Translation of the original assembly and operating instructions

novoferm

Intelligent Door Solutions

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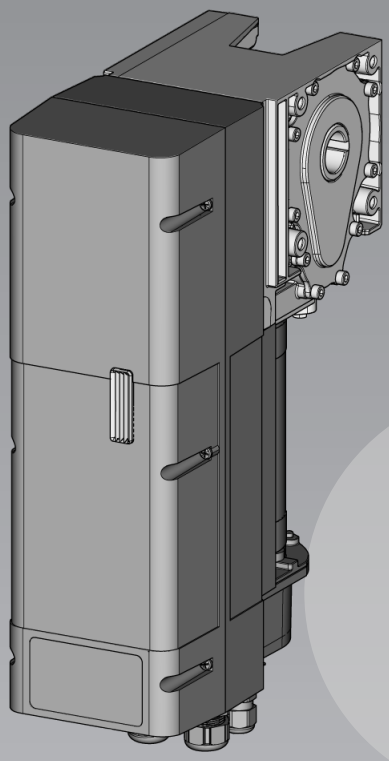
EN



DCC-80

R1.05

01.2026 Door drive

Contents

EN Copyright and disclaimer

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1 General information

1.1 Contents and target group

These assembly and operating instructions describe the door drive DCC-80 for the versions NHK, SK, ER, SK-WE, NHK-WE (hereinafter referred to as "DCC"). The instructions are intended for technicians that install and maintain the product, and for the operator using the product.

1.2 Illustrations

The illustrations in these assembly and operating instructions help you to better understand the descriptions and procedures. The illustrations only serve as examples and may deviate slightly from your product's actual appearance.

1.3 Explanation of symbols

1.3.1 Pictograms and signal words

Important information in these assembly and operating instructions is marked with the following pictograms.

⚠ DANGER

DANGER

... indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

WARNING

... indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

CAUTION

... indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

1.3.2 Hazard symbols

Warning of electrical voltage!
This symbol indicates dangers to the life and health of persons due to electrical voltage when handling the system.

Crush hazard to the whole body!
This sign indicates hazardous situations with a crush hazard to the whole body.

Crush hazard to limbs
This sign indicates hazardous situations with a limb crush hazard.

1.3.3 Further notice and information symbols

NOTICE

NOTICE

... indicates important information (e.g. material damage), but does not indicate dangers.

Info!
Information marked with this symbol helps you to carry out your tasks quickly and safely.

a Refers to a graphic of the corresponding connection variant in the **Figures** chapter.

15/h This symbol indicates that the door drive door drive is designed for a cycle sequence of 15 cycles per hour.

2 Safety

Observe the following safety information:

⚠ WARNING

Risk of injury when disregarding the safety information and instructions!

Failure to observe the safety information and instructions can cause electric shock, fire and / or severe injuries.

- Following the safety information and directives given in these assembly and operating instructions helps to avoid personal injuries and material damage while working on and with the product.
- Before starting work on the product, read the assembly and operating instructions, especially the **Safety** chapter and the respective safety information, completely and carefully. It is important for you to have understood what you have read.

- Keep all safety information and instructions for future reference.
- Only use genuine spare parts of the manufacturer. Wrong or faulty spare parts can cause damage, malfunctions or even a total failure of the product.
- Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.
- Failure to comply with the safety information and directives given in these instructions or with the accident prevention regulations and general safety regulations relevant to the field of application shall exempt the manufacturer or its representative from all liability and shall render any damage claims null and void.

2.1 Intended use

The DCC is designed exclusively for opening and closing spring-balanced or weight-balanced industrial sectional doors. It may not be used for garage doors without spring-balancing or weight-balancing mechanisms. Never make any modifications or changes to the product that have not been expressly approved by the manufacturer.

2.2 Foreseeable misuse

Any use other than described in chapter Intended use is regarded as reasonably foreseeable misuse. This includes but is not limited to:

- Improper maintenance activities or improper servicing, especially by non-qualified persons.
- Adding or installing components and parts which do not comply with the intended use to or in the door or the door drive.
- Modifications and changes to the product without the express permission of the manufacturer.
- Using the product for garage doors without spring-balancing or weight-balancing mechanisms.
- Using the door with other door constructions apart from industrial sectional doors, e.g. on overhead or sliding doors.

Any damage or injury as a result of reasonably foreseeable misuse or of not following the assembly and operating instructions will render the manufacturer's liability null and void.

2.3 Personnel qualifications

The following persons are qualified to perform assembly work and to work on the mechanical system (troubleshooting & repair):

- Skilled workers with relevant training, e.g. industrial mechanic

A skilled worker is a person who, due to his/her professional training, his knowledge and experience as well as due to his/her knowledge of the relevant regulations, is able to judge the work assigned to him/her as well as to identify possible hazards.

The following persons are qualified to perform electrical installation work and to work on the electrical system (troubleshooting, repair & deinstallation):

- Qualified electricians

Skilled electricians must be able to read and understand electric circuit diagrams, to put electrical systems into service and to maintain them, to wire control cabinets, to install the control software, to ensure the functionality of electrical components and to identify possible hazards resulting from handling electrical and electronic systems.

The following persons are authorised to handle the product:

- Operating personnel

2.4 Potential hazards associated with the product

The product has undergone a risk assessment. The product's design and construction, which are based on this risk assessment, correspond to the current state-of-the-art. The product is safe to operate when used as intended. Nevertheless, residual risks remain!

⚠ DANGER

Hazardous voltage!

Fatal electric shock when touching live parts. Observe the following safety rules when working on the electrical system:

- Disconnect from the mains.
- Secure against inadvertent switch-on.
- Verify de-energised state.
- Before opening the control wait for 1 minute to release residual voltage in the capacitors.
- Work on the electrical system may only be performed by skilled electricians or instructed persons working under the direction and supervision of a skilled electrician in accordance with the electrotechnical rules and directives.

⚠ WARNING

Crush hazard and risk of being struck by the closing door!

Persons can be struck when the door is closed or collide with the door.

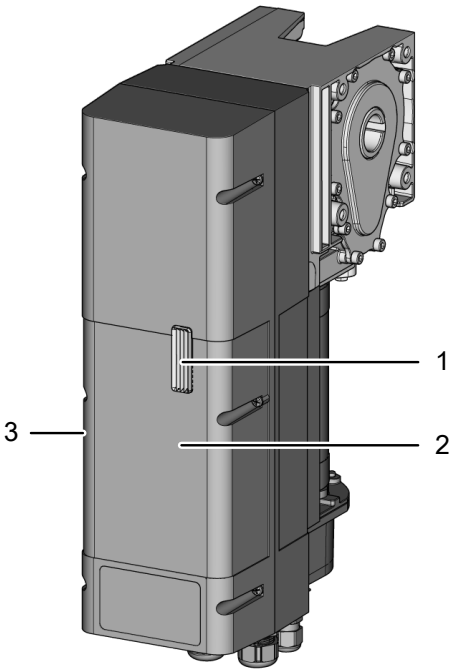
- The control device must be mounted within sight of the door and at a safe distance from moving parts.
- If the control device cannot be locked against unauthorised operation and if it is not a key switch, place the control device at a height of 1.5 m and make sure it is inaccessible to the public.

3 Product description

The DCC is optionally equipped with a control device (hereafter referred to as "IPD-E") for operation and programming. The current status of the door as well as the navigation of the programming is indicated via a LED light (red/blue). The IPD-E can be used for basic programming.

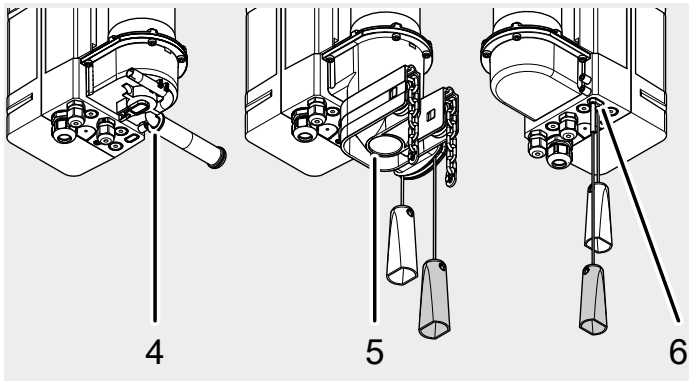
Alternatively, a control device with a two-digit 7-segment display (hereinafter referred to as "IPD-S") can be connected to the DCC. The IPD-S indicates the current status of the door and, during the programming process, the menu and setting value. With an IPD-S connected to the DCC, you can access an extended function menu in the programming mode. Furthermore, the IPD-S is equipped with additional inputs and outputs.

For information on operation with an IPD-S, see the complete version of the assembly and operating instructions.



1 LED status/programming
2 Housing cover
3 Rating plate on the side of the device

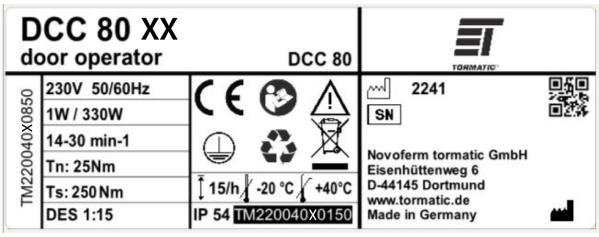
Please note that the model variants differ in their emergency operation mechanisms:



4 DCC-80 NHK / DCC-80 NHK WE
with emergency crank handle
5 DCC-80 SK / DCC-80 SK-WE
Emergency operation via quick chain
6 DCC-80 ER
mechanical emergency release of the drive

3.1 Rating plate

The rating plate is located at the side on the control housing. Observe the power supply specifications.



3.2 Technical data

General	
Height x width x depth	450 mm x 120 mm x 275 mm
Cable feed-throughs	5 x M16 1 x M20 V cutout
Electrical specifications	
Operating voltage	1~230 V
Operating current	3 A
Protection class:	I
Sensor control voltage	24 V DC
Power during operation / in resting mode	330 W / <1 W
Relay contact load (J12)	230 V AC, 2 A, ohmic 230 V AC, 1 A, inductive
Relay contact load (J31)	24 V AC/DC, 1 A, ohmic
Mechanical specifications	
Output speed	14–30 rpm
Nominal drive torque	25 Nm / 80 Nm[1)]
Max. holding torque	250 Nm
Maximum load	2500 N
Limit switch area / number of revolutions of the door shaft	15
Cycles per hour	15
Safety in accordance with EN 13849-1	J3.4 stop A: cat.2 / PL= c J3.2 CESD: cat.2 / PL= c J10.2/3 Roll-up protection mechanism: cat.2 / PL= c
Emission sound pressure level	LpA ≤ 70 dB (A)
Surroundings	
Protection type	IP 54
Operating temperature	-20 °C +40 °C
Manufacturer	Novoferm tormatic GmbH Eisenhüttenweg 6 D-44145 Dortmund www.tormatic.de

[1)] Specification according to EN 60335-2-103

The warranty is valid for 2 years or 36000 cycles (whichever is reached first).

4 Assembly and installation

Follow the instructions as well as the illustrations in the "Figures" chapter.

4.1 Preparing for installation

- Installation work may only be carried out by qualified technicians.
- Read these installation instructions before you start installing the product.

4.1.1 Scope of delivery

NOTICE

Check the supplied screws and wall plugs to make sure that they are suitable for the structural condition on the installation site.

The scope of delivery is determined by the product configuration. This usually consists of the DCC-80 door drive, a control device and the assembly material.

The assembly material usually contains the following components:

- 1 x mounting bracket incl. 2 fastening sets
- 4 x hexagon bolt M8 x 20
- 4 x spring washers A8 (DIN 127 – 8.4)
- 4 x washers (DIN 9021 – A8.4)
- 1 x key solid shaft
- 1 x key hollow shaft

4.1.2 Required tools

For the assembly of the DCC, the following tools are required:

- Cross-tip screwdriver Phillips, size 2
- SW13 wrench
- slotted screwdriver, 2 mm

4.2 Opening and closing the housing cover

The housing cover has to be opened and closed in order to carry out the assembly. To do so, please proceed as follows.

Fig. a Loosen the 6 screws on the housing cover and carefully pull the cover straight off towards the front. The housing cover is secured against falling off with a cord and can be left hanging from it. Adjust the housing cover so that it hangs down from the housing.

Fig. b Carefully put the housing cover on. Ensure that you insert the light guide, which is fixed inside the housing cover, through the guide in the non-contact safety device of the electronic components. On the sides, there are centring areas inside the cover which slide into the guides provided for this purpose when the cover is placed on the housing. This provides for the cover to close properly and ensures the sealing function. In the end, screw the housing cover to the housing using the 6 screws.

4.3 Mounting the door drive

NOTICE

Before installing the drive, check whether the mechanical condition of the gate is running smoothly and whether the door is counterbalanced.

The DCC can be mounted with a mounting bracket or, alternatively, using the Universal torque support. During the assembly, observe the two applicable installation positions (fig. a installation position 1 (vertical) and installation position 2 (horizontal, control unit upside down)).

Deviating installation positions are not permitted.

4.3.1 Assembly with mounting bracket

Fig. b Screw the mounting bracket on the gearbox side facing the door into the holes provided by using two M8 x 20 screws, spring washers and washers. Observe the tightening torque of 15 Nm.

Fig. c Grease the door shaft's areas that are in contact with the rails. Remove one of the two screws on the key and insert the key into the groove of the door shaft. The side without the screw must face the end of the door shaft.

Fig. d Push the drive onto the door shaft in the desired installation position and align the gear shaft with the groove on the door shaft. Push the drive onto the door shaft until the mounting bracket is supported on the door bracket.

Fig. e Align the key and fix the position by screwing the second screw back in. Screw the mounting bracket to the door bracket. To do so, use the screw set supplied with the mounting bracket.

4.3.2 Assembly with Universal mounting bracket

A suitable and load-bearing substrate (e.g. a wall) is required for the assembly with the Universal mounting bracket.

Fig. f Align the Universal mounting bracket with the door shaft and fasten the door shaft to the wall. Use the supplied wall plugs and screws to fix the unit to the wall.

Fig. g Push the door drive onto the door shaft as explained for installation with mounting bracket (fig. c to e). Connect the door drive to the torque support with 4 screws (M8 x 20) and washers.

4.4 Electrical installation

DANGER

Hazardous voltage!

Fatal electric shock when touching live parts.

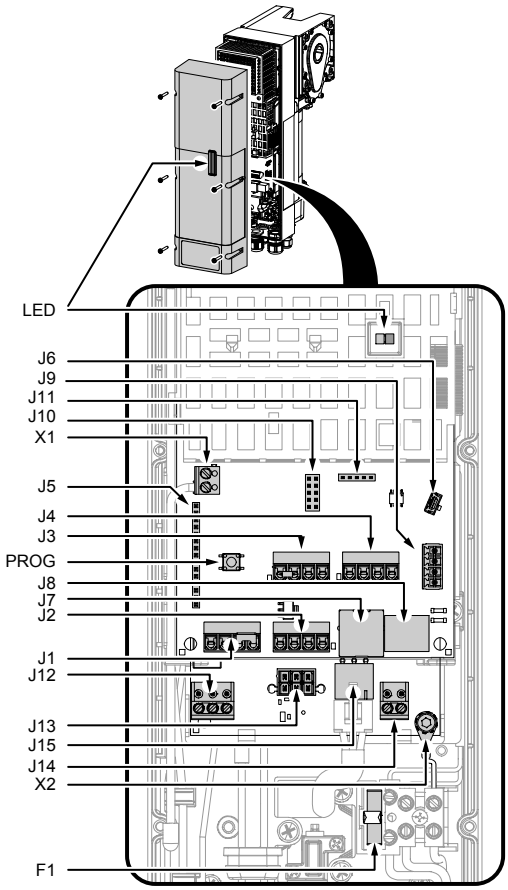
Always pull out the mains plug before working on the drive!

NOTICE

Malfunction due to defective insulation of the cables

- When connecting the cables, ensure that the cable sheath is stripped close to the connection terminal so that the cables remains insulated from each other.
- Avoid stowing cables in the connection compartment if they are too long. Shorten the cables if they are too long.

4.4.1 Connection diagram overview



LED	LED red/blue for operation/programming
PROG	PROG button, activates programming mode
J1	Connection of external control device / control device IPD-E/IPD-E KS
J2	Input for photoelectric sensor
J3	Input for door connection box
J4	Input for roll-up protection mechanism
J5	Slot for radio module (ISM 433/868)
J6	Slot for service/option module
J7	TM-BUS connection (control device IPD-S / IPD-S KS, EDL100)
J8	Battery serial interface
J9	BTD-K slot (Bluetooth dongle)
J10	Slot for option module (prioritised input, interlock, output status relay 2)
J11	Programming interface
J12	Output status relay 1 (potential-free contact)
J13	Connection of supply voltage via battery (optional accessory "DCC battery adapter")
J14	Output. 24 V DC/700 mA
J15	Motor connection
X1	Antenna
X2	Connection of functional earth ⏚
F1	Fuse 5 x 20 3.15AT

4.4.2 Electrical connection of further components

1. Using additional cable glands

If further cable feed-throughs are required for the installation, you can open them as follows:

Fig. a To open a cable gland for an M16 cable gland, place a suitable slotted screwdriver in the circumferential joint (predetermined breaking point) at various points. Break out the material by gently hammering on the screwdriver. Loosen the cable gland attachment and place it on the cable to be fed through. Push the cable of the required length through the cable gland and secure the cable by tightening the attachment on the cable gland.

Fig. b Push the supplied cable glands through the corresponding openings and secure them with the corresponding nuts.

Fig. c If the M20 push-in fitting is to be used, carefully break out the are marked in the illustration (e.g. by using pliers).

Fig. d Put on the push-in gland and guide the cable through it.

2. Mains connection

NOTICE

Checking the mains connection

- Ensure that on-site fusing of 10 A is available.
- Check whether the mains connection on site complies with the pre-wired mains connection of the door drive (10 A CARA plug).
- Only use all-current sensitive residual current circuit breakers of type B for on-site fusing.

The DCC is wired in a ready-to-connect fashion using a cable and mains plug (10 A CARA plug) as shown in the illustration. In doing this, ensure that the supply disconnection is easily accessible after the installation.

3. Input J1 – External control device

⚠ WARNING

Crush hazard and risk of being struck by the closing door!

Please note that when using a control device for dead man/emergency operation, the movements of the door must be monitored. Otherwise, people can be crushed or hit by the garage door.

- The control device must be mounted within sight of the door and at a safe distance from moving parts.
- If the control device cannot be locked against unauthorised operation and if it is not a key switch, place the control device at a height of 1.5 m and make sure it is inaccessible to the public.

Connect external control devices and pulse generators to connection terminal J1. Connect a bridge between connection terminal J1.3/4 if no STOP button is used. For fig. a / b, set menu item 51 to the value 1. For fig. c / d, set menu item 51 to the value 2.

Fig. a Connection for control device with OPEN, STOP and CLOSE.

Fig. b Connection of pulse generator OPEN, CLOSE.

Fig. c Connection of pulse generator to J1.2 with pulse sequence OPEN-STOP-CLOSE-STOP... , or to J1.1 with pulse sequence HALF-STOP-CLOSE-STOP...

Fig. d Connection of ceiling pull switch to J1.2 with pulse sequence OPEN-STOP-CLOSE-STOP... , or to J1.1 with pulse sequence HALF-STOP-CLOSE-STOP...

4. Input J2 – Photoelectric sensor

NOTICE

Malfunction due to incorrect photoelectric sensor type

- For failure-free operation, only use photoelectric sensors with "light switching" mode.

Connect a photoelectric sensor to input J2 according to the following variants:

Fig. a Connection of 2-wire photoelectric sensor LS2

Fig. b Connection of 4-wire photoelectric sensor with testing

Fig. c Connection of reflective photoelectric sensors

Then select the corresponding photoelectric sensor under menu item "Selection of photoelectric sensor J2".

5. Input J3 for door connection box

⚠ WARNING

Crush hazard and risk of being struck by the closing door

A pressure wave switch as closing edge safety device may only be actuated after having been tested.

- For this purpose, select the value 4 in the menu item.

The door connection box allows for the connection of a safety edge, a wicket door contact and slack rope switches. The wicket door contact and the slack rope switches are electrically connected in series and are monitored by the door drive. Connect a door connection box to connection terminal J3 as shown in the illustration.

If a wicket door is available, you have to connect a wicket door contact (model ENS-68xx) to one of the two door connection boxes. To do so, remove the 2 kOhm resistor on the respective door connection box and replace it with a wicket door contact (model ENS-68xx). Model ENS-68xx is tested in compliance with PL C as per EN 13849-1 and is monitored by the door drive.

Please note that switches with forced actuation complying with the specifications of EN 60947-5-1, Annex K, are to be used as slack rope switches. The supply line of the door connection box must to be laid at the door leaf, well protected against damage.

6. Input J4 – Roll-up protection mechanism

The input J4 offers the possibility of operating two roll-up protection mechanisms with OSE signal output (e.g. Fraba Vitector: Raytector, Witt TWIN-PRO). Connect a closing edge safety device as shown in the illustration and select the corresponding configuration in the menu item.

7. Slot J5 – Receiver module (optional accessory)

For the use of a hand-held transmitter, attach the receiver module (ISM 433/868) to into slot J5 and connect the antenna to connection terminal X1 as shown in the illustration. In order to program the hand-held transmitters, follow the instructions provided in "Programming the hand-held transmitter" in the Programming with IPD-E and Programming with IPD-S chapter.

8. Slot J9 – BTD K (optional accessory)

The BTD-K (Bluetooth dongle) allows for configuration of the DCC using an APP via Bluetooth.

Plug the BTD-K (Bluetooth dongle) into slot J9 as shown in the illustration. The BTD-K is automatically detected.

9. Slot J10 – Option module (optional accessory)

Fig. a Plug the option module into slot J10.

Fig. b The option module additionally offers the following connection options:

- Connection terminal J30 – prioritised input, moves the door to a previously defined door position when activated. Further information is described in the Operation chapter.
- Terminal J32 – output status relay 2 and terminal J31 – input, enable coupling with another control unit (e.g. dock leveller control) to allow for mutual interlocking.

10. Connection J12 – Status relay

The status relay J12 allows to operate a 24V red-green traffic light as shown in the illustration.

11. Slot J13 – DCC battery adapter (optional accessory)

⚠ DANGER

Hazardous voltage!

Fatal electric shock when touching live parts.

- Before connecting the battery module, disconnect the mains plug and wait one minute to release residual voltage in the capacitors.
- Work on the electrical system may only be performed by skilled electricians or instructed persons working under the direction and supervision of a skilled electrician in accordance with the electrotechnical rules and directives.

NOTICE

Malfunction due to incorrect power source

The external 24 V voltage source must supply a power of at least 75 W and operate in the voltage range of 23 V – 28 V.

NOTICE

Malfunction due to insufficiently dimensioned cables

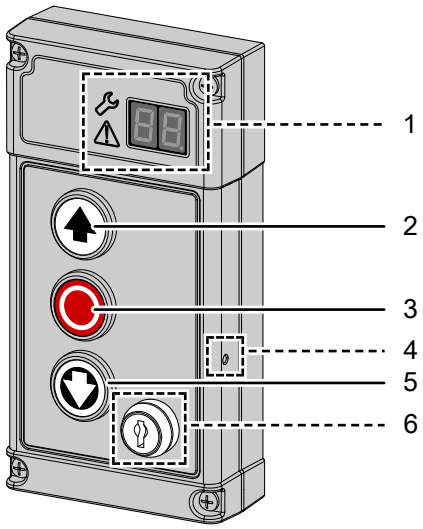
- Use the supplied cable or an equivalent cable (H03VV 3G 0.75 mm²) to connect the 230 V power supply.
- To connect the 24 V power source, use a cable of type H01VV 2x1.5 mm² for a length of up to 3 m and a cable of type H01VV 2x2.5 mm² for a length of more than 3 m, with a maximum cable length of 15 m.
- Cable installations outside the device must be protected against mechanical damage (e.g. by using a cable channel).

Fig. a and b Loosen the screw on the DCC shown in the picture. Position the "DCC battery adapter" in the DCC as shown. Then secure the adapter with the previously removed screw.

Fig. c Connect the "DCC battery adapter" to the DCC, the external 230 V voltage source and the external 24 V voltage source as shown.

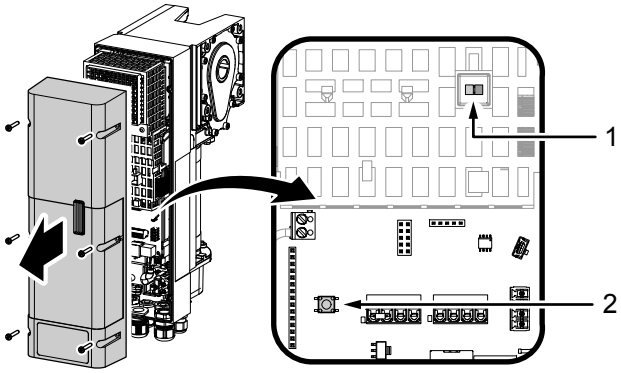
5 Programming with IPD-E

5.1 Basic programming procedure



1 7-segment display (IPD-S only)
Status/programming
2 OPEN button
3 STOP button
4 PROG button (IPD-S only)
5 CLOSE button
6 Key switch (variants IPD-E KS / IPD-S KS only)

The DCC door drive without IPD-S is programmed via the PROG button of the door drive. Open the housing cover by loosening the six screws on the housing cover (see description in the **Assembly and installation** chapter). The housing cover is secured against falling off with a cord and can be left hanging from it.



The DCC offers an LED-controlled basic settings menu. Proceed as follows to carry out programming settings:

1. To activate the configuration menu, press and hold the PROG button until the LED on the DCC changes from blue to flashing red.

⇨ The configuration menu is activated and the red LED indicates which menu item is currently active by flashing periodically.

2. Navigate with the ▲ (OPEN) and ▼ (CLOSE) buttons of the control device to select the desired menu item 1–10.
3. Confirm the selected menu item by briefly pressing the ● button (STOP).

⇨ The number of times the blue LED is periodically flashing indicates the currently selected parameter.

4. Navigate to the desired parameter using the ▲ and ▼ button.
5. Confirm the selection with the ● button to accept the setting parameter and return to the configuration menu.
6. To exit the configuration menu, repeatedly press the ▲ or ▼ button until the red LED flashes quickly.

7. Confirm the selection with the button ◉ to exit the programming.

After 120 seconds of inactivity, the configuration menu is exited.

5.2 Menu 1 Setting the door end positions

⚠ WARNING

Crush hazard and risk of being struck by the closing door

Ensure that no closing edge or photoelectric sensor monitoring is active whilst the end positions are set.

The door end positions OPEN and CLOSE must be set directly in succession.

1. Briefly actuate the ◉ button. The red LED flashes continuously.
2. In order to define the door end position OPEN, press and hold the ▲ button until the door is completely open.

⇨ If the door moves in the wrong direction, a reversal of the direction must be implemented. Press and hold the button combination ▲, ◉ and ▼ for 5 seconds until the red LED goes out briefly and then repeat step 2.

3. Confirm the set position by pressing the ◉ button for a long time. After confirming the door end position OPEN, the red LED flashes slowly.
4. Move to the door end position OPEN and confirm the desired position by pressing the ◉ button. After confirming the door end position CLOSE, the configuration menu is exited automatically.

⇨ The red LED is illuminated. The drive is in current learning mode.

5. Carry out a complete, failure-free opening and closing cycle.

5.3 Menu 2 Radio settings

Programming radio hand-held transmitters (menu item 2)

You are provided with the possibility of programming 40 "KeeLoq" hand-held transmitter channels.

1. Briefly actuate the ◉ button. The LED flashes blue. The programming mode is activated for 30 seconds.
2. Actuate the button of the hand-held transmitter that is to be programmed.

⇨ The blue LED flashes fast to indicate that the hand-held transmitter has been successfully taught.

3. To program any additional hand-held transmitters, repeat the procedure from menu item 1 or exit the configuration by briefly pressing the ▼ button until the red LED flashes quickly.
4. Press the ◉ button.

Deleting radio hand-held transmitters (menu item 2)

To delete all programmed hand-held transmitters, please proceed as follows:

1. Press and hold the ◉ button for 5 seconds.

⇨ The successful deletion of the hand-held transmitter is confirmed by the blue LED flashing quickly.

5.4 Menu 3 Programming the radio hand-held transmitter to 1/2 door opening

1. Briefly actuate the ◉ button. The LED now flashes blue. The programming mode is activated for 30 seconds.
2. Actuate the button of the hand-held transmitter that is to be programmed.

⇨ The blue LED flashes fast to indicate that the hand-held transmitter has been successfully taught.

3. To program any additional hand-held transmitters, repeat the procedure from menu item 1 or exit the configuration by briefly pressing the ▼ button until the red LED flashes quickly.
4. Press the ◉ button.

5.5 Menu 4 Force setting opening, Menu 5 Closing

1. Briefly press the ◉ button in menu item 4 or 5. The LED flashes blue. The number of times the LED flashes indicates the currently selected parameter.
2. Select the desired parameter with the ▲ or ▼ buttons.
3. Confirm the selected parameter by briefly pressing the ◉ button.

⇨ You then return to the selection menu via menu item 4 (LED flashes red 4 times).

4. Navigate to menu item 5. For fine adjustment of the closing force monitoring, please proceed as described for menu item 4.

5.6 Menu 6 Selection of closing edge safety device

1. Briefly actuate the ◉ button. The LED flashes blue. The number of times the LED flashes indicates the currently selected parameter.
2. Select the desired parameter with the ▲ or ▼ buttons.
3. Confirm the selected parameter by briefly pressing the ◉ button.

⇨ You then return to the selection menu via menu item 6 (LED flashes red 6 times).

Automatic selection of closing edge safety device (menu item 6)

1. Press and hold the ◉ button for 5 seconds.
2. The automatic identification is started. The LED flashes blue. The number of times the LED flashes indicates the determined parameter.
3. Confirm the selected parameter by briefly pressing the ◉ button.

⇨ You then return to the selection menu via menu item 6 (LED flashes red 6 times).

5.7 Menu 7 Selection of the photoelectric sensor

You can select and activate a connected photoelectric sensor in this menu item. An auto detection can be started as with menu item 6 by pressing the ◉ button for a long time (press for 5 seconds).

If a photoelectric sensor "mounted in frame" option is selected, the control proceeds with a position learning cycle after leaving the menu. This is indicated by a permanently illuminated red LED.

5.8 Menu 8 Selection of the roll-up protection mechanism

You can select and activate a connected roll-up protection mechanism in this menu item. An auto detection can be started as with menu item 6 by pressing the ◉ button for a long time (press for 5 seconds).

5.9 Menu 9 Selection of the door profile

Select the door profile in this menu item. Three different closing speeds are available for each door profile. If a new learning cycle is required due to the profile change, the DCC will initiate it automatically.

5.10 Menu 10 Setting the operating mode

Select the desired operating mode in this menu item. Pulsed operation is preset. An explanation of the operating modes can be found in chapter 8 "Operation". If a new learning cycle is required due to the change in operating mode, the DCC will start it automatically.

5.11 Menu 11 Default settings

You can reset the drive to the default settings in this menu item. To do so, press and hold the ◉ button for least 5 seconds. The setup wizard is then started automatically.

5.12 Program overview Basic programming IPD-E

Menu item flashes red Setting parameter flashes blue		
Menu (red)	**Input (blue)**	**Selection**
1x	**Door setting end positions OPEN/CLOSED**	
	OPEN+ STOP+ CLOSE	Change of direction
2x	**Programming/deleting radio hand-held transmitters**	
	STOP	Programming hand-held transmitter
		Deleting hand-held transmitter (5 seconds)
3x	STOP	**Programming the radio hand-held transmitter to 1/2 door opening**
4x	**Force setting opening**	
	1-12 (8*)	
5x	**Force setting closing**	
	1-15 (7*)	
6x	**Selection of closing edge safety device**	
	STOP	Auto detection (5 seconds)
	1*	none
	2	Optical closing edge safety device OSE
	3	Electrical safety edge 8k2
	4	Pressure wave switch 8k2 with testing
7x	**Selection of photoelectric sensor**	
	STOP	Auto detection photoelectric sensor on DCC (press for 5 seconds)
	1*	none
	2	2-wire photoelectric sensor on DCC
	3	2-wire photoelectric sensor on DCC in the frame
	4	4-wire photoelectric sensor, reflective photoelectric sensor
	5	4-wire photoelectric sensor, reflective photoelectric sensor on DCC or IPD-S in the frame
	6	2-wire photoelectric sensor on IPD-S
	7	2-wire photoelectric sensor on IPD-S in the frame
8x	**Selection of the roll-up protection mechanism**	
	STOP	Auto detection (5 seconds)
	1*	none
	2	Stop roll-up protection mechanism at J4.2
	3	Stop roll-up protection mechanism at J4.3
	4	Stop roll-up protection mechanism at J4.2 and J4.3
9x	**Selection of the door profile**	
	1-3	Standard fittings (cylindrical drum) 1:fast, 2:medium, 3:slow
	4-6	Raised fittings (semi-conical drum) 4:fast, 5:medium, 6:slow
	7-9	Vertical runner (full conical drum) 7:fast, 8:medium, 9:slow
10x	**Operating mode setting**	
	1*	Pulse OPEN / pulse CLOSE
	2	Pulse OPEN / dead man CLOSE
	3	Dead man OPEN / dead man CLOSE
11x	STOP	**Default setting (5 seconds)**
fast continu-ous	STOP	**Exit menu**

* Default setting

Red/blue LED indication

Normal operation		
blue	**red**	**Status**
flashing	off	Normal operation pulsed operation (short flashing of the blue LED every 5 seconds)
flashing	off	Normal operation AR operation (short flashing of the blue LED every 2.5 seconds, 1 Hz flashing during active open time)
flashing	off	Operating mode "Pulse OPEN / dead man CLOSED" (short flashing of the blue LED every 7.5 seconds)
flashing	off	Operating mode "Dead man OPEN / Dead man CLOSED" (short flashing of the blue LED every 10 seconds)
off	on	Learning cycle
flashing	flashing	Flashing sequence blue-red – error code indication (see error diagnosis)
off	off	Control switched off or short circuit 24 V

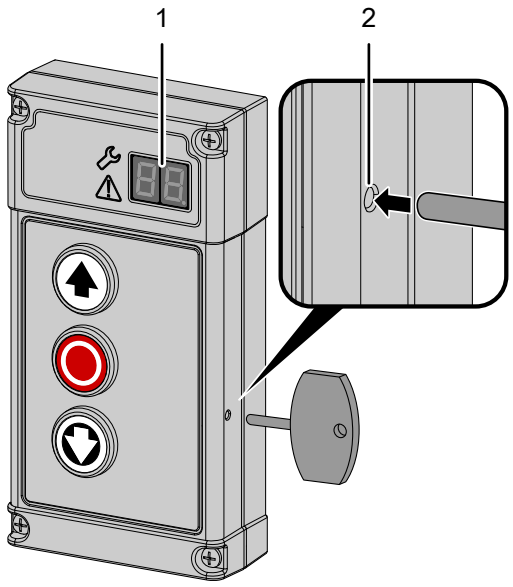
Prioritised position reached		
blue	**red**	**Status**
flashing		Alternating flashing blue-red

Settings menu		
blue	**red**	**Status**
off	flashing	Selection of menu item (flashing sequence) (see program overview)
flashing	off	Selection of parameters (flashing sequence) (see program overview)
off	off	Control switched off or short circuit 24 V

6 Programming with IPD-S

6.1 Programming procedure

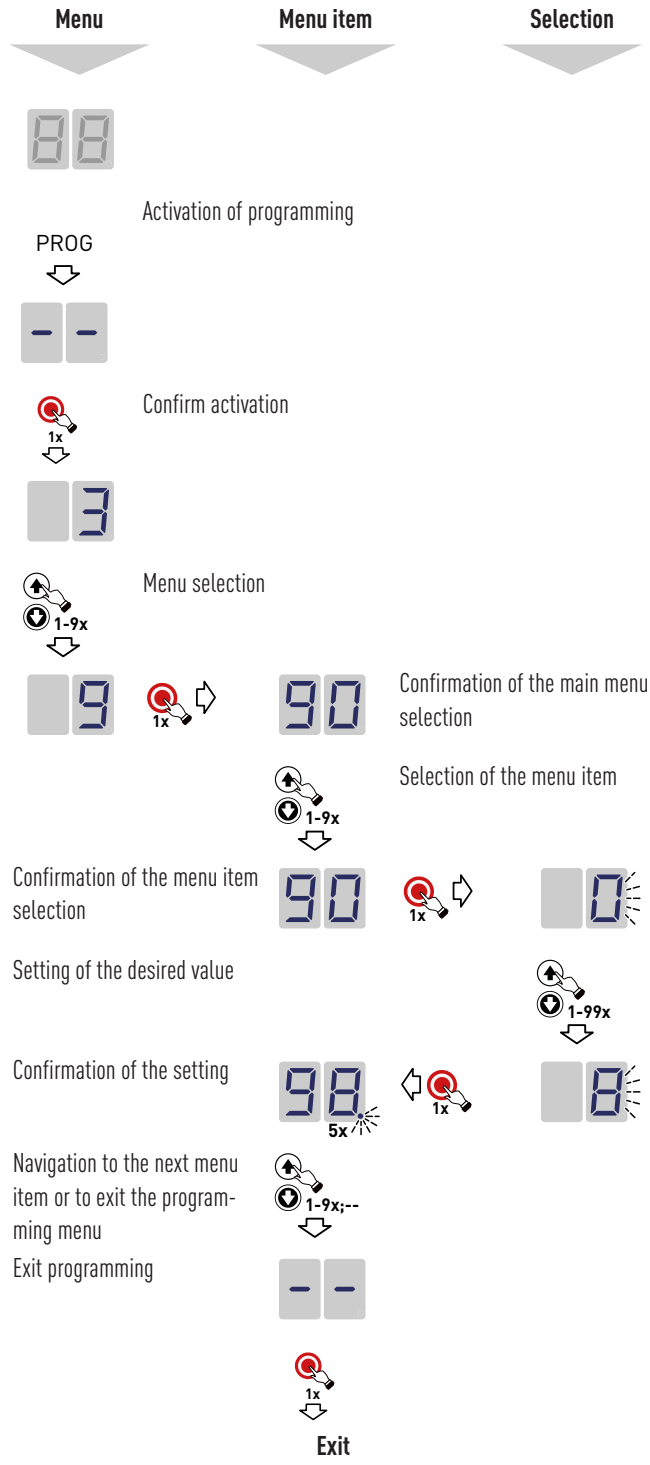
The control device IPD-S is equipped with a PROG (2) button. This button is protected inside the control device. It can be operated via a small opening in the housing. Further information on programming with IPD-S can be found in the IPD-S instructions (WN909009-01-6-50).



1. To enter the programming mode of the DCC, press and hold the PROG (2) button of the IPD-S until the 7-segment display (1) indicates – –.
2. Press the ◉ button (HALT) to confirm the activation.
3. Navigate with the ⊕ (OPEN) and ⊖ (CLOSE) buttons to select the desired menu. The 7-segment display (1) shows the current selection as value 1–9.
4. Confirm the selection with the button ◉. The 7-segment display (1) in the first digit now shows the menu which you are in. The second digit shows the current menu item in this menu.
5. Navigate with the buttons ⊕ and ⊖ to select the desired menu item. A total of up to 10 menu items is provided to you (0-9). The 7-segment display (1) shows the current selection in the second digit as value 0-9.
6. Confirm the selection with the button ◉. The currently set value for the respective menu item flashes on the 7-segment display (1).
7. Set the desired value using the ⊕ and ⊖ buttons. Depending on the menu item, values between 0 and 99 can be entered.
8. Confirm the selection with the button ◉. The 7-segment display (1) confirms the entry by 5-time blinking of the decimal point and by returning the the menu item selection.
9. If you want to complete the programming, press the button ⊖ repeatedly until – – appears on the 7-segment display (1).
10. Confirm the selection with the button ◉ to exit the programming.

☞ After 120 seconds of inactivity, the configuration menu is exited.

Graphical representation of the programming process with the IPD-S



6.2 Menu 3 Basic settings and initial operation

Setting the door end positions (menu item 30)

⚠ WARNING

Crush hazard and risk of being struck by the closing door

Ensure that no closing edge or photoelectric sensor monitoring is active whilst the end positions are set.

The door end positions OPEN and CLOSE must be set directly in succession.

1. Briefly press the ◉ button so that 01 flashes on the 7-segment display.
2. In order to define the door end position OPEN, press and hold the ▲ button until the door is completely open.

⇨ If the door moves in the wrong direction, a reversal of the direction must be implemented. Press and hold the button combination ▲ + ◉ + ▼ for 5 seconds. The successful change of the direction of rotation is confirmed by an animation on the 7-segment display. Then repeat step 2.

3. Confirm the set position by pressing the ◉ button for a long time.
4. After confirming the door end position OPEN, 02 flashes on the 7-segment display to program the door end position CLOSE. Press and hold the ▼ button until the door is completely closed and confirm the set position by pressing and holding the ◉ button.
5. After confirming the door end position CLOSE, the settings menu is exited automatically.
6. The 7-segment display now shows the L7 symbol and the drive is in current learning mode. A complete, failure-free opening and closing run must be carried out in each case.

Setting the 1/2 door opening (menu item 32), Prioritised position (menu item 33)

To set the position for a 1/2 door opening or for a prioritised position, proceed as follows:

1. Briefly press the ◉ button so that the number 32/33 flashes on the 7-segment display.
2. Move the door to the desired position using the ▲ and ▼ buttons.

   ☞ The minimum opening height is 15 cm.
3. Confirm the set position by pressing the ◉ button for a long time.

⇨ The decimal point flashes 5 times to indicate that the position has been taken over.

Selection of closing edge safety device (menu item 35)

1. You can make an auto detection or a manual selection.

⇨ *Auto detection*: Press and hold the ◉ button for 5 seconds. The setting for the closing edge safety device detected by the DCC appears. Briefly press the ◉ button to accept the indicated configuration or select another configuration using the ▲ and ▼ buttons.

⇨ *Without auto detection*: Use the ▲ and ▼ buttons to select the desired configuration and briefly press the ◉ button to accept the indicated configuration and complete the setting.

Selection of the photoelectric sensor (menu item 36)

1. You can make an auto detection or a manual selection.

⇨ *Auto detection*: Press and hold the ◉ button for 5 seconds. The setting for the photoelectric sensor detected by the DCC appears. Briefly press the ◉ button to accept the indicated configuration or select another configuration using the ▲ and ▼ buttons.

⇨ *Without auto detection*: Use the ▲ and ▼ buttons to select the desired configuration and briefly press the ◉ button to accept the indicated configuration and complete the setting.

If you have selected the configuration "Photoelectric sensor mounted in the frame", a position learning cycle is carried out after the menu is closed. L6 is shown on the 7-segment display.

Selection of the pre-limit switch position (menu item 37)

NOTICE

Compliance with standard EN 12453

Check the switch-off position of the door after every setting you have carried out. The switch-off setting must correspond to a maximum distance from the ground of 50 mm, otherwise compliance with the standard EN 12453 is not ensured. This might result in the loss of certification.

1. Briefly press the ◉ button to indicate the currently set configuration.
2. Set the switch-off position so that a maximum distance of 50 mm to the ground contact is generated. Values between 0 and 10 are provided to you for this purpose. Values of 2 (default setting) to 0 correspond to -10 mm to approx. -20 mm. Values from 3 correspond to 10 mm to approx. 50 mm.
3. Briefly press the ◉ button to accept the indicated configuration and complete the setting.

Selection of the roll-up protection mechanism (menu item 38)

1. Navigate to menu item 38 "Roll-up protection mechanism".
2. You can make an auto detection or a manual selection.

⇨ *Auto detection*: Press and hold the ◉ button for 5 seconds. The setting for the roll-up protection mechanism detected by the DCC appears. Briefly press the ◉ button to accept the indicated configuration or select another configuration using the ▲ and ▼ buttons.

⇨ *Without auto detection*: Use the ▲ and ▼ buttons to select the desired configuration and briefly press the ◉ button to accept the indicated configuration and complete the setting.

6.3 Menu 4 Further door settings

Setting the operating mode (menu item 40)

In this menu item, you can set the desired operating mode. In addition to operating the drive in the preset pulsed operation, you can operate it in the "Pulse OPEN / dead man CLOSE" or "Dead man OPEN / Deadman CLOSE" modes. A more detailed explanation of the operating modes can be found in chapter 8 "Operation".

Selection of the warning time (menu item 43)

You have the option of setting different warning times for the opening and/or closing process. If the status relay is to be active during the warning time, you must also set value 3 in menu item 45/46 (selection of function status relay 1/2).

Selection of open time and automatic return (menu item 44)

You can set the desired open time in this menu item. After the open time has elapsed, the door automatically starts to close (automatic return). If no photoelectric sensor is selected in menu item 36 (value 1), value 4 is automatically set as the photoelectric sensor type in menu item 36 after selecting an open time. In order to use the automatic return function, the installation of a photoelectric sensor is required according to EN 12453.

Selection of the function status relay 1 and 2 (menu items 45/46)

The DCC provides the status relay J12, whose function can be selected in menu item 45. A second, optional status relay can be plugged into slot J10 (option module). Then select the function in menu item 46 "Selection of the function status relay 2".

In case of "Selection 5 error state", the relay switches if there is an error in the emergency release, the slack rope switch safety circuit or the electronic door lock. Selection 6 always switches, except for the errors mentioned above. Selection 7 switches the relay when the set maintenance cycles are reached. Selection 8 switches the relay when battery operation is activated on the DCC.

6.4 Menu 5 Various settings

Wireless closing edge RSE (menu items 53,55,56)

NOTICE

After setting and before initial commissioning, check whether the safety devices are operating correctly.

The RSE system serves as a radio transmission system of the signals from the closing edge safety device, slack rope switch and wicket door sensor to the drive. The system is in accordance with PLc in compliance with EN 13849-1.

Please proceed as follows to commission the RSE system:

1. Connect the module to the DCC at slot J6.
2. Select value 1 "**R**adio**S**afety**E**dge system" in menu item 53 "Selection of module at slot J6".
3. Select the type of the closing edge safety device in menu item 55. "Optical closing edge safety device OSE" (value 1) is preselected as a default value.
4. Select the type of the wicket door in menu item 56. "ENS68xx" (value 1) is preselected as a default value.

Pairing of RSE-T and RSE-R

1. Navigate to menu item 55.
2. Press and hold the ◉ button for 5 seconds.

⇨ The RSE-R emits a long beep sound for confirmation.

⇨ Value 55 flashes on the 7-segment display (1).

3. Now press the button on the RSE-T.

⇨ The RSE-R emits a long beep sound for confirmation.

⇨ The drive confirms pairing by the decimal point flashing for 5 times in the LED display.

Unpairing of RSE-T and RSE-R

⚠ WARNING

Impact and crush hazard due to the door movement!

By unpairing the RSE-T and RSE-R, the safety sensors are inoperative.

- Repair the RSE-T and RSE-R again or make sure that the RSE system is replaced by a coiled cable.

1. Navigate to menu item 56.
2. Press and hold the ◉ button for 5 seconds.

⇨ The RSE-R emits several rapid beep sounds.

⇨ The drive confirms unpairing by the decimal point flashing for 5 times in the LED display.

Selection of module input J9 (menu item 54)

In this menu item, connection J9 can be configured. The preset value 0 for the BTD-K (Bluetooth) can be changed to internal service functions (1, 2).

Electronic door lock (menu item 57)

In this menu item, an electronic door lock (EDL 100) can be activated. To do so, set the value to 1.

6.5 Menu 6 Radio settings

You are provided with the possibility of programming 40 "KeeLoq" hand-held transmitter channels. Please observe that every hand-held transmitter must be programmed individually.

Programming the start button on the hand-held transmitter (menu item 60)

1. While the value "60" is flashing on the 7-segment display (1), press the button of the hand-held transmitter you want to program.

⇨ Successful programming of the hand-held transmitter is indicated by the decimal point flashing 5 times.

2. To program any additional hand-held transmitters, please repeat the procedure from point 1 or end the configuration by navigating to exit "– –" and pressing the ◉ button.

Programming the button 1/2 door opening on the hand-held transmitter (menu item 61)

1. Actuate the button of the hand-held transmitter for 1/2 door opening.

⇨ Successful programming of the hand-held transmitter is indicated by the decimal point flashing 5 times.

2. To program any additional hand-held transmitters, please repeat the procedure from point 1 or end the configuration by navigating to exit "– –" and pressing the ◉ button.

After programming the OPEN and CLOSED door end positions, the 1/2 door opening is automatically calculated and is immediately available. If a different position is desired, set it in menu item 32. This function is only possible in the pulse OPEN / pulse CLOSE operating mode.

Hand-held transmitter information / Deleting all radio codes (menu item 63)

To read out the number of occupied memory locations, proceed as follows:

1. Briefly actuate the ◉ button.

⇨ Four digits are output in sequence. The first two digits indicate the number of occupied hand-held transmitter memory locations. The last two digits indicate the total number of possible memory locations. Example: Output "2 4 4 0" means that 24 of 40 memory locations are occupied.

To delete all codes programmed, proceed as follows:

2. Press and hold the ◉ button for 5 seconds.

⇨ Successful deleting the hand-held transmitters is indicated by the decimal point flashing 5 times.

6.6 Menu 8 Profile settings

Selection of the door profile (menu item 80)

In this menu item, the door profile that has been selected during the initial installation can be changed subsequently.

1. Select the appropriate door profile 1-9 (standard fittings 1-3, raised fittings 4-6, vertical runner 7-9).
2. Confirm the profile selection by pressing the STOP button.

⇨ Changing the door profile requires a new failure-free force learning cycle in both the opening and closing direction and after exiting the menu. This will be indicated via the display and the LED on the drive. If a closing edge safety device has already been selected, there is no need for a new teach-in run.

Force setting opening (menu item 81)

⚠ WARNING

Danger of entanglement by the moving door!

Force detection does not replace the need for safety measures against the danger of entanglement!

NOTICE

Compliance with standard EN 12453

Any change of the force setting requires a subsequent check of the closing forces according to EN 12453.

The force detection for the opening direction can be adjusted in this menu item. The smaller the set value (1-10), the more sensitively the drive will react to external influences on the door.

1. Select the desired force setting (1 – "very sensitive" to 10 – "insensitive").
2. Confirm the selection with the button ◉. A new force learning cycle is not required when changing the force setting.

☞ If necessary, a new force learning cycle can be initiated by pressing and holding the ◉ button on menu item 81.

Force setting closing (menu item 82)

⚠ WARNING

Impact and crush hazard due to moving door!

Force detection does not replace the need for safety measures against impact and crush hazards caused by the descending door.

The force detection for the closing direction can be adjusted in this menu item. The smaller the set value (1-10), the more sensitively the drive will react to external influences on the door.

1. Select the desired force setting (1 – "very sensitive" to 10 – "insensitive")
2. Confirm the selection with the ◉ button. A new force learning cycle is not required when changing the force setting.

Adjusting the closing speed (menu item 83)

Press and hold the ◉ button for 5 seconds to access this setting. The maximum closing speed of the set profile can be fine-tuned here by +/- 10 %.

Battery operation (menu item 84)

The DCC can be operated using an external 24 V power supply (battery operation). This requires a connected DCC battery adapter (optional accessory).

☞ In battery operation, closing is only possible via the dead man's control, by pressing the ⓥ button for at least five seconds or with active closing edge monitoring and the set value 1 in menu item 84.

Two operating modes are available:

- Battery operation with active closing edge monitoring. Set the value to 1 in menu item 84.
- Battery operation "door open function only". The door can only be closed in emergency operation. Set the value to 2 in menu item 84.

6.7 Menu 9 Service

Limitation of cycles (menu item 90)

Select a number of cycles upon the completion of which the service indication is activated on the control. You can reset the maintenance counters by selecting the number of cycles in the respective menu item again.

Overall cycle counter output door (menu item 91)

By pressing the ◉ button, the cycle counter outputs the values digit by digit starting with the highest decimal power. The counter cannot be reset.

Output of firmware version, SN, production date (menu item 98)

Pressing the ◉ button starts the sequential output of the control information. "101 123456789 01012023" means firmware version "R1.01", serial number "123456789", production date "01.01.2023".

Resetting to default setting (menu item 99)

Press and hold the ◉ button to open the default settings. The drive starts automatically with the setup wizard.

6.8 IPD-S program overview

Menu 3 Basic door settings		
Menu item	**Entry**	**Selection**
30	**Door setting of the end positions**	
	OPEN+ STOP+ CLOSE	Reversal of the direction (5 seconds)
32	**Door setting for 1/2 opening position**	
33	**Door setting prioritised position**	
35	**Selection of closing edge safety device**	
	STOP	Auto detection (5 seconds)
	1*	none
	2	Optical closing edge safety device OSE
	3	Electrical safety edge 8K2
	4	Pressure wave switch with testing
36	**Selection of photoelectric sensor**	
	STOP	Auto detection photoelectric sensor on DCC (5 seconds)
	1*	none
	2	2-wire photoelectric sensor on DCC
	3	2-wire photoelectric sensor on DCC in the frame
	4	4-wire photoelectric sensor, reflective photoelectric sensor
	5	4-wire photoelectric sensor, reflective photoelectric sensor on DCC or IPD-S in the frame
	6	2-wire photoelectric sensor on IPD-S[1)]
	7	2-wire photoelectric sensor on IPD-S in the frame[1)]
37	**Selection of the pre-limit switch position**	
	0-1	20....10 mm lower
	2*	as adjusted
	3-10	10....50 mm higher
38	**Selection of the roll-up protection mechanism**	
	STOP	Auto detection (5 seconds)
	1*	none
	2	Stop roll-up protection mechanism at J4.2
	3	Stop roll-up protection mechanism at J4.3
	4	Stop roll-up protection mechanism at J4.2 and J4.3
- -	STOP	**Exit menu**

* Default setting

[1)] Information on the pin assignment can be found in the IPD-S instructions (WN909009-01-6-50).

Menu 4 further door settings		
Menu item	**Entry**	**Selection**
40	**Operating mode**	
	1*	Pulse OPEN / pulse CLOSE
	2	Pulse OPEN / dead man CLOSE
	3	Dead man OPEN / dead man CLOSE
43	**Selection of the warning time in seconds (s)**	
	0*	Off
	1-10	OPEN 1: 1s / 2: 2s / 3: 3s / 4: 4s / 5: 5s / 6: 6s / 7: 7s / 8: 8s / 9: 9s / 10: 10s
	11-20	CLOSE 11: 1s / 12: 2s / 13: 3s / 14: 4s / 15: 5s / 16: 6s / 17: 7s / 18: 8s / 19: 9s / 20: 10s
	21-30	OPEN + CLOSE 21: 1s / 22: 2s / 23: 3s / 24: 4s / 25: 5s / 26: 6s / 27: 7s / 28: 8s / 29: 9s / 30: 10s
44	**Selection of open time and automatic return in seconds (s) and minutes (min)**	
	0*	Automatic return deactivated
	1-15	1: 5s / 2: 10s / 3: 15s / 4: 20s / 5: 30s / 6: 40s / 7: 50s / 8: 1min / 9: 2min / 10:3min / 11: 4min / 12: 5min / 13: 10min / 14: 15min / 15: 20min
45	**Selection of the function status relay 1**	
	1	Door-closed status
	2*	Door-open status
	3	Door in motion / warning
	4	Wipe pulse (1 second)
	5	Status error
	6	Error state inverted
	7	Maintenance cycles reached
	8	Battery operation status
46	**Selection of the function status relay 2**	
	1	Door-closed status
	2*	Door-open status
	3	Door in motion / warning
	4	Wipe pulse (1 second)
	5	Status error
	6	Error state inverted
	7	Maintenance cycles reached
	8	Battery operation status
- -	STOP	**Exit menu**

* Default setting

Menu 5 Various settings		
Menu item	**Entry**	**Selection**
51	**Selection of the function Input J1**	
	1*	OPEN, STOP, CLOSE button
	2	STOP, pulse inputs
52	**Control adress indication**	
	00-99	Entry of control address (5 seconds)
53	**Selection of module input J6**	
	0*	None
	1	RadioSafetyEdge system
	2	Lion40 (Slave)
54	**Selection of module input J9**	
	0*	BTD-K (Bluetooth)
	1-2	Service functions
55	**RSE Selection of closing edge safety device** Start pairing (press for 5 seconds)	
	0	None
	1*	Optical closing edge safety device OSE
	2	Electrical safety edge 8k2
	3	Pressure wave 8k2
56	**RSE Selection of wicket door contact** Cancel pairing (press for 5 seconds)	
	0	ENS-8200
	1*	ENS-68xx
	2	NC /opener
57	**Electronic door lock EDL100**	
	0*	Off
	1	on
- -	STOP	**Exit menu**

* Default setting

Menu 6 Radio		
Menu item	**Entry**	**Selection**
60	**Programming the start button on the radio hand-held transmitter**	
61	**Programming the 1/2 opening button on the radio hand-held transmitter**	
63	**Hand-held transmitter information / Deleting all radio codes**	
	STOP	Hand-held transmitter information
	STOP	5 seconds
- -	STOP	**Exit menu**

* Default setting

Menu 8 Profile settings		
Menu item	**Entry**	**Selection**
80	**Selection of the door profile**	
	1-3	Standard fittings (cylindrical drum) 1:fast, 2:medium, 3:slow
	4-6	Raised fittings (semi-conical drum) 4:fast, 5:medium, 6:slow
	7-9	Vertical runner (full conical drum) 7:fast, 8:medium, 9:slow
81	**Force setting opening**	
	STOP	Start new force learning cycle cycle (5 seconds)
	1-12 (8*)	Force setting opening
82	**Force setting closing**	
	1-15 (7*)	Force setting closing
83	**Adjusting the closing speed (5 seconds)**	
	0	-10% from profile
	1*	Standard profile
	2	+10% from profile
84	**Battery operation**	
	0*	No battery operation
	1	Battery operation with closing edge safety device
	2	Battery operation "door open function only"
- -	STOP	**Exit menu**

* Default setting

Menu 9 Service menu		
Menu item	**Entry**	**Selection**
90	**Limitation door cycles**	
	0	No limitation
	1	1000 cycles
	2	1500 cycles
	3	2000 cycles
	4	2500 cycles
	5	3000 cycles
	6	3500 cycles
	7	4000 cycles
	8*	4500 cycles
	9	5000 cycles
	10	5500 cycles
	11	6000 cycles
	12	6500 cycles
	13	7000 cycles
	14	7500 cycles
	15	8000 cycles
	16	8500 cycles
	17	9000 cycles
	18	9500 cycles
	19	10000 cycles
91	**Overall cycle counter output door**	
98	**Firmware version output** – serial number – creation date	
99	**Reset to default setting**	
	STOP	5 seconds
- -	STOP	**Exit menu**

* Default setting

Door action status display

Display	State	
	Upper end position OPEN reached	
	Door end position has not been reached	
	Lower end position CLOSE reached	
	Representation of the door opening frequency	
	Representation of the door closing frequency	
	Force learning cycle indication	
	Battery operation, display of door operation	
	flashing	Normal operation, pulsed operation
	flashing	Learning cycle for detecting the position of the photoelectric sensor
	flashing	Programming the end position "OPEN"
	flashing	Programming the end position "CLOSE"
	sequence	Prioritised programmed position is approached
	flashing	Less than 500 cycles until next maintenance
	permanently	Set service cycles reached. Have maintenance activities carried out.
	permanently	A safety sensor is triggered.
	sequence	Rotation direction (right / left)
	permanently	Prioritised position reached

7 Initial operation

⚠ WARNING

Crush and impact hazard at the garage door!

During the learning cycle, the drive automatically learns the normal mechanical force required to open and close the garage door. Force limits are deactivated until the conclusion of the learning cycle. The door movement will not be stopped by an obstruction!

- For the entire path of motion, keep the door clear of persons and objects!

NOTICE

Checking the door before initial commissioning

- Before initial set-up, ensure that the door can be moved smoothly.
- Remove any manual door locking mechanisms that can interfere with or block the door movement.
- Connect safety switches (slack rope switches) to monitor the ropes.
- Ensure that the door is spring balanced.

NOTICE

Do not interrupt the learning cycle

- The learning cycle must not be interrupted, so that no incorrect position is recorded. Do not interrupt the learning cycle.

When the drive is switched on for the first time or after resetting to default settings, the setup wizard is started. The installation wizard guides you step by step through the initial installation. The display depends on the IPD variant used. When using the IPD-E, use the LED on the DCC; when using the IPD-S, use the 7-segment display on the IPD-S. The following steps are carried out:

1. **Selection of the door profile**

   DCC indication: the number of flashes indicates the current door profile.

   IPD-S indication: 7-segment display indicates the current door profile (P1...P9).

   Select a door profile according to the installed door by pressing the ▲ or ▼ button (in sequence fast/medium/slow):

   1–3 standard fittings (cylindrical drum)

   4–6 raised fittings (semi-conical drum)

   7–9 vertical runner (conical drum)

   Example 7 = vertical runner, fast

   Confirm the setting by pressing and holding the ● button.

2. **Approaching and confirming the door OPEN end position**

   DCC indication: fast flashing of the red LED

   IPD-S indication: 

   Move the door into the desired door OPEN position. Pressing the ▲ or ▼ button will move the door into the desired direction. The drive must be operated at least a half-turn without interruption. Once the desired position is reached, confirm it by pressing and holding the ● button.

   The rotation direction can be changed by simultaneously pressing the ▲, ● and ▼ button for 3 seconds.

3. **Approaching and confirming the door CLOSE end position**

   DCC indication: slow flashing of the red LED

   IPD-S indication: 

   Move the door into the desired door CLOSE position. Pressing the ▼ or ▲ button will move the door into the desired direction. Once the desired position is reached, confirm it by pressing and holding the ● button. A minimum distance of approx. 1 m must be covered between the OPEN and CLOSE positions.

4. **Selection of alternative safety sensors**

   If an additional closing edge safety device or a photoelectric sensor is connected, configure it in the menu items "Select closing edge safety device J3" and "Select photoelectric sensor J2".

5. **Carrying out a learning cycle**

   DCC indication: red LED permanently switched on

   IPD-S indication: 

   When briefly pressing the ⊕ or ⊖ button, the door performs a force learning cycle by opening and closing.

   After completion of the learning cycle, the initial set-up is complete.

   ☞ The learning cycle is limited to a maximum of five door cycles. If the learning cycle could not be completed after five door cycles, it is cancelled and the setup wizard returns to step 2 "Approaching and confirming the door OPEN end position". Readjust the end positions or install an active closing edge safety device.

6. **Test run**

NOTICE

Compliance with standard EN 12453

Check the switch-off position of the door after every setting you have carried out. The switch-off setting must correspond to a maximum distance from the ground of 50 mm, otherwise compliance with the standard EN 12453 is not ensured.

When programming and the force learning cycle have been completed, carry out a test run by checking all operating and safety functions. Once the test run and force measurement processes have been successfully completed in accordance with EN 12453, the door system is ready for operation.

8 Operation

8.1 Safety instructions for operation

Observe the following safety information for operation:

Check the DCC and the door system connected for visual defects before use. If the operational behaviour of the door system changes, switch the system off immediately. Recommissioning must be prevented. Notify the operating company of the change.

- The operator must be instructed on how to handle the DCC or the motor-driven door system and be familiar with the applicable safety regulations.
- Comply with the local accident prevention regulations relevant to the field of application.
- Check the DCC and the door system connected for visual defects before use.
- If you detect any safety-relevant deficiencies, decommission the door system and report all defects to the responsible line manager.
- Have the deficiencies remedied immediately.

8.2 Dead man OPEN / dead man CLOSE

⚠ WARNING

Crush hazard and risk of being struck due to moving door!

Persons can be struck when the door is closed or collide with the door.

- During the "Dead man OPEN / dead man CLOSE" operating mode, a clear view to the door from the place of operation must be ensured.
- Ensure that no persons are in the danger zone of the door.

By pressing the ⊕ button continuously, the door operation starts in the OPEN direction until the OPEN end position has been reached or the door operation is stopped by letting go of the ⊕ button. The door is closed by continuously pressing the ⊖ button (dead man function) until the CLOSE end position has been reached. If you let go of the ⊖ button while the door is moving, the door will stop immediately.

8.3 Pulse OPEN / dead man CLOSE

⚠ WARNING

Crush hazard and risk of being struck due to moving door!

Persons can be struck when the door is closed or collide with the door.

- During the "Pulse OPEN / dead man CLOSE" operating mode, a clear view to the door from the place of operation must be ensured.
- Ensure that no persons are in the danger zone of the door.

By briefly pressing the ⊕ button or by external pulse generators, the door starts moving in the OPEN direction until the end position OPEN has been reached or the door operation is stopped by pressing the ◉ button. Pressing the ⊕ button again continues the opening operation. The door is closed by continuously pressing the ⊖ button (dead man function) until the end position CLOSE has been reached. If you let go of the ⊖ button while the door is closing, the door will stop immediately.

8.4 Pulse OPEN / pulse CLOSE

If you press the ⊕ button briefly, the door starts moving in the opening direction until the door reaches the OPEN door end position, or until the door is stopped by actuating the ◉ button. If you press the ⊖ button briefly, the door starts moving in the CLOSE direction until the door end position CLOSE is reached.

This operating mode requires protection level "C" according to EN 12453. This protective device is part of the DCC as an integrated current control/force monitoring function. If the required closing forces cannot be maintained, a closing edge safety device can be connected. When the force detection or closing edge safety device is activated while the door is closing, the door will stop and reversal of the direction will be activated. Activation of the closing edge safety device has no effect when the

door is opening. In the event of a defect of the closing edge safety device, the door can be closed in emergency operation by pressing and holding the ⊙ button.

8.5 Automatic return (AR mode)

If you press the ⊙ button briefly, the door starts moving in the opening direction until the door reaches the OPEN door end position, or until the door is stopped by actuating the ⊙ button. The configured open time starts when the door is in the door end position "OPEN". After the open time has elapsed, a configured warning time starts. After this time has elapsed, the door starts to move in the closing direction automatically. If a radio start command is given during closing, the door reverses back to the door end position OPEN. If the door is reversed 5 times in succession during closing by force monitoring, the closing edge safety device or photoelectric sensor, the AR mode is cancelled in the door end position OPEN. The AR mode is restarted with a new start command.

8.6 Prioritised input J30 (optional) – emergency operation

The "Prioritised input" function is provided via the optionally available option module and offers the possibility of moving the door to a previously configured door position by means of an external control. As long as input J30 is connected, the DCC attempts to reach the preset position, but also reacts to connected safeties. If the input signal is withdrawn during operation, the drive stops and the DCC is set back to normal operation. If the set position is reached, returning to normal operation is only possible by disconnecting the power supply of the DCC.

8.7 Mutual locking (optional)

The optionally available option module enables coupling with another control unit (e.g. dock leveller control) for the purpose of mutual interlocking.

The "Lock" input J31 of the option module can be used to lock the closing command of the drive. The drive is locked if the contact of terminal J31 is open. The door can be closed if the contact is closed.

8.8 Lighting and / or an advance warning light (optional)

The DCC is equipped with a status relay with which external lighting or an advance warning light can be switched.

8.9 External control devices

The door can be operated by external control devices / pulse generators. The operation corresponds to the section "Pulse OPEN / Pulse CLOSE" and "Automatic return (AR mode)". If a single start button is used as control device, value 2 must be set in menu item 51. This allows for operation in the OPEN-STOP-CLOSE-STOP... or HALF-STOP-CLOSE-STOP-... pulse sequence .

8.10 Radio hand-held transmitter (optional)

With the radio hand-held transmitter, the door can be operated in pulse OPEN/pulse CLOSE and in AR mode. In pulse mode, the radio hand-held transmitter is provided with the pulse sequence OPEN-STOP-CLOSE-STOP-... . In AR mode, a radio command from the CLOSE position or during closing causes the door to open. A radio command during the open time or the warning time restarts the open time.

8.11 Radio hand-held transmitter 1/2 door opening (optional)

If a radio hand-held transmitter has been programmed for this function in menu item 61, the following function is available:

Briefly press the button for the 1/2 door opening on the hand-held transmitter to move the door to the pre-configured position. If no position for the 1/2 door opening has been programmed in menu item 32, half the travel path is automatically used.

8.12 Battery operation (optional)

⚠ WARNING

Crush hazard and risk of being struck due to moving door in emergency operation

Persons can be struck when the door is closed or collide with the door.

- During emergency operation, a clear view to the door from the place of operation must be ensured.
- Ensure that no persons are in the danger zone of the door.

The DCC can be operated with an external 24 V power supply (battery operation). To do so, set the value 1 or 2 in menu item 84.In battery operation, closing is only possible via the dead man's control, by pressing the ⊙ button for at least five seconds or with active closing edge monitoring and the set value 1 in menu item 84.

8.13 Emergency operation

⚠ WARNING

Risk of being crushed or hit by the moving door in emergency operation

Persons can be struck when the door is closed or collide with the door.

- For emergency operation the door needs to be checked and found to be in perfect mechanical condition.
- During emergency operation, a clear view to the door from the place of operation must be ensured.
- Ensure that no other persons are in the danger zone of the door.

The emergency operation permits the operation of the door with defective or tripped safety devices. The emergency operation is activated by pressing and holding the ⊙ button for 5 seconds.

8.13.1 Emergency operation with emergency crank handle

This function applies to the DCC-80 NHK and NHK-WE variants.

Fig. a Insert the crank handle.

Fig. b and c Open and close the door by turning the crank handle. If necessary, slowly turn the crank and try to insert it further with light pressure until it engages in the drive.

8.13.2 Emergency operation with quick chain

This function applies to the DCC-80 SK and SK-WE variants.

Fig. d Pull the red handle on the emergency release to switch off the drive electronically. Open or close the door by using the chain.

Fig. e To operate the door with the drive again, pull the green handle.

8.13.3 Emergency operation with mechanical emergency release

This function applies to the DCC-80 ER variant.

Fig. f Pull the red handle of the emergency release to mechanically disconnect the drive from the door. Open or close the door by hand.

Fig. g To operate the door with the drive again, pull the green handle.

9 Troubleshooting

blue	red	Error
LED codes troubleshooting		
0 x	1 x	Service cycles reached
1 x	1 x	Emergency operation
	2 x	Slack rope switch triggered (J3/RSE/IPD-S)
	3 x	Wicket door open / fault (J3/RSE/IPD-S) Short circuit coiled cable (J3/RSE/IPD-S)
	4 x	Roll-up protection menchanism triggered (J4)
	5 x	Drive disengaged
	6 x	Emergency limit switch OPEN approached
2 x	1 x	Closing edge safety device (J3/RSE) triggered Testing for pressure wave switch failed
	2 x	Photoelectric sensor (J3 / IPD-S) triggered
	3 x	Cycles per hour reached, let drive cool down
	4 x	Supply voltage error (IPD-S)
	5 x	Power supply error
	6 x	–
3 x	1 x	Warning cycles per hour almost reached
	2 x	RSE module error
	3 x	RSE RadioDutyCycle/battery
	4 x	DES error / rotation direction
	5 x	Testing has failed
	6 x	–
4 x	1 x	Interlock input LOCK (J31) is active on option module
	2 x	Current overload / obstruction
	3 x	EDL100 fault
	4 x	Permanent stop signal at input J1. Check terminals J1.3 and J1.4 for missing bridge / check connected button for incorrect wiring
	5 x	–
	6 x	–

Example:

blue – red – red – red	Wicket door open, short circuit coiled cable

Error	State	Diagnosis / remedy
DCC events		
E01	No door movement	Roll-up protection mechanism no. 1 activated
E02	No door movement	Roll-up protection mechanism no. 2 activated
E03	No door movement	Wicket door open
E04	No door movement	Control unit interlocked by external control. Set bridge at terminal LOCK to option module
E05	No door movement	Slack rope switch has triggered
E06	Door reverses	Closing edge safety device has tripped
E07	Door reverses	Photoelectric sensor has triggered
E08	No door movement	Drive has been disengaged
E13	Door reverses	Overcurrent detected
E20	Display when fully operational	Runtime limitation reached in a few minutes
E30	Door only closes in dead man mode	Emergency operation. Check closing edge safety device or photoelectric sensor
E34	No door movement	Permanent stop signal at input J1. Check terminals J1.3 and J1.4 for missing bridge / check connected button for incorrect wiring
RSE events		
E43	No door movement	RSE wicket door open
E45	No door movement	RSE slack rope switch has triggered
E46	Door reverses	RSE closing edge safety device triggered
IPD-S events		
E53	No door movement	IPD-S bracket wicket door open
E55	No door movement	IPD-S slack rope switch has triggered
DCC error		
F11	No door movement	Error during testing of the current measuring device
F12	No door movement	Current overload detected
F13	No door movement	Temperature sensor has triggered, allow drive to cool down
F15	No door movement	Testing of photoelectric sensor has failed
F17	No door movement	ENS6800 sensor error detected (J3)
F18	No door movement	Short circuit detected in coiled cable line (J3)
F19	Closing impossible	Testing of pressure wave switch failed, check pressure wave rubber profile
F21	Brief operational interruption	Runtime limitation of door drive, let drive cool down for approx. 20 min
F22	No door movement	EDL100 not recognised. Check wiring
F23	No door movement	Error during locking/unlocking procedure EDL100
F24	No door movement	Communication error with DES
F27	No door movement	Drive blockage detected
F28	No door movement	Faulty voltage supply
F29	No door movement	Wrong rotation direction detected
F31	No door movement	Emergency limit switch OPEN approached Retract the door in a de-energised state using the emergency manual override
F32	No door movement	Travel distance exceeded in time. Check door for ease of motion

Error	State	Diagnosis / remedy
RSE error		
F40	No door movement	RSE module not recognised
F41	No door movement	RSE receiver and transmitter are not paired
F42	No door movement	RSE radio interference detected
F44	No door movement	RSE battery empty
F47	No door movement	RSE error ENS6800 sensors
F48	No door movement	RSE short circuit detected
F49	No door movement	RSE radio duty cycle exceeded
IPD-S error		
F56	No door movement	IPD-S supply voltage faulty. Check X4, X5, X6 for short circuit
F57	No door movement	IPD-S wicket door error
F58	No door movement	IPD-S short circuit detected in coiled cable line
Test error		
F90-F99 F9B	No door movement	Internal testing failed. Switch drive off and on again
General indication		
CS	–	Maintenance cycles reached Perform service activity
IA	–	Control unit inactive Prioritised position was approached Return to normal operation by mains reset
Lo	–	Operation of the drive has been locked
dE	–	Determining the limit switch type is active

10 Maintenance

10.1 Tasks to be performed before starting maintenance

NOTICE

NOTICE

For your safety, we recommend that the door system be checked before initial use and as needed – at least once a year – in accordance with the check list in the **Inspection** chapter. The check can be carried out by a person with the corresponding qualification certificate or by a specialist company.

First carry out the following steps before performing maintenance activities on the door:

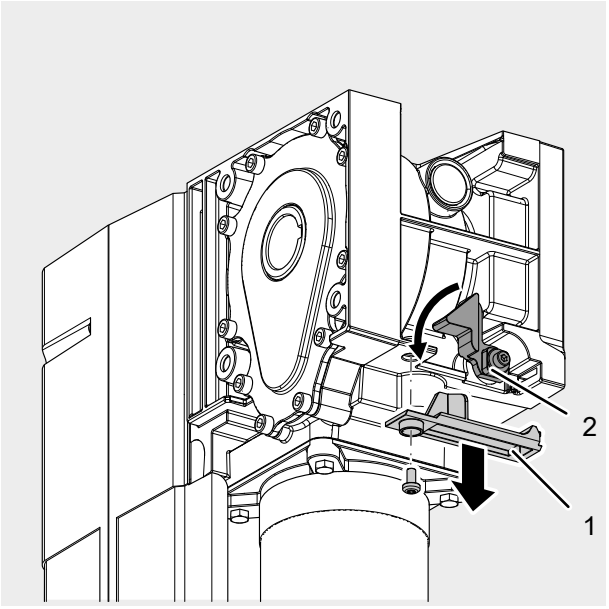
1. Disconnect from the mains.
2. Secure against inadvertent switch-on.
3. Verify de-energised state.
4. Please note that works on the electrical system only be performed by skilled electricians or instructed persons working under the direction and supervision of a skilled electrician in accordance with the electrotechnical rules and directives may.

10.2 Maintenance release (variant-specific)

The variants with the quick chain and emergency crank handle are equipped with an optional maintenance unlocking function which mechanically disconnects the drive from the door and allows the door to be checked for ease of motion.

This function may only be operated when the drive is at a standstill. The drive must also be disconnected from the power supply.

1. Loosen the screw and remove the cover (1).



2. Turn the red lever (2) in clockwise direction while disconnecting the drive from the door.

⇨ The door can now be moved by hand and the door movement can be checked.

10.3 Inspection

When being commissioned, power-operated doors must be inspected and maintained by correspondingly qualified persons (persons with suitable qualifications, based on knowledge and experience) and in compliance with intervals specified by the manufacturer in the maintenance instructions and, if necessary, also in accordance with any special national regulations (e.g. ASR A1.7 "Technical Rules for Workplace Safety - doors and gates"). All maintenance and inspection tasks must be documented in the inspection logbook provided. It must be kept safe by the operating company, together with the documentation of the door system, throughout the entire service life and must be handed over to the operating company in a duly completed fashion, at the latest on the date of commissioning by the technician (we also recommend this for manually operated doors). The specifications laid down in the documentation of the door system (assembly, operating and maintenance instructions, etc.) must be absolutely observed in any case.

The manufacturer's warranty expires immediately if the inspection / maintenance has not been carried out properly!

Any changes that are made to the door system (if permitted at all) must also be documented.

Door system inspection logbook

Operating company of the system: .....

System site: .....

.....

Drive data

Drive type: .....

Manufacturer: .....

Date of manufacture: .....

Operating mode: .....

Door data

Model: .....

Serial No. .....

Door dimensions: .....

Year of manufacture: .....

Wing weight: .....

Installation and commissioning

Company, technician: .....

Commissioning on: .....

Company, technician: .....

Signature: .....

Other details

.....

.....

.....

Subsequent changes

.....

.....

.....

Proof of inspection and maintenance of the door system

Date	Work performed / necessary measures	Test carried out	Defects rectified
		Signature / company address	Signature / company address
	Commissioning, initial check		

Check list for door system

(Document equipment during commissioning by ticking the items off)

	Equipment	Available/ applicable	Properties to be checked	OK	Comment
1.0	**Door**				
1.1	Manual operation of the door	☐	Smooth running	☐	.....
1.2	Fastenings/connections	☐	State/seat	☐	.....
1.3	Pivots/joints	☐	State/lubrication	☐	.....
1.4	Track rollers/track roller holders	☐	State/lubrication	☐	.....
1.5	Seals/sliding contact strips	☐	State/seat	☐	.....
1.6	Door frame/door guide	☐	Alignment/fastening	☐	.....
1.7	Door leaf	☐	Alignment/state	☐	.....
2.0	**Weight counterbalance/safe opening**				
2.1	Springs	☐	State/seat/setting	☐	.....
2.1.1	Clamping heads / bearing blocks	☐	State	☐	.....
2.1.2	Spring break device	☐	State/rating plate	☐	.....
2.1.3	safety elements	☐	State/seat	☐	.....
2.2	Wire cables	☐	State/seat	☐	.....
2.2.1	Mounting	☐	State/seat	☐	.....
2.2.2	Cable drums	☐	2 safety windings	☐	.....
2.2.3	Slack rope switch	☐	State/seat/function	☐	.....
2.3	Fall protection	☐	State	☐	.....
2.4	Concentricity of T-shaft	☐	State	☐	.....
3.0	**Drive / controls**				
3.1	Drive/console	☐	State/fastening	☐	.....
3.2	Electrical cables/connections	☐	State	☐	.....
3.3	Emergency release	☐	State/function	☐	.....
3.3.1	Quick chain	☐	State/function	☐	.....
3.3.2	Crank handle	☐	State/function	☐	.....
3.3.3	Quick release	☐	State/function	☐	.....
3.4	Control devices push-button/hand-held transmitter	☐	State/function	☐	.....
3.5	Limit stop	☐	State/function	☐	.....
4.0	**Safeguarding of crush and shearing zones**				
4.1	Force limit	☐	Stops and reverses	☐	.....
4.2	Protection against lifting of persons	☐	Door leaf	☐	.....
4.3	Site conditions	☐	Safely distances	☐	.....
5.0	**Other devices**				
5.1	Latching/lock	☐	Function/state	☐	.....
5.2	Wicket door	☐	Function/state	☐	.....
5.2.1	Wicket door contact	☐	Function/state	☐	.....
5.2.2	Door closer	☐	Function/state	☐	.....
5.3	Traffic light control	☐	Function/state	☐	.....
5.4	Photoelectric sensors	☐	Function/state	☐	.....
5.5	Closing edge safety device	☐	Function/state	☐	.....
6.0	**Documentation by the operating company**				
6.1	Rating plate/CE marking	☐	complete/readable	☐	.....
6.2	Declaration of Conformity for the door system	☐	complete/readable	☐	.....
6.3	Assembly, operating, maintenance manuals	☐	complete/readable	☐	.....

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11 Disassembly

Disassembly is carried out in reverse order of the assembly instructions in the **Installation** chapter.

12 Disposal

Dispose of packaging material in an environmentally friendly way and in accordance with the applicable local disposal regulations.

The symbol with the crossed-out waste bin on waste electrical or electronic equipment stipulates that this equipment must not be disposed of with the household waste at the end of its life. The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment.

Dispose of the waste electrical or electronic equipment in accordance with national legislation.

UK (The following applies for the United Kingdom)

According to Waste Electrical and Electronic Equipment Regulations 2013 (SI 2013/3113) (as amended) devices that are no longer usable must be collected separately and disposed of in an environmentally friendly manner.

13 Declaration of conformity and incorporation

13.1 Declaration of Incorporation in accordance with the EC Machinery Directive 2006/42/EC

For the installation of partly completed machinery in terms of the EC Machinery Directive 2006/42/EC, Annex II Part 1 Section B.
We hereby declare that the following partly completed machinery – as far as possible with respect to the scope of supply – complies with the essential requirements of the EC Machinery Directive. The partly completed machinery is only intended to be incorporated into a door system to thus form a complete machine within the meaning of the EC Machinery Directive. The door system must not be put into service until the final machinery has been declared in conformity with the provisions of the EC Machinery Directive and the EC Declaration of Conformity according to Annex II Part 1 Section A is available. We furthermore declare that the relevant technical documentation for this partly completed machinery has been compiled in accordance with Annex VII, Part B, and undertake to transmit it through our Documentation Department in response to a reasoned request by the competent national authorities.

Product model / product:	DCC-80
Product type:	Door drive
Year of manufacture from:	03/2024

Relevant EU directives:

- 2014/30/EU
- 2011/65/EU RoHS Directive including Annex II according to (EU) 2015/863

Fulfilled requirements of the EC Machinery Directive 2006/42/EC, Annex I, Part 1:

- 1.1.2, 1.1.3, 1.1.5, 1.2.1, 1.2.2, 1.2.3, 1.2.4, 1.2.5, 1.2.6, 1.3.2, 1.3.4, 1.5.1, 1.5.2, 1.5.4, 1.5.5, 1.5.6, 1.6.1, 1.6.2, 1.6.3, 1.7

Applied harmonised standards:

- EN ISO 12100:2010
- EN ISO 13849-1:2015
- EN 60335-1:2012
- EN 60335-1:2012/AC:2014
- EN 60335-1:2012/A11:2014
- EN 60335-1:2012/A13:2017
- EN 60335-1:2012/A15:2021
- EN 60335-2-103:2015
- EN 61000-6-2:2005
- EN 61000-6-2:2005/AC:2005
- EN 61000-6-3:2007
- EN 61000-6-3:2007/A1:2011/AC:2012
- EN 61000-6-3:2007/A1:2011
- EN 300 220-2 V3.1.1
- EN 12453:2022

Other applied technical standards and specifications:

- EN 12604:2021
- EN 300220-1:2017

EN 301489-1:2020

Manufacturer and name of the authorised representative of the technical documentation:

Novoferm tormatic GmbH
Eisenhüttenweg 6
44145 Dortmund

Place and date of issue:

Dortmund, 07.01.2026

Christian Hasenest, Director Operations Novoferm Tormatic

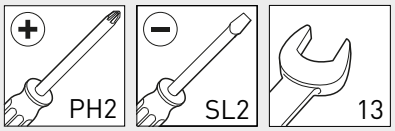
13.2 Declaration of Conformity according to Directive 2014/53/EU

The integrated radio system complies with directive 2014/53/EU. The full text of the declaration of conformity can be found at:
https://www.tormatic.de/dokumentation/

14 Figures

4.1 Preparing for installation

Tools required



4.2 Opening and closing the housing cover

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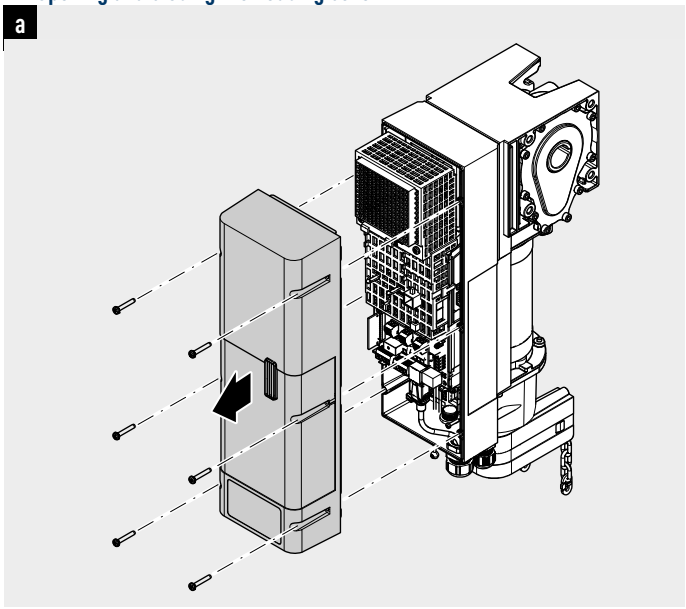

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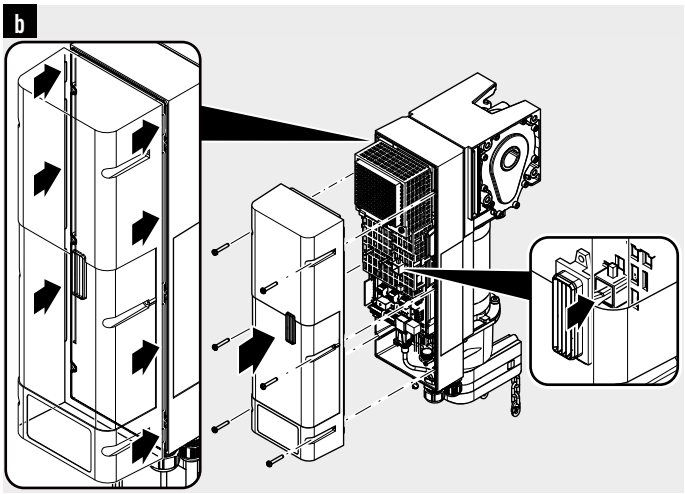

4.3 Mounting the door drive

Types of assembly

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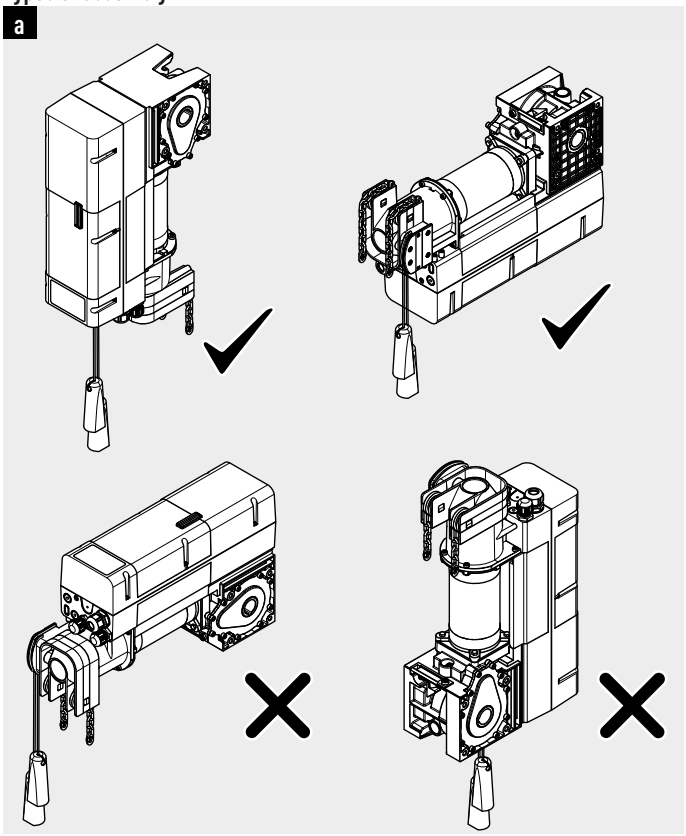

Assembly with mounting bracket

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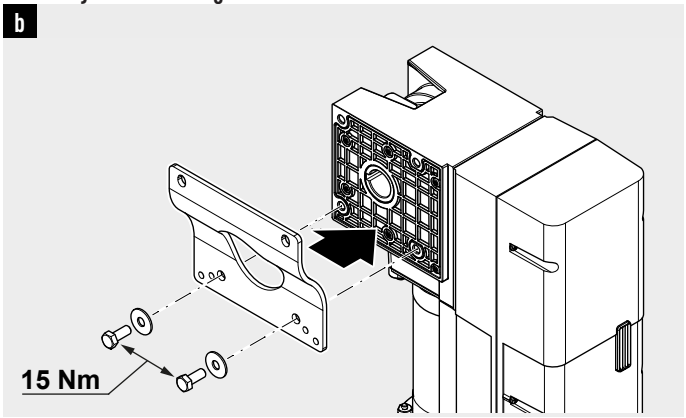

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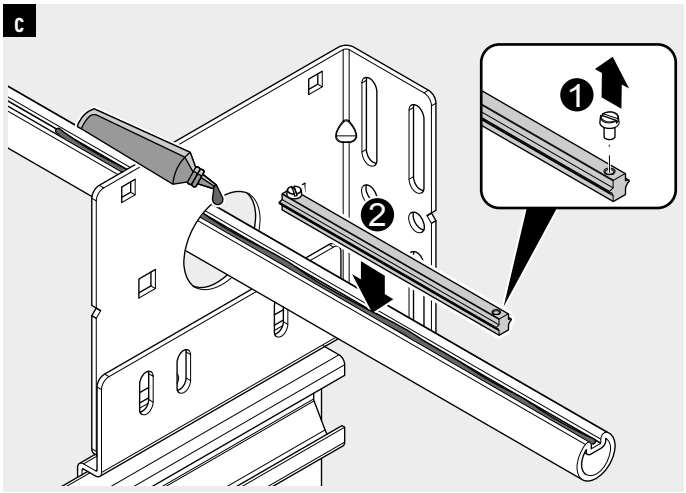

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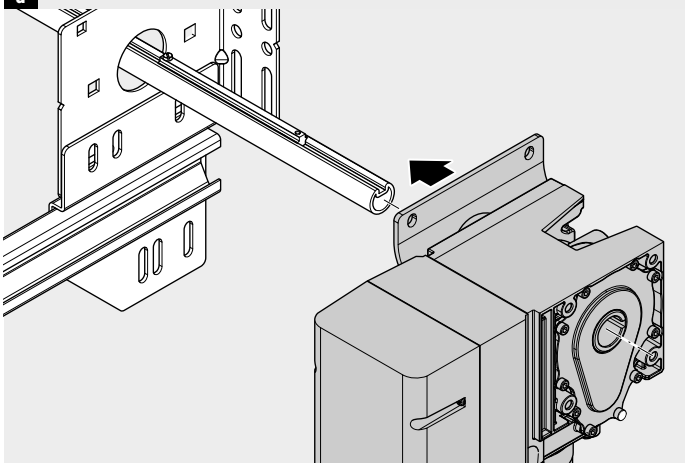

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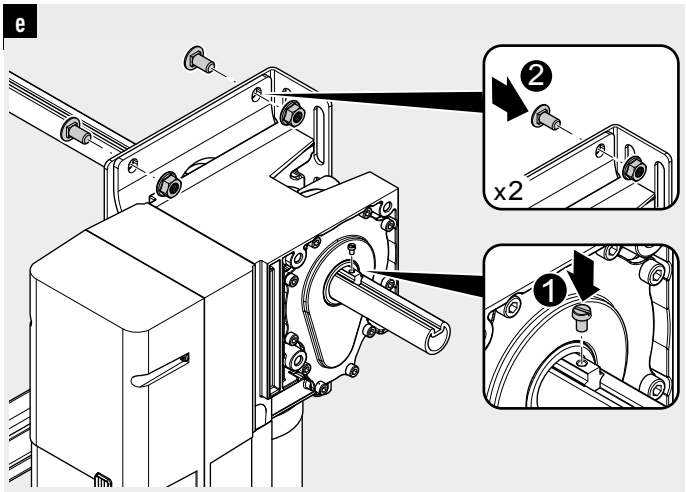
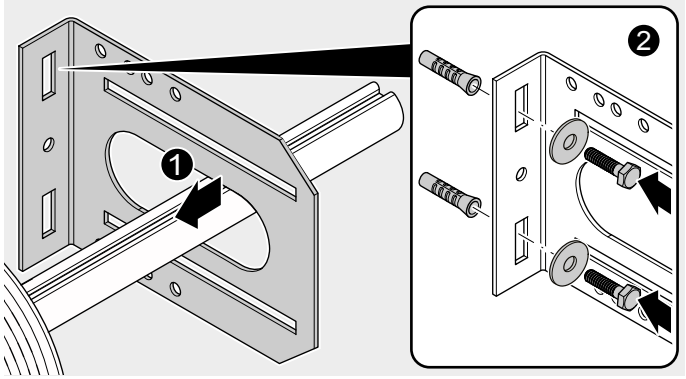
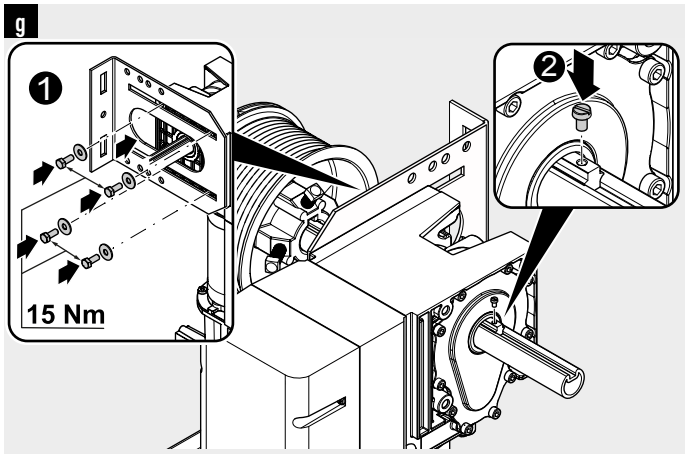


Assembly with Universal torque support

f



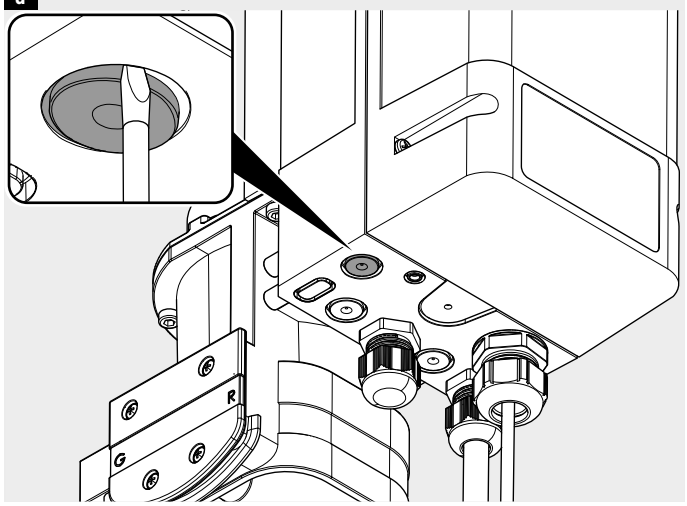
g



4.4 Electrical installation

1. Using additional cable glands

a



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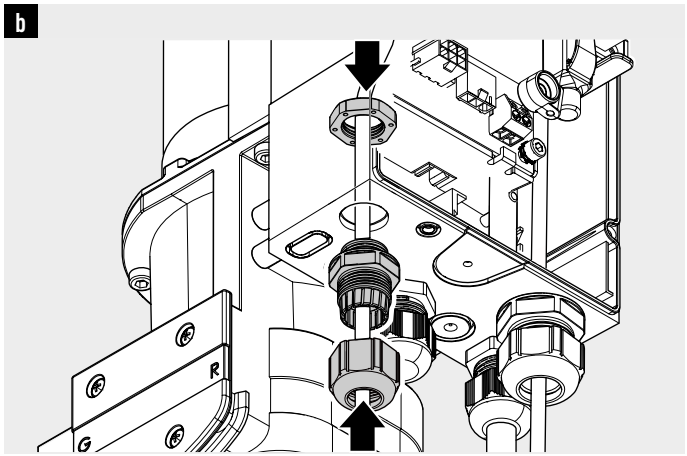

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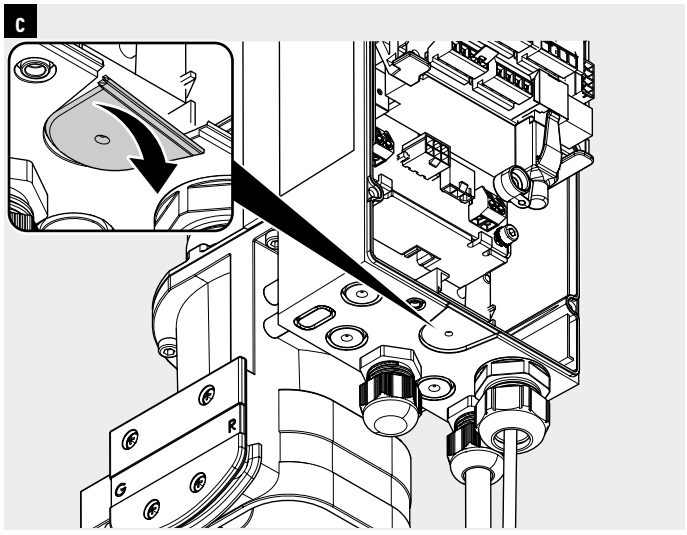

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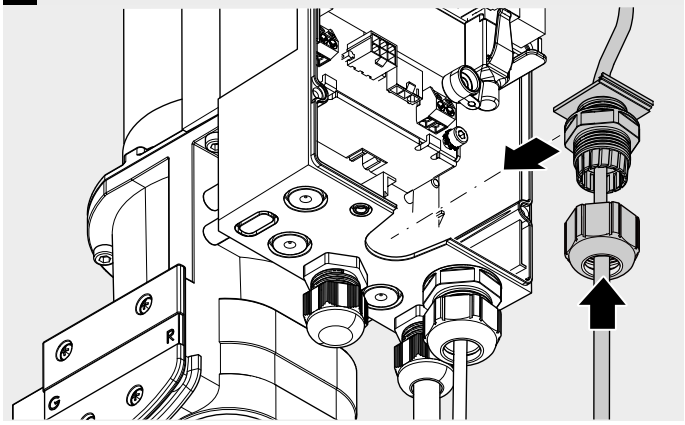
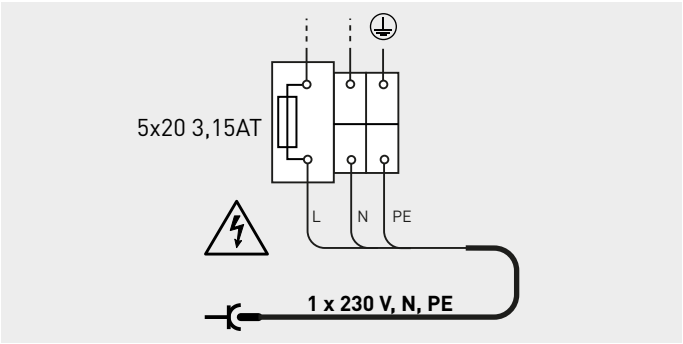
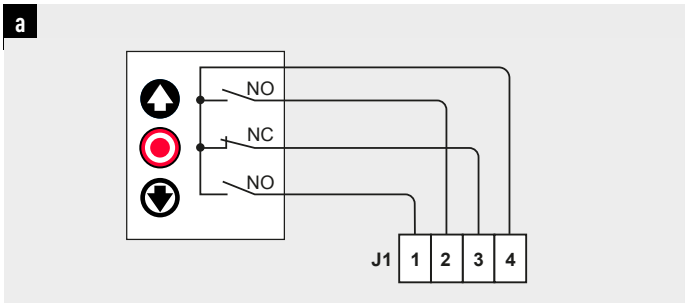


2. Mains connection



3. Input J1 – External control device

a



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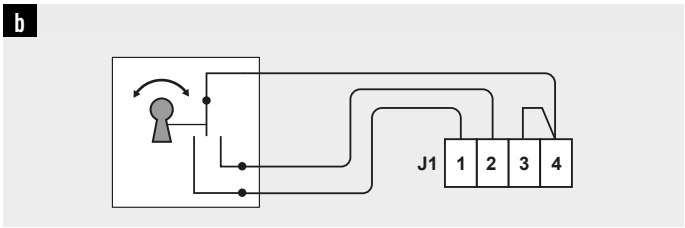

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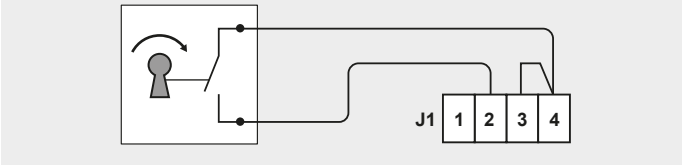

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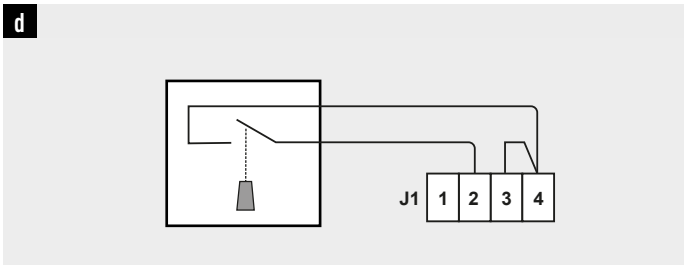
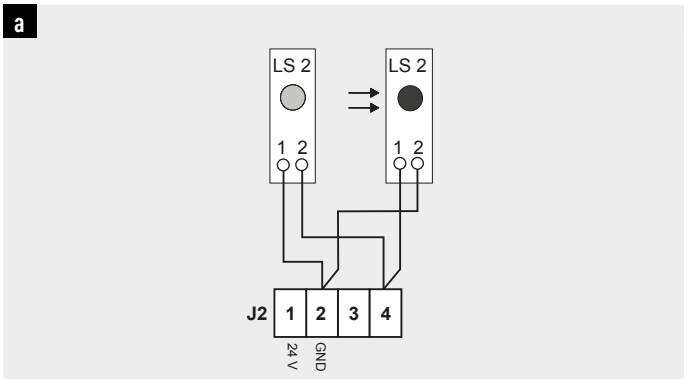


4. Input J2 – Photoelectric sensor

a



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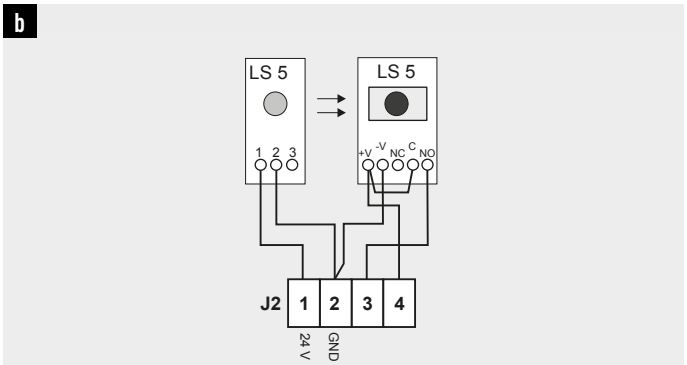

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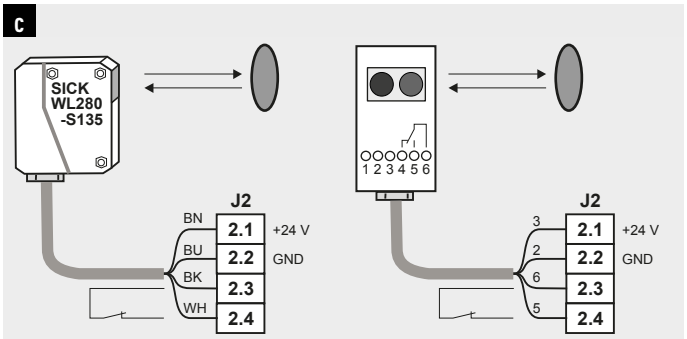
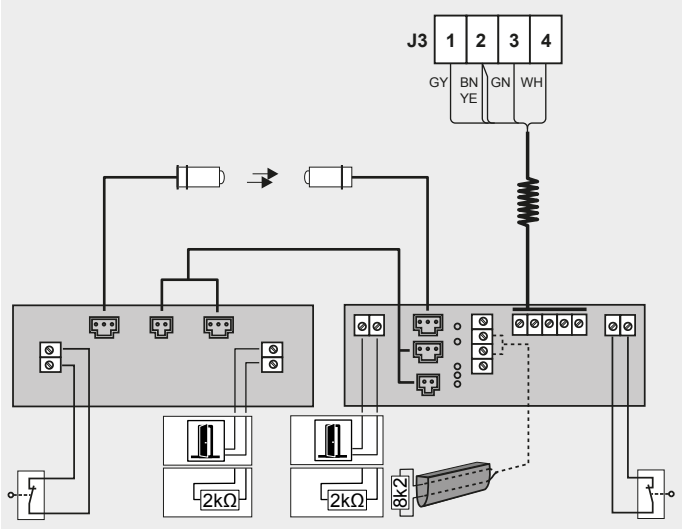
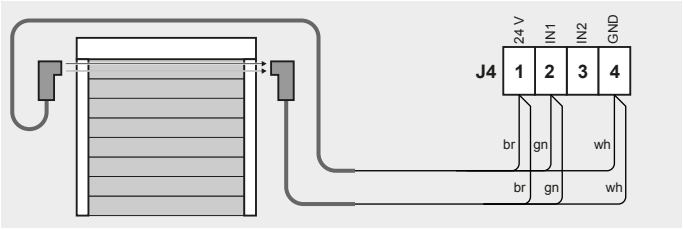


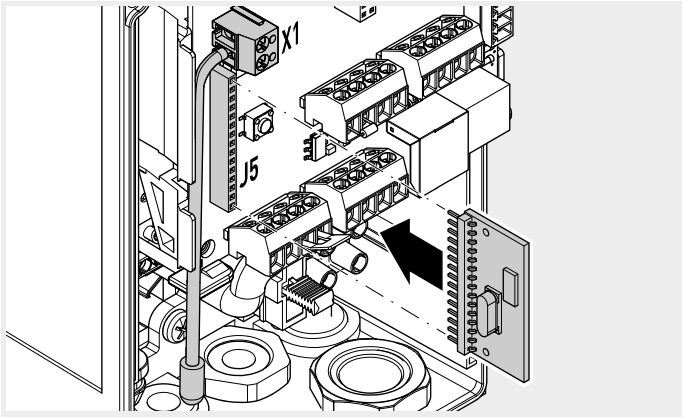
5. Input J3 for door connection box



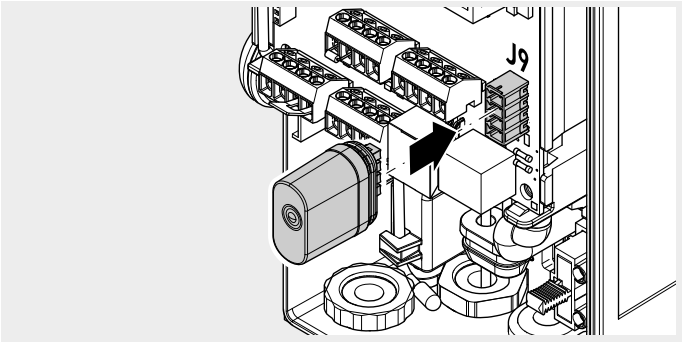
6. Input J4 – Roll-up protection mechanism



7. Slot J5 – Receiver module (optional accessory)

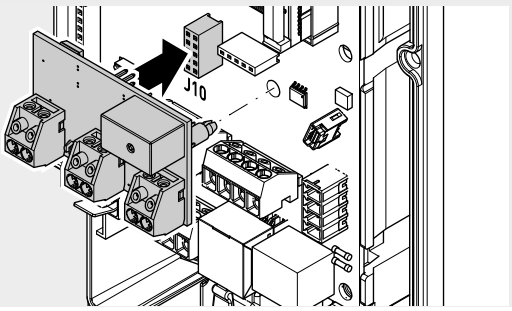


8. Slot J9 – BTD-K (optional accessory)



9. Slot J10 – Option module (optional accessory)

a



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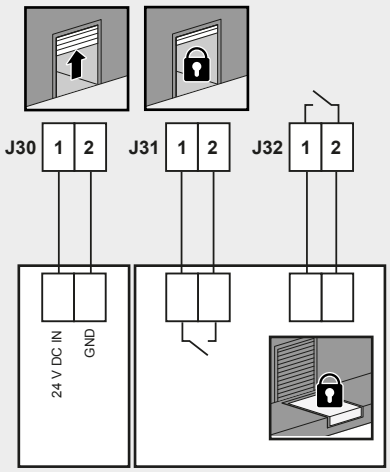
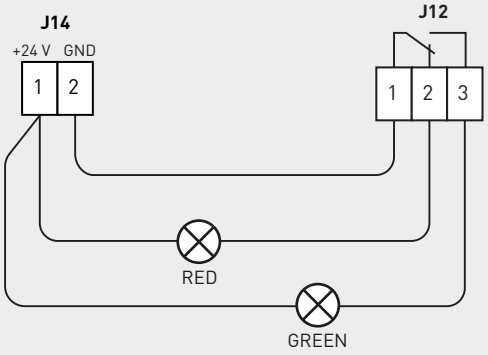
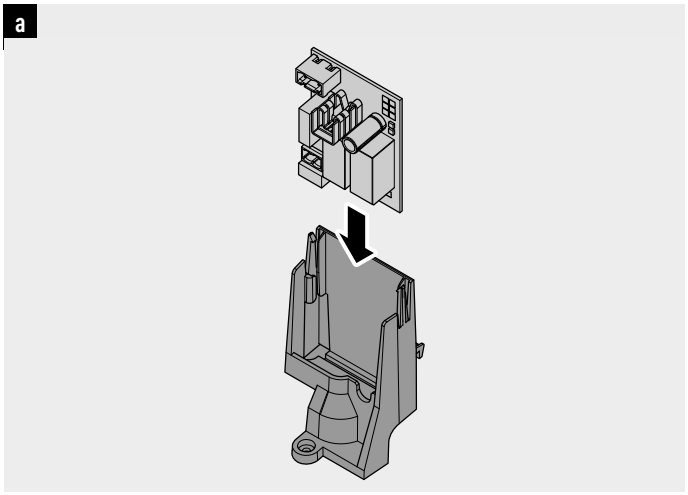


10. Connection J12 – Status relay



11. Steckplatz J13 - DCC-Akku Adapter (optionales Zubehör)

a



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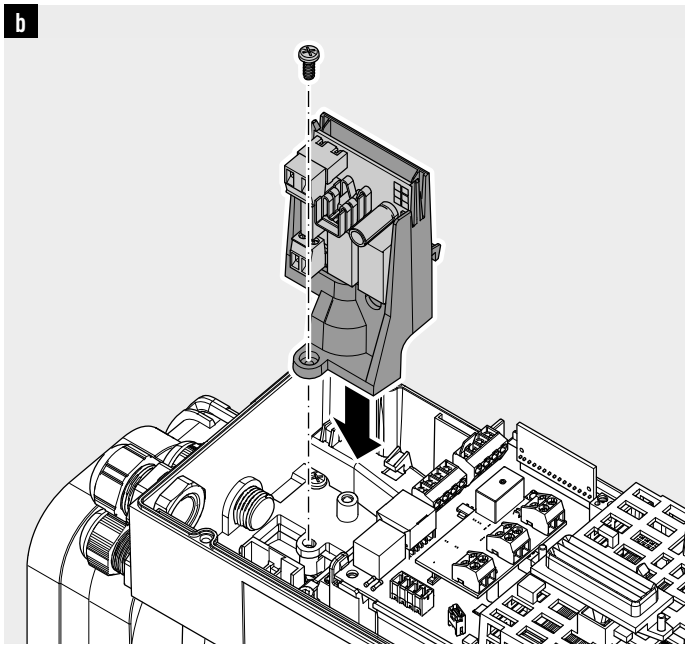

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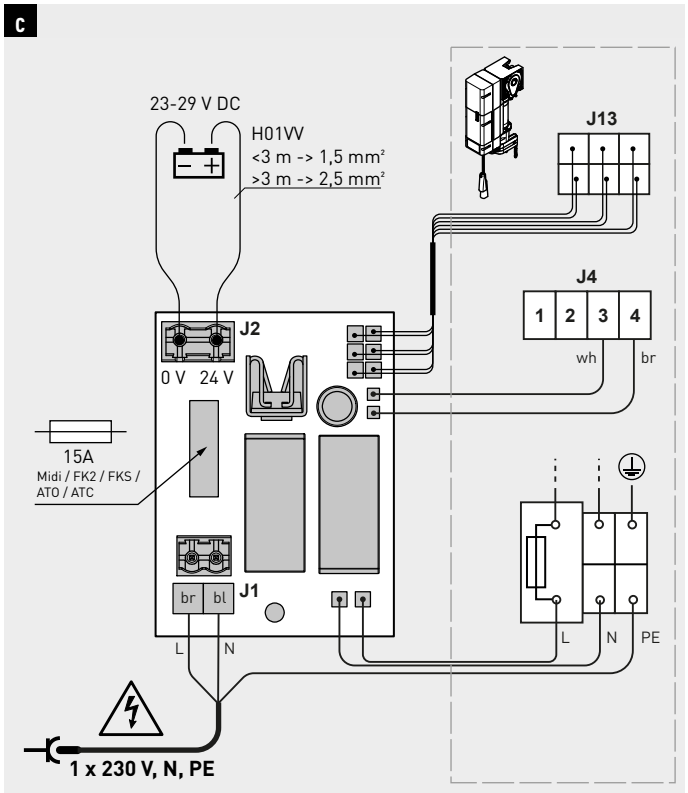
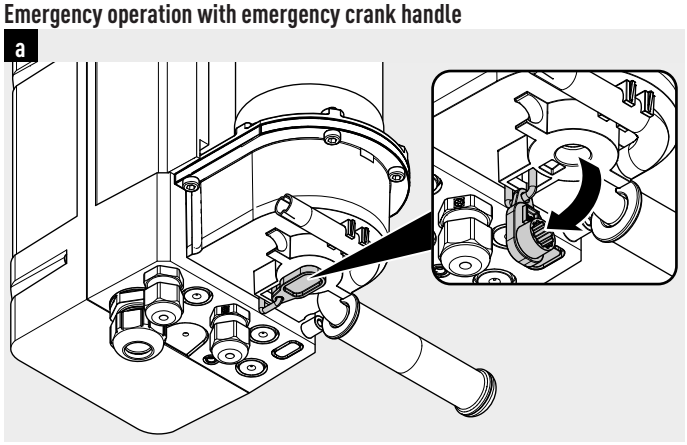


8 Operation

Emergency operation with emergency crank handle

a



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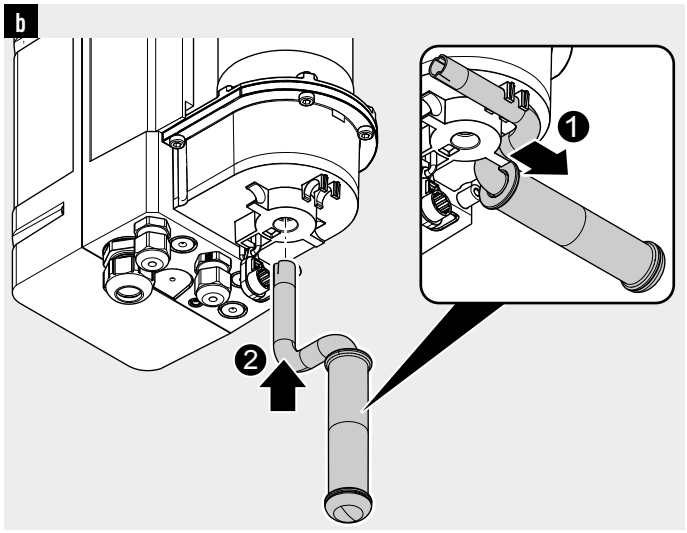

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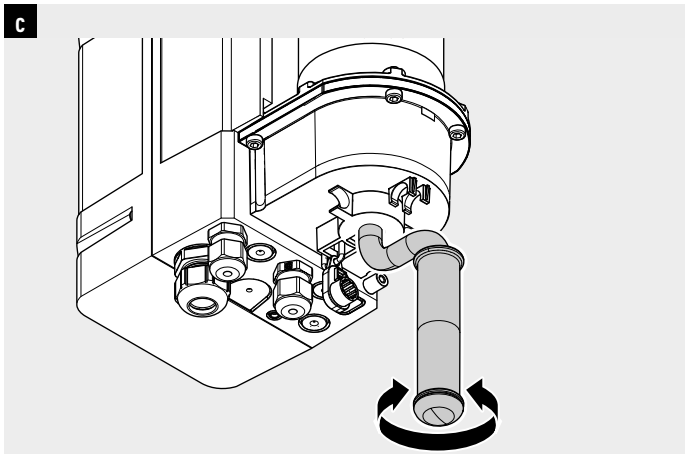
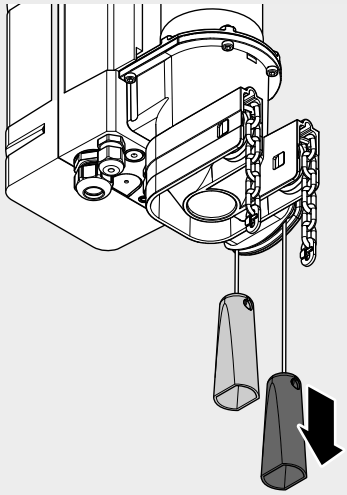
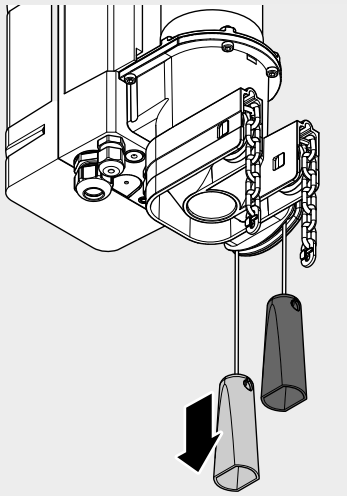


Emergency operation with quick chain

d

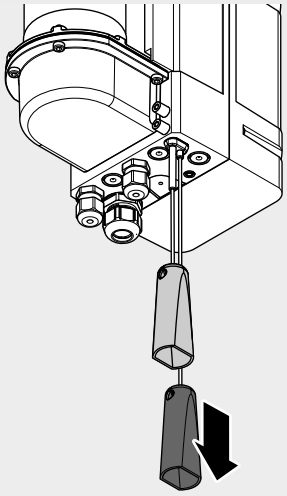


e



Emergency operation with mechanical emergency

f



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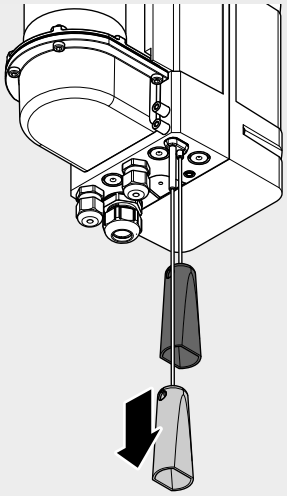

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