possibilities OK (access control, etc.)			
Emergency exit doors OK			
External key switch OK			
External alarm generator/alarm generator combination working correctly			
Uninterruptible power supply working correctly			

7.2 Glossary of terms

Direct unlocking (according to EltVTR)
Safety-relevant interruption of the power supply to the electrical lock through an NC contact when the emergency button is pressed.

Unlocking (according to EltVTR)
Non-safety-relevant interruption of the power supply to the electrical lock, for example with a key switch.

Unlocking (according to EltVTR)
Non-safety-relevant interruption of the power supply to the electrical lock, for example by a hazard alert system (GMA) or similar automatic triggering system.

Pre-alarm
If the door is passed through after the short-term release time has expired, an audible signal is issued to warn the user that the short-term release time has expired. The pre-alarm duration is 60 seconds. If the door is closed while a pre-alarm is active, the door is locked automatically and the pre-alarm is reset.

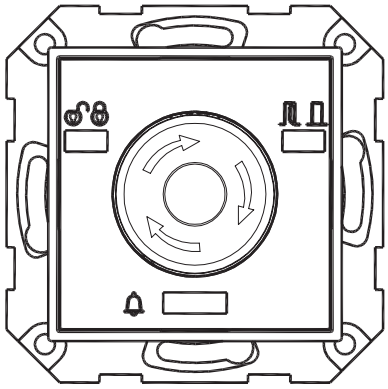
Door alarm
If the pre-alarm time is exceeded, the door alarm is triggered. This must then be reset with the built-in key switch or with a new short-term release command. If the door is closed while the door alarm is active, it locks and can be unlocked again only after the alarm has been reset (except when the emergency button is pressed). The door alarm is also triggered when the door is opened forcefully.

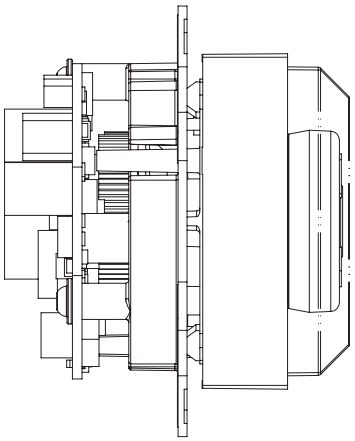
Cancelling short-term release
If the door is closed before the short-term release time has expired, short-term release is terminated and the door locked again. This prevents unauthorized access through the door after an authorized person has passed through it.

Retriggering short-term release
If the short-term release function is triggered again while the function is still active, the short-term release period starts again.

7.3 Data sheets

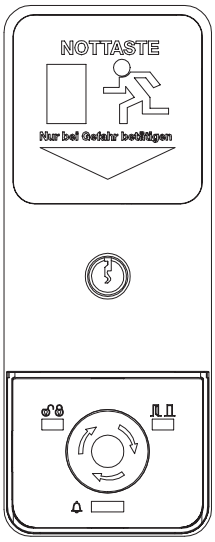
7.3.1 Door control unit TZ300 UP

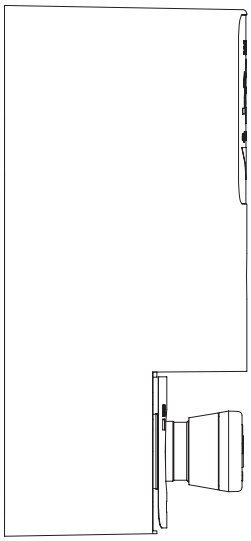




Technical specifications	
Device name	Door control unit TZ300 UP
Function	Monitoring and controlling an emergency exit door
Dimensions	55 × 55 × 37 (w × h × d) w × h: Button face d: Distance from support ring upper edge to terminal rear edge
Installation	UP socket, diameter 60 mm, depth 62.5 mm
Operating voltage	24 V DC (±10 %)
Power consumption	100 mA at 24 V DC (w/o peripherals)
Total power consumption	1 A at 24 V DC (depending on PSU used)
Protection class	II according to EN 60950 (in built-in state)
Mounting location	Dry rooms
Ambient temperature	-10 to 50 °C
Directives	German “Guideline on Electrical Locking Systems of Doors in Escape Routes (EltVTR) – Version December 1997”.
Package content	Control unit, terminals and replacement fuse
Display elements	Catch LED, door LED, alarm LED, buzzer Buzzer, 75 dB (at about 50 cm distance)
Fuse	F1, 1.5 A, SMF 125 V, fast-acting, 24 V, external

7.3.2 Door control unit TZ300 AP





Technical specifications	
Device name	Door control unit TZ300 AP
Versions	TZ 300SN with built-in key switch and PSU TZ 300S with built-in key switch
Function	Monitoring and controlling an emergency exit door
Dimensions	72 × 197 × 88 (w × h × d)
Installation	Wall mounting
Operating voltage	Versions with PSU: 230 V, 50 Hz Versions without PSU: 24 V DC (±10 %)
Power consumption	100 mA at 24 V DC (w/o peripherals)
Total power consumption	Versions with PSU: 800 mA Versions without PSU: Max. 1A (depending on PSU used)
Protection class	Versions with PSU: I according to EN 60950 Versions without PSU: II according to EN 60950
Mounting location	Dry rooms
Ambient temperature	-10 to 50 °C
Directives	German "Guideline on Electrical Locking Systems of Doors in Escape Routes (EltVTR) – Version December 1997".
Package content	Mounting plate, preaasembled housing, mounting accessories, terminals and replacement fuse
Display elements	Catch LED, door LED, alarm LED, buzzer Buzzer, 75 dB (at about 50 cm distance)
Fuse	F1, 1.5 A, SMF 125 V, fast-acting, 24 V, external

7.3.3 Emergency exit sign FWS320UP

CE

Technical specifications	
Device name	Emergency exit sign FWS320UP (non-illuminated)
Function	Emergency exit label
Dimensions	55 × 55 × 16 (w × h × d) w × h: Emergency exit label d: Distance from support ring upper edge to fitted ribbon cable
Installation	In UP socket, 60 mm, depth 62.5 mm
Mounting location	Dry rooms
Ambient temperature	-10 to 50 °C
Package content	Emergency exit sign module, green border

7.3.4 Key switch SCT320UP

CE

Technical specifications	
Device name	Key switch SCT320UP
Versions	White Anthracite Pure white
Function	Key switch with tamper monitor
Dimensions	55 × 55 × 41 (w × h × d) w × h: Cover d: Distance from support ring upper edge to fitted terminal
Installation	In UP socket, 60 mm, depth 62.5 mm
Operating voltage	24 V DC (±10 %)
Protection class	II according to EN 60950 (in built-in state)
Mounting location	Dry rooms
Ambient temperature	-10 to 50 °C
Package content	Key switch module, terminal and ribbon cable

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