

Powerdrive PL-HT KIT

EN Pre-installation instructions VP

190485-00

GEZE

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1 Introduction

1.1 Symbols and illustrations

Warning notices




In these instructions, warnings are used to warn against material damage and injuries.

- ▶ Always read and observe these warnings.
- ▶ Observe all measures marked with the warning symbol and warning word.

Warning symbol	Warning word	Meaning
	DANGER	Danger to persons. Non-compliance will result in death or serious injuries.
	WARNING	Danger to persons. Non-compliance may result in death or serious injuries.
	CAUTION	Danger to persons. Non-compliance can result in minor injuries.

More symbols and illustrations

Important information and technical notes are highlighted to explain correct operation.

Symbol	Meaning
	means "important note". Information to prevent property damage, to understand or optimise the operation sequences.
	means "additional Information"
	Symbol for an action: This means you have to do something. ▶ If there are several actions to be taken, keep to the given order.

1.2 Revisions and validity

Version 00: valid for PL-HT Kit from date of manufacture 2019.

1.3 Product liability

In compliance with the liability of the manufacturer for his products as defined in the German "Product Liability Act", compliance with the information contained in this brochure (product information and intended use, misuse, product performance, product maintenance, obligations to provide information and instructions) must be ensured. Failure to comply releases the manufacturer from his statutory liability.

1.4 Reference documents

Type	Name
Wiring diagram	DCU1-NT / DCU1-2M-NT
Additional wiring diagrams	DCU1-NT-OP
User manual	DCU1-NT-OP
Faults and corrective measures	DCU1 / DCU1-2M
Cable plan	Single leaf Double leaf
Safety analysis	Automatic sliding doors
Installation instructions	Powerdrive PL-HT KIT
Installation instructions	Powerdrive PL-HT Moving leaf

These documents are subject to change. Use only the most recent version.

2 Fundamental safety precautions



- ▶ Please also note the fundamental safety precautions in the installation instructions for the Powerdrive PL-HT sliding door system.

2.1 Intended use

The Powerdrive PL-HT sliding door system is suitable for the construction of an automatic sliding door system that is designed for use in the medical field and in areas with high hygienic requirements. The completely assembled and tested Powerdrive PL-HT drive unit must be assembled and put into operation in accordance with the pre-installation instructions for the Powerdrive PL-HT sliding door system.

The sliding door system is used for the automatic opening and closing of a building passage. The sliding door system may only be used in a vertical installation position and in dry rooms within the permitted application area (see installation and service instructions).

The sliding door system is designed for pedestrian traffic in buildings.

The sliding door system is not designed for the following uses:

- for industrial use
- for areas of application which do not serve pedestrian traffic (such as garage doors)
- on mobile objects such as ships

The sliding door system may only be used:

- in the modes of operation provided for by GEZE
- with the components approved / released by GEZE
- with the software delivered by GEZE
- in the installation variants / types of installation documented by GEZE
- within the tested/approved area of application (climate / temperature / IP rating)

Any other use is considered non-intended and will lead to the exclusion of all liability and warranty claims to GEZE.

2.2 Safety notices

- Intervention and modifications which influence the safety technology and functionality of the door system may only be carried out by GEZE.
- Problem-free and safe operation assumes proper transportation, proper set-up and installation, qualified operation and correct maintenance have taken place.
- The relevant accident prevention regulations and other generally recognised safety-related or health & safety rules must be kept.
- Only original accessories, original spare parts and accessories approved by GEZE guarantee problem-free function of the door system.
- The mandatory installation, maintenance and repair work must be performed by properly trained personnel authorised by GEZE.
- The country-specific laws and regulations are to be observed during safety-related tests.
- GEZE is not liable for any injuries or damage whatsoever resulting from unauthorised changes to the system.
- GEZE does not accept any warranty for combinations with third-party products.
- Furthermore, only original GEZE parts may be used for repair and maintenance work.
- The connection to the mains voltage must be made by a professional electrician. Perform the power connection and equipment earth conductor test in accordance with VDE 0100 Part 610.
- Use an on-site 10-A overload cut-out as the line-side disconnecting device.
- Protect the display programme switch against unauthorised access.
- In compliance with Machinery Directive 2006/42/EC, a risk analysis must be performed and the door system identified in accordance with CE Marking Directive 93/68/EEC before the door system is commissioned.
- Observe the latest versions of directives, standards and country-specific regulations, in particular:
 - DIN 18650: 2010-06 "Building hardware– Powered pedestrian doors"
 - VDE 0100, Part 610: 2004-04 "Installing Electrical Power Systems with Nominal Voltages up to 1000 V"
 - DIN EN 16005: 2013-01 "Power operated pedestrian doorsets; safety in use; Requirements and test methods"
 - DIN EN 60335-1: 2012-10 "Safety of electrical devices for home use and similar purposes - Part 1: General requirements (IEC 60335-1: 2010, modified), German version EN 60335-1: 2012"
 - DIN EN 60335-2-103: 2016-05 "Safety of electrical devices for home use and similar purposes - Part 2-103: Special requirements for drives for gates, doors and windows. (IEC 60335-2-103: 2006, modified + A1: 2010, modified), German version EN 60335-2-103: 2015"



The product should be installed or incorporated in such a way that effortless access to the product is guaranteed during any repairs and/or maintenance, and that any removal costs do not stand out of economic proportion to the value of the product.

2.3 Safety-conscious working

- Secure workplace against unauthorised entry.
- Only use the cables prescribed in the cable plan provided. Cables must be shielded in compliance with the wiring diagram.
- Secure loose, internal drive cables with cable ties.
- Before working on the electrical system:
 - Disconnect the drive from the 230/115 V mains and secure it against being switched back on again. Check isolation from power supply.
 - Disconnect the control unit from the 24-V rechargeable battery.
- When an Uninterruptible Power Supply (UPS) is used, the system will still be under voltage even when disconnected from the mains.
- Always use insulated wire-end ferrules for wire cores.
- Danger of injury with opened drive. Hair, clothing, cables, etc. can be drawn in by rotating parts!
- Danger of injury caused by unsecured crushing, impact, drawing-in or shearing spots!
- Danger of injury due to sharp edges on the drive!
- Danger of injury during installation through freely moving parts!

2.4 Environmentally conscious working

- When disposing of the door system, separate the different materials and have them recycled.
- Do not dispose of batteries and rechargeable batteries with household waste.

2.5 Safety instructions related to transportation and storage

- ▶ Do not throw, do not drop product and product components.
- ▶ Avoid heavy blows.
- Storage temperatures under -30 °C and above $+60\text{ °C}$ can result in damage to the product.
- Protect the product against humidity.
- Dry, well ventilated, closed, weather-proof and UV-protected rooms are suitable as storage areas.

2.6 Qualification

Installation of the GEZE sliding door drive may only be carried out by experts authorised by GEZE.

3 About this document

These instructions describe the pre-installation of the Powerdrive PL-HT automatic sliding door drive.

4 Overview

4.1 Diagrams

Drawing no.	Type	Designation
70722-9-0950	Drive drawing	Powerdrive PL-HT drive
70506-2-0263	Production drawing	Track made to measure for Powerdrive PL-HT
70722-2-0250	Production drawing	Carrier made to measure for PL-HT
70722-2-0207	Production drawing	Ramp for left hand slide to open made to measure for PL-HT
70722-2-0208	Production drawing	Ramp for right hand slide to open made to measure for PL-HT
70722-1-0119	Production drawing	HPL/ wooden leaf mounted PL-HT
70722-2-0215	Production drawing	Frame right / left / top
70722-2-0218	Production drawing	Frame right / left / top
70722-2-0229	Production drawing	Floor guide profile
70722-2-0235	Component drawing	Suspension profile leaf PL-HT
70722-2-0253	Component drawing	Suspension profile leaf HPL/WOOD PL-HT
70722-2-0237	Production drawing	Frame right with floor guide
70722-2-0238	Production drawing	Frame left with floor guide
70723-2-0239	Production drawing	Floor guide profile right
707023-2-0240	Production drawing	Floor guide profile left
707023-2-0250	Production drawing	Carrier made to measure
70722-2-0252	Production drawing	Wooden leaf PL-HT
70722-2-0255	Production drawing	Seal silicone profile PL-HT made to measure



The diagrams are subject to change without notice. Use only the most recent version.

4.2 Tools and aids

Tool	Size
Tape measure	
Marking pen	
Torque spanner	
Allen key	2 mm, 2.5 mm, 3 mm, 4 mm, 5 mm, 6 mm
Open-ended spanner	8 mm, 10 mm, 13 mm, 15 mm
Screwdriver set	Slot up to 6 mm
Side-cutting pliers	
Crimping pliers for cables	
Wire stripper	
Multimeter	
Display programme switch DCU1/Service terminal ST220/GEZEconnects	

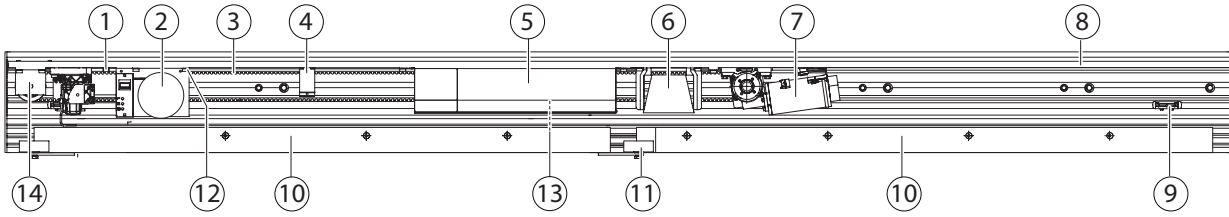
4.3 Torques

The torques are given at the respective installation step.

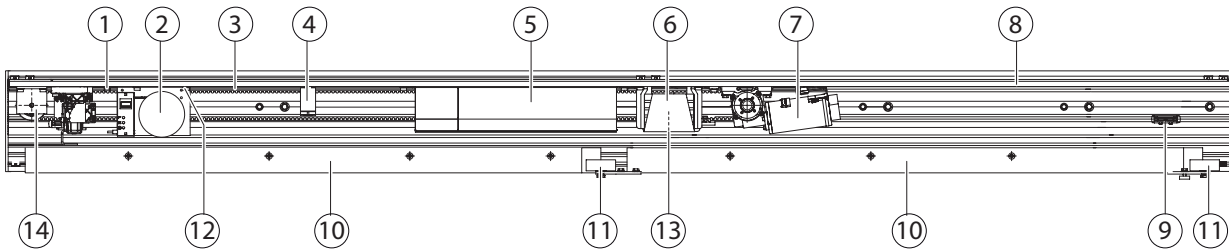
4.4 Components and assembly groups

These illustrations show the equipment of a standard drive in 1-leaf version, right and left slide to open. The structure of the assembly groups can vary depending on the drive equipment or version. Precise details about positioning of the individual components can be found on the drive drawing (70722-9-0950).

1-leaf, right hand slide to open



1-leaf, left hand slide to open



4.5 Bill of material VP-Kit Powerdrive PL-HT

- | | | | | | |
|---|----------------------|----|-------------------|---|---|
| 1 | Transformer earthing | 8 | Track | - | Div. clear adhesive labels |
| 2 | Transformer | 9 | Stop buffer | - | Accessories attachment drive components |
| 3 | Toothed belt | 10 | Ramp | - | Accessories for cable fastening |
| 4 | Cable holder | 11 | Guide roller | - | Installation instructions |
| 5 | Control unit | 12 | Transformer cable | - | User manual |
| 6 | Rechargeable battery | 13 | Driver | - | Wiring diagram |
| 7 | Gear motor | 14 | Return pulley | - | Test log |
| | | | | - | Safety analysis |
| | | | | - | EC Installation Declaration of Conformity |
| | | | | - | Test certificate booklet |
| | | | | - | Type test mark |
| | | | | - | Drive drawing |
| | | | | - | Roller carriage |

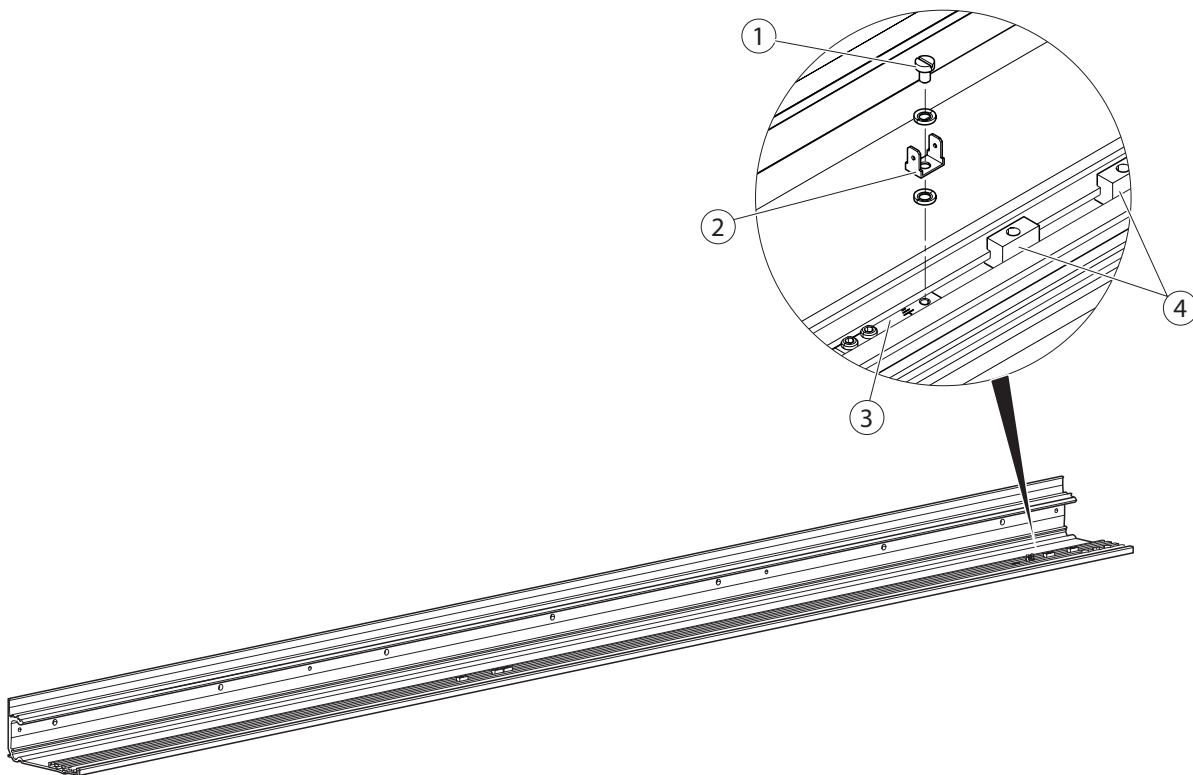
5 Pre-installation

The up-to-date drive drawing is applicable for the pre-installation work to be carried out. All components must be identified and installed in accordance with the drive drawing.

5.1 Cutting the track to size

- ▶ Check profiles for damage.
- ▶ Cut the track (Pos. 8 in the assembly group list, Chapter 4.5) to the required length (see processing drawings, Chapter 4.1).
- ▶ Check whether additional bore holes are necessary (see production drawing for track made to measure, Chapter 4.1).
- ▶ Clean the track after processing.

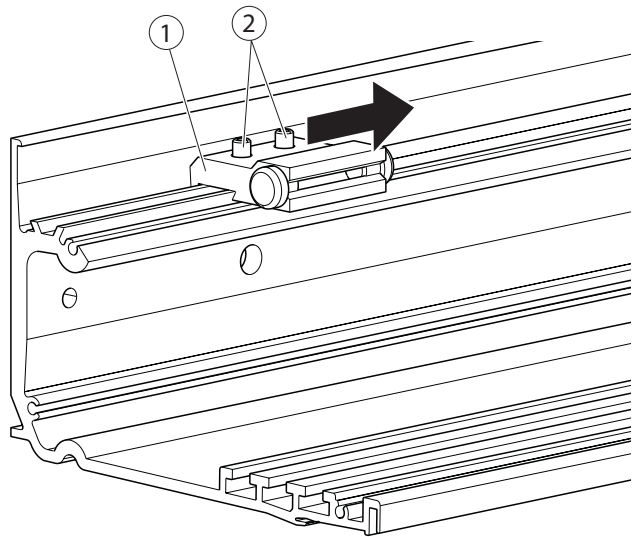
5.2 Preparing the track



- ▶ Push sliding blocks (4) and earth connectors (3) into the mounting groove in accordance with the drive diagram.
- ▶ Screw the device flat plug (2) to the earth connector (3) using the slotted pan head screw M4 × 6 (1) (torque 3.5 Nm).

5.3 Installing stop buffers

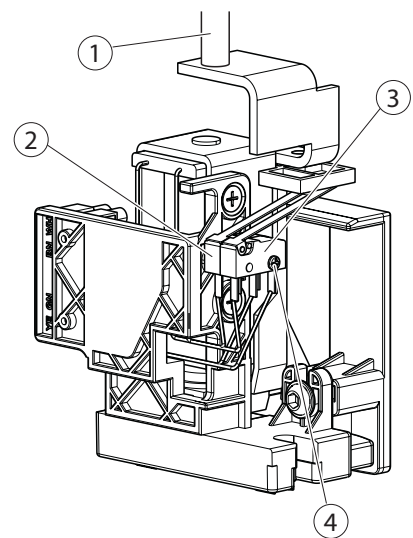
- ▶ Push the stop buffers (1) onto the track from the left and right.
- ▶ Tighten the Allen screws (2) of the stop buffer **slightly**.



5.4 Connecting the contact on the toothed belt lock (optional)

- ! ▶ Only insert the locking pin (1) in again after the cover has been set in place.

- ▶ Place the alarm contact switch (3) on the feed-back switch (2).
- ▶ Fix both switches in place on the locking mechanism using M2.3 x 18 (4) screw and spring washer.
- ▶ Connect cable.
- ▶ Shorten the switching flag of the alarm contact switch.

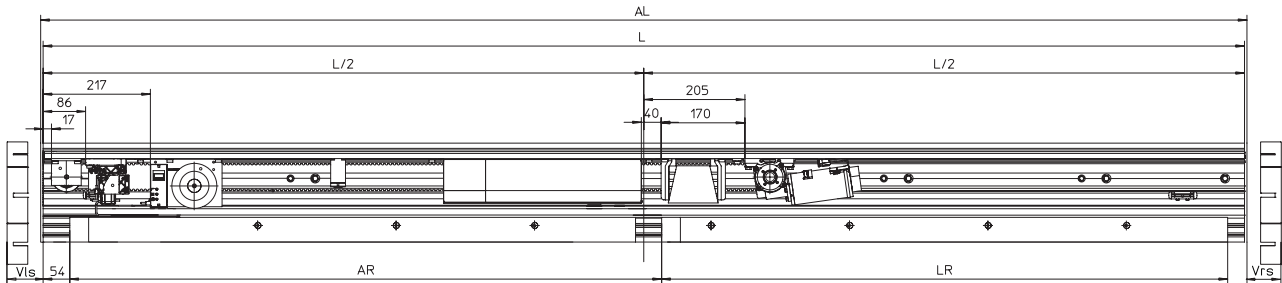


5.5 Installing the drive components

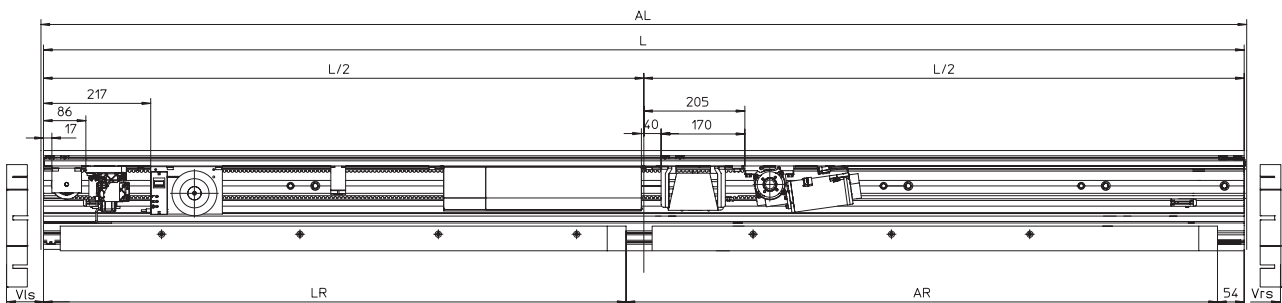


The exact positioning of the components is given on the drive drawings.

Illustrated: right hand slide to open, passage width 1065 mm



Illustrated: left hand slide to open, passage width 1065 mm



Legend:

AL	Length of drive
L	Running track length
ÖW	Opening width
LR	Ramp length
AR	Ramp gap
FB	Leaf width
FH	Leaf height
Z	Length of toothed belt
Vrs	Extension left
Vls	Extension right

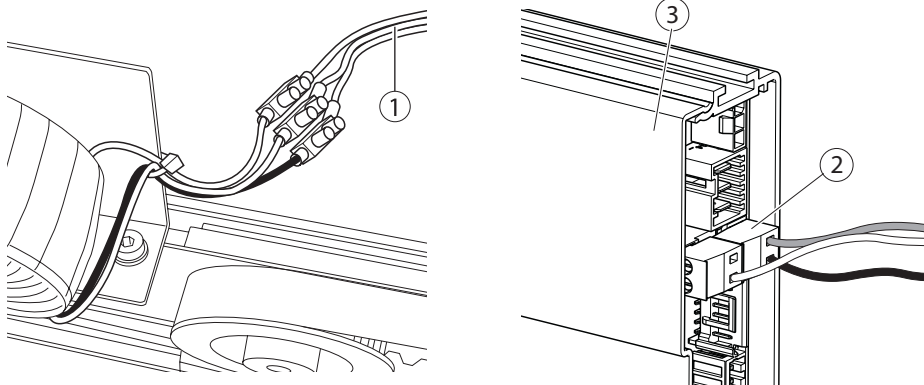


When the drive is extended (Vls / Vrs) the positions of the components must be adapted accordingly.

- ▶ Install the components with the screws provided in accordance with the drawing.
 - Torque for components which transfer force: 15 Nm
 - Torque for other components: 8 Nm

5.6 Connecting transformer and control unit

- ! ▶ Make sure that cables are routed and secured in such a way that they do not become jammed when the cover is positioned and cannot come into contact with moving components.

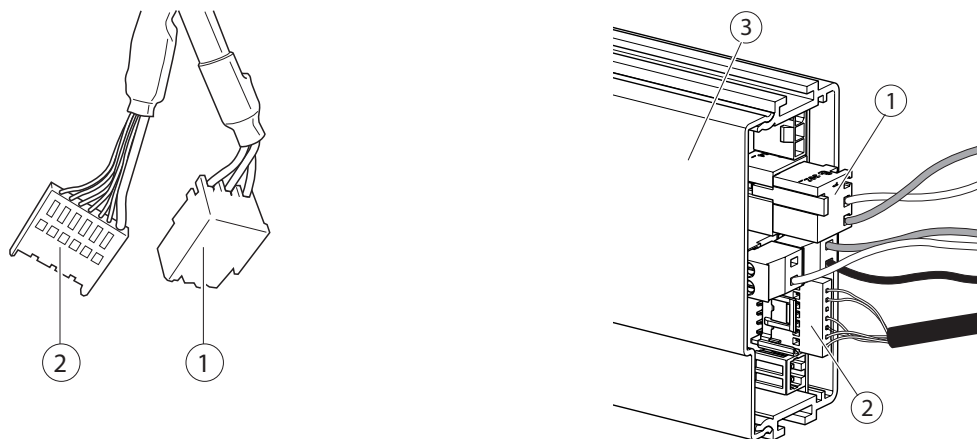


- ▶ Cut the transformer cable (1) from the transformer to the control unit (3) to size.
- ▶ Fit wire-end ferrules to the transformer cable (1).

- ! ▶ Note earthing connection!
- ▶ Do not mix up wires!

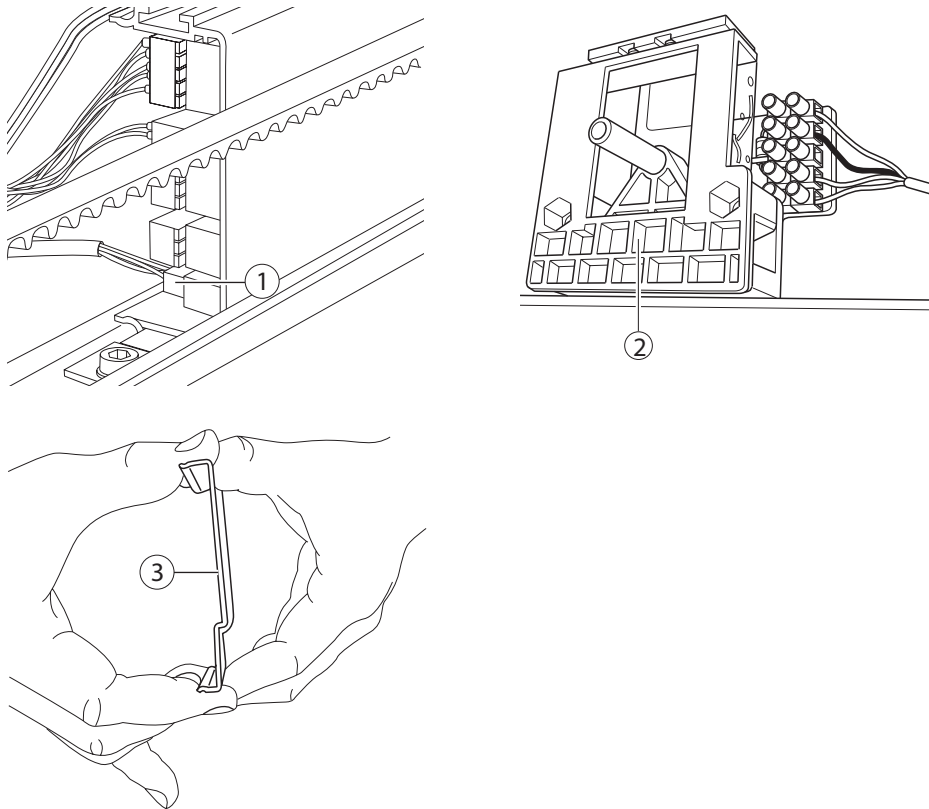
- ▶ If necessary, shorten and strip cable (1), attach insulated wire-end ferrules and connect to the connector (2) (see wiring diagram).
- ▶ Connect the connector (2) to the control unit (3).

5.7 Connecting drive motor and control unit



- ▶ Route the rotary transducer cable (2) and motor connection cable (1) to the control unit (3).
- ▶ Insert the connector into the control unit (3).

5.8 Connecting locking (optional) and control

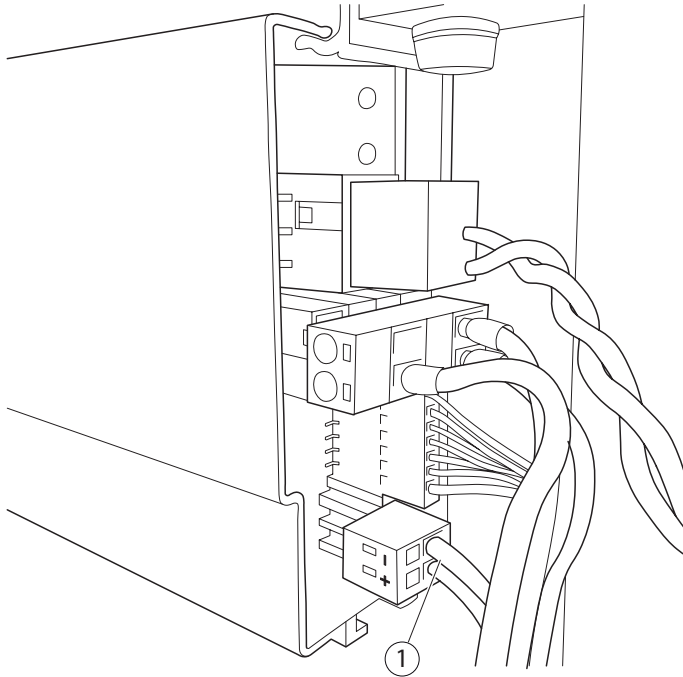


- ▶ Plug in the locking cable (1) into the control unit.
- ▶ Lay cable to the locking mechanism, shorten if necessary, strip and attach insulated wire-end ferrules.
- ▶ Connect cable to locking mechanism (2) (see wiring diagram).
- ▶ Place cover (3) on control unit and lock in place. The retention force of the cover can be increased by slightly bending the cover.



- ▶ When positioning the cover, do not trap any cables.

5.9 Checking the connection between rechargeable battery and control unit

**CAUTION!**

Danger of injury due to impact and crushing!

When the rechargeable battery cable is plugged in, the door leaves can move unexpectedly.

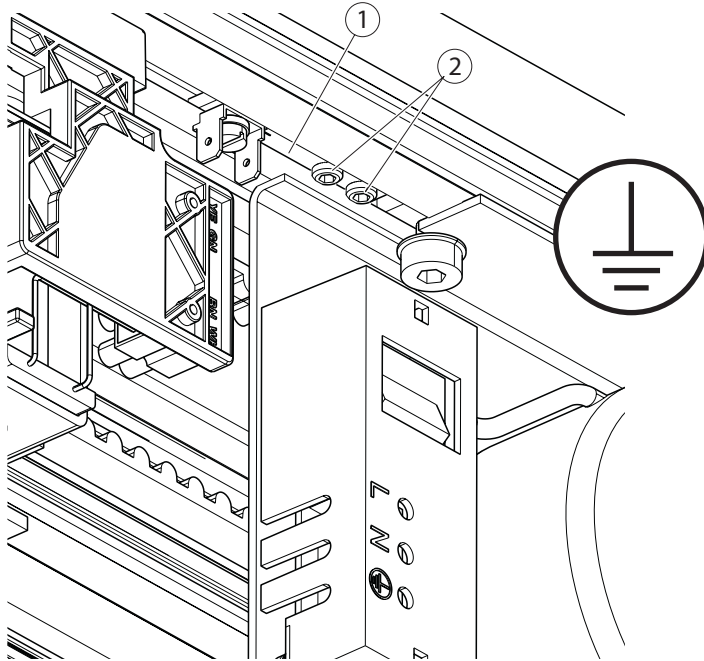
- ▶ Make sure that the rechargeable battery cable is not plugged into the control unit.



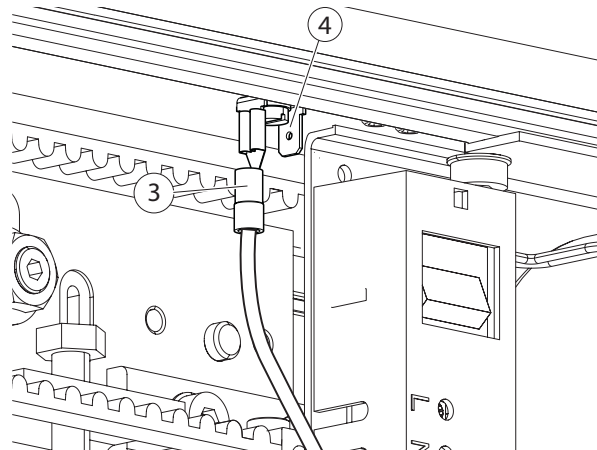
The rechargeable battery is not connected to the control until the production test, Chapter 5.12, or during commissioning.

- ▶ Check whether the rechargeable battery cable (1) is long enough.
- ▶ If necessary, plug the rechargeable battery extension cable to the rechargeable battery cable.

5.10 Mounting the transformer earthing



- ▶ Slide the earthing rail (1) to its final position.
- ▶ Tighten 2 Allen screws (2) (torque 5 Nm).
- ▶ Connect the earthing cable (3) from the transformer to the device flat plug (4).



5.11 Testing cover earthing (on site)

- ▶ Make sure that there is a cover earthing on the cover (on site).

5.12 Production test



WARNING

Risk of fatal injury due to electric shock!

- ▶ The electrical system (230/115 V) may only be connected and disconnected by a professional electrician.
- ▶ Carry out mains connection and earth conductor test in accordance with VDE 0100 Part 610.
- ▶ Carry out the production test as described in the wiring diagram "Automatic sliding doors DCU1-NT/DCU1-2M-NT".

5.13 Unplugging the cables

- ▶ Unplug the rechargeable battery cable, transformer cable (1, Chapter 5.6) and locking cable (optional) (1, Chapter 5.8) on the control unit.
- ▶ Wind up the cables and fix them in place.

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