



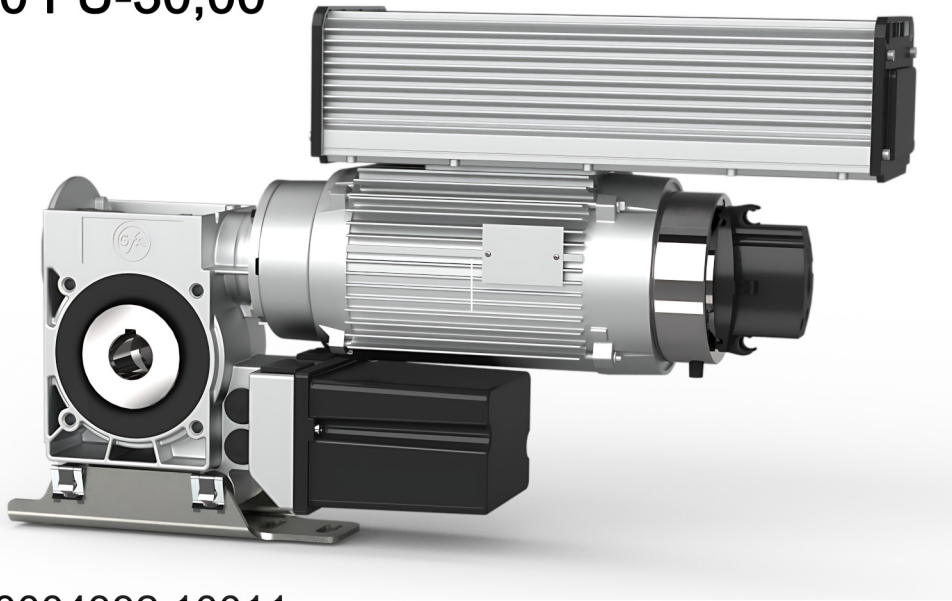
Puertas & Portones Automaticos, S.A. de C.V.
¡Nuestra pasión es la Solución!....

»OPERADOR INVERTER PARA PUERTAS RAPIDAS MARCA ELEKTROMATEN
MOD.SI 8.180 FU-30,00.

Installation Instructions

ELEKTROMAT

SI 8.180 FU-30,00



Model: 10004332 10011

 **DANGER**

Read and understand operator's manual before installation and using this machine!

Failure to follow operating instructions could result in death or serious injury!



-en-

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V04.26



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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!

NOTICE

NOTICE is used to address practices not related to personal injury!

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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 doors, which have to be secured against falling down; a safety brake is included in the gearbox. The drive unit is directly mounted on the door shaft.



WARNING

Danger to life from electric current!

Use this drive only for industrial doors!

- ▶ 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.

Safety instructions



WARNING

Danger to life from electric current!

- ▶ 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.
- ▶ It is the responsibility of the door operator or overall door manufacturer to ensure compliance with requirements of UL 325 for protection against entrapment.
- ▶ It is the responsibility of the manufacturer of the door operator or system to provide the placards as required by UL325 standard.

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 | SG 63F | |
| Output torque | 710 [80] | lbf in [Nm] |
| Output speed OPEN | 30-180 | rpm |
| Output speed CLOSE | 30-90 | rpm |
| Output speed CLOSE > 100 in [2,5 m] | 30-90 | rpm |
| Output shaft / hollow shaft | 1.18 [30,00] | in [mm] |
| Locking torque moment | 4510 [510] | lbf in [Nm] |
| Safety brake (testhouse/approval number) | 14-003612-PR02 | |
| Supply voltage | 1N~ 230 | V |
| Operating current | 7,0 | A |
| Operating frequency | 50/60 | Hz |
| Power factor cos φ | 0,47 | |
| Duty cycle | 1/9 min On/Off | |
| Hand forces | 49 [217] | lbf [N] |
| Class of protection | IP 54 | |
| Limit switch range (maximum revolutions of output shaft / hollow shaft) | 20 | |
| Braking torque | 80 [9] | lbf in [Nm] |
| Braking voltage | 103 | V DC |
| Rectifier type | FU | |
| Temperature range | +41 / +104 [+5 / +40] | °F [°C] |

3 Integrated safety brake

A safety brake is integrated into the gearbox of this ELEKTROMATEN. The safety brake protects against the door dropping due to breakage or wear of the gear teeth. The safety brake works regardless of the mounting position, speed and rotating direction. It is maintenance-free. The specification of the locking torque and the approval number of the safety brake are available in the technical data of these instructions.



Warning - Danger of the door dropping!

If you need to apply more than the permissible force of 390N (according to DIN EN 12604/DIN EN 12453) to move the door by emergency manual operation, this indicates a stalling on the drive unit or door. Releasing the stalling may cause the door to drop.

- Adopt a secure position.
- For drive units with brake, the emergency manual operation must be carried out against the closed brake.

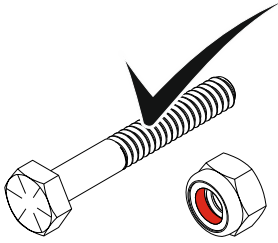
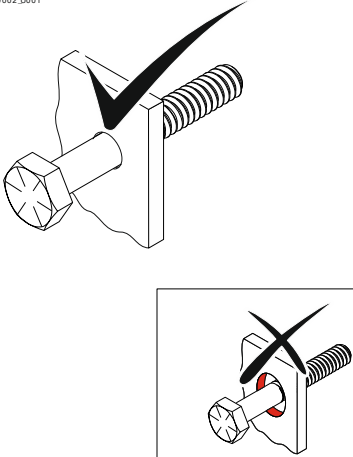
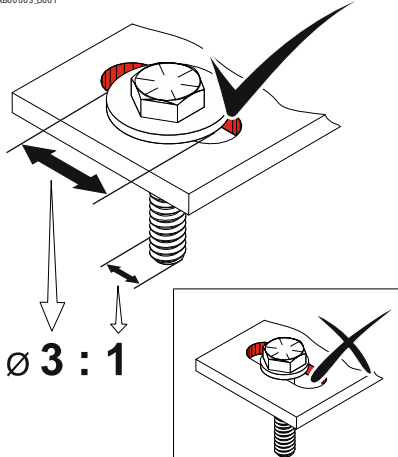
4 Mechanical installation

WARNING

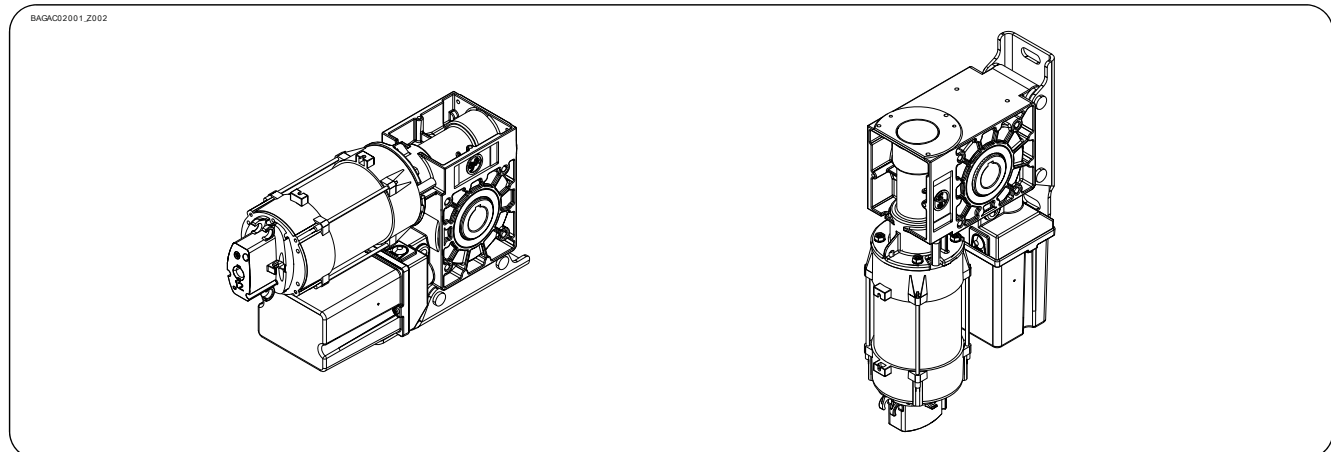
Potential injury or danger to life!

- 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

| | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>▶ Self-locking connection elements with a minimum strength of 116000 lbf/in² [800 N/mm²] must be used.</p> | <p>▶ Utilize the hole diameter to the full.</p> | <p>▶ Use adequately dimensioned washers for elongated holes.</p> |
| <p><small>BAGAB00001_L001</small></p>  <p>≥ 116000 lbf/in² [≥ 800 N/mm²]</p> | <p><small>BAGAB00002_L001</small></p>  | <p><small>BAGAB00003_L001</small></p>  <p>∅ 3 : 1</p> |

Permissible mounting positions



Mounting (possible versions A + B)

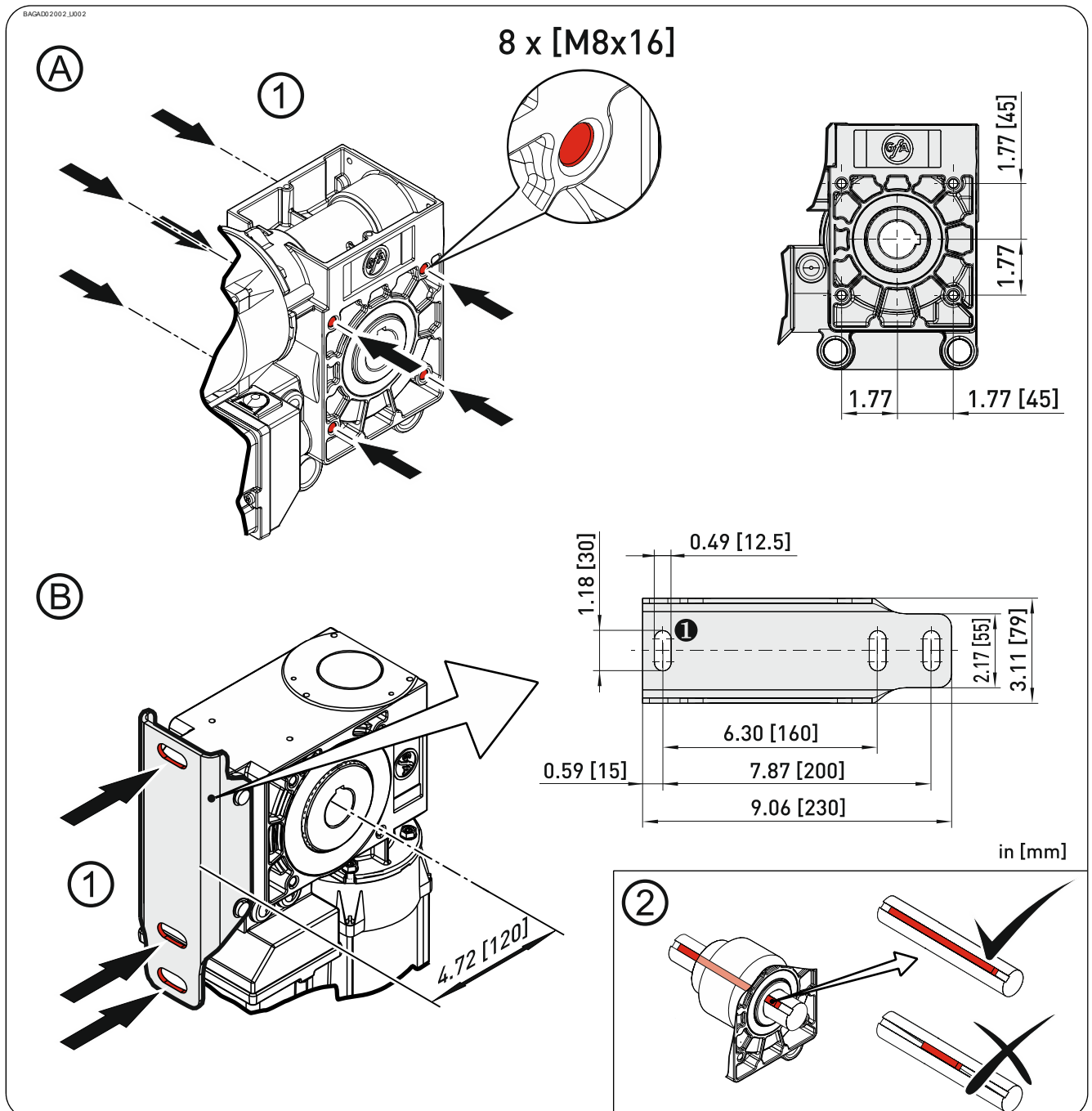
Eight threads are available for version A.

Three elongated holes are provided for version B.

► Use at least 2 of these (1) for mounting. Always use elongated hole 1.

A key is used to connect to the door shaft.

► Use a key that is at least as long as the hollow shaft (2).



Installation

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

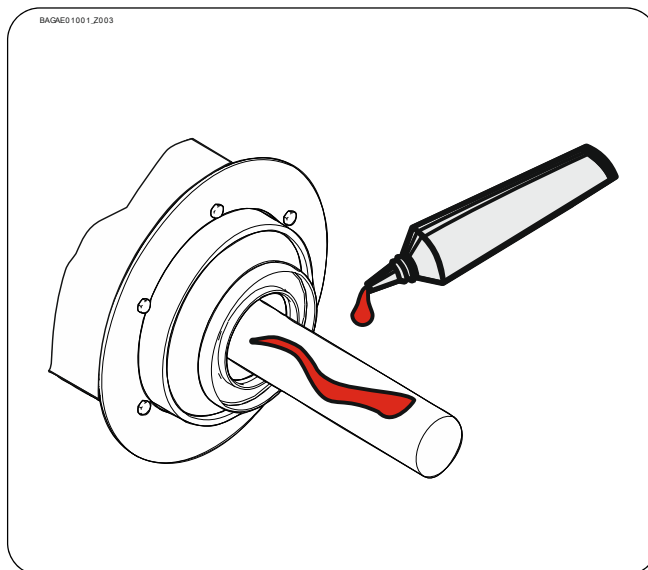
WARNING

Potential injury or danger to life!

- During installation, be sure to use a lifting device that has a sufficient load-carrying capacity.
- Where possible, install the door opener 8ft [2,44m] or more above the floor!

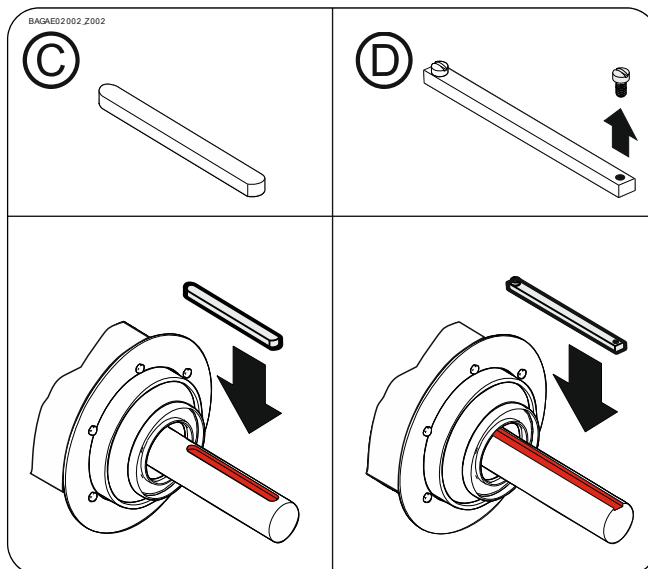
Versions **A** + **B**:

- ▶ Thoroughly grease the door shaft.



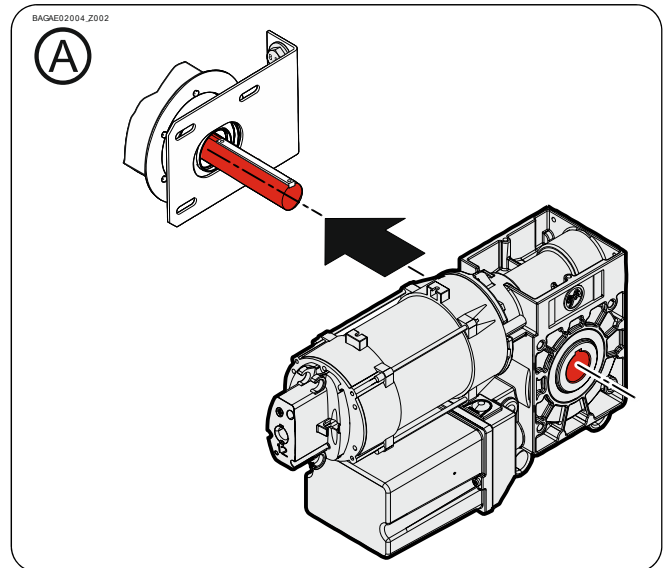
Versions **A** + **B**:

- ▶ Mount the keys. Possible version **C** or **D**.



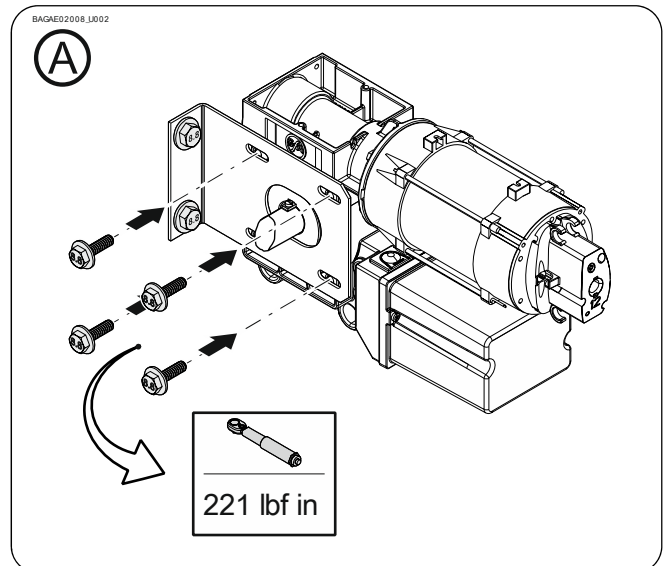
Version Ⓐ:

- ▶ Attach the drive unit.



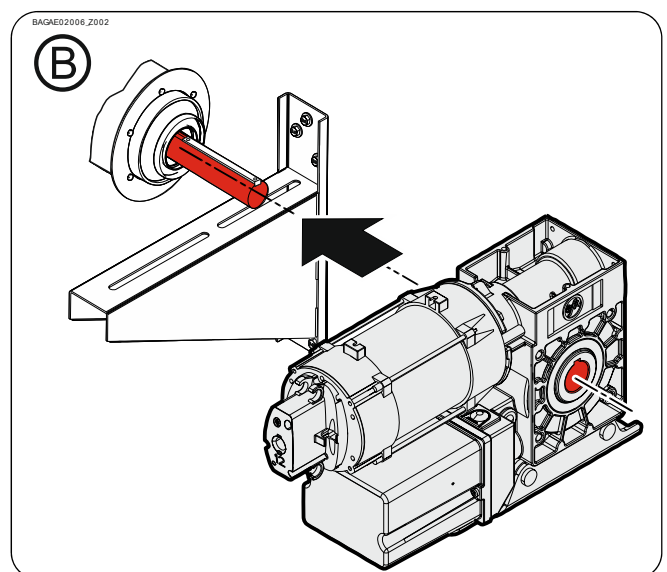
Version Ⓐ:

- ▶ Tighten all connection elements [M8] to 221 lbf in [25 Nm]. Install all other connection elements according to the specifications of the door manufacturer.



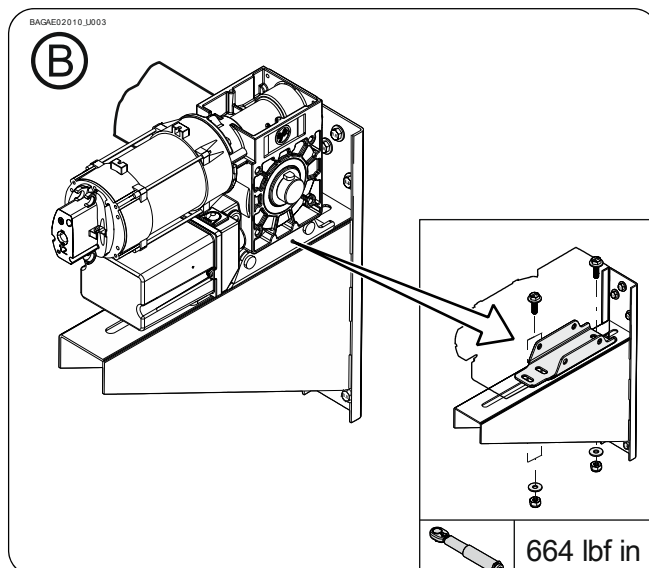
Version Ⓑ:

- ▶ Attach the drive unit.



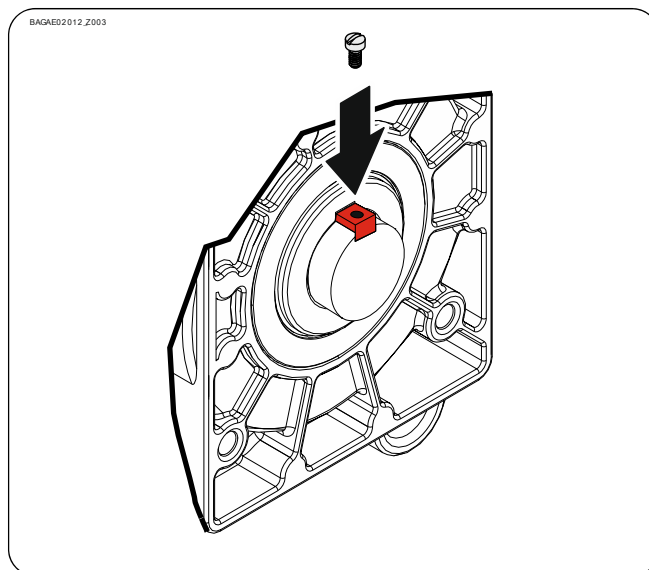
Version ②:

- ▶ Tighten all connection elements [M12] to 664 lbf in [75 Nm]. Install all other connection elements according to the specifications of the door manufacturer.



Versions ① + ②:

- ▶ Secure the keys (version ② only).



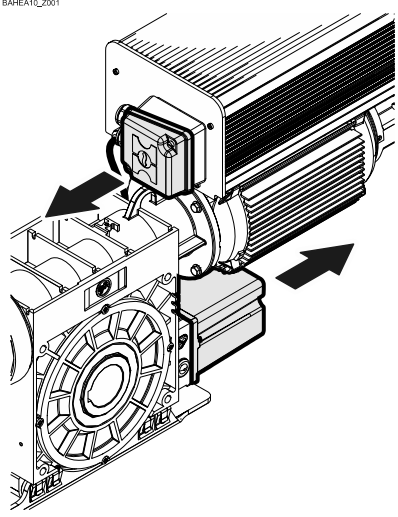
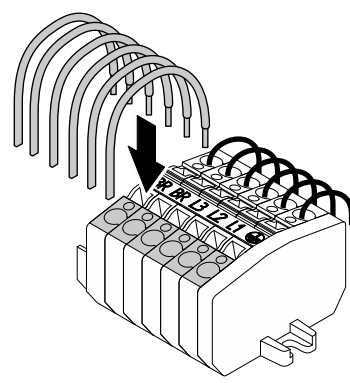
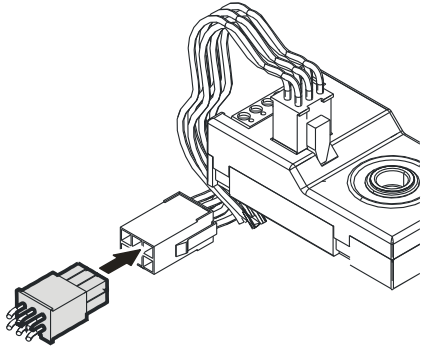
5 Electrical installation

WARNING

Danger to life from electric current!

- Switch the mains OFF and check that the cables are de-energised
- Permanent wiring is to be employed as required by local codes, and instructions for permanent wiring or conversion to permanent wiring as applicable shall be supplied
- Make a proper electrical connection
- Use suitable tools

Performing electrical installation

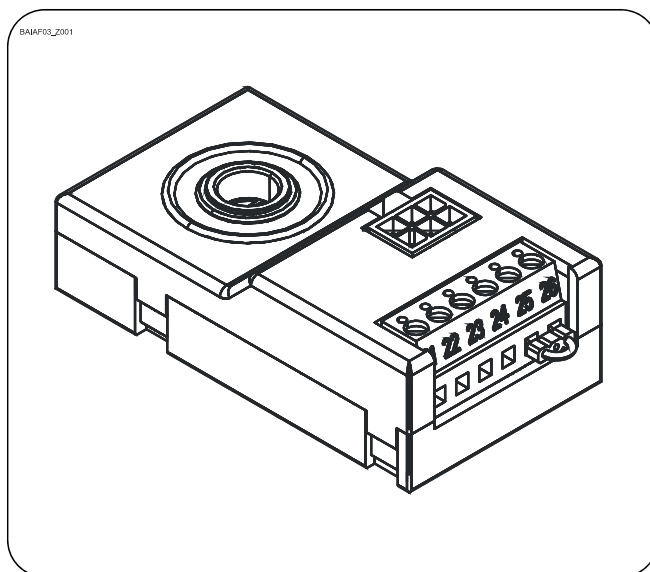
| | | |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Remove the cover. | Connect the motor cables. | Insert the limit switch plug. |
|  <p>BAHEA10_Z001</p> |  <p>BAHEB03_Z001</p> |  <p>BAHEC01_Z001</p> |

Completing the electrical installation

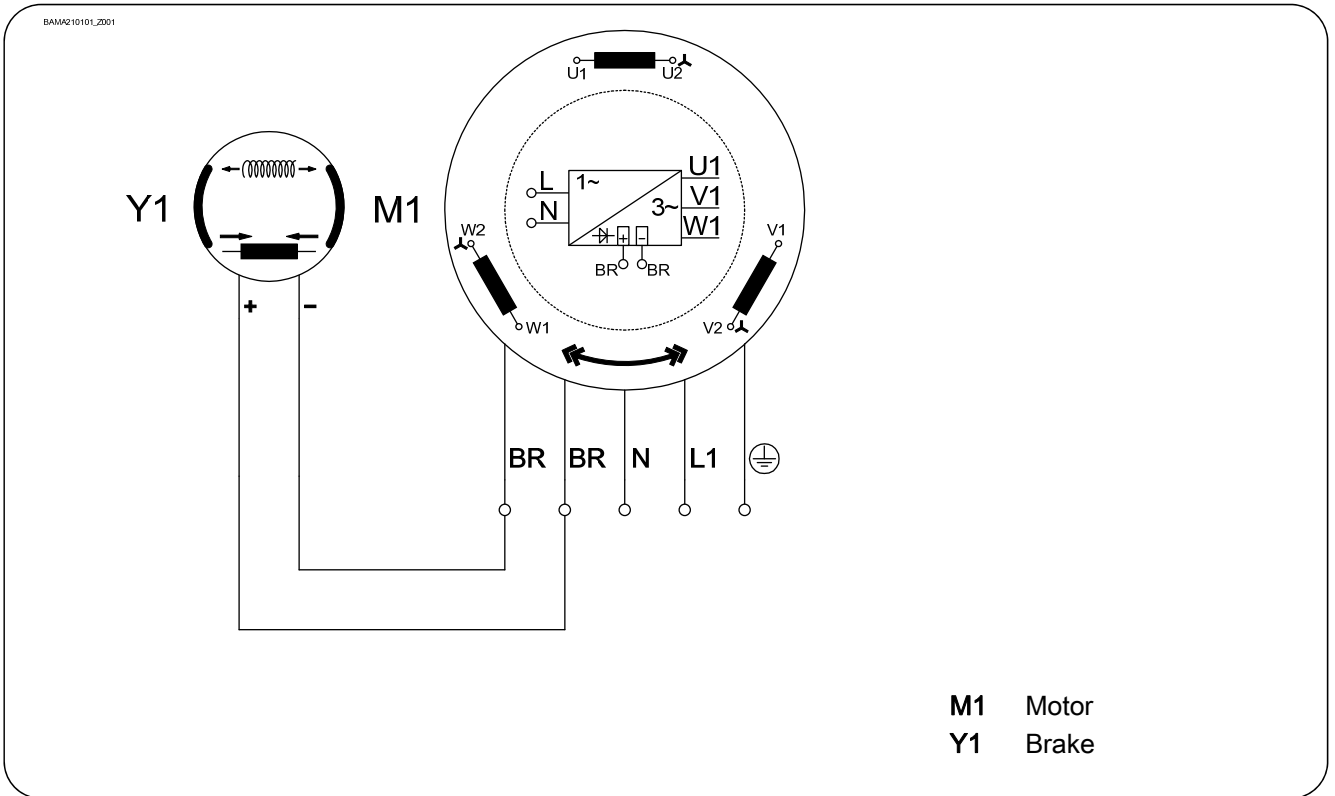
Mount the cable entries and/or cable glands.

6 Limit switch adjustment

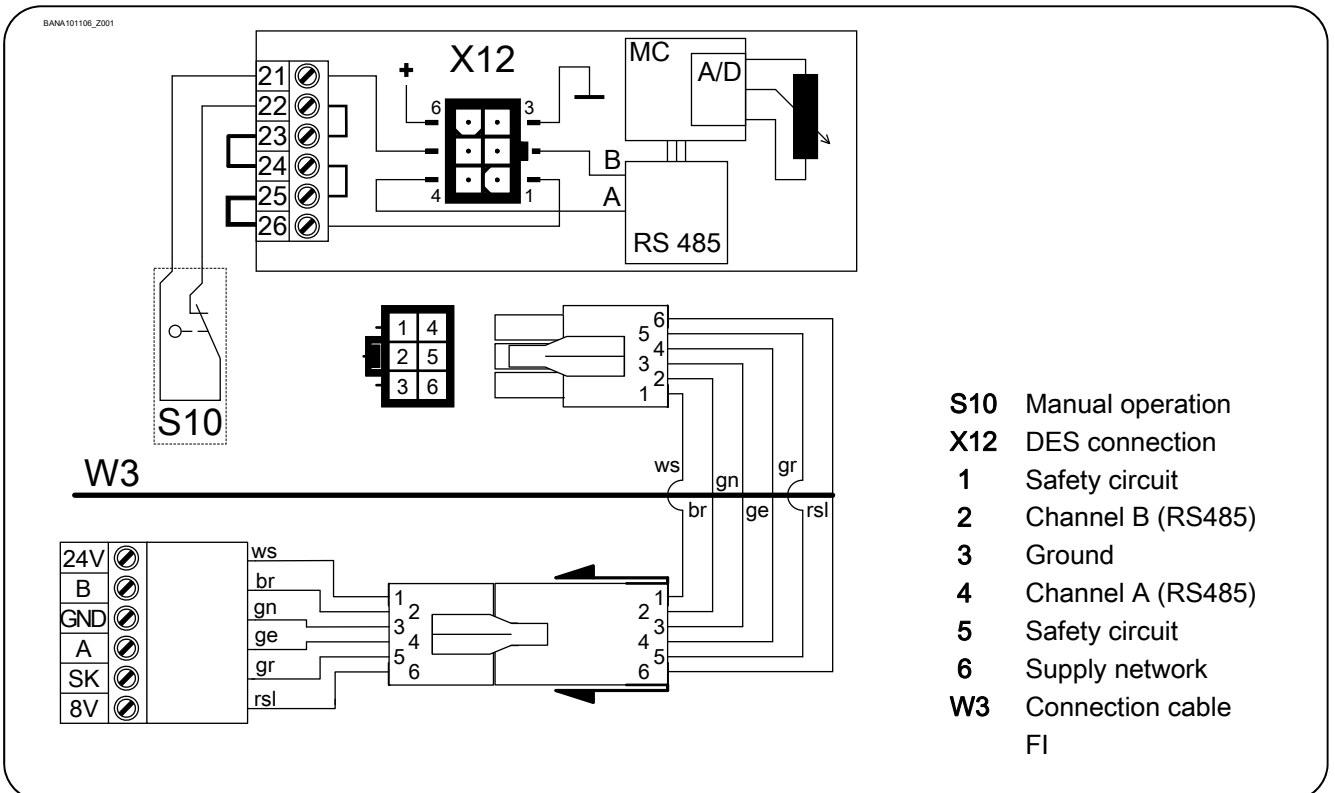
The adjustment of the final limit positions OPEN and CLOSE is described in the instructions for the door control panel.



7 Motor connection



8 Limit switch connection



9 Emergency manual operation (emergency hand crank)

The emergency manual operation is designed for opening or closing the door without power supply. Its activation interrupts the control voltage. Electrical operation is no longer possible.



CAUTION

Injuries due to incorrect operation!

- Switch off voltage.
- Adopt a secure position.
- For drive units with brake, the emergency manual operation must be carried out against the closed brake.



WARNING

Warning – Danger of the door dropping

If you need to apply more than the permissible force of 390N (according to DIN EN 12604/DIN EN 12453) to move the door by emergency manual operation, this indicates a stalling on the drive unit or door. Releasing the stalling may cause the door to drop.

- Adopt a secure position.
- For drive units with brake, the emergency manual operation must be carried out against the closed brake.

NOTICE

Damage to components!

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

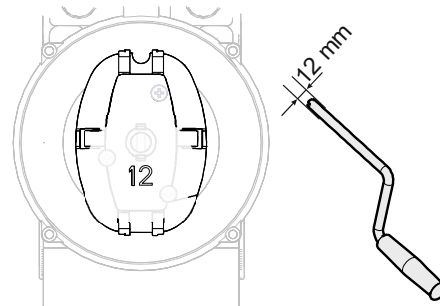
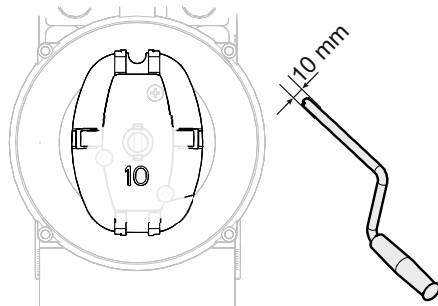
WARNING

Warning – Risk of injury due to uncontrolled movements and falling objects!

The drive unit could start up unexpectedly and injure people should a wrong emergency hand crank be used. A wrong crank will drop out of the mounting and injure people.

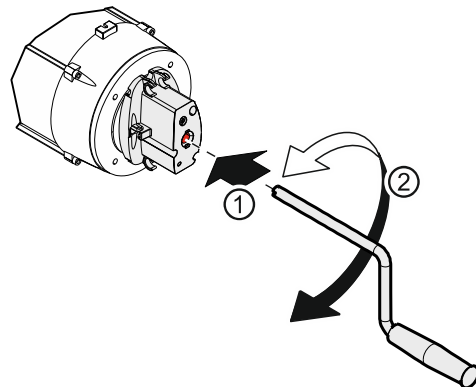
- Only use a crank with the correct diameter. The diameter is indicated on the crank handle switch: 10 mm = 0.4 in. 12 mm = 0.47 in.

BAUA000101_Z001



Plug in the crank and turn until it engages (①). Open or close by turning the crank (②).

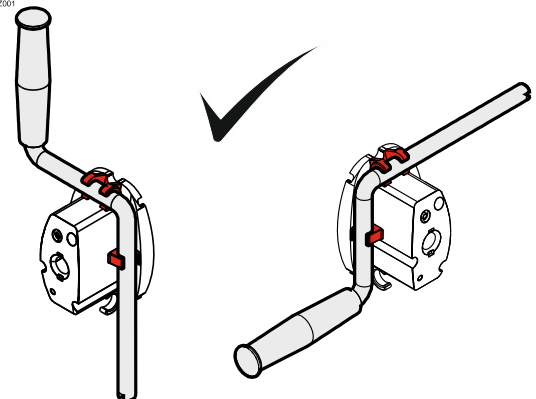
BAUA000001a_Z001



After use, the crank may be attached to the drive unit.

- Attach as illustrated.

BAUA000001b_Z001



10 Completion of commissioning / testing

Check the following components and after that, mount all covers.

Gearbox

Check drive unit for oil loss (a few drops are not critical). Protect output shaft permanently against corrosion.

Safety brake in the gearbox

The safety brake requires no maintenance or inspection.



Warning – Danger of the door dropping

In the case of a gearbox damage, the internal safety brake is triggered to prevent the door from dropping. The gearbox stalls.

Releasing the stalling may cause the door to drop!

- Block the door for pedestrians and vehicles.
- Do not release the stalling. Do not use the emergency manual operation.
- Secure the door against dropping. Please observe the specifications of the door manufacturer.
- The drive unit needs replacement. Please observe the specifications of the door manufacturer.

Mounting

Check all mounting elements (consoles, torque brackets, screws, retaining rings etc.) for tightness and impeccable condition.

Electric wiring

Check connection cables and cables for damage or pinches. Check screw and plug connections for correct seating and electrical contact.

Emergency manual operation

Function to be checked in a de-energised state. Carry out functional test only between final limit positions.

Limit switches

Check the final limit positions by opening and closing the door completely. The safety zone must not be reached.

Brake

WARNING

Injury or danger to life possible!

- Carry out brake test. Overrun depends on the door and its equipment. The manufacturer's specifications must be observed.
- The brake release for doors without counter-balancing may only be used in the CLOSE final limit position.
- Service life of the brake - replacement of the entire brake in the case of:
Operation with mains supply after 250,000 door cycles;
Operation with frequency inverter after 1,000,000 door cycles
- Degree of protection IP65i must be used in environments that may change the friction coefficient of the brake pad (atmospheres with oil, solvents, cleaning agents, etc.).

Entire drive unit

NOTICE

Damage to components!

- Have the drive checked annually by a specialist.
- Shorter inspection interval for frequently used doors.
- Observe the applicable regulations and standards.



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