

1 HOLDING BRAKE FD 20

1.1 General remarks

The present Option instructions are only applicable in conjunction with the:

- Mounting and operating instructions 0548-990/02

Before carrying out the first work step, these documents must be entirely read and understood.

1.2 Requirements

- Upon completion of a new installation, all the elements have been built in according to the respective Mounting instructions and the respective Geometry drawing.
- If the holding brake is installed at a later date, the installation must be taken out of operation.



Warning:

Risk of electric shock! Before working on any live elements, pull out the mains plug respectively switch off the main installation switch!

1.3 Mounting versions

The mounting of the holding brake depends on the respective door configuration.

A distinction is made between the following 3 variants:

1-leaf installation

- Mounting of all components on the corresponding swing door drive mechanism.

2-leaves installation with mechanical closing sequence regulator

1 holding brake 0548-182

- 1 holding magnet SECONDARY drive mechanism
- 1 mini relay SECONDARY drive mechanism
- 1 open position transmitter SECONDARY drive mechanism

2-leaves installation without mechanical closing sequence regulator

2 holding brakes 0548-182

- 2 holding magnets MAIN and SECONDARY drive mechanism
- 2 mini relays MAIN and SECONDARY drive mechanism
- 1 open position transmitter SECONDARY drive mechanism

1.4 Mounting

Material:

- .. Holding brake 0548-182
- .. Option instructions 0548-992/72



Note:

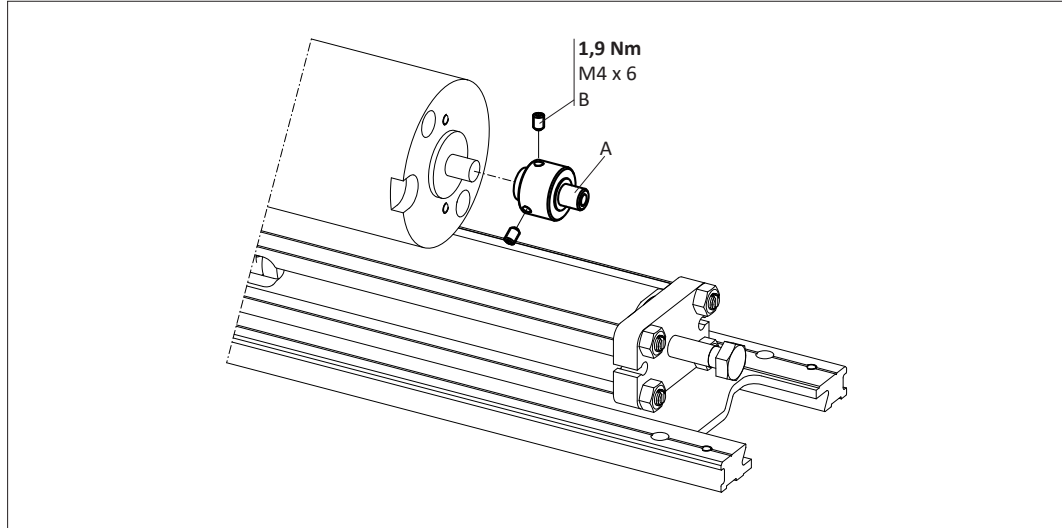
The mounting is carried out according to the present drive mechanism situation.

| | | |
|---|--------------------------|------------|
| A | Free-wheel hub | |
| B | Set screw | M4 x 6 |
| C | Brake disc | |
| D | Washer | 5,2/10 x 1 |
| E | Pan-head screw | M5 x 10 |
| F | Holding magnet | |
| G | Pan-head screw | M4 x 10 |
| H | Adjusting washer | 8/14 x 0,2 |
| I | Switch support | |
| J | Flat head screw | M4 x 8 |
| K | Adapter plate | |
| L | Pan-head screw | M6 x 30 |
| M | Microswitch | |
| N | Pan-head screw | M2 x 10 |
| O | Pan-head screw | M8 x 40 |
| P | Cam | |
| Q | Set screw | M4 x 6 |
| R | Clamping piece | |
| S | Mini relay | |
| T | Socket Mini relay | |
| U | Device rail | |
| V | Switch PERMANENT OPENING | 0548-523 |

1.4.1 Free-wheel hub

Procedure:

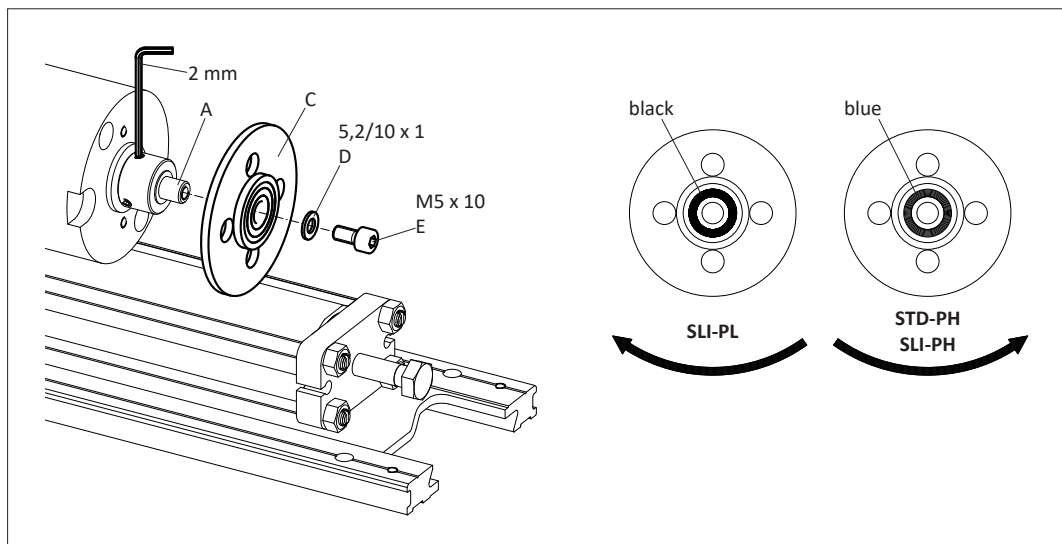
1. Push the free-wheel hub (A) onto the corresponding motor shaft (to the stop) and tighten it by means of two set screws (B) ⇒ Tightening moment 1,9 Nm.



1.4.2 Brake disc

Procedure:

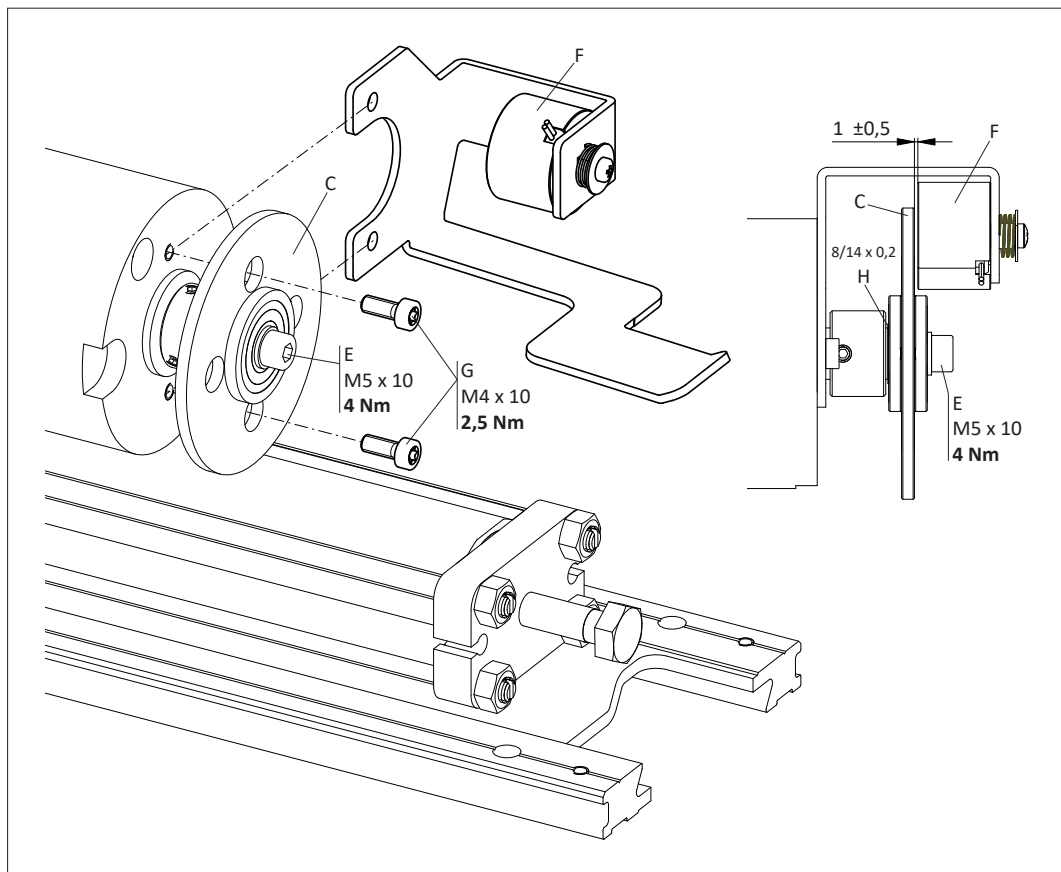
1. Push brake disc (C), incl. free-wheel, in correct position onto free-wheel hub (A):
Black plastic ring visible ⇒ Sense of rotation clockwise ⇒ Sliding rod pulling function SLI-PL.
Blue plastic ring visible ⇒ Sense of rotation counterclockwise ⇒ Normal rod STD-PH, sliding rod pushing function SLI-PH.
2. Fix the free-wheel hub (A) (using a 2 mm hexagon socket wrench):
 Slightly tighten the pan-head screw (E) and washer (D).



1.4.3 Holding magnet

Procedure:

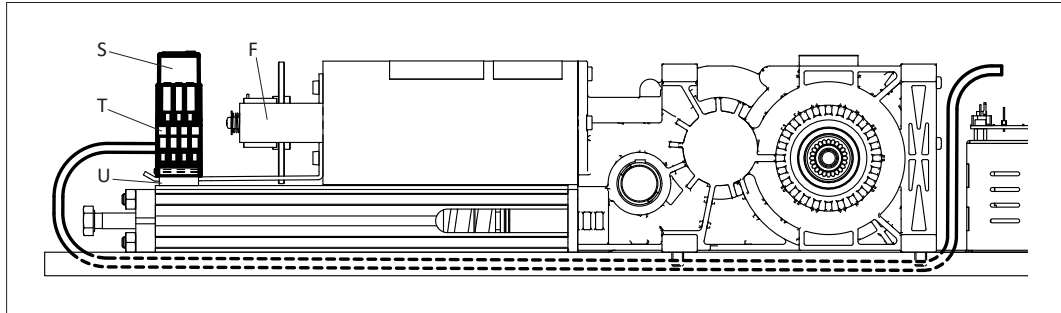
1. Fasten the holding magnet (F) to the motor with two pan-head screws (G) \Rightarrow Tightening moment 2,5 Nm.
2. Check distance $1 \pm 0,5$ mm between brake disc (C) and holding magnet (F).
3. If necessary:
Shim the brake disc (C) with adjusting washers (H).
To do this, remove the holding magnet (F) and loosen the pan-head screw (E).
4. Apply a little Loctite 243 to the pan-head screw (E) and fix the brake disc (C) definitively \Rightarrow Tightening moment 4 Nm.
5. Fasten the holding magnet (F) to the motor with two pan-head screws (G) \Rightarrow Tightening moment 2,5 Nm.



1.4.4 Mini relay

Procedure:

1. Push the mini relay (S) and the socket (T) onto the device rail (U)
2. Push the mini relay (S) up to the stop under the holding sheet of the holding magnet (F).
3. Feed the pre-assembled cable between the drive module and the chassis profile and pull it up to the control unit.



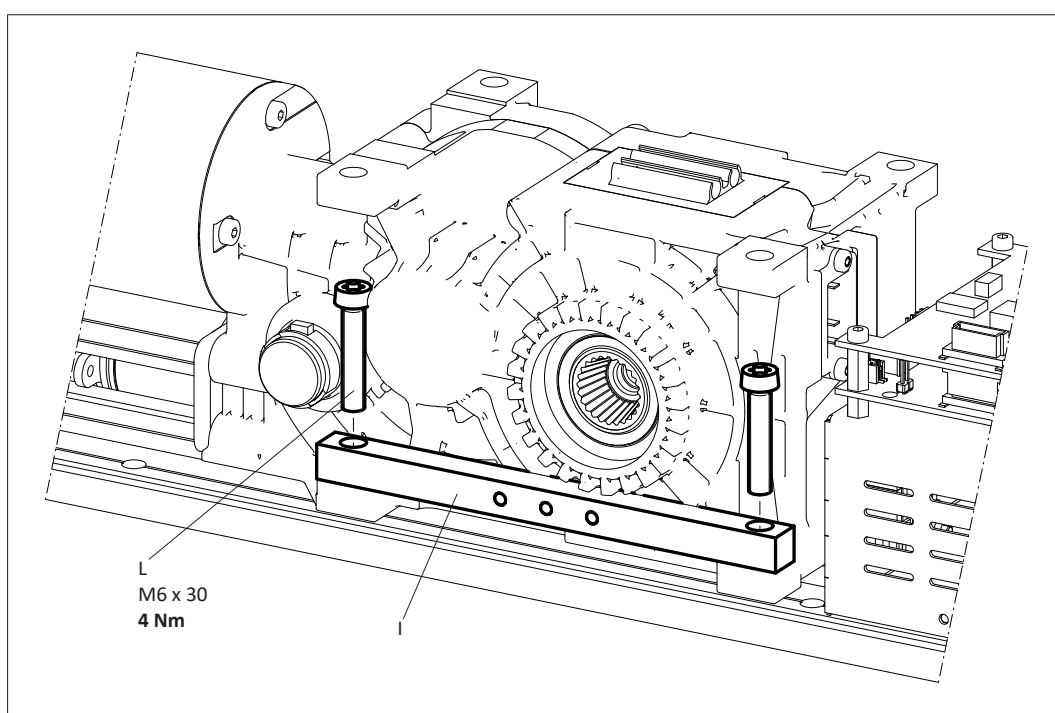
1.4.5 Support open position transmitter

**Attention:**

In 2 leaves installations, the open position transmitter is always mounted on the SECONDARY drive mechanism.

Procedure:

1. Loosen and remove two fixing screws on the gear housing (on the opposite side of the rod assemblies).
2. Position switch support (I) and fix it by means of pan-head screws (L) ⇒ Tightening moment 4 Nm.



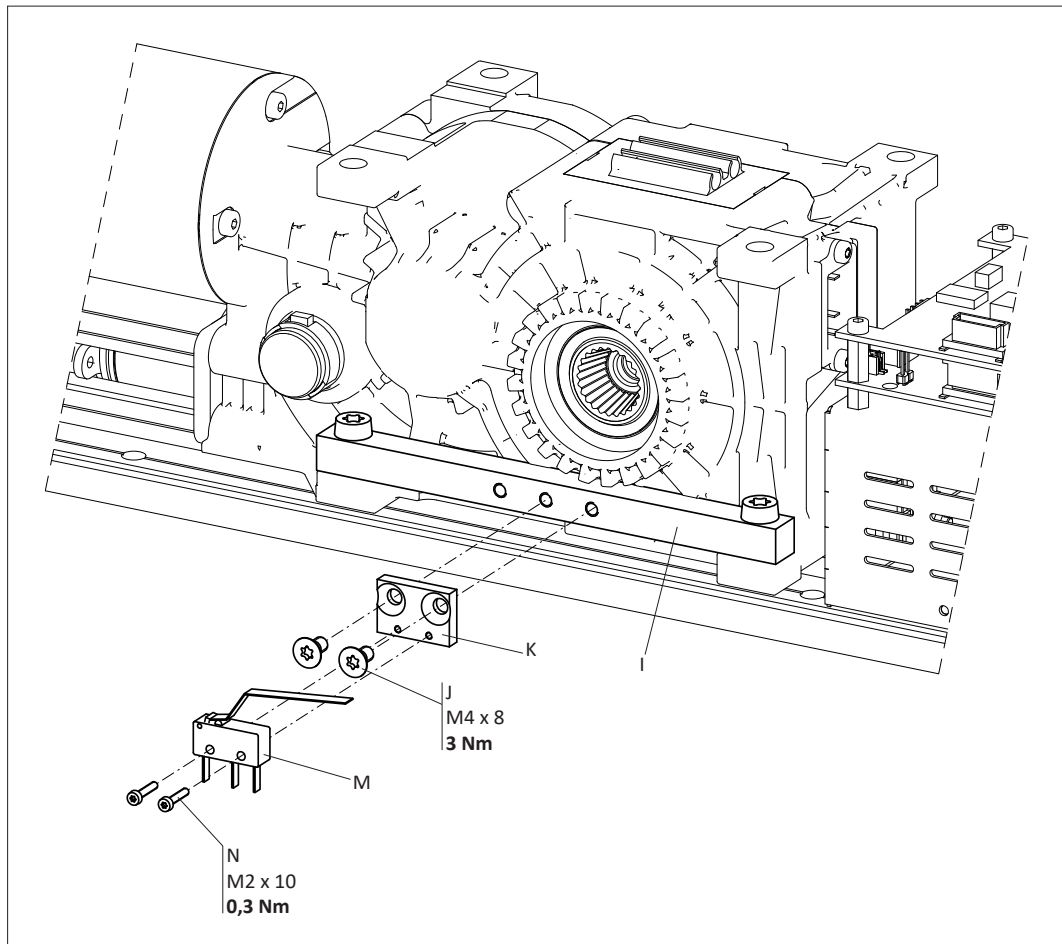
1.4.6 Microswitch

Procedure:

1. Fasten the adapter plate (K) to the switch support (I) using flat head screws (J) ⇒ Tightening moment 3 Nm. Use the two holes that are closer to the control unit.
2. Attach the microswitch (M) to the adapter plate (K) using pan-head screws (N) ⇒ Tightening moment 3 Nm.

**Attention:**

The switch lever of the microswitch points in the direction of the control unit.

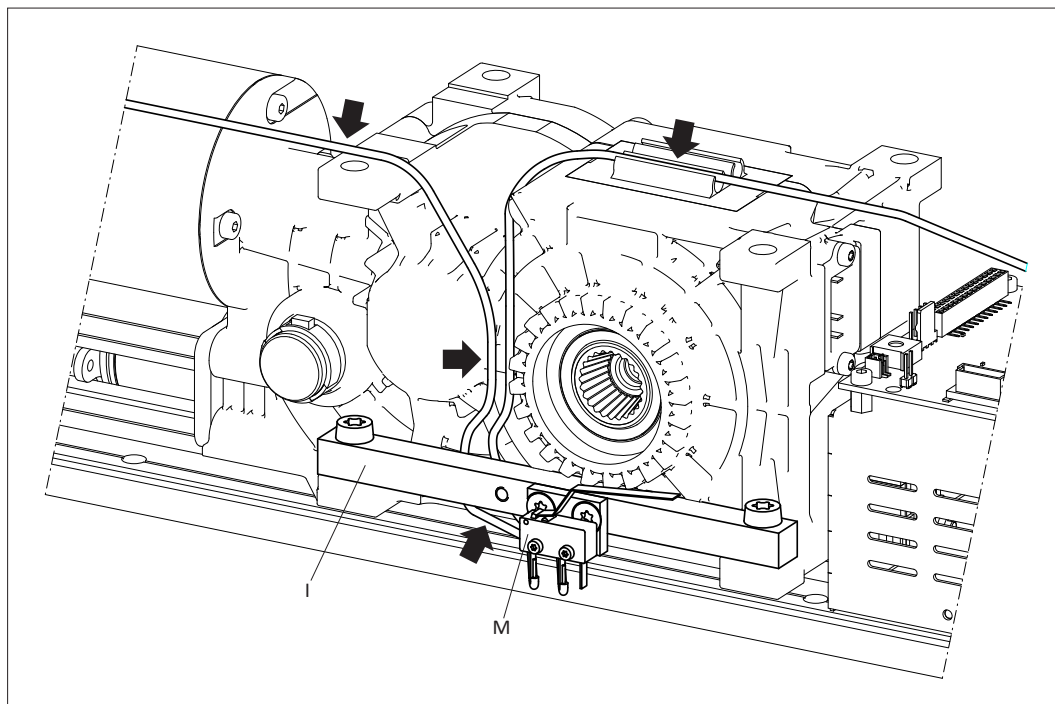


3. Feed the wires of the microswitch (M) between the housing of drive mechanism and the switch support (I). Pull one wire through the cable guide on the service cover. Pull the other wire over the motor to the mini relay.



Attention:

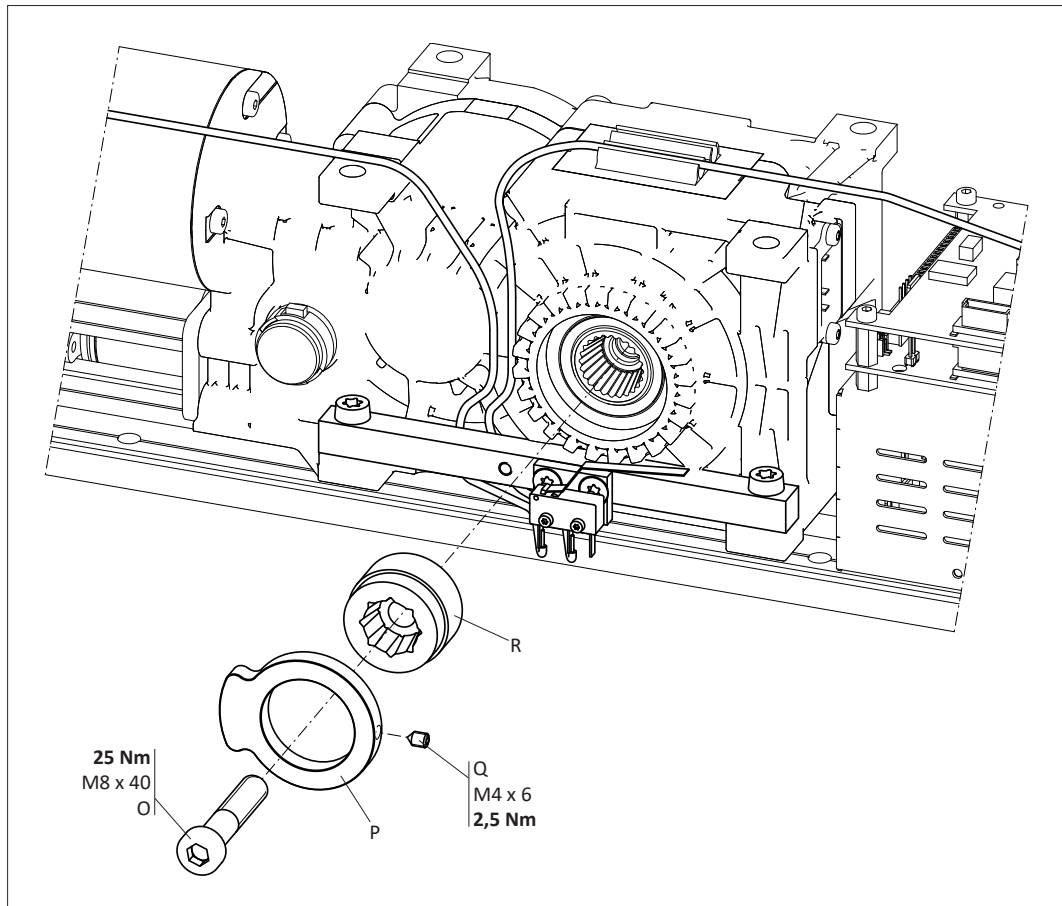
Wires must not be damaged when mounting the drive mechanism covering!



1.4.7 Cam

Procedure:

1. Screw the set screw (Q) slightly into the cam (P) (but do not tighten it yet).
2. Push the cam (P) onto the clamping piece (R).
3. Fasten the clamping piece (R) to the output shaft using the pan-head screw (O) ⇒ Tightening moment 25 Nm.



1.4.8 Drive mechanism

Procedure:

1. Mount and commission the swing door drive mechanism(s) and the rod assemblies according to the mounting and operating instructions.
2. Set the system out of service.

1.4.9 Adjust the cam

Procedure:

1. Select operating mode OPEN with the program selector ⇒ and let the door leaf open.
2. Turn the cam (P) on the clamping piece (R) in the opening direction of the drive mechanism until the microswitch (M) switches.
3. Tighten set screw (Q) ⇒ Tightening moment 2,5 Nm.

1.5 Switch PERMANENT OPENING



Note:

The switch PERMANENT OPENING (V) can be mounted either on the drive mechanism or externally.

The switch PERMANENT OPENING (V) can also be replaced by an element delivery by customer (permanent contact, rotary switch, key-operated selector switch).

1 leaf installation

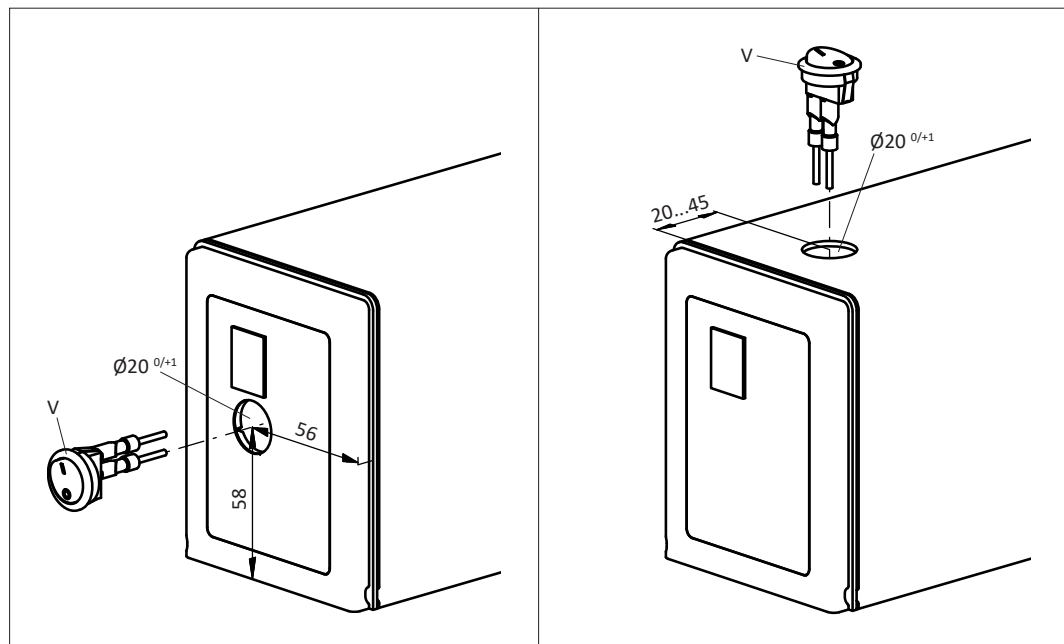
- Mounting of the switch PERMANENT OPENING (V) either in the side cover or in the drive mechanism covering (drilling diameter $20^{0/+1}$ mm).
- Mounting of the switch PERMANENT OPENING (V) at any point outside the drive mechanism (drilling diameter $20^{0/+1}$ mm).



Note:

The cable length of the switch PERMANENT OPENING (V) is designed for mounting on the drive mechanism.

For external mounting, the cable length must be adapted accordingly (by customer).



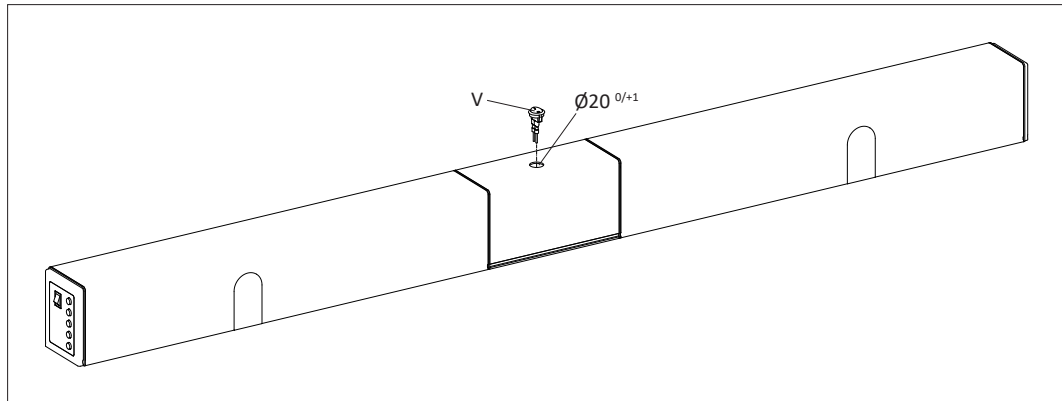
2 leaves installation with mechanical closing sequence regulator

- Mounting of the switch PERMANENT OPENING (V) in the SECONDARY drive mechanism covering or in the intermediate covering (drilling diameter $20^{0/+1}$ mm).
- Mounting of the switch PERMANENT OPENING (V) at any point outside the drive mechanism (drilling diameter $20^{0/+1}$ mm).

**Note:**

The cable length of the switch PERMANENT OPENING (V) is designed for mounting in the intermediate covering.

For external mounting, the cable length must be adapted accordingly (by customer).

**2 leaves installation without mechanical closing sequence regulator**

- Mounting of the switch PERMANENT OPENING (V) in one of the two drive mechanism coverings or in the intermediate covering (drilling diameter $20^{0/+1}$ mm).
- Mounting of the switch PERMANENT OPENING (V) at any point outside the drive mechanisms (drilling diameter $20^{0/+1}$ mm).

1.6 Wiring



Attention:

The installation must be disconnected from the mains supply during the entire wiring process!

1 leaf installation

- see wiring diagram E4-0141-713, sheet no. 33-1 (in the appendix)

2 leaves installation with mechanical closing sequence regulator

- Wiring holding magnet/open position transmitter ⇒ SECONDARY drive mechanism
see wiring diagram E4-0141-713, sheet no. 35 (in the appendix)
- Wiring switch PERMANENT OPENING ⇒ SECONDARY drive mechanism
see wiring diagram E4-0141-713, sheet no. 35 (in the appendix)

2 leaves installation without mechanical closing sequence regulator

- Wiring holding magnets ⇒ MAIN and SECONDARY drive mechanism
see wiring diagram E4-0141-713, sheet no. 36 and 37 (in the appendix)
- Wiring open position transmitter ⇒ SECONDARY drive mechanism
see wiring diagram E4-0141-713, sheet no. 37 (in the appendix)
- Wiring switch PERMANENT OPENING ⇒ SECONDARY drive mechanism
see wiring diagram E4-0141-713, sheet no. 36 (in the appendix)
- Wiring of control cable between MAIN and SECONDARY drive mechanism
see wiring diagram E4-0141-713, sheet no. 36 and 37 (W364) (in the appendix)

Note:

The control cable is not included in the set

⇒ delivery by customer, cross-section $\geq 0,5 \text{ mm}^2$



Attention:

The operating mode PERMANENT OPENING with holding brakes can only be switched on via the supplied switch PERMANENT OPENING.

When the open position is reached, the drive mechanisms are switched to manual operation (the holding brakes keeps the door leaves open).

When the operating mode PERMANENT OPENING is cancelled, the door leaves close by means of spring force.

1.7 Appendix

The following documents are added as an appendix to this instructions:

Wiring diagram E4-0141-713

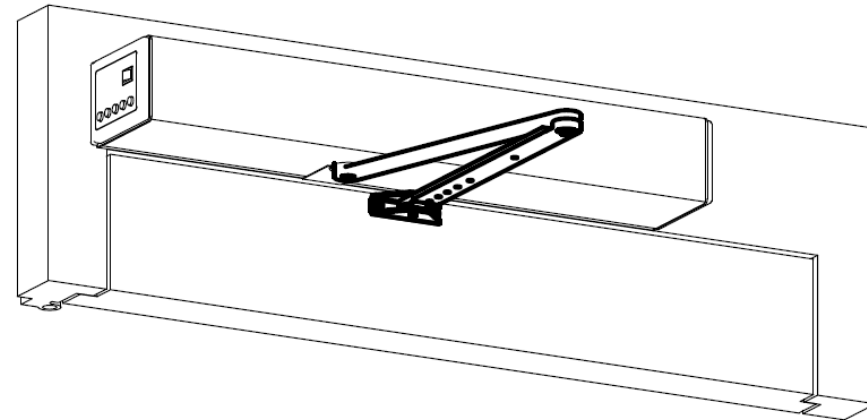
Electrical documentation

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 www.gilgendoorsystems.com



Drive mechanism for swing door FD 20 Standard diagram no. E4-0141-713 f

- Overview
- Options
- Variants



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| | | | | | | | | | | | |
|-----|-----------|-------------|------|-------------|------------|------------------|--|--|--|-----------|---|
| | | Designed by | | 03.12.2021 | bdg | Standard diagram | | | | Sheet no. | |
| f | Nr. 15649 | 15.09.2023 | bdg | Reviewed by | 15.09.2023 | bdg | | | | | 1 |
| e | Nr. 15338 | 06.01.2022 | bdg | Approved by | 15.09.2023 | ha | | | | | |
| Id. | Revision | Date | Name | | | | | | | | |



Drive mechanism for swing door FD 20
 Cover sheet
 1

Origin: NORM0141-724.pro
 Substitution: NORM0141.pro-713d

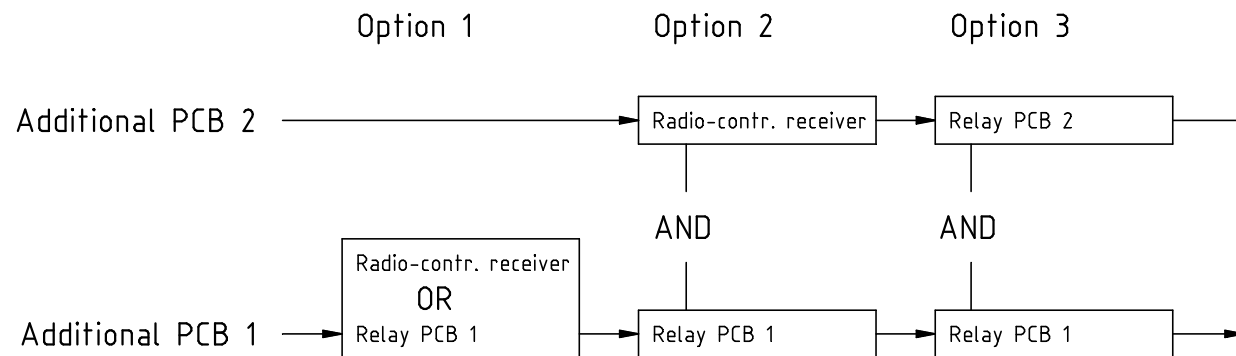
E4-0141-713 f

1

Table of contents

| No. | 1.Level | 2.Level | 3.Level | 4.Level | 5.Level | Sheet designation Special notes | Creator Data | Revision-Id. Data |
|-----|--------------------------------------|-------------------|----------------------------|-----------------------------------|---------|------------------------------------|-------------------|----------------------|
| 1 | Drive mechanism for swing door FD 20 | Cover sheet | 1 | | | | bdg 03.12.2021 | f 15.09.2023 |
| 2 | Drive mechanism for swing door FD 20 | Table of contents | 2 | | | | bdg 03.12.2021 | f 15.09.2023 |
| 3 | Drive mechanism for swing door FD 20 | Overview | 5 | | | Overview Control unit | bdg 03.12.2021 | f 15.09.2023 |
| 4 | Drive mechanism for swing door FD 20 | Control unit | 11 | | | Layout, Logic Basic PCB | bdg 03.12.2021 | f 15.09.2023 |
| 5 | Drive mechanism for swing door FD 20 | Control unit | 12 | | | Overview connection terminals | bdg 03.12.2021 | f 15.09.2023 |
| 6 | Drive mechanism for swing door FD 20 | Control unit | 13 | | | Power supply, Drive unit | bdg 03.12.2021 | f 15.09.2023 |
| 7 | Drive mechanism for swing door FD 20 | Control unit | 14 | | | Operating elements internal | bdg 03.12.2021 | e 06.01.2022 |
| 8 | Drive mechanism for swing door FD 20 | Options | Additional PCB | Relay PCB | 21 | Layout | bdg 03.12.2021 | f 15.09.2023 |
| 9 | Drive mechanism for swing door FD 20 | Options | Additional PCB | Relay PCB | 22 | Relay PCB 1 (Address 0) | bdg 03.12.2021 | f 15.09.2023 |
| 10 | Drive mechanism for swing door FD 20 | Options | Additional PCB | Relay PCB | 23 | Relay PCB 2 (Address 1) | bdg 03.12.2021 | f 15.09.2023 |
| 11 | Drive mechanism for swing door FD 20 | Options | Additional PCB | Radio-contr. receiver | 24 | Radio-contr. receiver | bdg 03.12.2021 | e 06.01.2022 |
| 12 | Drive mechanism for swing door FD 20 | Options | Holding brake No. 0548-182 | Overview | 31 | | bdg 03.12.2021 | f 15.09.2023 |
| 13 | Drive mechanism for swing door FD 20 | Options | Holding brake No. 0548-182 | Overview | 32 | Instructions | bdg 03.12.2021 | f 15.09.2023 |
| 14 | Drive mechanism for swing door FD 20 | Options | Holding brake No. 0548-182 | 1-winged | 33 | | bdg 03.12.2021 | f 15.09.2023 |
| 15 | Drive mechanism for swing door FD 20 | Options | Holding brake No. 0548-182 | 2-winged, Option 1 | 34 | Drive mechanism 1, Main | bdg 03.12.2021 | f 15.09.2023 |
| 16 | Drive mechanism for swing door FD 20 | Options | Holding brake No. 0548-182 | 2-winged, Option 1 | 35 | Drive mechanism 2, Secondary | bdg 03.12.2021 | f 15.09.2023 |
| 17 | Drive mechanism for swing door FD 20 | Options | Holding brake No. 0548-182 | 2-winged, Option 2 | 36 | Drive mechanism 1, Main | bdg 03.12.2021 | f 15.09.2023 |
| 18 | Drive mechanism for swing door FD 20 | Options | Holding brake No. 0548-182 | 2-winged, Option 2 | 37 | Drive mechanism 2, Secondary | bdg 03.12.2021 | f 15.09.2023 |
| 19 | Drive mechanism for swing door FD 20 | Options | Safety elements | 41 | | BEA LZR-Flatscan | bdg 03.12.2021 | f 15.09.2023 |
| 20 | Drive mechanism for swing door FD 20 | Options | Locking | 51 | | Motorised lock Example | bdg 03.12.2021 | f 15.09.2023 |
| 21 | Drive mechanism for swing door FD 20 | Variants | Double door | Closing sequence Main - Secondary | 61 | Settings, Function | bdg 03.12.2021 | f 15.09.2023 |
| 22 | Drive mechanism for swing door FD 20 | Variants | Interlock-system | Side A - Side B | 62 | Settings, Function | bdg 03.12.2021 | f 15.09.2023 |
| 23 | Drive mechanism for swing door FD 20 | Appendix | 111 | | | Position Motor connector | bdg 03.12.2021 | e 06.01.2022 |

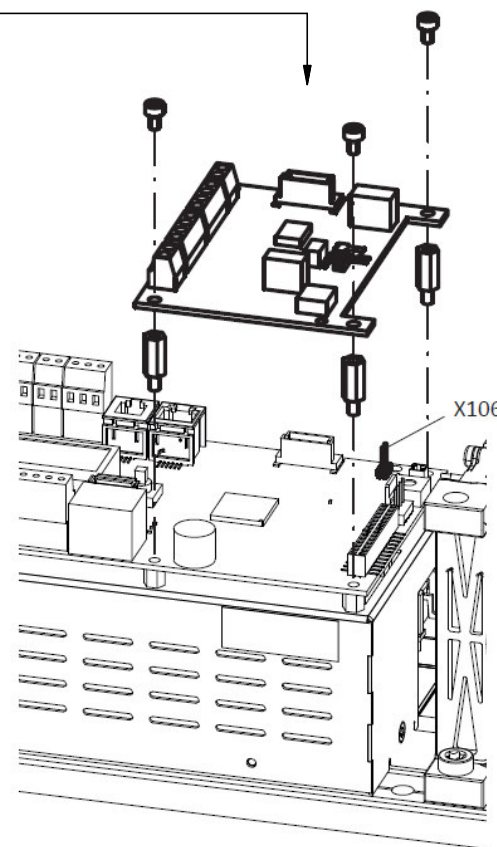
Control unit - Overview



Control unit
0548-118

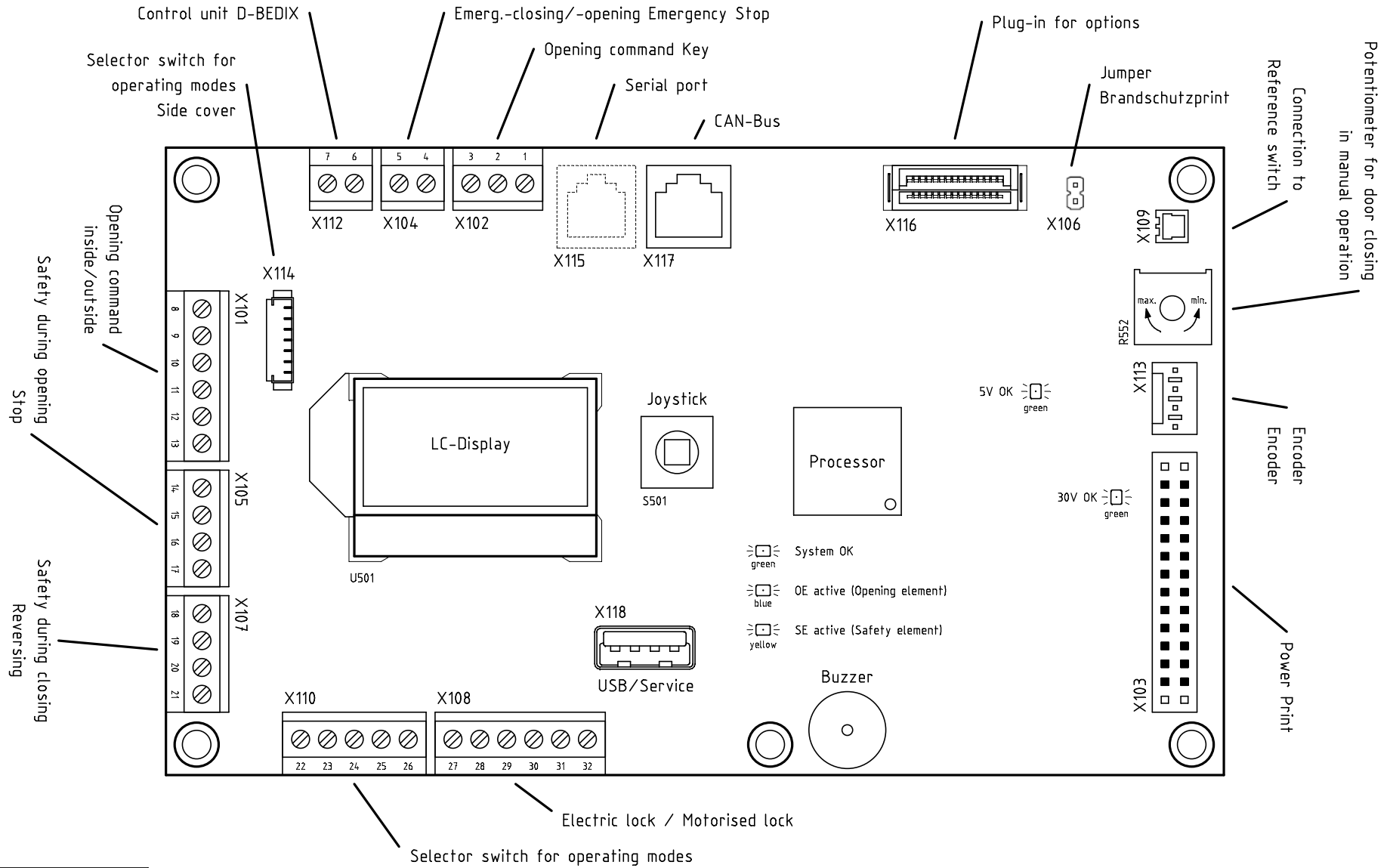
Logic Basic PCB

Power Print



| | | | | | | |
|-----|-----------|------------|-------------|------------|-----|------------------|
| | | | Designed by | 03.12.2021 | bdg | Standard diagram |
| f | Nr. 15649 | 15.09.2023 | Reviewed by | 15.09.2023 | bdg | |
| e | Nr. 15338 | 06.01.2022 | Approved by | 15.09.2023 | ha | |
| Id. | Revision | Date | Name | | | |

Logic Basic PCB - Layout



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| | | | | | | |
|-----|-----------|------------|-------------|------------|-----|------------------|
| | | | Designed by | 03.12.2021 | bdg | Standard diagram |
| f | Nr. 15649 | 15.09.2023 | Reviewed by | 15.09.2023 | bdg | |
| e | Nr. 15338 | 06.01.2022 | Approved by | 15.09.2023 | ha | |
| ld. | Revision | Date | Name | | | |



Drive mechanism for swing door FD 20
Control unit
11

Layout, Logic Basic PCB

Origin: NORM014.1-724.pro
Substitution: NORM014.1.pro-713d

E4-0141-713 f

Sheet no.

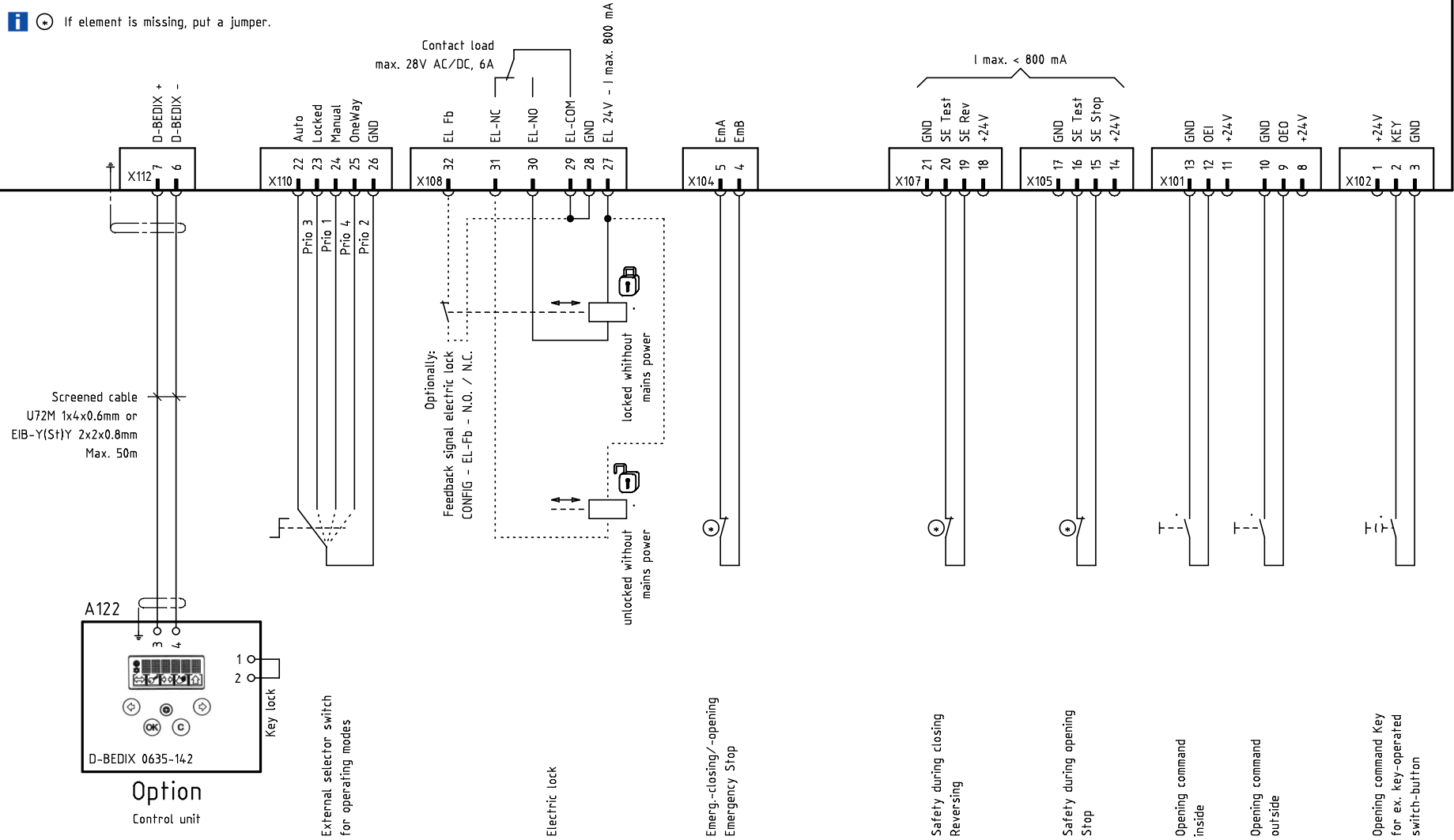
12

11

Logic Basic PCB, 0350-391/00

i Total load +24V: max. 2A

i ⊛ If element is missing, put a jumper.



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| | | | | | | | |
|-----|-----------|------------|------|-------------|------------|-----|------------------|
| f | Nr. 15649 | 15.09.2023 | bdg | Designed by | 03.12.2021 | bdg | Standard diagram |
| e | Nr. 15338 | 06.01.2022 | bdg | Reviewed by | 15.09.2023 | bdg | |
| ld. | Revision | Date | Name | Approved by | 15.09.2023 | ha | |



Drive mechanism for swing door FD 20
Control unit
12

Overview connection terminals

| | |
|---------------|--------------------|
| Origin: | NORM014-1-724.pro |
| Substitution: | NORM014.1.pro-713d |

E4-0141-713 f 12

Sheet no.
11 13

A131

Power Print, 0350-390/00

Power consumption
max. 560W

Power supply unit

GND internal



.Q132
Main installation switch
Side cover



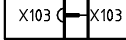
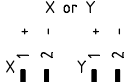
Configuration,
see sheet 111

A136

Logic Basic PCB, 0350-391/00

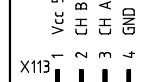
Motor

Plug position
X or Y



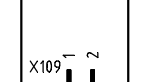
Encoder (Encoder)

Vcc 5V
CH B
CH A
GND 0V

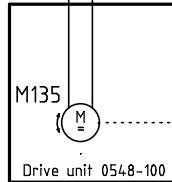


Reference switch

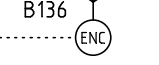
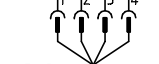
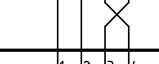
X109



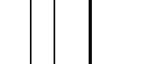
red
black
AWG 18
2x0,82mm²



brown
yellow
green
white
0548-502
AWG 26
4x0,14mm²



black
black
0548-503
AWG 26
2x0,14mm²



Contact open
for opening 0...20°

internal
external

Power supply 230 VAC (+10/-15 %), 50 Hz

Supplied by customer with:
- Autom. line cut-out switch FI 30mA
- Fuse 13A

| | | | | | | | |
|-----|-----------|------------|------|-------------|------------|-----|------------------|
| f | Nr. 15649 | 15.09.2023 | bdg | Designed by | 03.12.2021 | bdg | Standard diagram |
| b | Nr. 15338 | 06.01.2022 | bdg | Reviewed by | 15.09.2023 | bdg | |
| ld. | Revision | Date | Name | Approved by | 15.09.2023 | ha | |



Drive mechanism for swing door FD 20
Control unit
13

Power supply, Drive unit

Originals: NORM0141-724.pro
Substitution: NORM0141.pro-713d

E4-0141-713 f

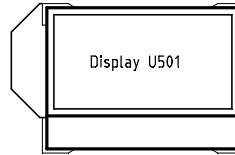
Sheet no.

12 14

13

A136

Logic Basic PCB, 0350-391/00



Joystick S501



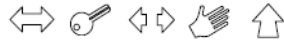
for Settings (PARAMETER, KONFIG)

X114

-W141

A141

Program switch
Side cover



Automatic (Auto)

Night (Locked)

Open

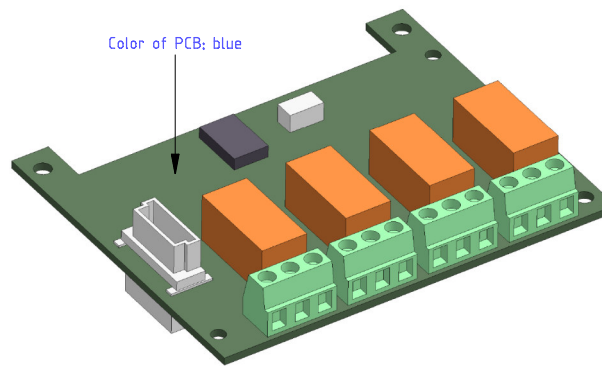
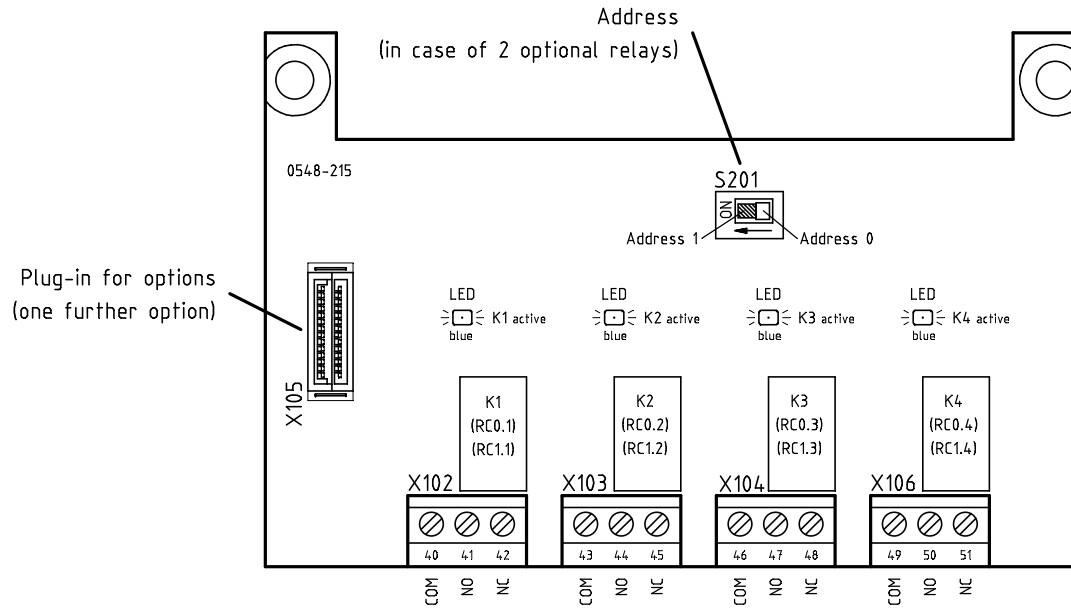
Manual (Manual)

Exit (One Way)

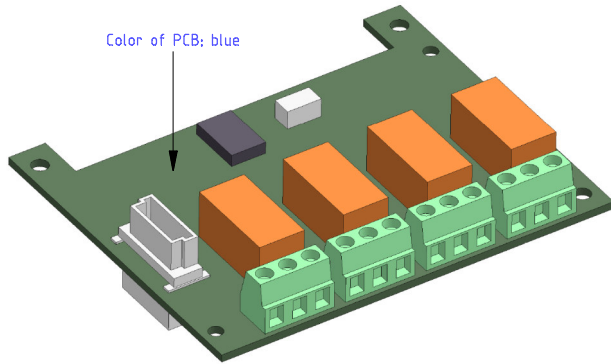
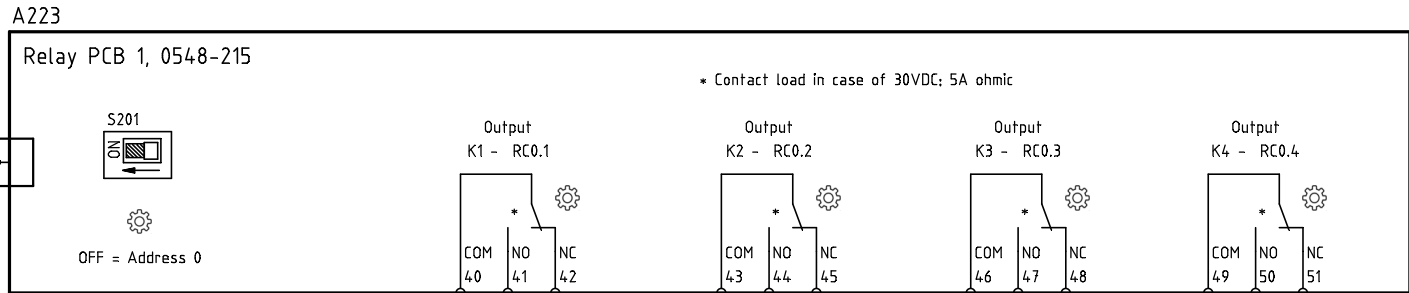
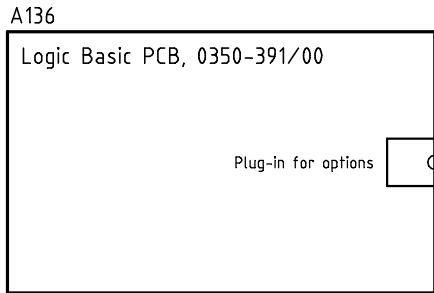
internal
external

| | | | | | | | | | | | | |
|--------------|--|--|-------------|------------|------|------------------|--|--------------------------------------|----|-----------------------------|--|---------------------------------|
| | | | Designed by | 03.12.2021 | bdg | Standard diagram | | Drive mechanism for swing door FD 20 | | Operating elements internal | | Sheet no. |
| | | | Reviewed by | 15.09.2023 | bdg | | | Control unit | 14 | | | 13 |
| | | | Approved by | 15.09.2023 | ha | | | | | Origin: NORM0141-724.pro | | Substitution: NORM0141.pro-713d |
| E Nr. 15338 | | | Date | 06.01.2022 | bdg | E4-0141-713 f | | | | 14 | | |
| Id. Revision | | | Date | | Name | | | | | | | |

Relay PCB - Overview



| | | | | | | |
|-----|-----------|------------|-------------|------------|-----|------------------|
| | | | Designed by | 03.12.2021 | bdg | Standard diagram |
| f | Nr. 15649 | 15.09.2023 | Reviewed by | 15.09.2023 | bdg | |
| b | Nr. 15338 | 06.01.2022 | Approved by | 15.09.2023 | ha | |
| Id. | Revision | Date | Name | | | |

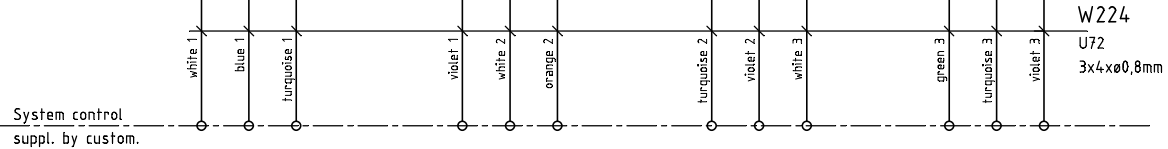


internal
external

⚙️ Configurable, Factory default:

- CONFIG - RC0.1 = CLOSED
- CONFIG - RC0.2 = OPEN
- CONFIG - RC0.3 = ERROR
- CONFIG - RC0.4 = GONG

i see also instruction FD 20, 0548-990/0*



Feedback signal
door closed

Feedback signal
door open

Feedback signal
Error

Impuls
Gong

| | | | | | | | | | | | | | | |
|-----|-----------|------------|-------------|-------------|------------|------------------|--|--------------------------------------|-------------------|-------------------------|---------------|-----------|--|----|
| | | | Designed by | 03.12.2021 | bdg | Standard diagram | | Drive mechanism for swing door FD 20 | | Relay PCB 1 (Address 0) | | Sheet no. | | |
| f | Nr. 15649 | 15.09.2023 | bdg | Reviewed by | 15.09.2023 | | | bdg | Options | | | 421 | | 23 |
| e | Nr. 15338 | 06.01.2022 | bdg | Approved by | 15.09.2023 | | | ha | Additional PCB | | | | | |
| Id. | Revision | Date | Name | | | | | Relay PCB | Origin: | NORM0141-724.pro | E4-0141-713 f | 22 | | |
| | | | | | | | | Substitution: | NORM0141.pro-f13d | | | | | |

A223

A233

Relay PCB 1, 0548-215

Relay PCB 2, 0548-215

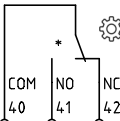
Plug-in for options



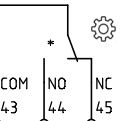
ON = Address 1

* Contact load in case of 30VDC; 5A ohmic

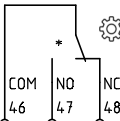
Output
K1 - RC1.1



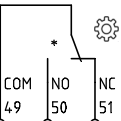
Output
K2 - RC1.2



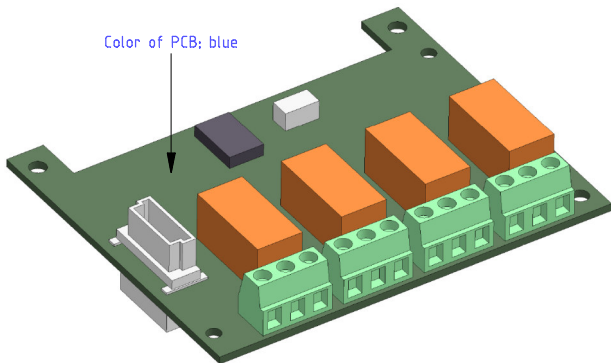
Output
K3 - RC1.3



Output
K4 - RC1.4



Color of PCB: blue



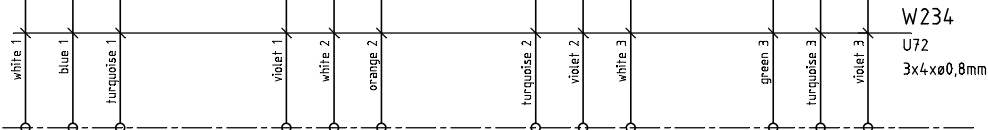
internal
external

⚙️ Configurable, Factory default:

- CONFIG - RC1.1 = OPENING
- CONFIG - RC1.2 = CLOSING
- CONFIG - RC1.3 = PSAUTO
- CONFIG - RC1.4 = LOCKED

📘 see also instruction FD 20, 0548-990/0*

System control
suppl. by custom.



W234
U72
3x4x0,8mm

Feedback signal
door in motion
open

Feedback signal
door in motion
close

Feedback signal
Operating mode
Automatic

Feedback signal
door locked

| | | | | | | | |
|-----|-----------|------------|------|-------------|------------|-----|------------------|
| f | Nr. 15649 | 15.09.2023 | bdg | Designed by | 03.12.2021 | bdg | Standard diagram |
| b | Nr. 15338 | 06.01.2022 | bdg | Reviewed by | 15.09.2023 | bdg | |
| ld. | Revision | Date | Name | Approved by | 15.09.2023 | ha | |



Drive mechanism for swing door FD 20
Options
Additional PCB
Relay PCB

Relay PCB 2 (Address 1)

Origin: NORM0141-724.pro
Substitution: NORM0141.pro-f13d

E4-0141-713 f

Sheet no.
422

23

A243

see sheet 5

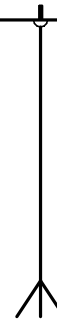
Plug-in for options



Radio-contr. receiver, 0548-216



Opening command Key



Antenna

internal
external

① Options Operating elements



Hand-held radio transmitter
GFU 4



Hand-held radio transmitter
GFU 2



Code switch

| | | | |
|--|--|--|--|
| | | | |
| | | | |
| | | | |
| | | | |

| | | |
|-------------|------------|-----|
| Designed by | 03.12.2021 | bdg |
| Reviewed by | 15.09.2023 | bdg |
| Approved by | 15.09.2023 | ha |

Standard diagram



Drive mechanism for swing door FD 20
Options
Additional PCB
Radio-contr. receiver

Radio-contr. receiver

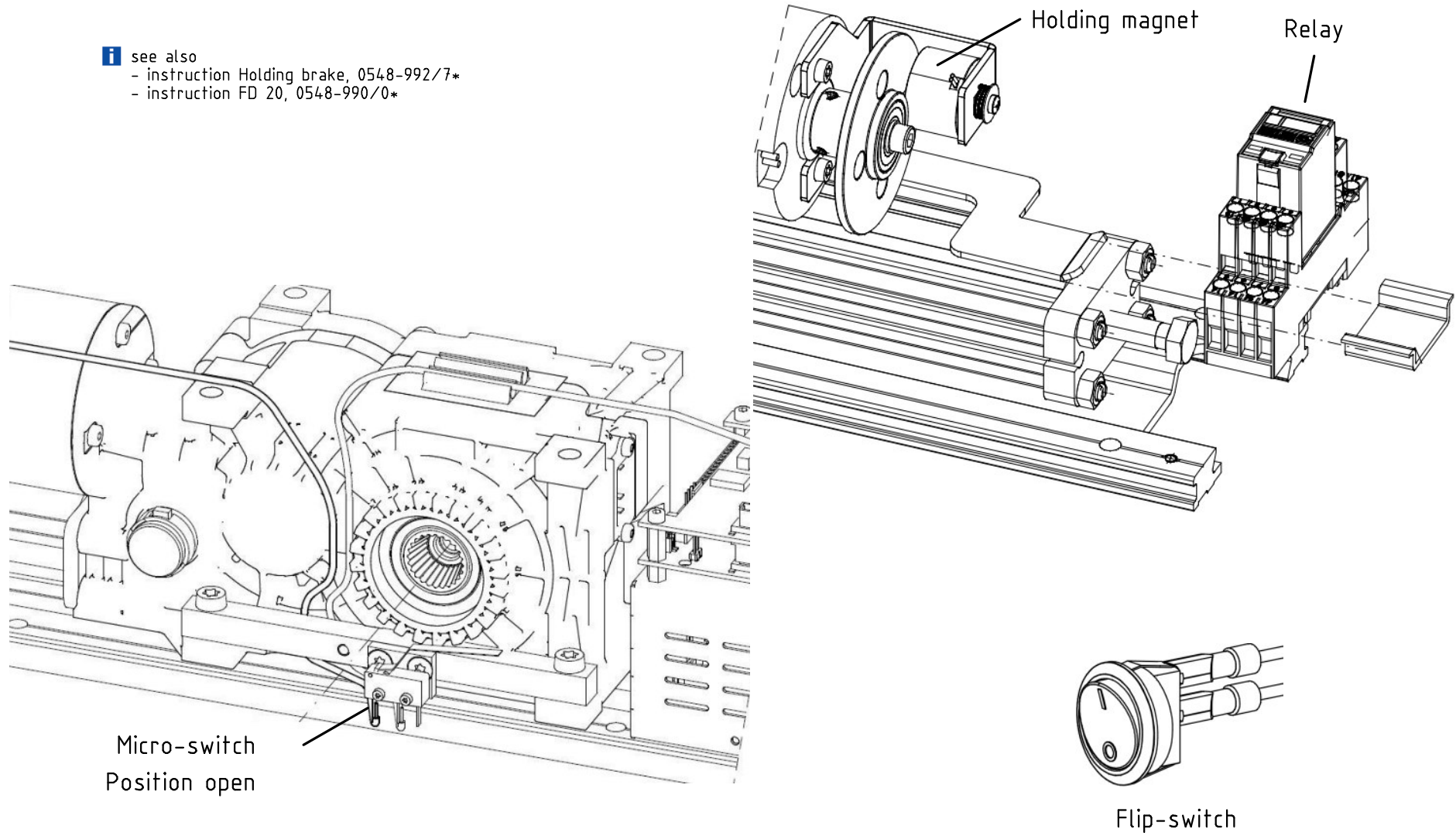
| | |
|---------------|-------------------|
| Origin: | NORM0141-724.pro |
| Substitution: | NORM0141.pro-713d |

E4-0141-713 f

| | |
|-----------|----|
| Sheet no. | 24 |
|-----------|----|

Holding brake - Overview

i see also
 - instruction Holding brake, 0548-992/7*
 - instruction FD 20, 0548-990/0*



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| | | | | | | |
|-----|------------|------------|-------------|-------------|------------|------------------|
| | | | Designed by | 03.12.2021 | bdg | Standard diagram |
| | | | Reviewed by | 15.09.2023 | bdg | |
| f | Nr. 1564-9 | 15.09.2023 | bdg | Approved by | 15.09.2023 | ha |
| Id. | Revision | Date | Name | | | |

GILGEN
DOOR SYSTEMS

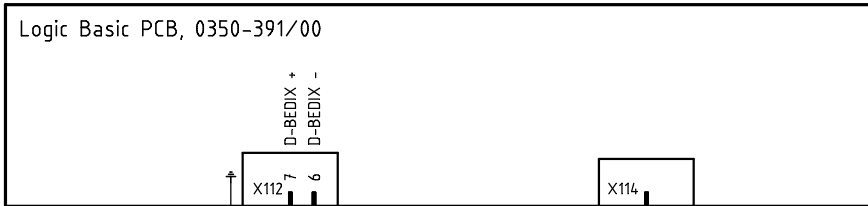
Drive mechanism for swing door FD 20
 Options
 Holding brake No. 0548-182
 Overview

Origin: NORM0141-724.pro
 Substitution: NORM0141.pro-713d

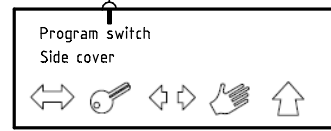
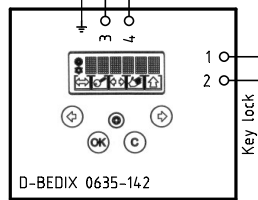
E4-0141-713 f

Sheet no.
 32
 31

Holding brake - Instructions



Screened cable
U72M 1x4x0.6mm or
EIB-Y(S)Y 2x2x0.8mm
Max. 50m



Automatic (Autol)
Night (Locked)
Open
Manual (Manual)
Exit (One Way)

-W141

i Diagram Double door (2-winged, Main - Secondary)
see sheet 61

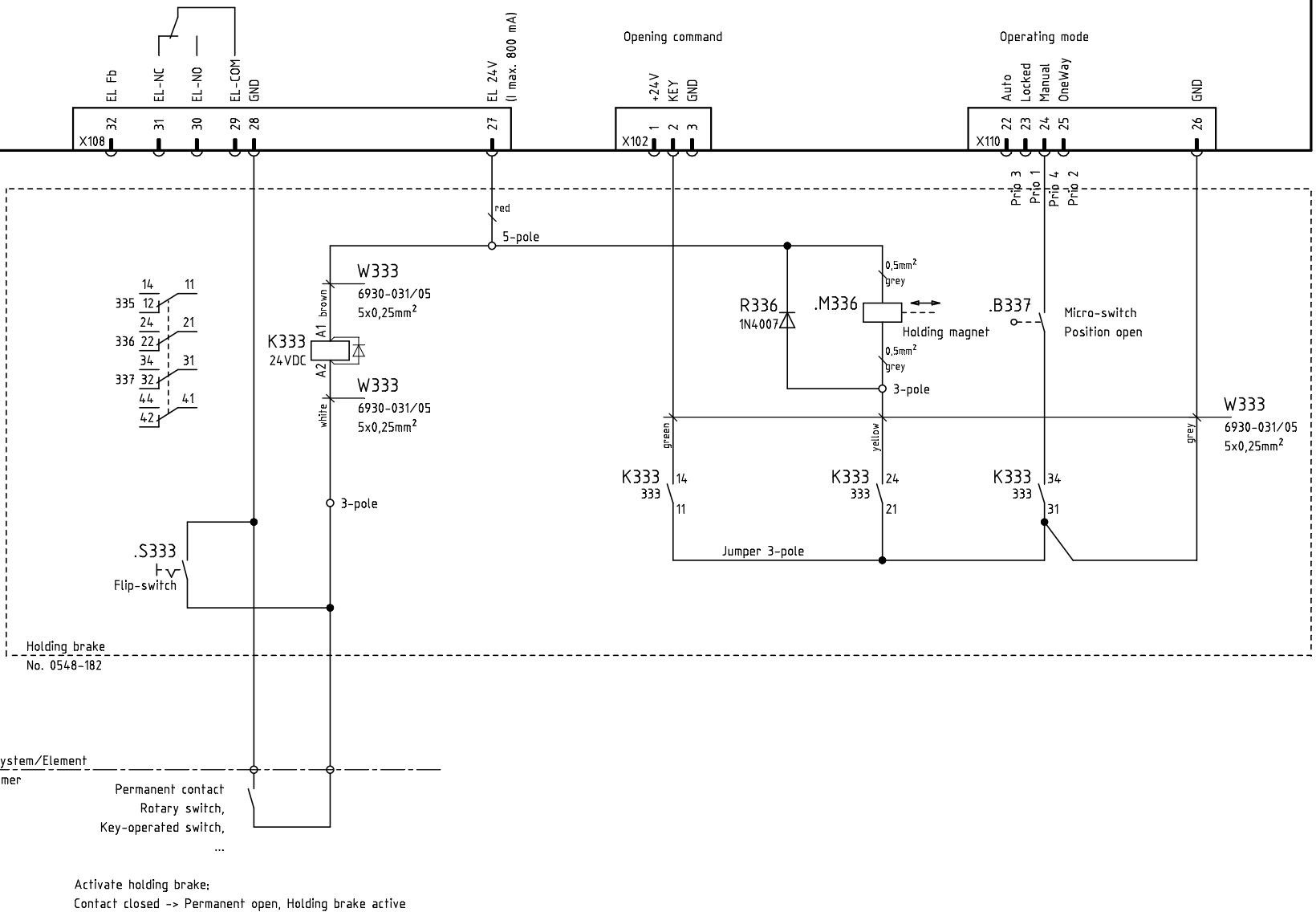


Activate holding brake not possible !

| | | | | | | | | | | |
|--------------|------------|------|----------------------------|------------------|-------------------------------|--|---|---------------|-----------------|----|
| | | | Designed by 03.12.2021 bdg | Standard diagram | GILGEN DOOR SYSTEMS | Drive mechanism for swing door FD 20 Options Holding brake No. 054-8-182 Overview | Instructions | | Sheet no. 31 | |
| | | | Reviewed by 15.09.2023 bdg | | | | Origin: NORM0141-724.pro Substitution: NORM0141.pro-f13d | E4-0141-713 f | | 32 |
| f Nr. 1564-9 | 15.09.2023 | bdg | Approved by 15.09.2023 ha | | | | | | | |
| Id. Revision | Date | Name | | | | | | | | |

1-winged

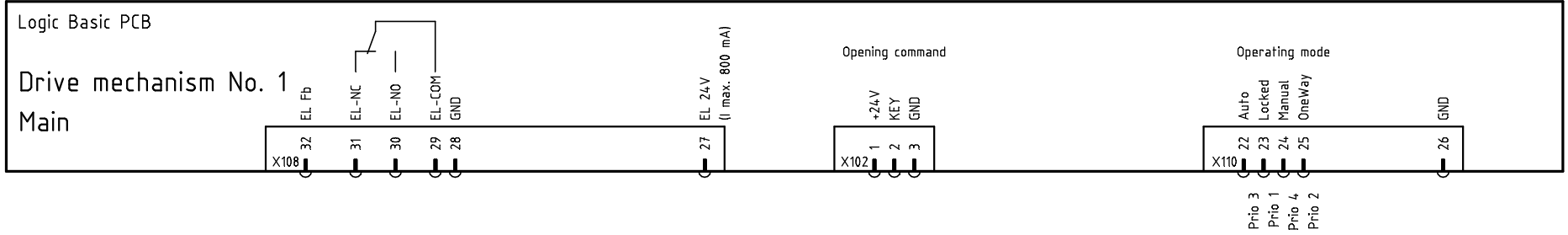
Logic Basic PCB



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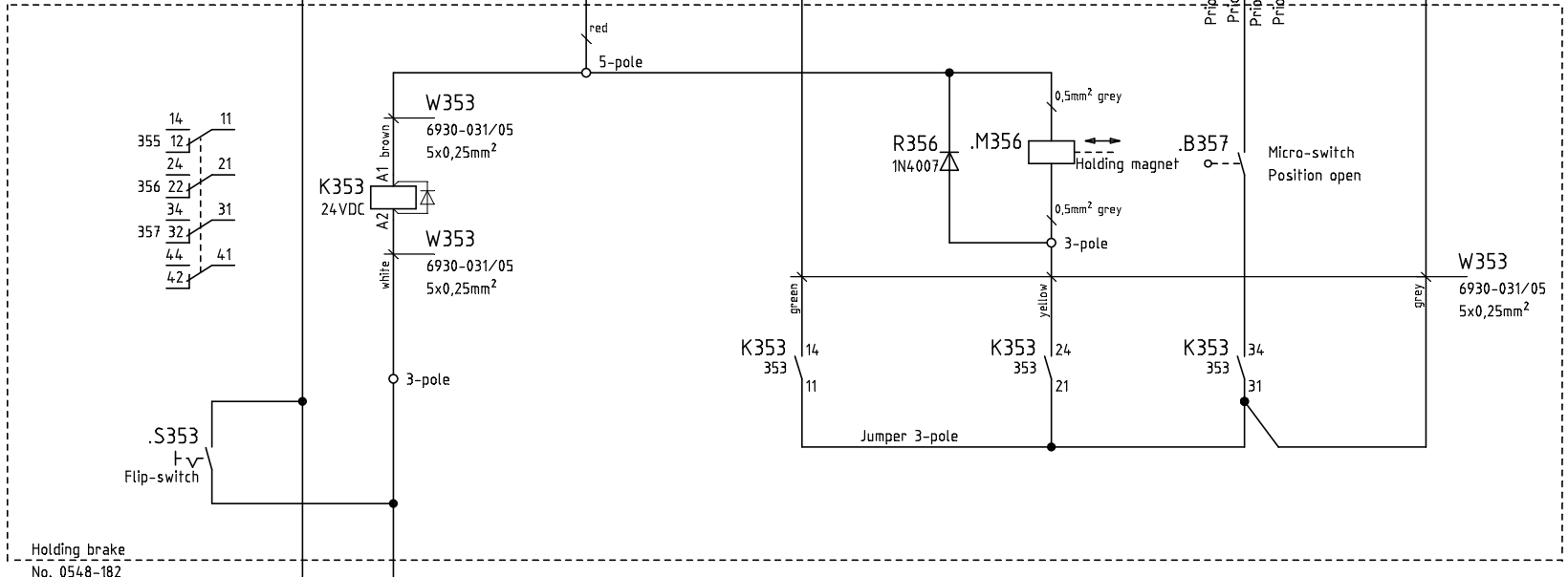
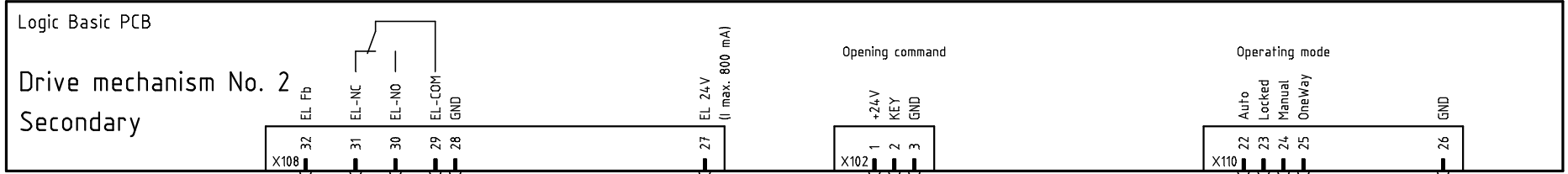
| | | | | | | | | | | | |
|--------------|--|------------|------|------------------|--|--------------------------------------|--|---------------------------------|--|---------------|--|
| Designed by | | 03.12.2021 | bdg | Standard diagram | | Drive mechanism for swing door FD 20 | | 1-winged | | Sheet no. | |
| Reviewed by | | 15.09.2023 | bdg | | | Options | | | | | |
| Approved by | | 15.09.2023 | ha | | | Holding brake No. 0548-182 | | | | | |
| f Nr. 15649 | | 15.09.2023 | bdg | | | 1-winged | | | | | |
| Id. Revision | | Date | Name | | | Original: NORM0141-724.pro | | Substitution: NORM0141.pro-713d | | E4-0141-713 f | |
| | | | | | | | | | | 33 | |

2-winged, WITH mechanical closing sequence regulator



| | | | | | | | | | | | | | |
|--------------|------------|------|-------------|------------|-----|------------------|-------------------------------|---|-------------------------|--|-------------|-----------|----|
| | | | Designed by | 03.12.2021 | bdg | Standard diagram | GILGEN DOOR SYSTEMS | Drive mechanism for swing door FD 20 Options Holding brake No. 0548-182 2-winged, Option 1 | Drive mechanism 1, Main | | 2-winged-V1 | Sheet no. | |
| | | | Reviewed by | 15.09.2023 | bdg | | | | | | | | 35 |
| | | | Approved by | 15.09.2023 | ha | | | | | | | | |
| f Nr. 1564-9 | 15.09.2023 | bdg | | | | | | Origin: NORM0141-724.pro Substitution: NORM0141.pro-713d | E4-0141-713 f | | 34 | | |
| Id. Revision | Date | Name | | | | | | | | | | | |
| 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | | | | | | |

2-winged, WITH mechanical closing sequence regulator



Holding brake
No. 0548-182

Option System/Element
by customer

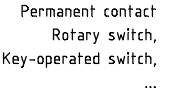
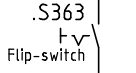
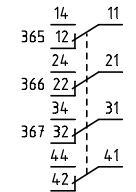
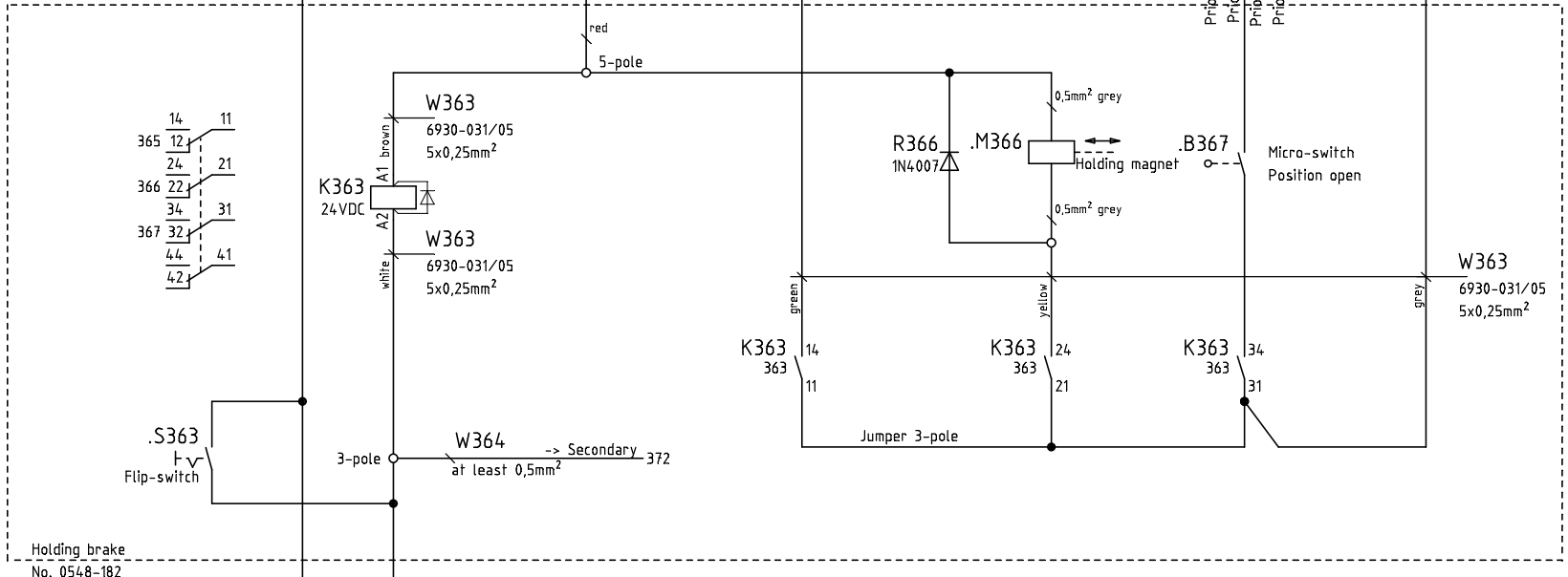
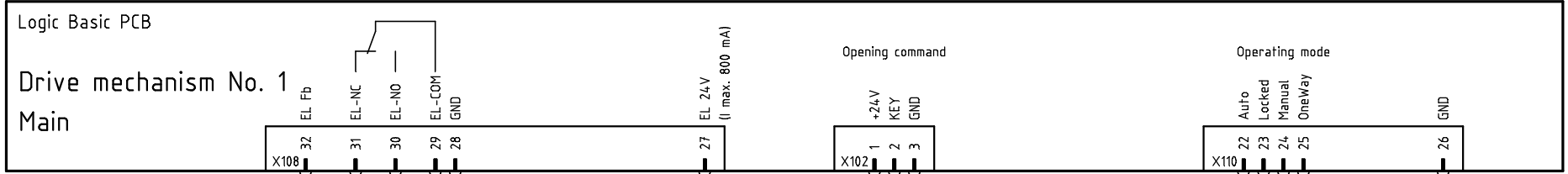
Permanent contact
Rotary switch,
Key-operated switch,
...

Activate holding brake:
Contact closed -> Permanent open, Holding brake active

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| | | | | | | | | | | | | |
|----------------------------|------------|------------------|--|-------------------------------|--------------------------------------|--|------------------------------|---------------------------------|-------------|--|---------------|--|
| Designed by 03.12.2021 bdg | | Standard diagram | | GILGEN DOOR SYSTEMS | Drive mechanism for swing door FD 20 | | Drive mechanism 2, Secondary | | 2-winged-V1 | | Sheet no. | |
| Reviewed by 15.09.2023 bdg | | | | | Options | | | | | | 34 | |
| Approved by 15.09.2023 ha | | | | | Holding brake No. 0548-182 | | 2-winged, Option 1 | | | | E4-0141-713 f | |
| f Nr. 15649 | 15.09.2023 | bdg | | | | | | Origin: NORM0141-724.pro | | | | |
| Id. Revision | Date | Name | | | | | | Substitution: NORM0141.pro-f13d | | | | |

2-winged, WITHOUT mechanical closing sequence regulator

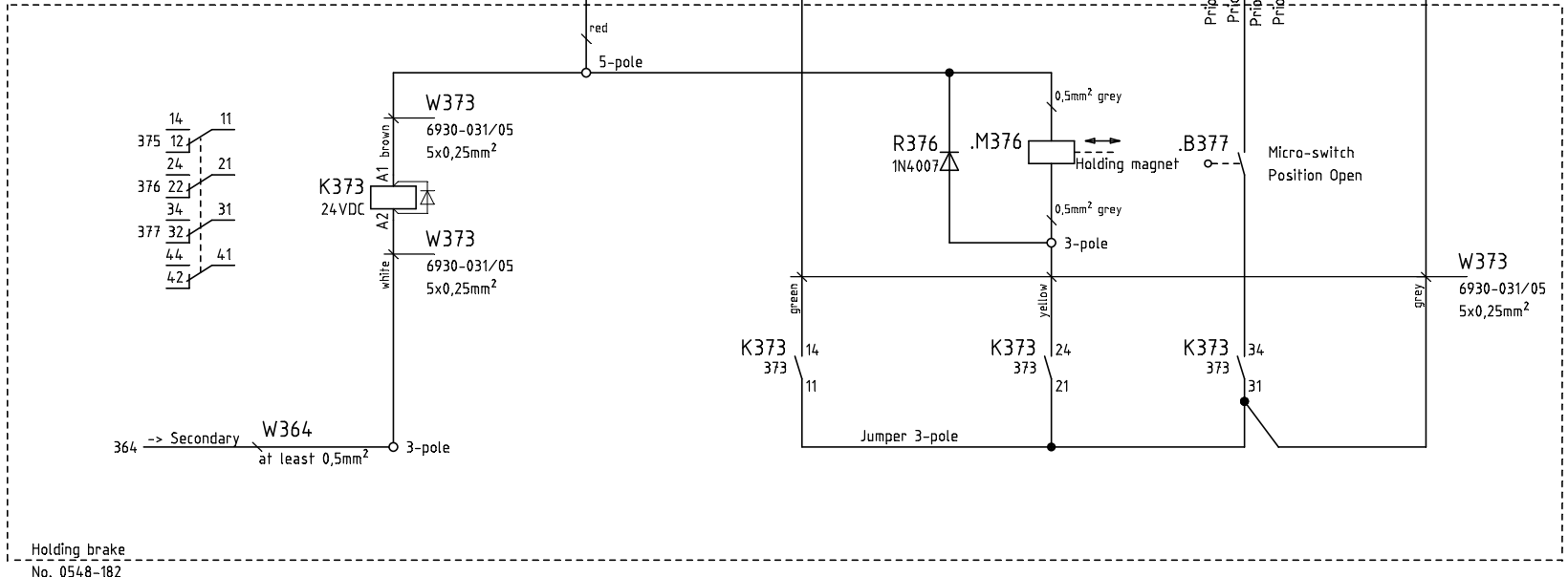
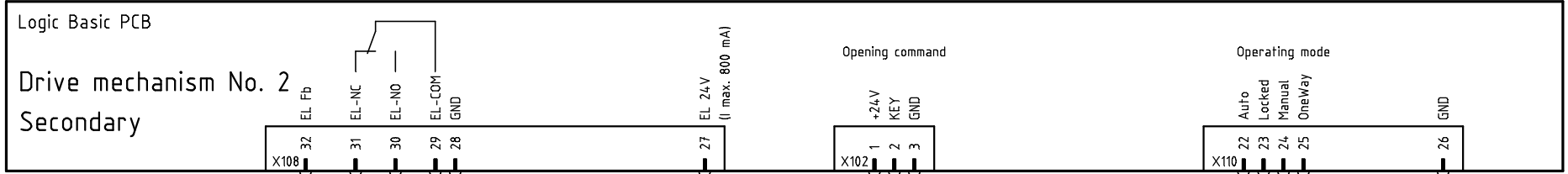


Activate holding brake:
Contact closed -> Permanent open, Holding brake active

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| | | | | | | | | | | | | | |
|----------------------------|------------|------------------|--|-------------------------------|--------------------------------------|--|-------------------------|--|--------------------------|--|---------------------------------|--|------------------|
| Designed by 03.12.2021 bdg | | Standard diagram | | GILGEN DOOR SYSTEMS | Drive mechanism for swing door FD 20 | | Drive mechanism 1, Main | | 2-winged-V2 | | Sheet no. | | |
| Reviewed by 15.09.2023 bdg | | | | | Options | | | | | | 37 | | |
| Approved by 15.09.2023 ha | | | | | Holding brake No. 0548-182 | | 2-winged, Option 2 | | Origin: NORM0141-724.pro | | Substitution: NORM0141.pro-f13d | | E4-0141-713 f 36 |
| f Nr. 15649 | 15.09.2023 | bdg | | | | | | | | | | | |
| Id. Revision | Date | Name | | | | | | | | | | | |

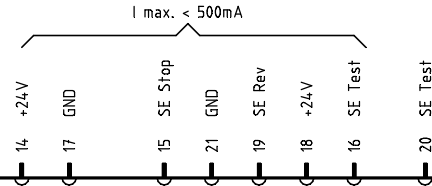
2-winged, WITHOUT mechanical closing sequence regulator



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| | | | | | | | | | | | | | |
|--------------|------------|------------|-----|------------------|--|-------------------------------|--------------------------------------|--|---------------------------------|--|---------------|--|-----------|
| Designed by | | 03.12.2021 | bdg | Standard diagram | | GILGEN DOOR SYSTEMS | Drive mechanism for swing door FD 20 | | Drive mechanism 2, Secondary | | 2-winged-V2 | | Sheet no. |
| Reviewed by | | 15.09.2023 | bdg | | | | Options | | | | | | 436 |
| Approved by | | 15.09.2023 | ha | | | | Holding brake No. 0548-182 | | 2-winged, Option 2 | | | | |
| f Nr. 1564-9 | 15.09.2023 | bdg | | | | | | | Origin: NORM0141-724.pro | | E4-0141-713 f | | 37 |
| Id. Revision | Date | Name | | | | | | | Substitution: NORM0141.pro-f13d | | | | |

Logic Basic PCB, 0350-391/00

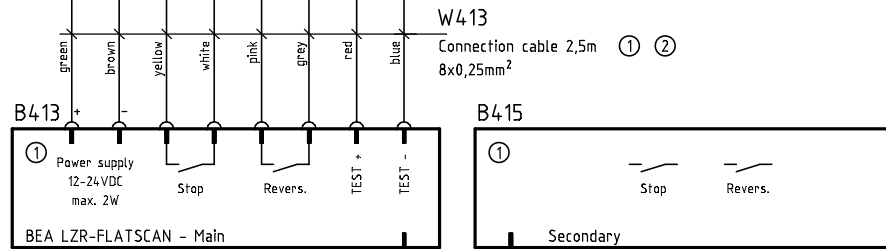


internal
external

⊙ If element is missing, put a jumper.

- ① Option LZR-FLATSCAN black: 6466-600
- Option LZR-FLATSCAN white: 6466-601
- Option LZR-FLATSCAN silber: 6466-602

- ② Option Connection cable 10m: 6466-947



Safety element
inside (Side drive unit)



Safety element
outside (Opposite side)

| | | | | |
|--|--|--|--|--|
| | | | | |
|--|--|--|--|--|

| | | | | | | | |
|-----|-----------|------------|------|-------------|------------|-----|------------------|
| f | Nr. 15649 | 15.09.2023 | bdg | Designed by | 03.12.2021 | bdg | Standard diagram |
| e | Nr. 15338 | 06.01.2022 | bdg | Reviewed by | 15.09.2023 | bdg | |
| ld. | Revision | Date | Name | Approved by | 15.09.2023 | ha | |



Drive mechanism for swing door FD 20
Options
Safety elements
41

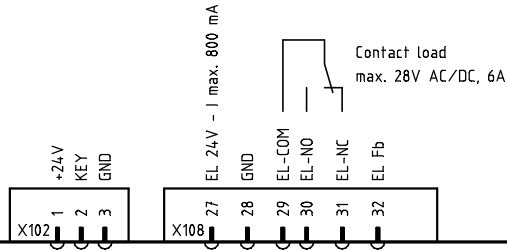
BEA LZR-Flatscan
Origin: NORM0141-724.pro
Substitution: NORM0141.pro-713d

E4-0141-713 f 41

Sheet no.

Logic Basic PCB, 0350-391/00

i Total load +24V: max. 2A



Contact load
max. 28V AC/DC, 6A

Power supply

Command unlock

Optionally:
Feedback signal unlocked

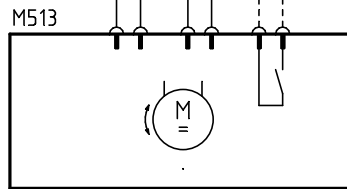


Optionally Terminal 32:
CONFIG - EL-Fb
N.O. / N.C.



see also
instruction FD 20
0548-990/0*

internal
external



Motorised lock

| | | | | | | | |
|-----|-----------|------------|------|-------------|------------|-----|------------------|
| f | Nr. 15649 | 15.09.2023 | bdg | Designed by | 03.12.2021 | bdg | Standard diagram |
| e | Nr. 15338 | 06.01.2022 | bdg | Reviewed by | 15.09.2023 | bdg | |
| ld. | Revision | Date | Name | Approved by | 15.09.2023 | ha | |



Drive mechanism for swing door FD 20
Options
Locking
51

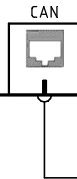
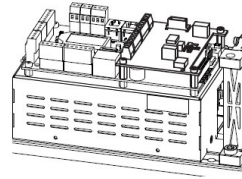
Motorised lock Example

Origin: NORM0141-724.pro
Substitution: NORM0141.pro-713d

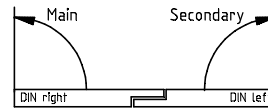
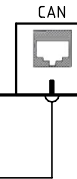
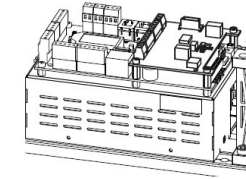
E4-0141-713 f

Sheet no.
51

Control unit
Drive mechanism No. 1
Main



Control unit
Drive mechanism No. 2
Secondary



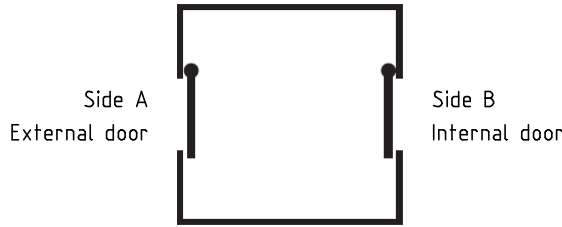
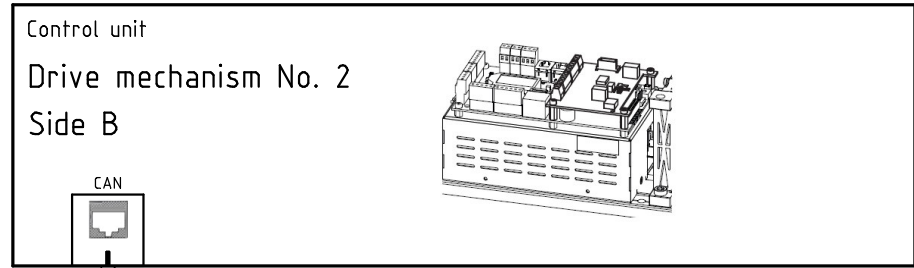
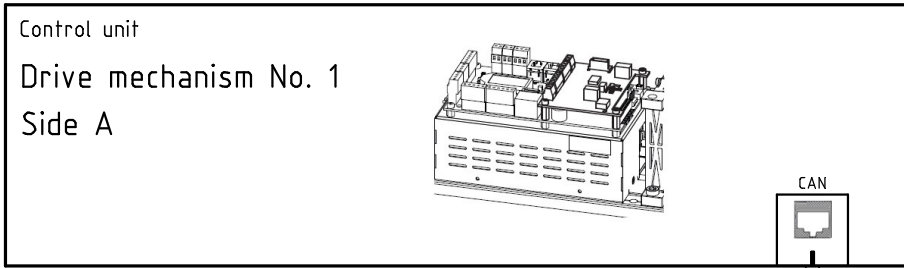
| Settings Main | | | |
|---------------|------------------------|--------------------------------------|--|
| PARAMETER | TOEx TKey TDelay | 0...60 s 0...180 s 0,0...4,0 s | Opening period for 1-wing operation Opening period for 1-wing operation Starting retard (T-Delay) for Main |
| DOUBLE DOOR | DoubleD AcSeq | MastrA 0..110° | see instruction FD 20 |

| Settings Secondary | | | |
|--------------------|------------------------|--------------------------------------|---|
| PARAMETER | TOEx TKey TDelay | 0...60 s 0...180 s 0,0...4,0 s | Opening period for 2-wing operation Opening period for 2-wing operation Starting retard (T-Delay) for Secondary |
| DOUBLE DOOR | DoubleD AoSeq | SecondaryA 0..110° | see instruction FD 20 |

| Function Main | |
|--|--|
| Opening command Key/OEI/OEO | Only Main open |
| Selector switch for operating modes (Program switch) | Operating mode with highest priority is active, either pre-selection Main or pre-selection Secondary |
| Emerg.-closing/-opening/Emergency Stop (Terminals 4-5) | Operates on Main and on Secondary dependent of [CONFIG]- [EMY-IN] |

| Function Secondary | |
|--|--|
| Opening command Key/OEI/OEO | Main and Secondary open |
| Selector switch for operating modes (Program switch) | Operating mode with highest priority is active, either pre-selection Main or pre-selection Secondary |
| Emerg.-closing/-opening/Emergency Stop (Terminals 4-5) | Operates only on Secondary |

| | | | | | | | | | | | | | | |
|--------------|-----|------------|------|-------------|------------|-----|------------------|--|--|--------------------|--------------------|-----------------|---------------|----|
| f Nr. 15649 | | 15.09.2023 | bdg | Designed by | 03.12.2021 | bdg | Standard diagram | | Drive mechanism for swing door FD 20 Variants Double door Closing sequence Main - Secondary | Settings, Function | | Sheet no. 61 | | |
| e Nr. 15338 | | 06.01.2022 | bdg | Reviewed by | 15.09.2023 | bdg | | | | Origin: | NORM014-1-724.pro | | E4-0141-713 f | 61 |
| Id. Revision | | Date | Name | Approved by | 15.09.2023 | ha | | | | Substitution: | NORM014.1.pro-713d | | | |
| 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | | | | | | | |



| Function | | | |
|----------------|----------------|--------------------|--------------------|
| A: Door status | B: Door status | A: Key / OE0 / OEI | B: Key / OE0 / OEI |
| closed | closed | active | active |
| open | closed | active | inactive |
| closed | open | inactive | active |

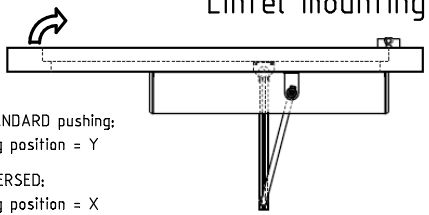
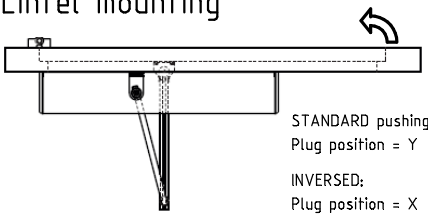
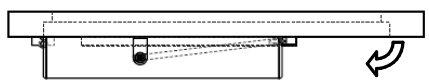
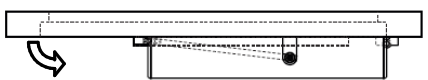
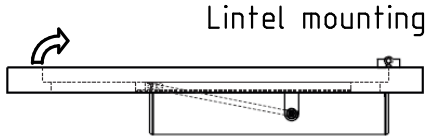
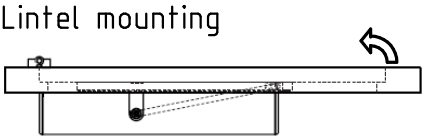

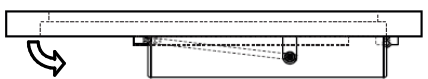
| Settings Side A | | | |
|-----------------|--------------------------------------|-------------------------------------|--|
| DOUBLE DOOR | InterL ILAuto ILExit ILNigt | SideA Active Active Active | Interlock-system - External door active on Operating mode Automatic (Auto) active on Operating mode Exit (One Way) active on Operating mode Night (Locked) ... see instruction FD 20 |

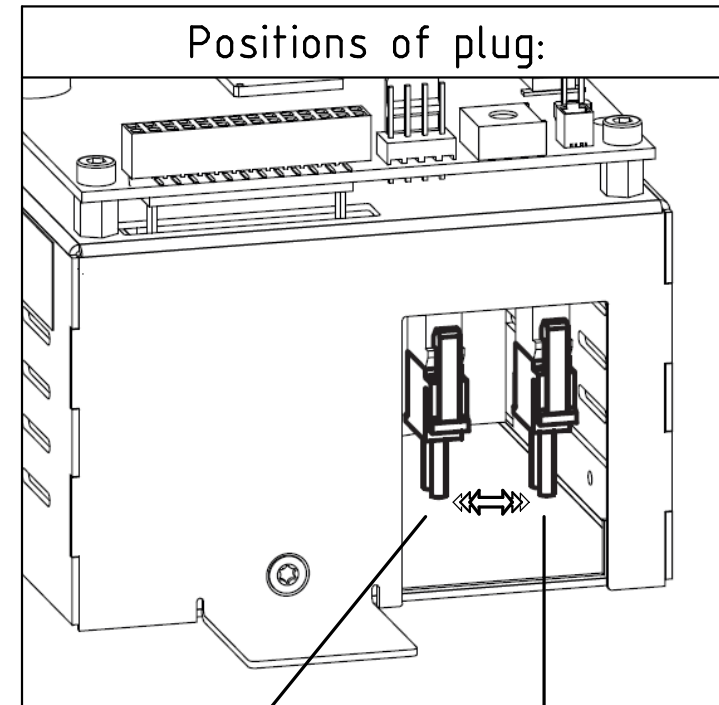
| Settings Side B | | | |
|-----------------|--------------------------------------|-------------------------------------|--|
| DOUBLE DOOR | InterL ILAuto ILExit ILNigt | SideB Active Active Active | Interlock-system - Internal door active on Operating mode Automatic (Auto) active on Operating mode Exit (One Way) active on Operating mode Night (Locked) ... see instruction FD 20 |

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| | | | | | | | | | | | | | |
|-----|-----------|----------------------------|------|------------------|------------|--|--------------------------------------|------------------|--------------------|---------------------------------|-----------|---------------|--|
| | | Designed by 03.12.2021 bdg | | Standard diagram | | | Drive mechanism for swing door FD 20 | | Settings, Function | | Sheet no. | | |
| f | Nr. 15649 | 15.09.2023 | bdg | Reviewed by | 15.09.2023 | | bdg | Variants | | | | 62 | |
| b | Nr. 15338 | 06.01.2022 | bdg | Approved by | 15.09.2023 | | ha | Interlock-system | | Origin: NORM0141-724.pro | | 62 | |
| Id. | Revision | Date | Name | | | | | Side A - Side B | | Substitution: NORM0141.pro-713d | | E4-0141-713 f | |

Position of motor plug in function of the assembly version

| DIN left | DIN right |
|---|---|
| <p>Lintel mounting</p>  <p>STANDARD pushing: Plug position = Y</p> <p>INVERSED: Plug position = X</p> | <p>Lintel mounting</p>  <p>STANDARD pushing: Plug position = Y</p> <p>INVERSED: Plug position = X</p> |
| <p>Lintel mounting</p>  <p>STANDARD pulling: Plug position = X</p> <p>INVERSED: Plug position = Y</p> | <p>Lintel mounting</p>  <p>STANDARD pulling: Plug position = X</p> <p>INVERSED: Plug position = Y</p> |
| <p>Lintel mounting</p>  <p>STANDARD pushing: Plug position = Y</p> <p>INVERSED : Plug position = X</p> | <p>Lintel mounting</p>  <p>STANDARD pushing: Plug position = Y</p> <p>INVERSED: Plug position = X</p> |
| <p>Wing mounting</p>  <p>STANDARD pushing: Plug position = Y</p> <p>INVERSED: Plug position = X</p> | <p>Wing mounting</p>  <p>STANDARD pushing: Plug position = Y</p> <p>INVERSED: Plug position = X</p> |



X
STANDARD pulling,
INVERSED pushing

Y
STANDARD pushing,
INVERSED pulling

| | | | | | |
|-----|-----|-------------|------------|------|------------------|
| | | Designed by | 03.12.2021 | bdg | Standard diagram |
| | | Reviewed by | 15.09.2023 | bdg | |
| | | Approved by | 15.09.2023 | ha | |
| Id. | Nr. | Revision | Date | Name | |