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# Installation Instructions

**ELEKTROMAT**

**SE 5.24 WS-25,40**

Model: 10003582 00012

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**Symbols**



**Warning** - Potential injury or danger to life!



**Warning** - Danger to life from electric current!



**Note** - Important information!



**Requirement** - Required action!

Schematic representations are based on product examples. Deviations from delivered products are possible.

## **1 General safety information**

### **Specified normal use**

The drive unit is intended for sectional doors with full counter-balancing.

The safe operation is only guaranteed with normal specified use. The drive unit is to be protected from rain, moisture and aggressive ambient conditions. No liability for damage caused by other applications or non-observance of the information in the manual.

Modifications are only permitted with the agreement of the manufacturer. Otherwise the Manufacturer's Declaration shall be rendered null and void.

### **Safety information**

Installation and initial operation tasks are to be performed by trained, skilled fitters only.

Only trained electrical craftsmen are permitted to work on electrical equipment. They must assess the tasks assigned to them, recognise potential danger zones and be able to take appropriate safety measures.

The installation is only to be carried out with the supply off.

Observe the applicable regulations and standards.

### **Coverings and safety devices**

Do not operate unless corresponding coverings and safety devices are fitted/installed.

Ensure that gaskets are correctly positioned and cable glands are correctly tightened.

### **Spare parts**

Use only original spare parts.

## 2 Technical Data

Type	KG 50	
Output torque	50	Nm
Output speed	24	rpm
Output shaft / hollow shaft	25,40	mm
Maximum holding torque	200	Nm
Maximum door weight	2500	N
Supply voltage	1N~ 230	V
Operating current	3,50	A
Operating frequency	50	Hz
Power factor $\cos \varphi$	0,99	
Maximum movement per hour	12	h <sup>-1</sup>
Class of protection	IP 65	
Limit switch range (maximum revolutions of output shaft / hollow shaft)	20	
Temperature range	-10 / +40 (+60)	°C

When using a temperature range of +40°...+60°C use half of maximum movements per hour.



### Caution - Component damage can result!

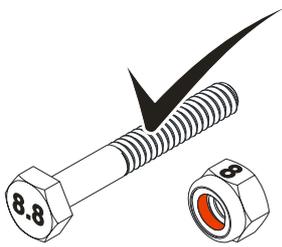
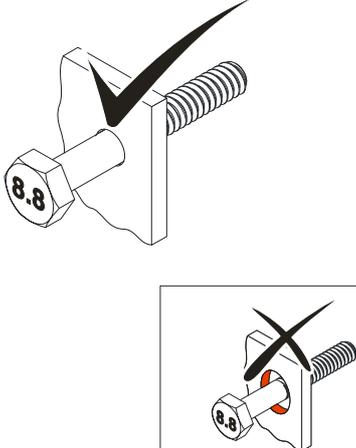
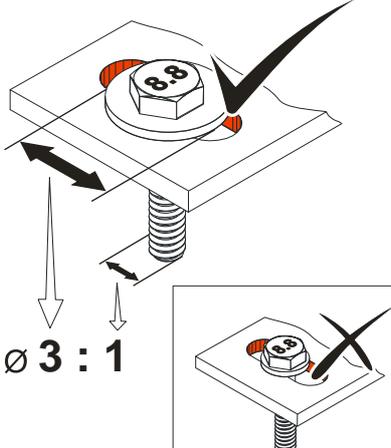
- The maximum current that can be switched over the limit switch is  
1A for 230 V AC and 0.4 A for 24V DC

### 3 Mechanical installation

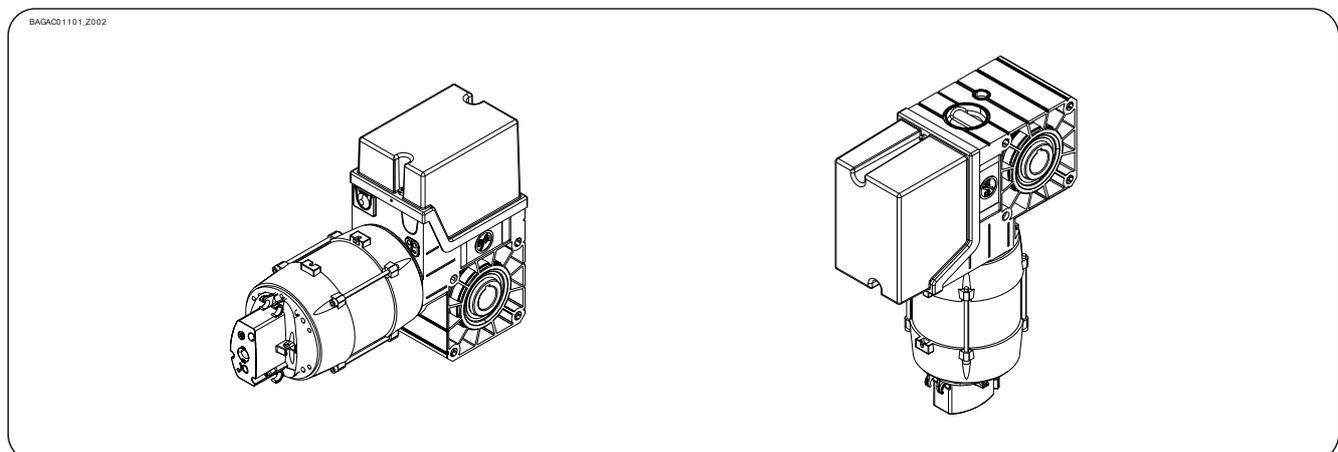
#### Prerequisites

The permissible loads on walls, fastenings, mountings and transmission elements must not be exceeded, even for maximum holding torques or locking torques (▶ refer to technical data).

#### Connection elements:

<ul style="list-style-type: none"> <li>▶ Self-locking connection elements with a minimum strength of 800 N/mm<sup>2</sup> (8.8) must be used.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Utilize the hole diameter to the full.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Use adequately dimensioned washers for elongated holes.</li> </ul>
<p><small>BAGAB00001_2002</small></p>  <p><b>≥ 800 N/mm<sup>2</sup></b></p>	<p><small>BAGAB00002_2002</small></p> 	<p><small>BAGAB00003_2002</small></p>  <p><b>Ø 3 : 1</b></p>

#### Permissible mounting positions



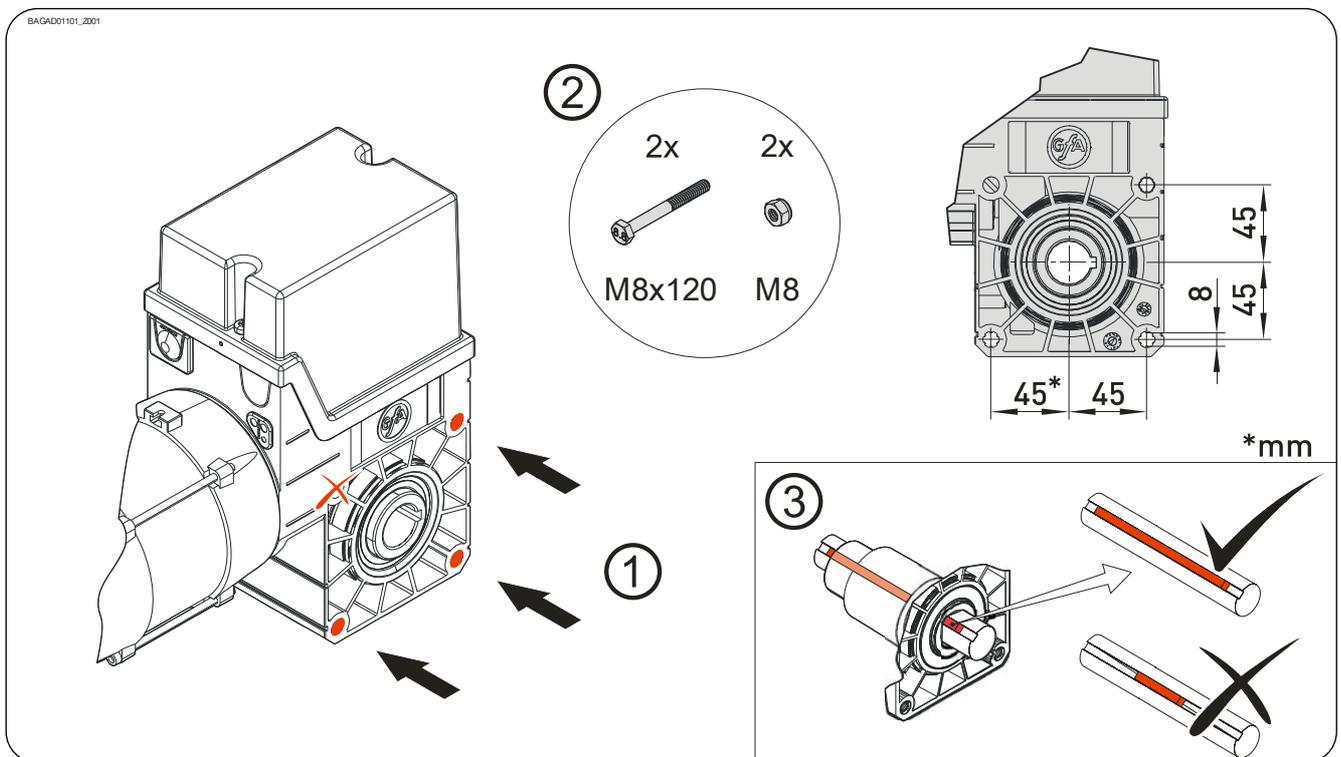
## Mounting

Three holes are provided for mounting.

- ▶ Use at least 2 of these (①).
- ▶ Use the connection elements supplied (②).

Keys are used to connect to the door shaft.

- ▶ Use a key that is at least as long as the hollow shaft (③).



## Installation

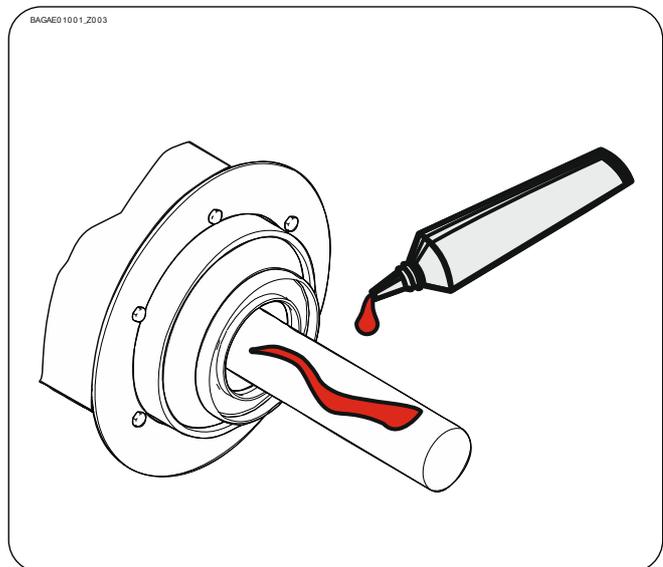
The descriptions below apply to general door specifications. The specifications of the door manufacturer must also be observed during installation.



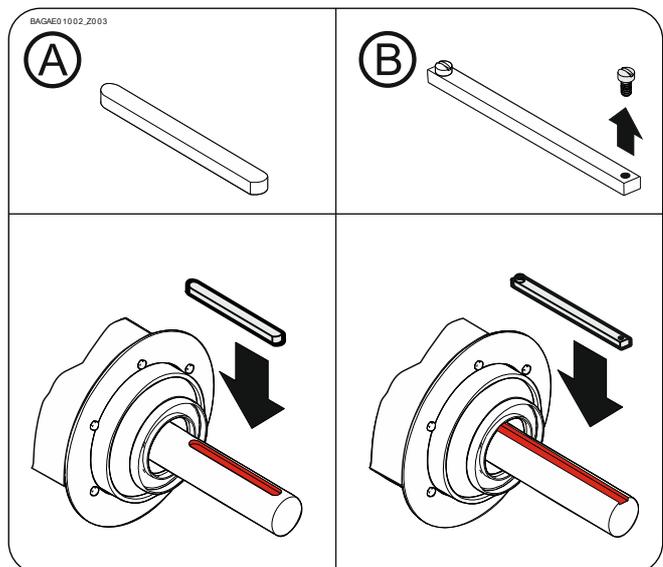
Warning - Potential injury or danger to life!

- During installation, be sure to use a lifting device that has a sufficient load-carrying capacity.

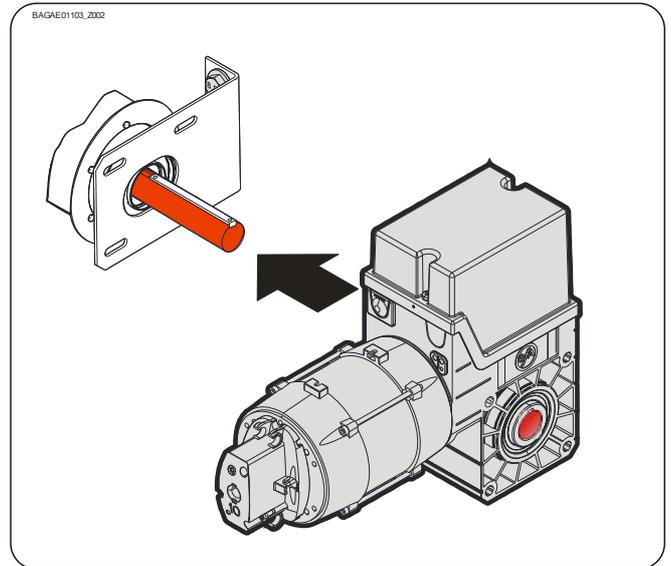
- ▶ Thoroughly grease the door shaft.



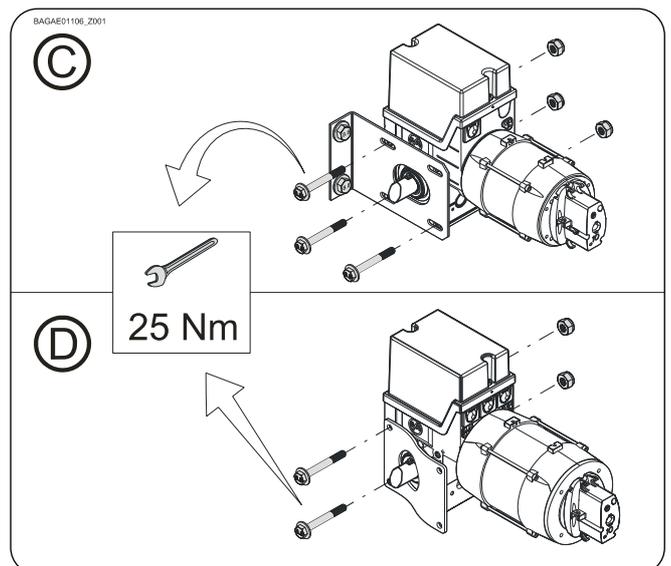
- ▶ Mount the keys. Observe possible variants  
Ⓐ or Ⓑ.



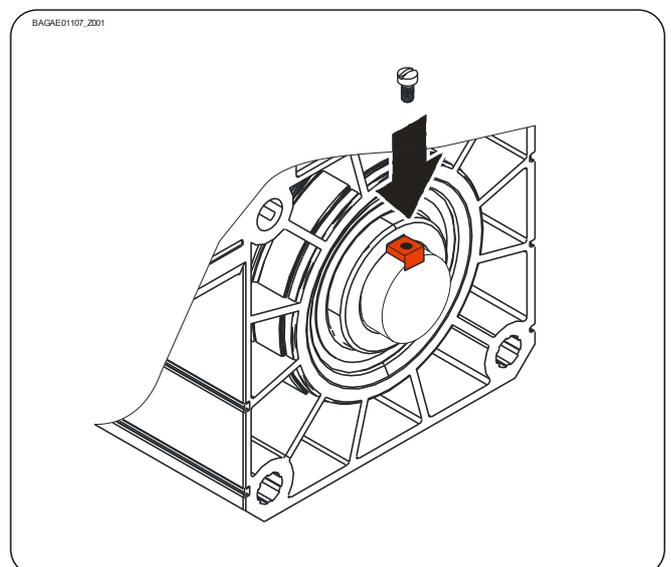
- ▶ Attach the drive unit.



- ▶ Tighten all connection elements on the drive (M8) to 25 Nm. Install all other connection elements according to the specifications of the door manufacturer.



- ▶ Secure the keys (version B only).



## 4 Electrical installation



### Warning - Danger to life from electric current!

- Switch the mains OFF and check that the cables are de-energised
- Observe the applicable regulations and standards
- Make a proper electrical connection
- Use suitable tools



### Installation location for the control!

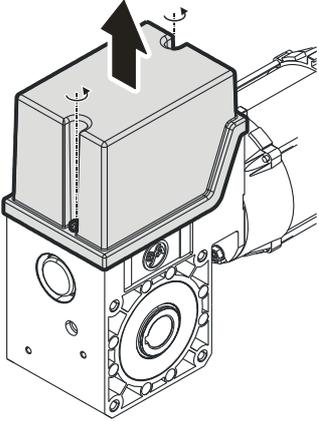
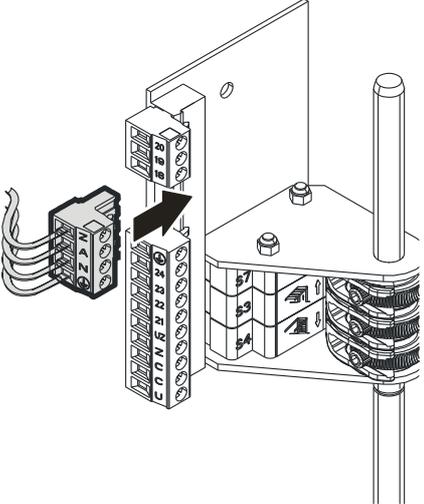
- Use indoors only



### On-site back-up fuse and mains disconnecter!

- Use a single-pole automatic circuit breaker with a maximum of 10 A as protection.
- Connect to the indoor installation via an all-pole disconnecter unit  $\geq 10A$  in accordance with EN 12453 (e.g. plug connection CEE, mains switch)

## Performing electrical installation

<p>Remove the cover.</p>	<p>Connect the supply cables.</p>
<p>BAHG01_2001</p> 	<p>BAHG02_2001</p> 

## Completing the electrical installation

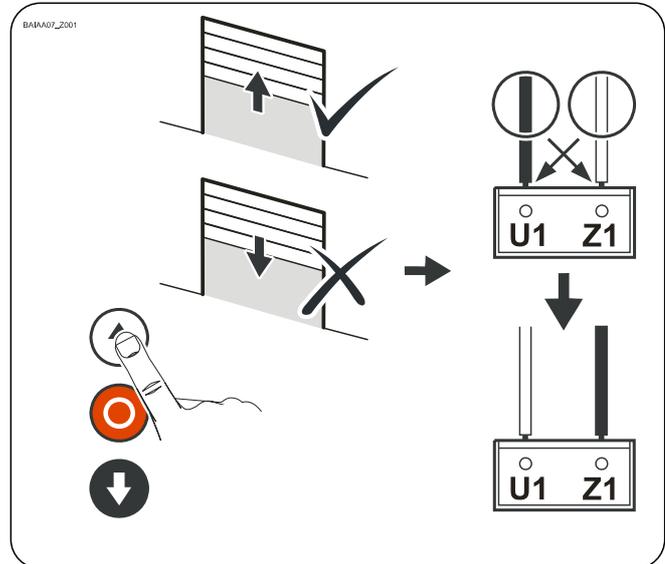
Mount the cable entries and/or cable glands.

## 5 Limit switch adjustment

Adjust the limit switches to define the final limits positions for OPEN and CLOSE.

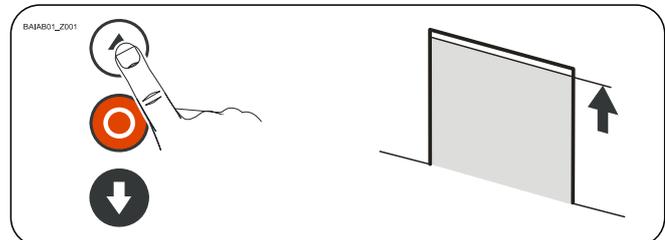
### Prerequisite

The door must open when the OPEN pushbutton is operated. If the door closes, U1 and Z1 must be exchanged with the current switched off.



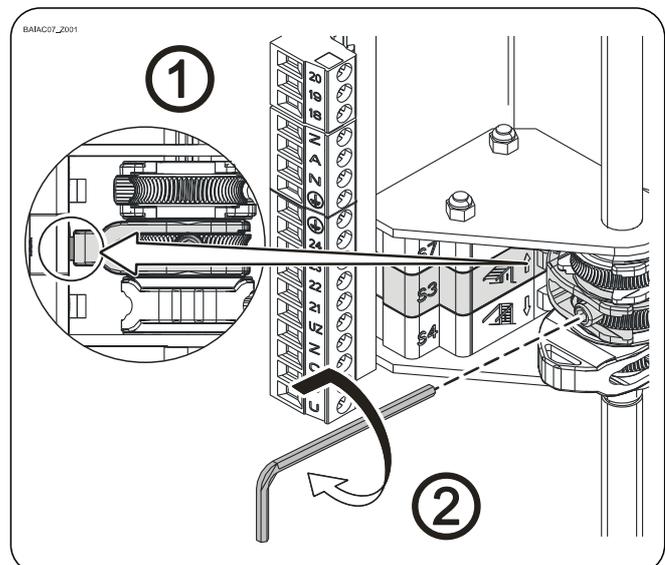
### Adjusting the OPEN limit position

Use the OPEN pushbutton to open the door to the desired OPEN final limit position.



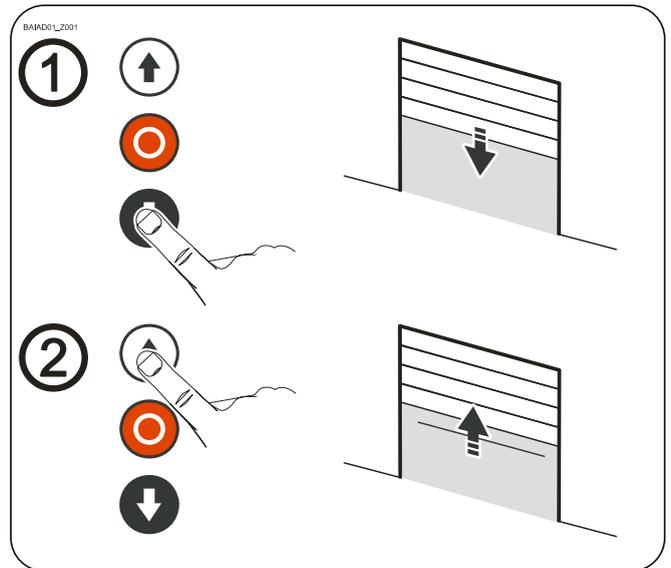
Rotate the cam of the OPEN limit switch S3 to the middle of tappet ①.

Tighten the screw of the cam ②.

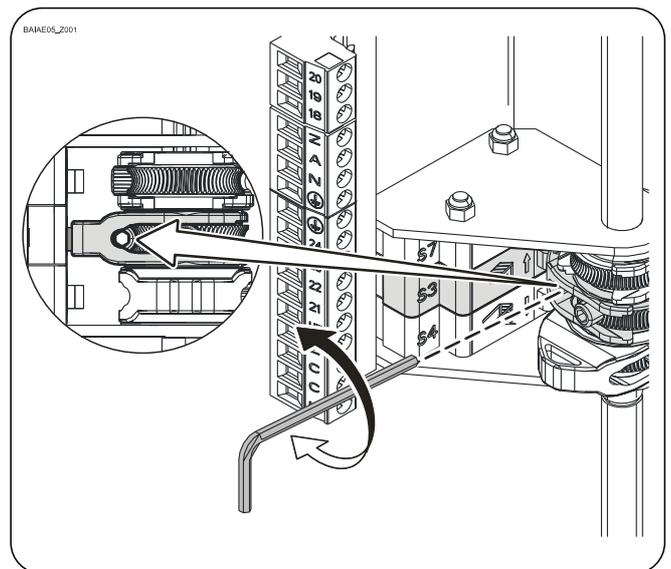


Check the position of the door:

Close the door ① until the cam is free and open the door again ② at OPEN final limit position.



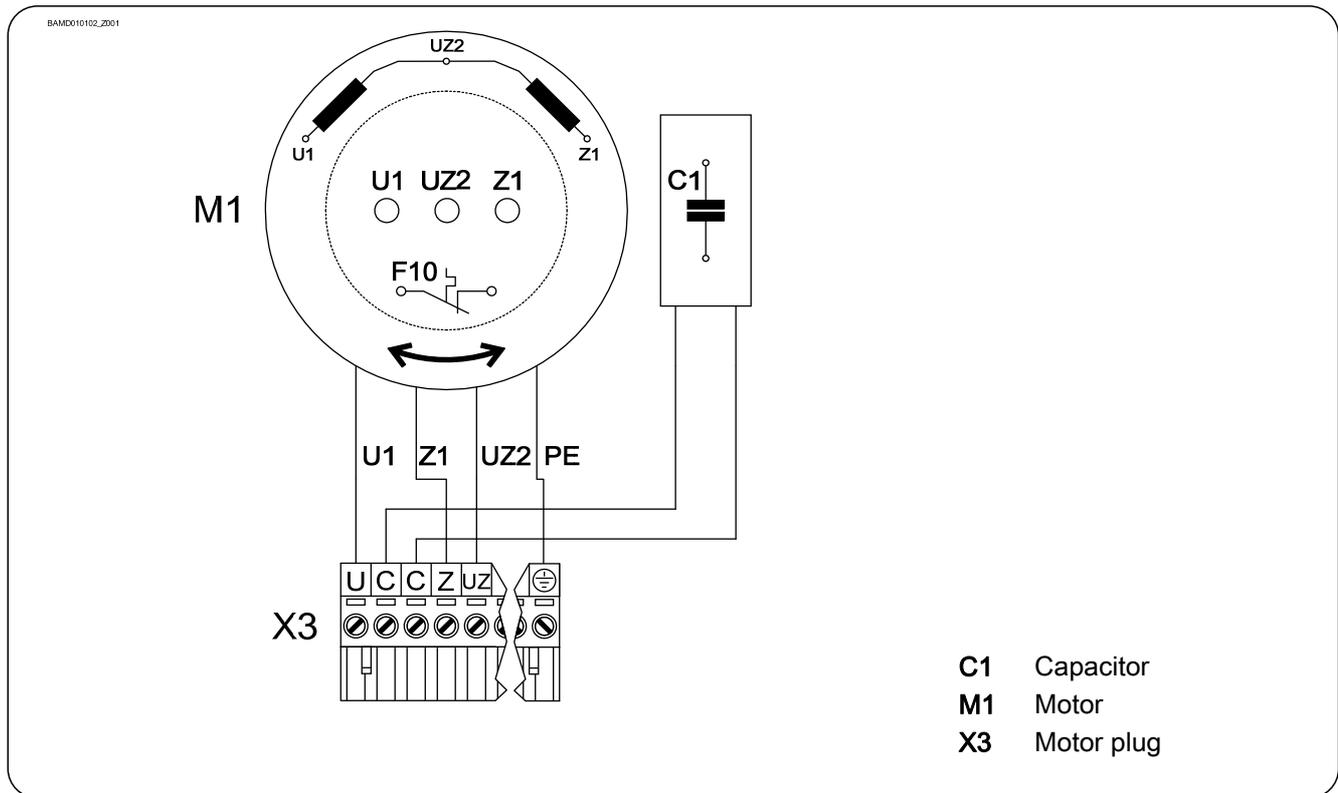
Carry out fine adjustment to correct the OPEN final limit position. Check the door position after correction.



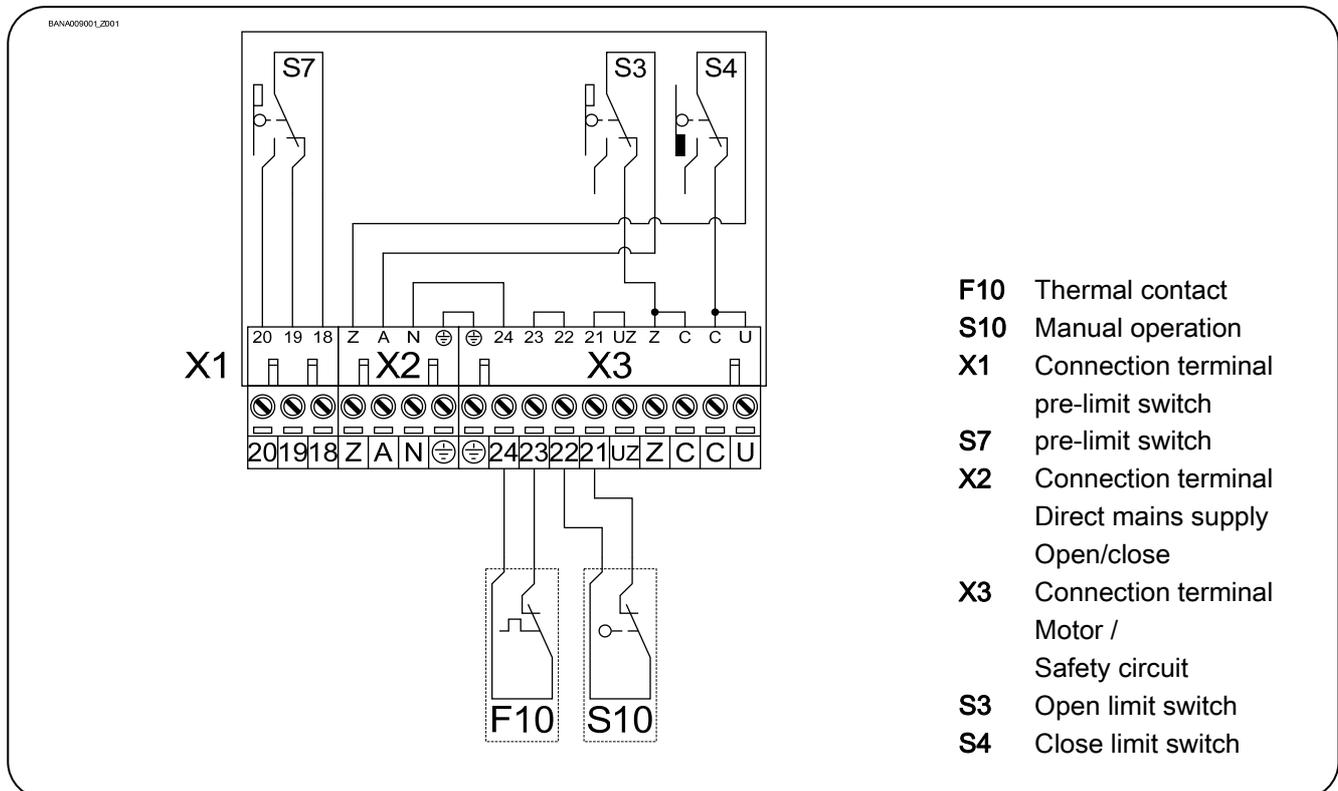
### Adjusting the CLOSE final limit position and auxiliary limit switch

Carry out adjustment as for OPEN final limit position.

## 6 Motor connection



## 7 Limit switch connection



## 8 Emergency manual operation SK (rapid hand chain operator)

The emergency manual operation is provided as a means of opening or closing doors that do not have electric power supply. Operation interrupts the control voltage. Electrical operation is no longer possible.



### Warning - Injury through improper operation!

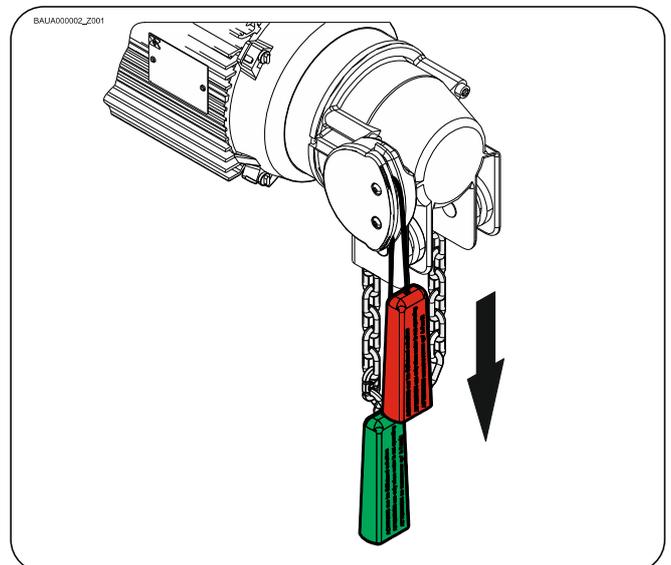
- Disconnect the voltage
- Adopt a secure position
- For drives that have a brake, emergency manual operation should be carried out with the brakes on



### Caution - Component damage can result!

- Do not move the door beyond the final limit positions.

Pull the red grip to activate. Pull the chain to open or close. Pull the green grip to deactivate.



## 9 Completing commissioning / inspection

Check the following components and then install all covers.

### Gearbox

Check the drive unit for loss of oil (a few drops can be neglected). Protect the output-shaft permanently against corrosion.

### Mounting

Check that all connection elements (consoles, torque mounts, screws, locking rings, etc.) are secure and in proper condition.

### Electrical wiring

Check the connection cables and cabling for damage or crushing. Check that the screw connections and plug connections are fitted properly with a good electric contact.

### Emergency manual operation

Check the function with the power disconnected. Perform the check only between the final limit positions.

### Limit switch

Check the final limit positions by opening and closing fully.

### Drive unit



#### Note!

- Engage a qualified engineer to check the drive unit annually
- Apply shorter inspection intervals for doors that are operated frequently
- Observe the applicable regulations and standards

# Declaration of incorporation

in the terms of Machinery Directive 2006/42/EC  
for partly completed machinery, Appendix II Part B



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# Declaration of conformity

in terms of EMC Directive 2004/108/EC

We, the  
**GfA – Gesellschaft für Antriebstechnik**  
hereby declare that the following products are conform with the above  
EC Guideline and are only intended for installation in door equipment.

## SE 5.24 WS-25,40

Standards applied

<b>DIN EN 12453</b>	Doors - safety in use of power operated doors
<b>DIN EN 12604</b>	Doors - Mechanical aspect
<b>DIN EN 60335-1</b>	Safety of household and similar electrical appliances Purposes - Part 1 : General requirements
<b>DIN EN 61000-6-2</b>	Electromagnetic compatibility (EMC) Part 6-2 Generic standard – Emission standard for industrial environments
<b>DIN EN 61000-6-3</b>	Electromagnetic compatibility (EMC) Part 6-3 Generic standard – Emission standard for residential, commercial and light-industrial environments

We undertake to transmit in response to a reasoned request by the appropriate regulatory  
authorities the special  
documents on the partly completed machinery.

### Authorised representative for the compilation of the relevant technical documents

(internal EU address)

Dipl.-Ing. Bernd Synowsky

Documentation representative

Incomplete machines within the meaning of the EC Directive 2006/42/EC shall only be intended to  
be integrated into other machines (or into other incomplete machines/systems) or to be assembled  
with them to form a complete machine within the sense of the Directive. Therefore, this product  
cannot be commissioned before it is determined that the entire machine/system to which it was  
integrated shall comply with the provisions of the Machinery Directive indicated above.

Düsseldorf, 29.12.2009

**Stephan Kleine**

CEO

Signature





