

Electrical operating instructions

GB

Door Control - panel TS 955

(Design and functions subject to change)

51171148 / 10.2002

GfA



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ELEKTROMATEN®



OPERATING INSTRUCTIONS

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SAFETY DIRECTIONS

Basic Directions

This control has been built in accordance with **EN 12453 Industrial, commercial and garage doors and gates - Safety in use of power operated doors - Requirements; pr EN 12978 Industrial, commercial and garage doors and gates - Safety devices for power operated doors - Requirements and Test methods** - and left the factory in perfect condition from the point of view of safety. To maintain this condition and to ensure safe operation, the user must observe all the directions and warnings contained in these operating instructions.

In principle, only trained electrical craftsmen should work on electrical equipment. They must assess the work which has been assigned to them, identify potential danger sources and take suitable safety precautions.

Reconstruction of or changes of this control Panel TS 955 is only permissible with the approval of the manufacturer. Original replacement parts and accessories authorised by the manufacturer guarantee safety. Liability ceases to apply if other parts are used.

The operational safety of this control Panel TS 955 is only guaranteed if it is used in accordance with the regulations. The limiting values stated in the technical data should not be exceeded under any circumstances (see corresponding sections of the operating instructions).

Safety Regulations

During the installation, initial operation, maintenance and testing of the ELEKTROMATEN, it is necessary to observe the safety and accident-prevention regulations valid for the specific application.

In particular, you should observe the following regulations (this list is not exhaustive):

European normativ

- EN 12445
Safety in use of power operated doors - Test methods
- EN 12453
Safety in use of power operated doors - Requirements
- pr EN 12978 Industrial, commercial and garage doors and gates -
Safety devices for power operated doors - Requirements and Test methods

Please check normative´s bellow.

VDE-regulations

- DIN EN 418
Safety machinery
Emergency stop equipment functional aspects
Principles for design
- DIN EN 60204-1 / VDE 0113-1
Safety of machinery - Electrical equipment of machines - Part 1:
Prescriptions générales
- DIN EN 60335-1 / VDE 0700-1
Safety of household and similar electrical appliances - Part 1:
General requirements



Regulations

- Please ensure that the local regulations relating to the Safety of Operations of Doors are followed

SAFETY DIRECTIONS

Explanation of warnings

These operating instructions contain directions which are important for using the ELEKTROMATEN appropriately and safely.

The individual directions have the following meaning:



DANGER

This indicates danger to the life and health of the user if the appropriate precautions are not taken.



CAUTION

This warns that the ELEKTROMATEN or other materials may be damaged if the appropriate precautions are not taken.

General warnings and safety precautions

The following warnings are to be understood as a general guideline for working with the ELEKTROMATEN in conjunction with other devices. These directions must be observed strictly during installation and operation.



- Please observe the safety and accident prevention regulations valid for the specific application. The installation of the ELEKTROMATEN, the opening of covers or lids and electrical connection must be carried out when the supply is switched off.
- The ELEKTROMATEN must be installed with the authorised coverings and protective devices. Care should be taken that any seals are fitted correctly and screw couplings are tightened correctly.
- In the case of ELEKTROMATEN with a permanent mains connection, an all-pole main switch with appropriate back-up fuse must be provided.
- Check live cables and conductors regularly for insulation faults or breakages. When a fault is detected in the cabling, the defective cabling should be replaced after immediately switching off the mains supply.
- Before starting operation, check whether the permissible mains voltage range of the devices corresponds to the local mains voltage.
- Emergency stop devices in accordance with VDE 0113 should remain operational in all operating modes of the control. Releasing the emergency stop device should not cause any uncontrolled or undefined restart.

ENCLOSURE INSTALLATION

Before mounting the enclosure the surface has to be checked for flatness, slope and freedom from vibrations.
Mounting must be vertical.

MAINS SUPPLY



Warning! This indicates danger to the life through electric shock.
Before starting assembly, disconnect the supply-cables from the electricity supply and check that the cables are dead

The control panel TS 955 has a universal electric supply and works with following supplies. (See diagrams)
Fig.1 to Fig.4 mains supply

Fig. 1: Mains supply 3 x 400V, N, PE

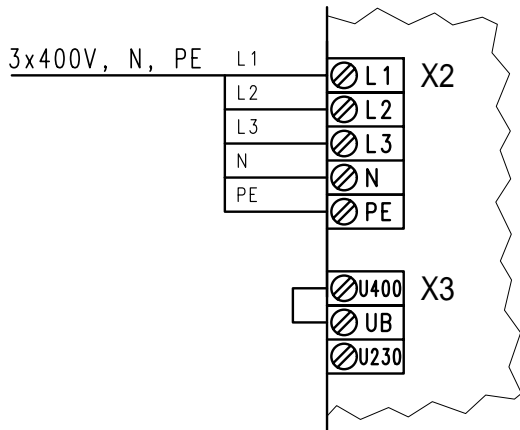


Fig. 2: Mains supply 3 x 400V, PE

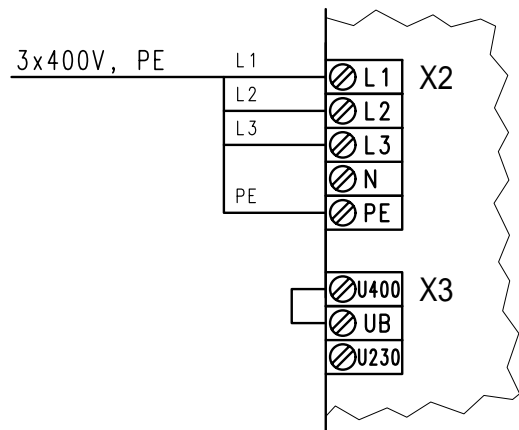


Fig. 3: Mains supply 3 x 230V, PE

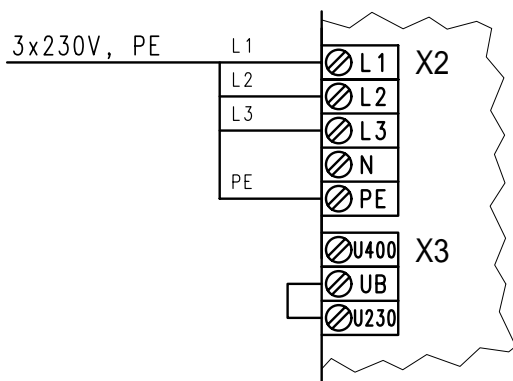
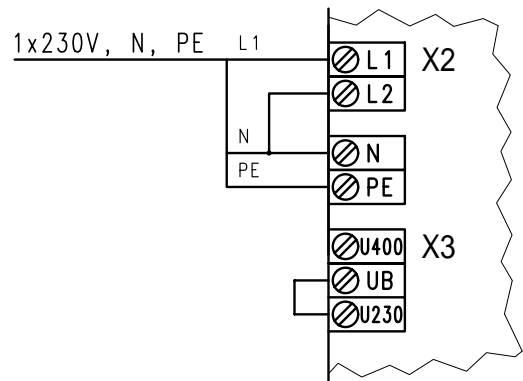
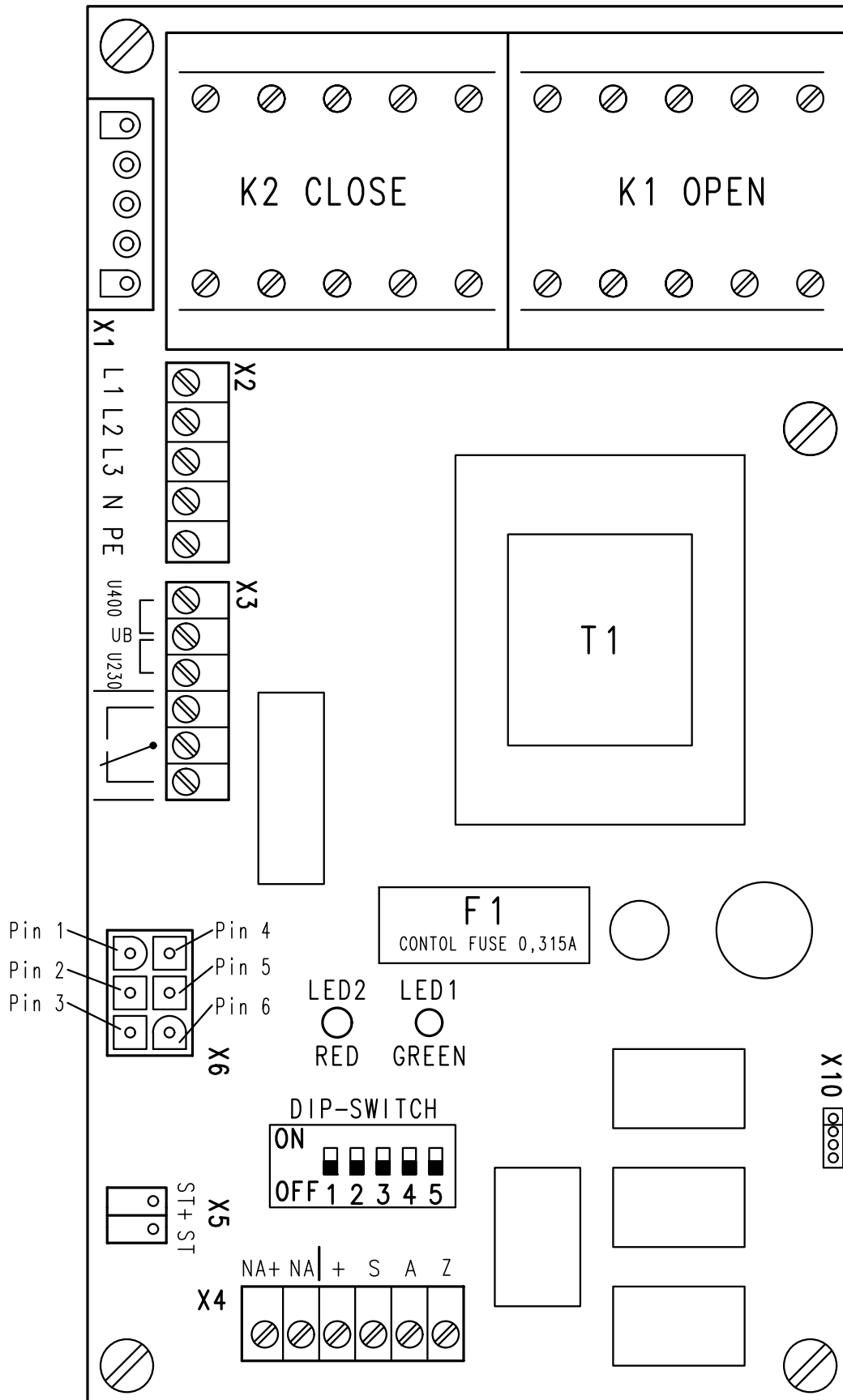


Fig. 4: Mains supply 1 x 230V, N, PE

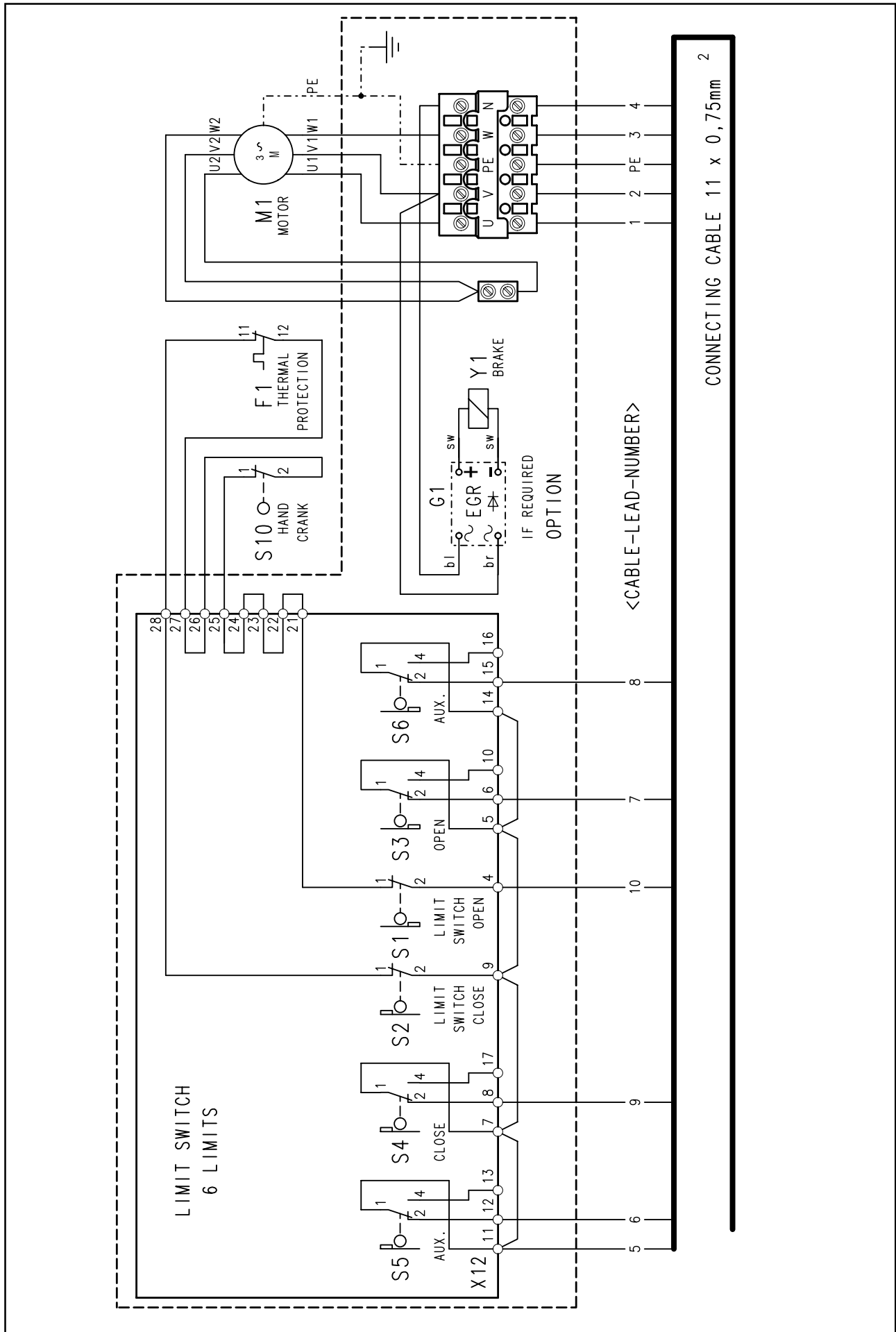


PCB PRINT OVERVIEW



CONFIGURATION PLAN FOR LIMIT SWITCHES

3 x 400V/N/PE



SAFETY DEVICES

Option for GfA - spiral cable plug - in system to check shutter pass door and slack wire switch contact. Connection is directly into the Safety circuit.

Mounting the spiral cable

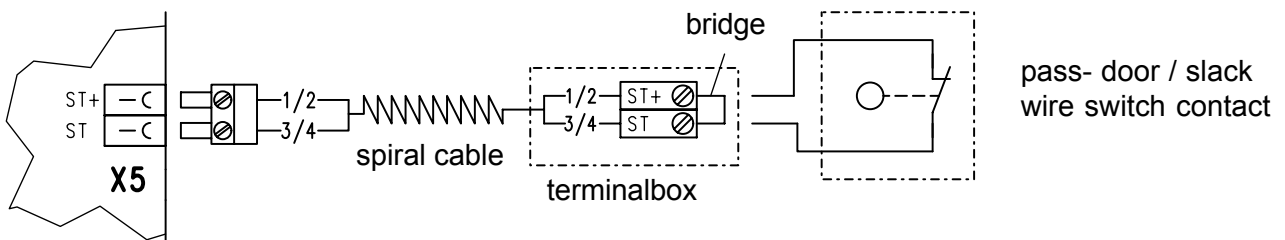
A bush is provided on both sides of the control box for mounting the spiral cable. Push the blue plugs through into the enclosure until there is sufficient cable to allow the blue plug to be connected to the board. The plug with two cores must be connected to the pass-door and/or slack wire switch terminals.



Important note!

To activate pass-door and/or slack wire **switch DIP 3** must be set on **OFF**.

Fig. 5: wiring pass-door / slack wire switch



EMERGENCY - STOP

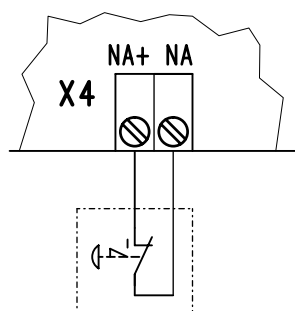
Terminal NA+ and NA: This is to connect Emergency - stop button or other security switch e.g. Einzugsicherung, high level safety device



Important note!

To activate - EMERGENCY - STOP SWITCH - DIP 2 must be set on OFF.

Fig. 6: Emergency stop pushbutton



PUSHBUTTON

The control panel TS 955 would be delivered with a foil keypad OPEN - STOP - CLOSE. Connection of one add. pushbutton is possible.



Important note!

When using an external pushbutton within STOP - BUTTON, DIP 1 must be set on OFF.

Wiring diagrams:

Fig. 7: Three pushbutton

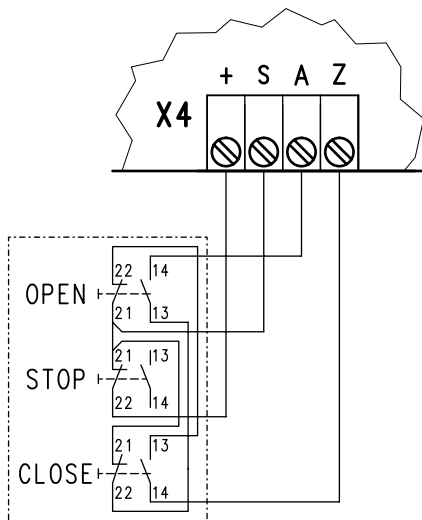


Fig. 8: Key switch with stop - button

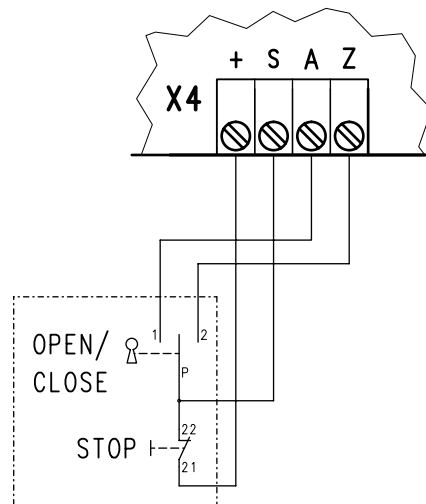
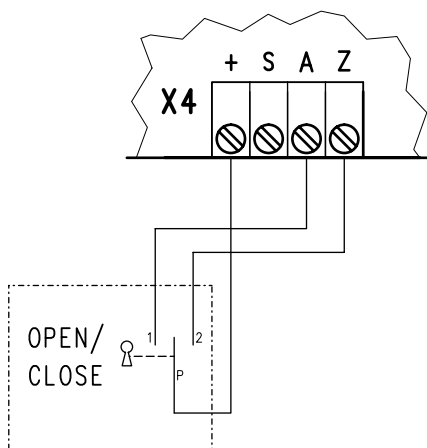


Fig. 9: Key switch



FUNCTION DESCRIPTION

First installation

At first installation control is in set - up and only DEAD MAN MODE is possible. Door moves only if a pushbutton would be pressed.

Self - hold open

To activate self hold upwards, Set Dip 4 - ON and touch pushbutton open.
Downwards, only dead man function is possible.



Important note!

Before self hold function should be selected, the limits must be adjusted.

Fully closed control

At this function the self-hold should be activate. The pushbutton must be pressed until the shutter reaches the final limit. Otherwise the door opens in self-hold automatically.

To activate this function, set Dip 5 - ON- and set pre limit S5 before the final limit close.



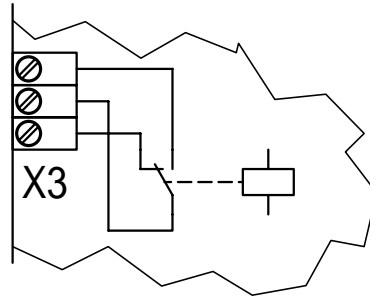
Important note!

If pre limit S5 is not adjusted, shutter closing is not possible.

RELAY CONTACT

The control provides a potential free relay output, which can be used for several functions. The relay output can be chosen as switch contact for illumination or specify door position. To activate this function, pre limit S6 must be set on free chosen door position.

Fig.10: wiring: potential-free change over relay contact 2A / 230V



LED - OPERATING STATUS

Operation status about green and red LED.

LED green: 24V OK
Control voltage OK

LED red: Stop
Stop command with pushbutton or Safety circuit interrupted

FUNCTION DIP - SWITCHES

The following operation mode are possible.

Slide switch	Function
DIP 1 External stop button	ON by-passed OFF in circuit
DIP 2 Emergency stop	ON by-passed OFF in circuit
DIP 3 slack wire / passing door switch	ON by-passed OFF in circuit
DIP 4 Self hold upwards	ON active OFF inactive
DIP 5 fully closed control	ON active OFF inactive

TECHNICAL DATA

Measuring housing	B x H x T; 160 x 240 x 90mm
Measuring of pcb	100mm x 200mm
Mounting	vertical
Supply motor via L1,L2,L3	Fuse external until up to 3x400VAC + -10% 50...60Hz
Control via L1,L2	400V AC or 230V AC + - 10%, 50-...60Hz, voltage changing with bridge to 3- pol terminal, safety fuse
Motor duty cycle	ED S3 60%, S1 100%
Permitted load	6,5VA without motor
Controlling inputs	24V DC/10mA, all inputs are to be linked potential free
Safety circuit including emergency stop and limits up and down	all inputs have to be linked potential free maximal contactload max.35VDC/ at min. 200mA if the safety circuit is interrupted no movement is possible even in DEAD MAN mode
Relay output	if inductive loads are to be switched (e.g. other relays) those have to be protected with free - wheeling Diodes
Motor output	up to 3x400V AC, max. load 2,2 KW; max. 10A
Temperature:	in use: from - 10 up to + 50°C in storage: from - 20 up to + 70°C
Humidity:	up to 95% not condensing
Vibration:	vibration free mounting; e.g. on flat built wall
Protection:	in case with plugged cable IP 54, IP 65 available