REVERSING CONTACTOR BOARD UNIVERSAL

52370099

The control consists of a printed circuit board with a pair of reversing contactors for opening (K1) and closing (K2). Different functions can be achieved by interchanging wire links.

Fig. 6) : Reversing contactor board for: 3 x 380/400V AC, N, PE or 3 x 380/400V AC, PE
3 x 460V AC, PE (special execution);
3 x 220/230V AC, PE;
3 x 500V AC, PE (special execution)

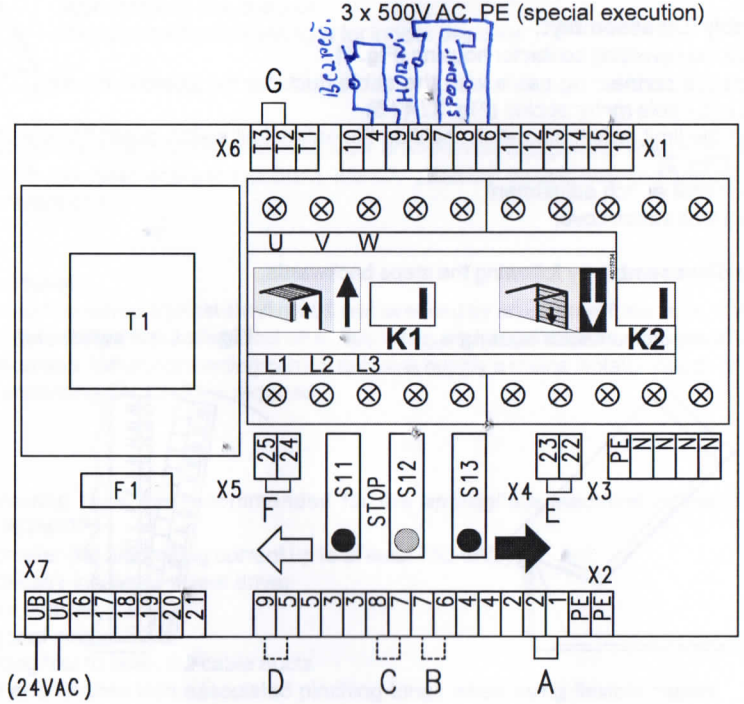


Fig. 7) : circuit board for:
1 x 220/230V with symmetric winding

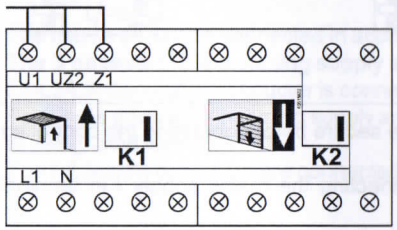
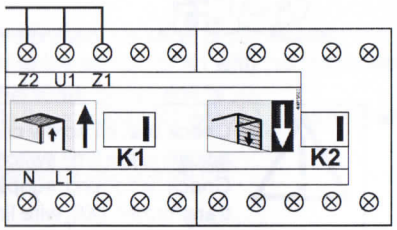


Fig. 8) : circuit board for:
1 x 220/230V with asymmetric winding



WIRE LINKS ON THE REVERSING CONTACTOR BOARD

52370100

Wire links A:
These wire links are absolutely necessary for the operation of the door. By removing the wire links, the control voltage is interrupted and electrical operation of the door is no longer possible. Additional safety switches, e.g. interlocking switches or slack wire switches, can be connected instead of the wire links A.

Wire link B:
This wire link is necessary for the latching function*) during the opening movement. By removing the wire link, the door can only be opened in dead man' mode*). For shutters which are able to lift a person, a high level safety device is required.

Wire link C:
By connecting a safety edge device with a relay contact (in place of the wire link), the door operation is latching during the closing operation. If no safety edge device is connected, the door can only be closed in dead man mode.

Wire link D:
This wire link is used for single-channel radio control or for operation with a pull switch. With the first command, the door opens and travels to the fully open position If a second command is given when the door is in the fully open position, the command is re-routed via the link D and the door travels to the fully closed position
If the door is stopped between its end positions, e.g. with a stop command, the next command causes the door to open.

Wire links E + F:
These wire links are absolutely necessary for operation of the door. Additional safety switches can be connected instead of the wire link E (which interrupts opening) and F (which interrupts closing).

Wire link G:
This wire link is requested to choose the incoming mains supply.

Wire link G terminal T1 to T2 = 1 x 220/230V AC, N, PE;
3 x 220/230V AC, PE
3 x 460V AC, PE (special execution)

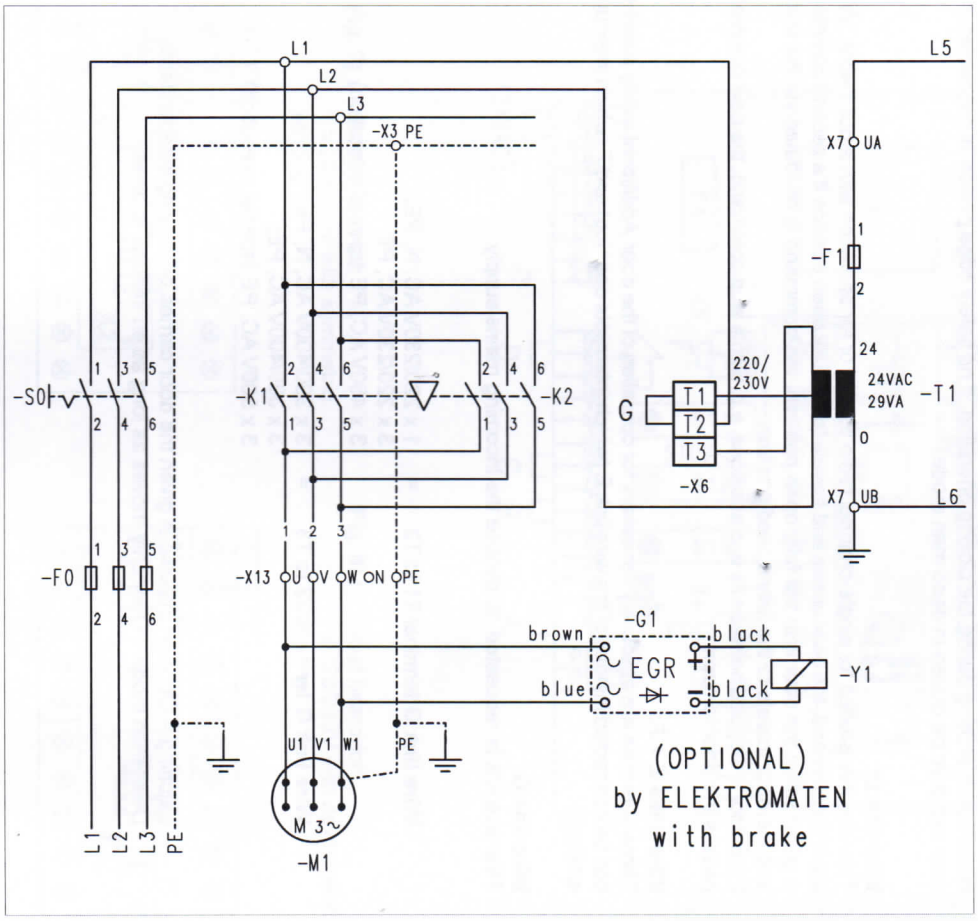
Wire link G terminal T2 to T3 = 3 x 380/400V AC, N, PE;
3 x 380/400V AC, PE;
3 x 500V AC, PE (special execution)

*) Latching = Once an impulse is given the door carries on moving independently
Dead man mode = Door only moves as long as an impulse is given

PRIMARY ELECTRICAL CIRCUIT 3 x 220/230V AC, PE

5238076

E8



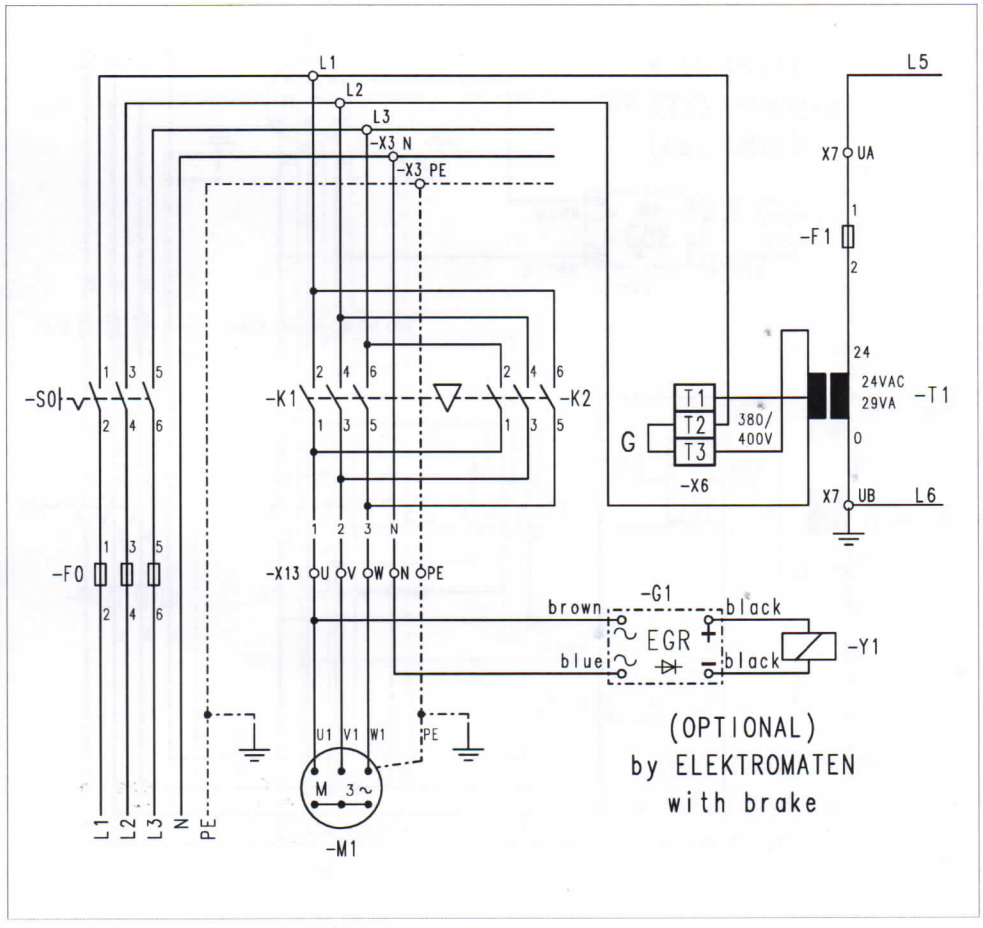
F0	Fusing on the building supply side
F1	Control Fuse 1A
F2	Faulty current fuse 0,33A
F3	Thermal protection
G1	Rectifier EGR II OPTION
K1	OPEN Contactor
K2	CLOSE Contactor
M1	Motor
S0	Main switch supply side
S1	Safety limit switch OPEN
S2	Safety limit switch CLOSE
S3	Limit switch OPEN
S4	Limit switch CLOSE
S10	Manual interlock switch
S11	Built-in OPEN push-button
S12	Built-in STOP push-button
S13	Built-in CLOSE push-button
S14	Control Button OPEN
S15	Control Button STOP
S16	Control Button CLOSE
T1	Transformer 380/400V - 220/230V / 24VAC
Y1	Spring tension brake if required 103V DC OPTION
X1 - 7	PCB Terminal Rail
X12	Limit Switch Terminal Rail
X13	Motor Terminal Rail

1 2 1	=	Wirenumber

PRIMARY ELECTRICAL CIRCUIT 3 x 380/400V AC, N, PE

5238077

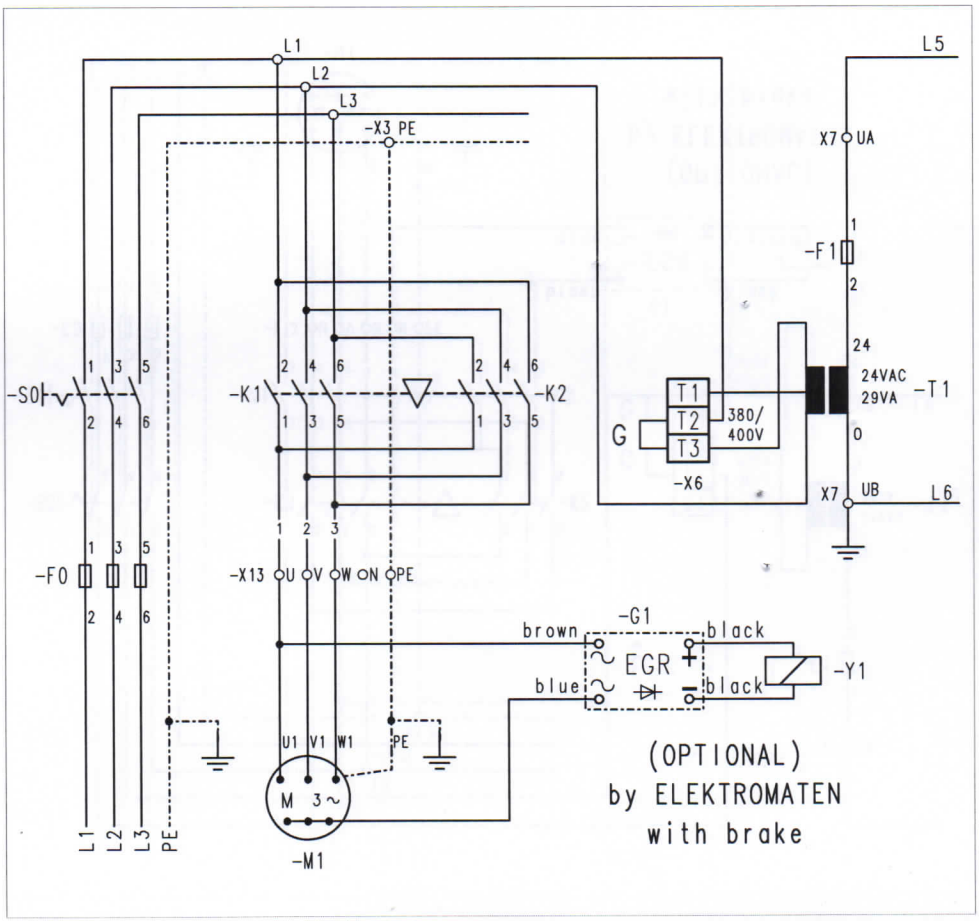
E9



F0	Fusing on the building supply side
F1	Control Fuse 1A
F2	Faulty current fuse 0,33A
F3	Thermal protection
G1	Rectifier EGR II OPTION
K1	OPEN Contactor
K2	CLOSE Contactor
M1	Motor
S0	Main switch supply side
S1	Safety limit switch OPEN
S2	Safety limit switch CLOSE
S3	Limit switch OPEN
S4	Limit switch CLOSE
S10	Manual interlock switch
S11	Built-in OPEN push-button
S12	Built-in STOP push-button
S13	Built-in CLOSE push-button
S14	Control Button OPEN
S15	Control Button STOP
S16	Control Button CLOSE
T1	Transformer 380/400V - 220/230V / 24VAC
Y1	Spring tension brake if required 103V DC OPTION
X1 - 7	PCB Terminal Rail
X12	Limit Switch Terminal Rail
X13	Motor Terminal Rail

1 2 1	=	Wirenumber

PRIMARY ELECTRICAL CIRCUIT 3 x 380/400V AC, PE



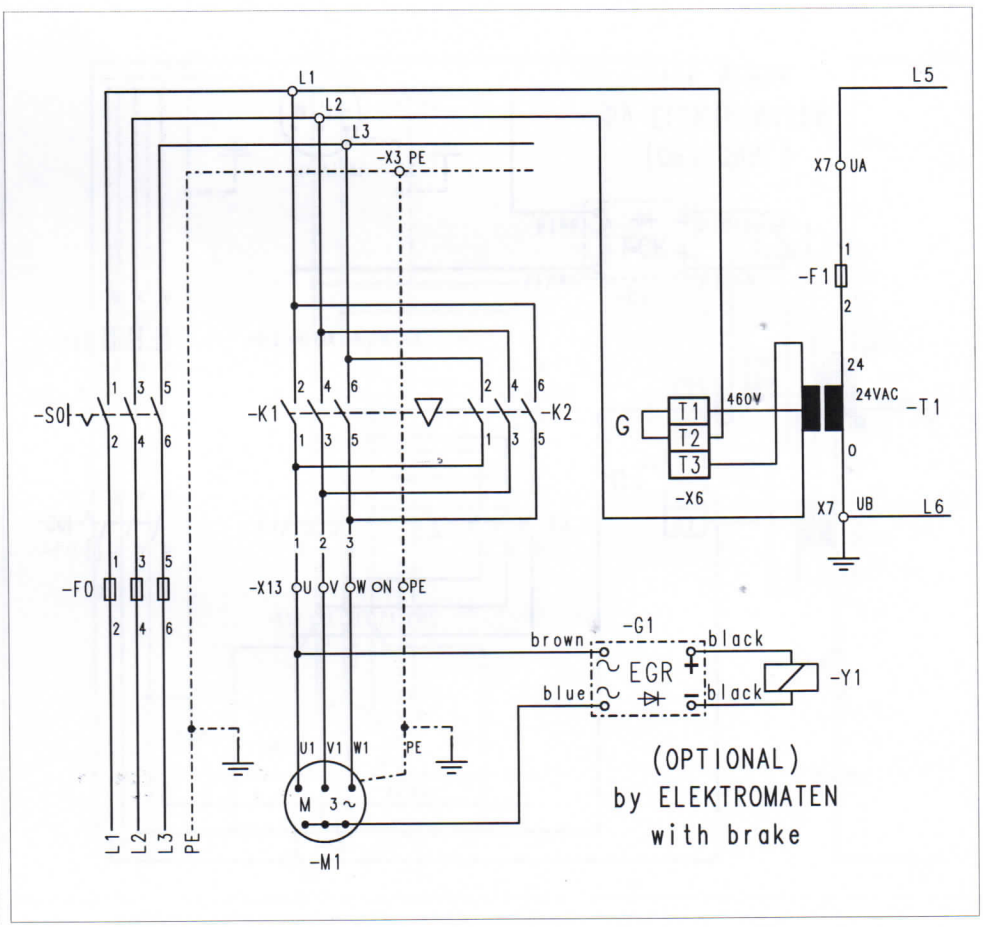
F0	Fusing on the building supply side
F1	Control Fuse 1A
F2	Faulty current fuse 0,33A
F3	Thermal protection
G1	Rectifier EGR II OPTION
K1	OPEN Contactor
K2	CLOSE Contactor
M1	Motor
S0	Main switch supply side
S1	Safety limit switch OPEN
S2	Safety limit switch CLOSE
S3	Limit switch OPEN
S4	Limit switch CLOSE
S10	Manual interlock switch
S11	Built-in OPEN push-button
S12	Built-in STOP push-button
S13	Built-in CLOSE push-button
S14	Control Button OPEN
S15	Control Button STOP
S16	Control Button CLOSE
T1	Transformer 380/400V - 220/230V / 24VAC
Y1	Spring tension brake if required 103V DC OPTION
X1 - 7	PCB Terminal Rail
X12	Limit Switch Terminal Rail
X13	Motor Terminal Rail

1 2 = Wirenumber

5238084

E 10

PRIMARY ELECTRICAL CIRCUIT 3 x 460V AC, PE (special execution)

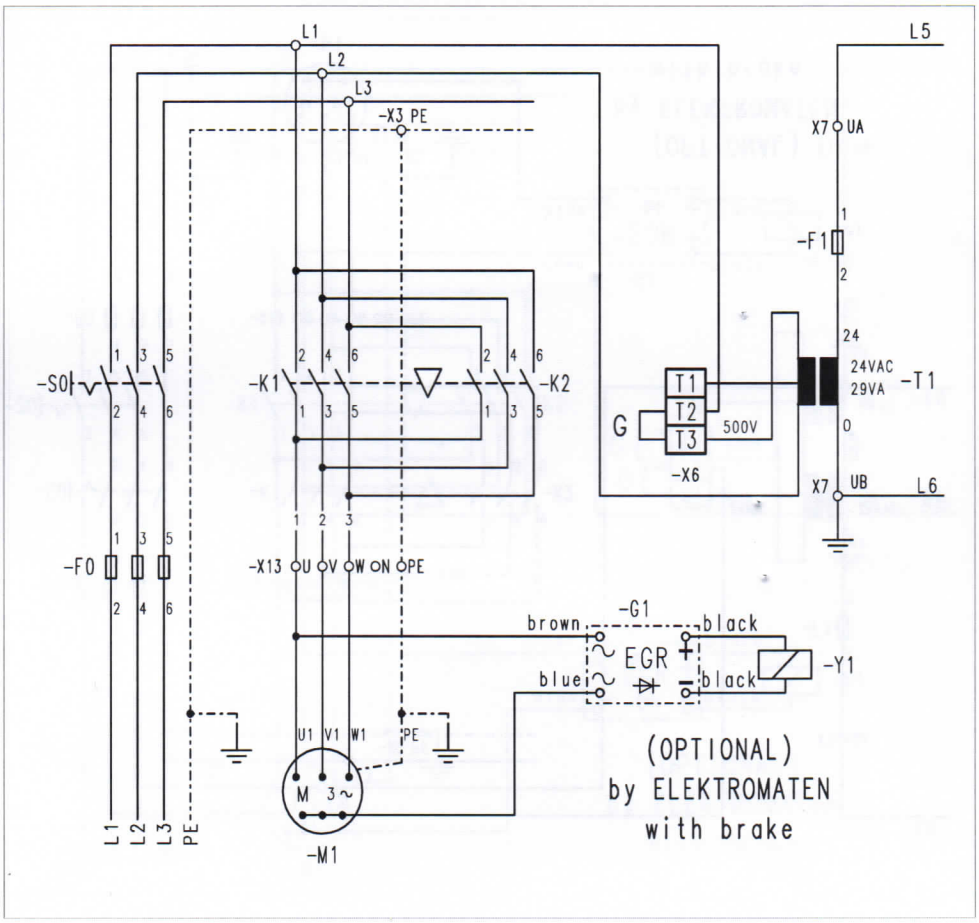


F0	Fusing on the building supply side
F1	Control Fuse 1A
F2	Faulty current fuse 0,33A
F3	Thermal protection
G1	Rectifier EGR III OPTION
K1	OPEN Contactor
K2	CLOSE Contactor
M1	Motor
S0	Main switch supply side
S1	Safety limit switch OPEN
S2	Safety limit switch CLOSE
S3	Limit switch OPEN
S4	Limit switch CLOSE
S10	Manual interlock switch
S11	Built-in OPEN push-button
S12	Built-in STOP push-button
S13	Built-in CLOSE push-button
S14	Control Button OPEN
S15	Control Button STOP
S16	Control Button CLOSE
T1	Transformer 460V - 230V / 24VAC
Y1	Spring tension brake if required 103V DC OPTION
X1 - 7	PCB Terminal Rail
X12	Limit Switch Terminal Rail
X13	Motor Terminal Rail

1 2 = Wirenumber

5238085

E 11

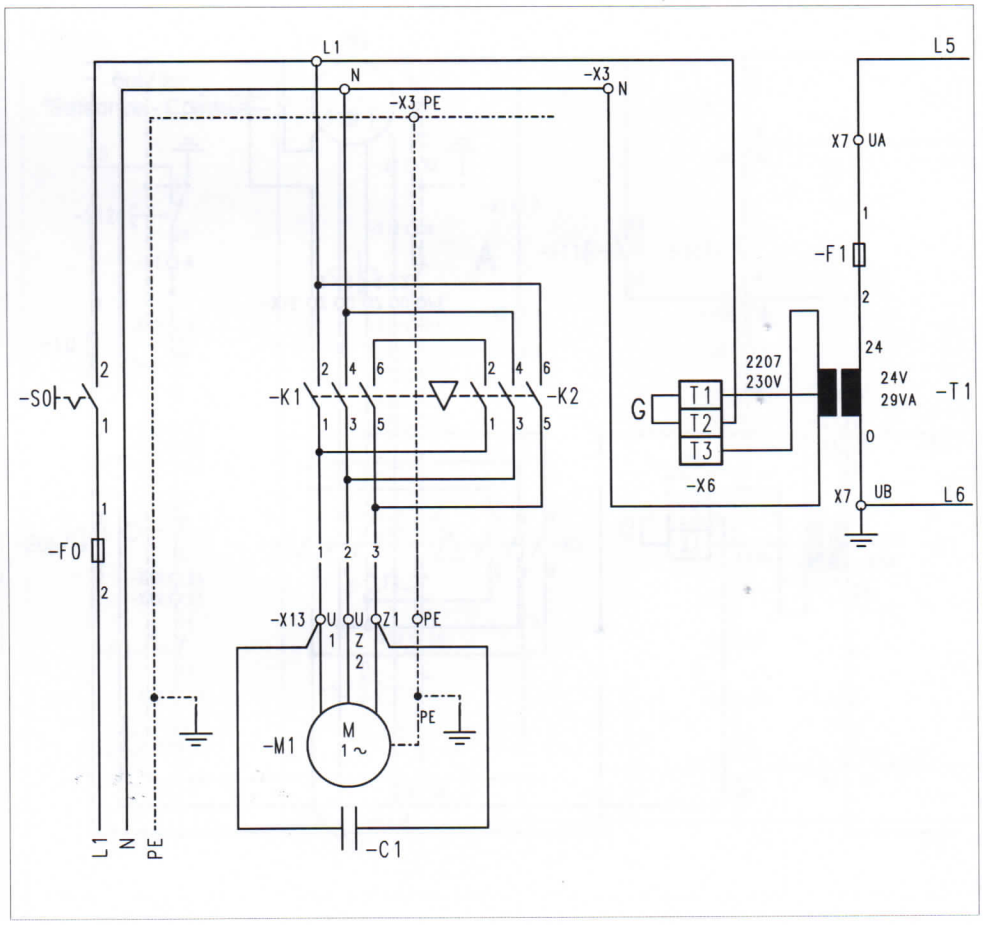


F0 Fusing on the building supply side
F1 Control Fuse 1A
F2 Faulty current fuse 0,33A
F3 Thermal protection
G1 Rectifier EGR III OPTION
K1 OPEN Contactor
K2 CLOSE Contactor
M1 Motor
S0 Main switch supply side
S1 Safety limit switch OPEN
S2 Safety limit switch CLOSE
S3 Limit switch OPEN
S4 Limit switch CLOSE
S10 Manual interlock switch
S11 Built-in OPEN push-button
S12 Built-in STOP push-button
S13 Built-in CLOSE push-button
S14 Control Button OPEN
S15 Control Button STOP
S16 Control Button CLOSE
T1 Transformer 500V - 460V / 24VAC
Y1 Spring tension brake if required 130V DC OPTION

X1 - 7 PCB Terminal Rail

X12 Limit Switch Terminal Rail
X13 Motor Terminal Rail

| 2 | = Wirenumber

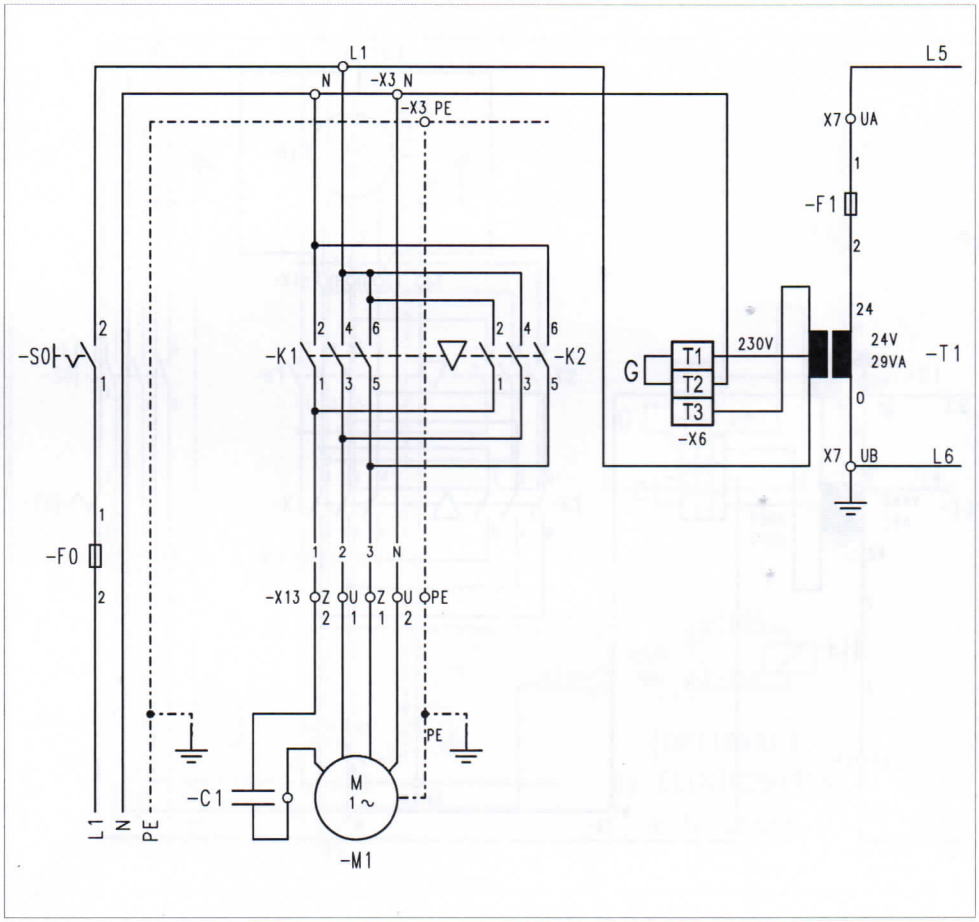


C1 Capacitor
F0 Fusing on the building supply side
F1 Control Fuse 1A
F2 Faulty current fuse 0,33A
F3 Thermal protection
K1 OPEN Contactor
K2 CLOSE Contactor
M1 Single-phase motor symmetric
S0 Main switch supply side
S1 Safety limit switch OPEN
S2 Safety limit switch CLOSE
S3 Limit switch OPEN
S4 Limit switch CLOSE
S10 Manual interlock switch
S11 Built-in OPEN push-button
S12 Built-in STOP push-button
S13 Built-in CLOSE push-button
S14 Control Button OPEN
S15 Control Button STOP
S16 Control Button CLOSE
T1 Transformer 380/400V - 220/230V / 24VAC

X1 - 7 PCB Terminal Rail

X12 Limit Switch Terminal Rail
X13 Motor Terminal Rail

| 2 | = Wirenumber



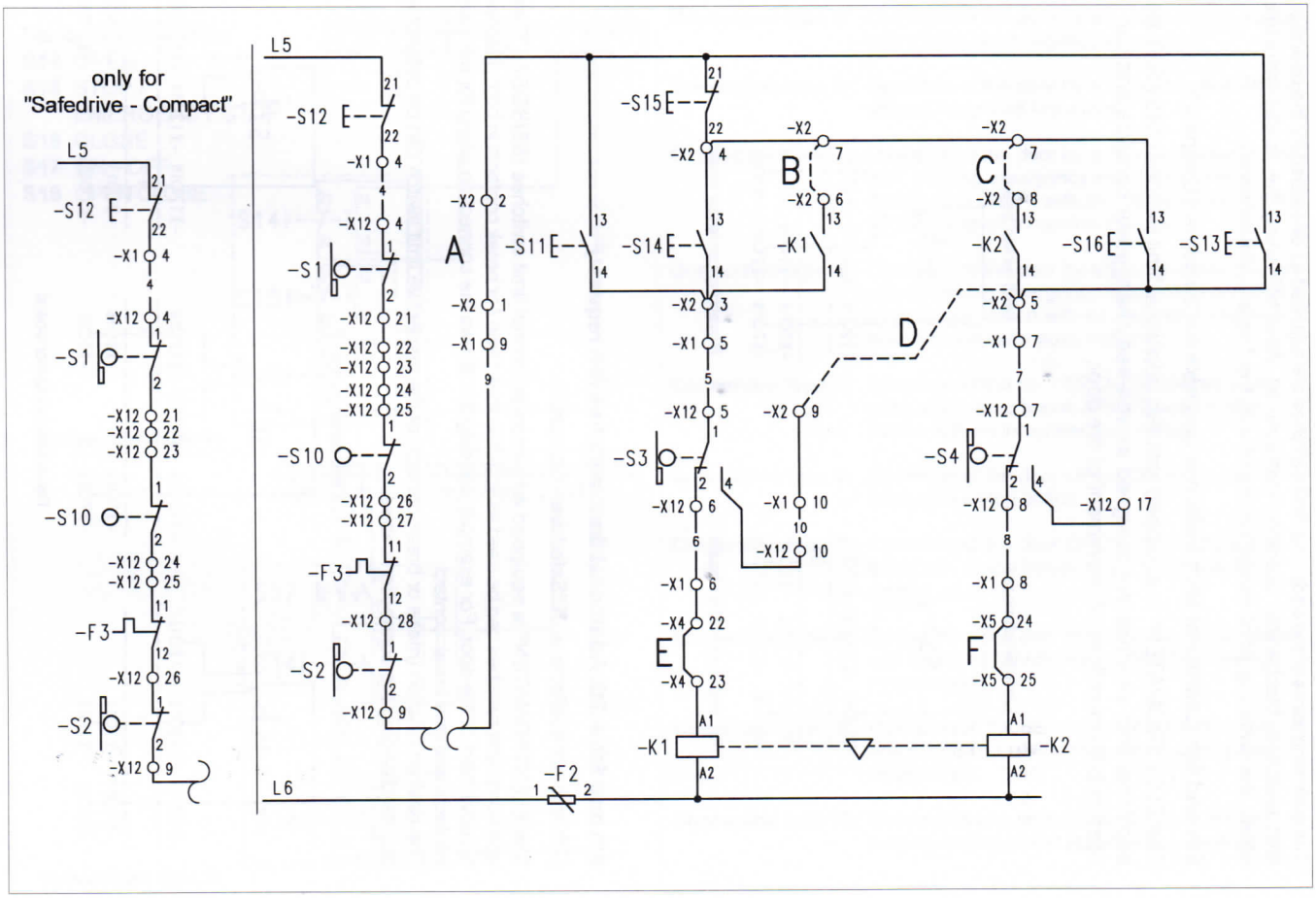
C1	Capacitor
F0	Fusing on the building supply side
F1	Control Fuse 1A
F2	Faulty current fuse 0,33A
F3	Thermal protection
K1	OPEN Contactor
K2	CLOSE Contactor
M1	Single-phase motor asymmetric
S0	Main switch supply side
S1	Safety limit switch OPEN
S2	Safety limit switch CLOSE
S3	Limit switch OPEN
S4	Limit switch CLOSE
S10	Manual interlock switch
S11	Built-in OPEN push-button
S12	Built-in STOP push-button
S13	Built-in CLOSE push-button
S14	Control Button OPEN
S15	Control Button STOP
S16	Control Button CLOSE
T1	Transformer 380/400V - 220/230V / 24VAC

X1 - 7 PCB Terminal Rail

X12 Limit Switch Terminal Rail
X13 Motor Terminal Rail

2 = Wirenumber

5238079



5238050

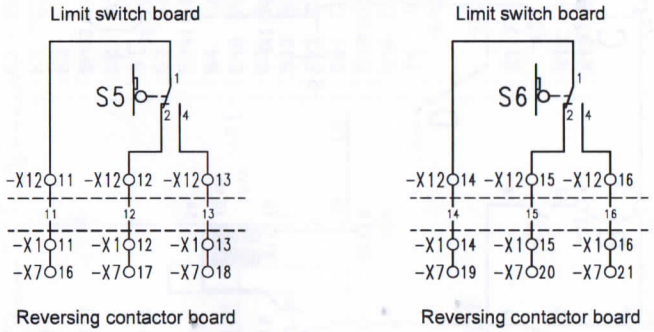
ADDITIONAL LIMIT SWITCHES

52345024

The switching cams of the additional limit switches are adjusted as described for the operational limit switches (Mechanical operating instructions). After tightening the coarse adjustment screw, the switching point can be corrected with the fine adjustment screw.

5th and 6th Additional limit switches (available for "Safedrive - Compact")

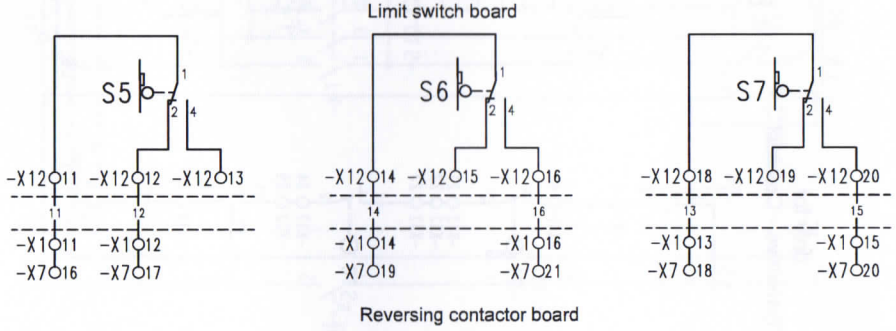
The ELEKTROMATEN® is equipped with two additional limit switches (S5 / S6). Both additional limit switches are designed as volt-free changeover contacts and can be used in both directions of movement of the door.



5th and 6th + 7th Additional limit switches (on request)

(7th limit not available with "Safedrive - Compact")

The ELEKTROMATEN® is equipped with three additional limit switches (S5/S6/S7). These additional limit switches can be used as volt-free make and / or break contacts in both directions of movement of the door. For example, the diagram shows the connection wiring for two make contacts and one break contact.
The desired function (make or break contact) of the respective limit switch can be determined by interchanging the connection cables.



CONTROL DEVICES - TYPES OF CONNECTION

52315042

Connection type 1: Operation of the door by a 3- push-button station with a latching emergency stop button

Connection type 2: Operation of the door by a 3- push-button station with an integrated key-switch

Connection type 3: Operation of the door by a 3- push-button station with latching emergency stop button and a 3-push-button station with an integrated key-switch for switching off all control devices.

Connection type 4: Operation of the door by a 3-push-button station with a latching emergency stop button and a 3-push-button station with an integrated key-switch to isolate the latter push-buttons.

Connection type 5: Operation of the door OPEN/CLOSE by a key-witch with a stop button and a 3-push-button station with an integrated key-switch.

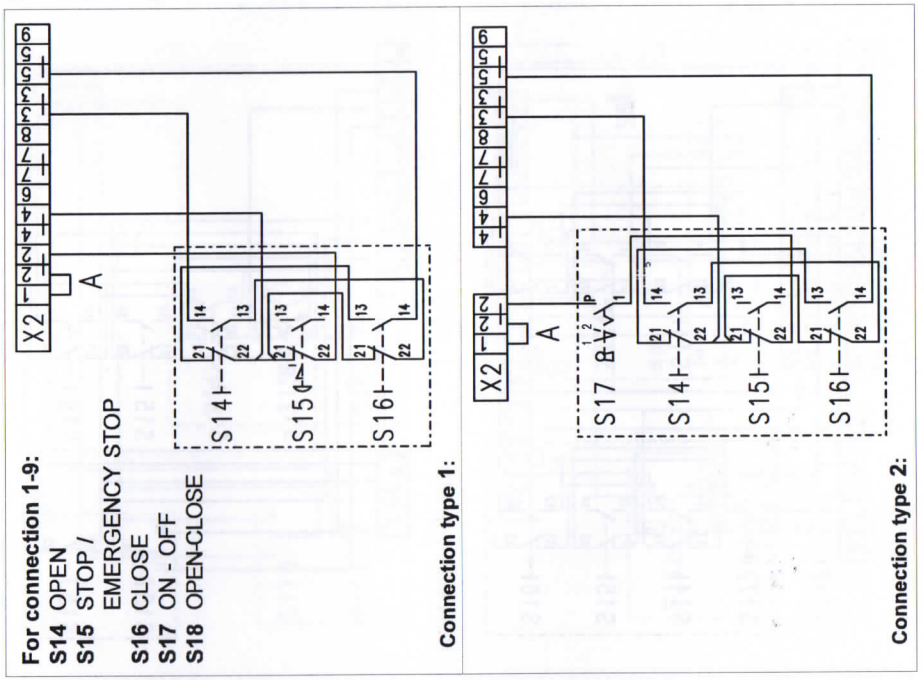
Connection type 6: Operation of the door OPEN/CLOSE by a key-witch with a stop button.

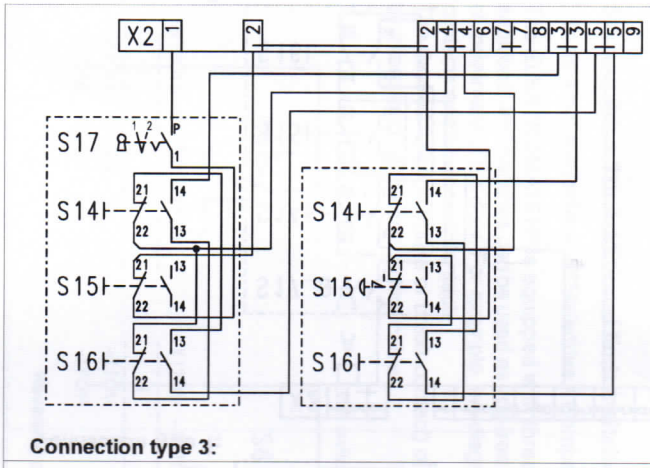
Connection type 7: Operation of the door OPEN/CLOSE by a key-witch with a stop button and a 3- push-button station.

Connection type 8: Operation of the door by a 3- push-button station and a single-channel radio control (safety-edge necessary)

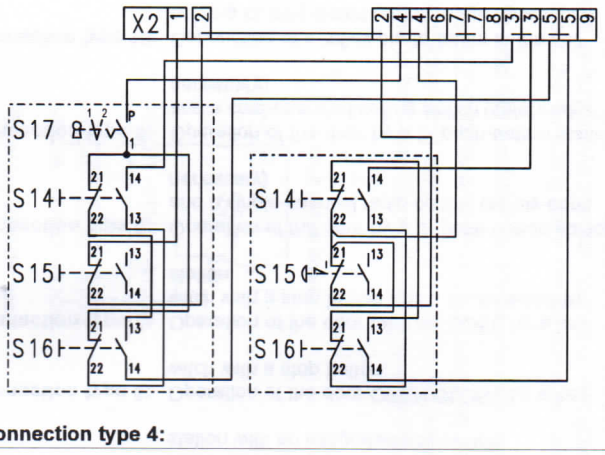
Connection type 9: Operation of the door by a 3- push-button station and a cord-operated ceiling switch (safety-edge necessary)

Connection type 10: Connection of a reflex photo-beam in the self-holding closing circuit (safety-edge necessary)

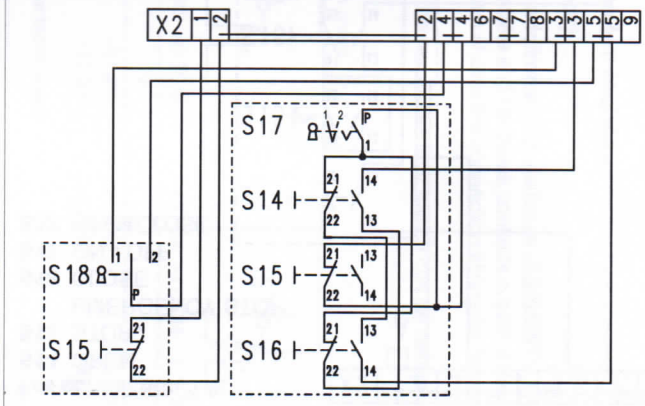




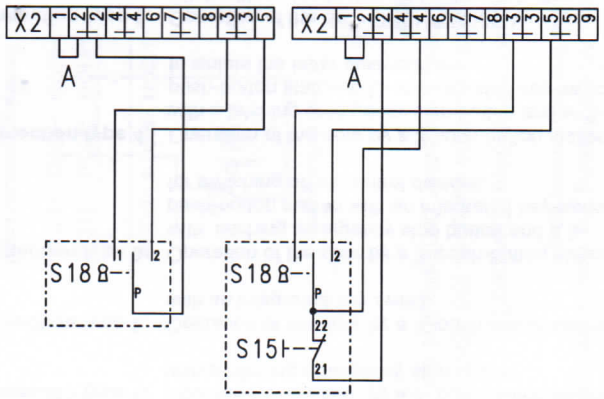
Connection type 3:



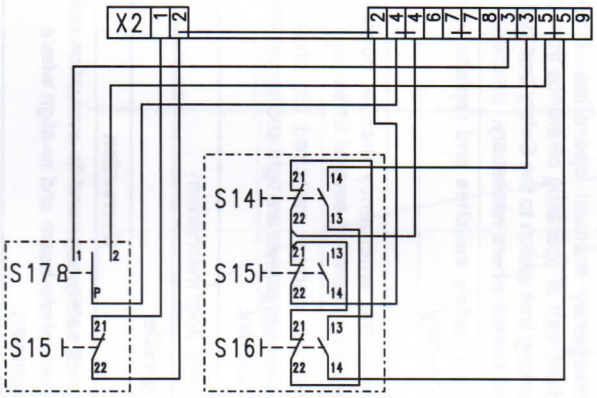
Connection type 4:



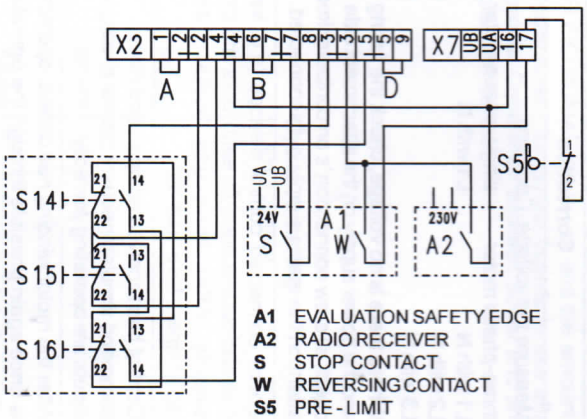
Connection type 5:



Connection type 6:

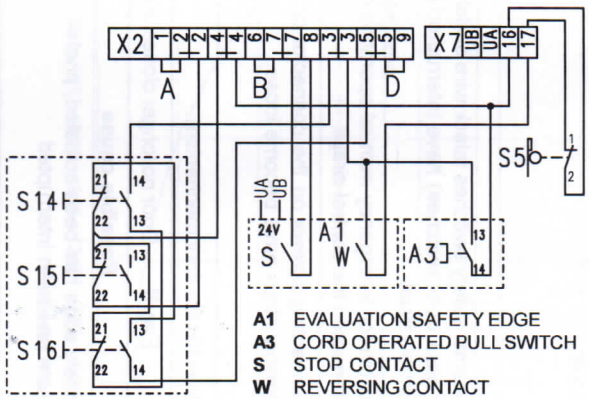


Connection type 7:



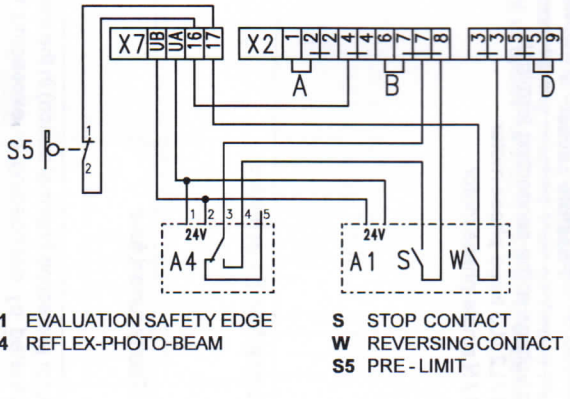
A1 EVALUATION SAFETY EDGE
A2 RADIO RECEIVER
S STOP CONTACT
W REVERSING CONTACT
S5 PRE - LIMIT

Connection type 8:



A1 EVALUATION SAFETY EDGE
A3 CORD OPERATED PULL SWITCH
S STOP CONTACT
W REVERSING CONTACT
S5 PRE - LIMIT

Connection type 9:



A1 EVALUATION SAFETY EDGE
A4 REFLEX-PHOTO-BEAM
S STOP CONTACT
W REVERSING CONTACT
S5 PRE - LIMIT

Connection type 10: