

DORMA Glas

MAGNEO Magnetic Drive Sliding System

Installation and Maintenance

NOTE:
Read installation
instructions carefully
before assembly

Dear Customer,

Thank you for purchasing from our DORMA product line. The DORMA brand stands for first-class and scrutinized quality products offering extremely high safety standards.

In order to keep satisfied with your product, we would recommend reading these operating instructions carefully and thoroughly.

Keep these instructions for further reference and make it available to other users.

Yours faithfully,

The DORMA Glas Team

Required tools:

- Tape measure or folding rule respectively
- Spirit level
- Pencil
- Electric Drill
- Masonry drill bit Ø1/4"
- Metal drill bit Ø1/8" + Ø5/16"
- Socket wrench (10 mm)
- Small flat head screwdriver to connect the terminals on the control unit.
- Phillips screwdriver for countersunk screws of wall connection.
- Allen (Hex) key, 4 mm
- Combination wrench, wrench size 10 mm and 13 mm
- Long-nosed pliers for connection to terminals.
- Adequate screws and wall anchor for the prevailing structures, in case they are not made of brickwork or concrete.

Additionally for DORMA MANET fixing:

- Allen (Hex) key, 3 mm and 5 mm

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Manufacturer's declaration

Declaration of conformity



REMARK

The REMARK symbol calls your attention to important information that will facilitate your work with the MAGNEO.



ADVISE

The ADVISE symbol warns you that you could damage the MAGNEO and explain how to avoid this.




ATTENTION

The ATTENTION symbol informs you of dangers that might cause damage to property or injure or kill people.

Safety Instructions

1.1 Specified standard operation

-  The MAGNEO is only designed to open and close doors. Do not allow children to play with the MAGNEO or rigidly mounted adjustment and/or control devices. Keep remote controls out of reach of children.

1.2 Product-specific characteristics

The MAGNEO is intended for use on interior single-panel sliding doors. The MAGNEO is not suitable for applications such as escape routes, fire and smoke door, or exterior doors.

1.3 Standards, laws, codes and regulations

General information

The latest versions of the common and country-specific standards, laws, codes and regulations have to be observed.

MAGNEO as low-energy product according to German DIN 18650 (German Industrial Standard)

According to the German Industrial Standard DIN 18650, the movement range of an automatic door always has to be protected (amongst others) by safety sensors. However, there are special requirements for low-energy systems.

The MAGNEO meets the requirements of a low-energy operator according to the standard by fulfilling the following requirements:

- Reduced driving speeds (reduced dynamic forces at the door panel/contact forces)
- Force limitation (reduced static forces at the door panel/contact forces)

Required protection equipment for MAGNEO according to DIN 18650

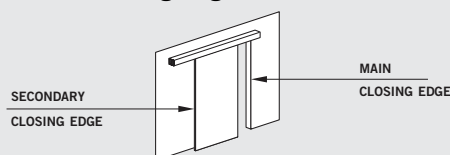
The German Industrial Standard DIN 18650 stipulates different requirements regarding the protection of the above-mentioned danger spots.

Systems with MAGNEO offer the following benefits:

- The system does not have to be equipped with additional protection equipment (not compulsory).
- The application of safety sensors at the closing edges as additional protection measure is optional and lies in the discretion of the person performing the installation of the door system - under consideration of the result of the individual risk assessment (also refer to **Risk assessment**, page 5).
- Altogether the system offers a high safety standard!

Danger spots at closing edges

Automatic doors might cause hazards by crushing, shearing, hitting and drawing-in at the different closing edges.



Risk assessment on the part of the installer

Special spatial conditions and certain user groups might make it sensible to equip the application with safety sensors even when the system is operated in Low Energy Mode.

Whether this is required or not has to be assessed with the aid of an individual risk assessment and must be considered during the planning of the system and by the manufacturer, i.e. the party performing the installation of the system.

Special requirements regarding the protection of people in need of protection

In case the risk assessment reveals that there is a health risk or risk of injury when the door hits a user in an unacceptable way, additional protection via safety equipment (connection of safety sensors) is required. This is especially necessary when people in need of protection (children, elderly people, or disabled people) use the door.

1.4 Limitation of liability

The MAGNEO must only be used according to its specified standard operation. DORMA USA will not accept any liability for damages resulting from unauthorized modifications of the MAGNEO.

1.5 Documentation

Using control elements, making adjustments, or performing procedures that are not described here might cause electric shocks, danger caused by electric voltage/current and/or dangers due to mechanical incidents.



This documentation contains important information for the safe installation of the system. Read these instructions thoroughly before you mount, install, and use the MAGNEO.



It is important for your personal safety to abide by the instructions mentioned in this documentation. An incorrectly performed installation of the system might cause serious injuries.

Please keep this documentation for later reference.

1.6 General information regarding the installation of the system

The MAGNEO must be disconnected from power supply (de-energized) when performing mounting or installation work. Remove the power plug, or, in case of permanent power supply, switch off fuse.

Secure the working area against unauthorized access of other people.

Falling items or tools might cause injuries.

In any case, the way of mounting and the mounting equipment—screws and wall plugs, for example—have to be adequate with regard to the structural conditions (concrete, wood, plasterboard etc.).

As soon as you have loosened the screws of the end stop, both the end stop and the carrier could fall out of the operator. Therefore you should always hold the operator straight.

- Pay attention that no water or other liquids drop on or into the MAGNEO.
- Never stick metal objects inside the openings of the MAGNEO.

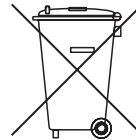
Otherwise you could sustain an electric shock.

- Never put your hand inside the MAGNEO in order to avoid injuries.
- Only specially qualified staff may open the power supply housing.
- Lay the power cord so that nobody can trip over the cable or unplug it by mistake.
- Do not operate the MAGNEO when the power cord is damaged.
- Always pull at the plug and never at the cable when unplugging the power supply.
- Only operate the mains switch at the header profile while the door stands still or is permanently open.
- No push buttons/switches, pictures etc., must be located within the door's movement range. Baseboards have to be removed if required.
- Following the successful installation of the system, you have to check the settings as well as the MAGNEO and the safety devices for proper functioning.
- The installation described herein is only an example. Structural or local conditions, available tools, or other conditions might suggest a different approach.

1.7 Residual risks

Automatic doors might cause hazards by crushing, shearing, hitting, and drawing-in. Depending on the structural conditions, the door version and the safety equipment, residual risks cannot be excluded.

1.8 Waste Electrical and Electronic Equipment (WEEE) Directive






Within the European Union, this device must not be disposed of as domestic waste. It has to be disposed of at a special facility so that it can be recycled.

MAGNEO —Awarded Safety



Developed according to the latest safety standards:

- + Low Energy Mode in accordance with DIN standard
- +  Tested Safety
- +  Mark

The TUV certificate and the  certificate can be obtained from the manufacturer on demand.

2. Functional Characteristics

2.1 General information

The MAGNEO is a single-panel electro-mechanical sliding door operator for small and light interior doors with an admissible weight from 44 lb (20 kg) to 176 lb (80 kg) per door panel. The opening and closing speed respectively depend on the weight of the door panel and can be adjusted via a potentiometer (infinitely variable).

2.2 Commissioning

During the first commissioning of the operator, the facility operator has to perform a learning cycle according to the commissioning instructions. When the facility operator connects the system to the power supply (plugs it in) the light indicator at the operator will blink and the operator has no function. The door can be opened and closed manually. Following the learning cycle the light indicator goes on and the operator is ready for operation.

2.3 Energy modes

With the aid of a sealed switch (located inside the operator), the system can be switched from Low Energy Mode to Full Energy Mode.

Low Energy Mode (Standard)

According to the standard (DIN 18650) the force with which a door panel hits an obstacle must be limited when a system is operated in Low Energy Mode. Therefore the operator moves the door panel at correspondingly low speed and no additional safety sensors are required. The potentiometer (located inside the operator) can only be used to reduce the speed.

Full Energy Mode

The forces are limited in this mode as well. Due to the increased contact forces, safety equipment is compulsory in most cases.

The speed is infinitely variable with the aid of a potentiometer (located inside the operator).

The closing cycle always remains in Low Energy Mode.

2.4 Operation modes

OFF: The operator is switched off. You can move the door by hand.

AUTOMATIC:

When the system has been activated via pushbutton, radio remote control or similar, the operator opens the door and closes it on expiry of the adjusted hold-open time.

PERMANENT OPEN:

The operator opens the door and holds it in OPEN position until it receives another signal.

When the system is delivered, the MAGNEO is adjusted to AUTOMATIC Mode.



An external program switch is required to change the operation mode.

2.5 Functions in AUTOMATIC Mode

Push & Go

As soon as the door is moved manually into opening direction by approximately 3/8" (10 mm), the operator will automatically move the door panel further in the desired direction. The door closes automatically.

PERMANENT OPEN via double-click

A double-click on the pushbutton (activate the pushbutton twice in quick succession) will open the door. When you double-click on the button for a second time or move the door panel by hand, the door will close.

Opening/closing via pushbutton

As soon as you push the button or move the door manually the door will open. When you push the button for a second time or move the door panel by hand, the door will close.

Express-Function

The door can be moved manually in its driving direction and there will be no extra resistance. However, when the maximum speed is exceeded, the driving resistance will increase in line with the speed by which it is exceeded. As soon as the user has released the door panel, the operator will softly slow it down to maximum speed. This function is activated during all opening and closing cycles.

2.6 Safety functions

Static forces in Low Energy Mode

The system does not exceed a value of 15 lb (7 kg) during opening and closing cycles.

Opening cycle

As soon as the door hits an obstacle during an opening cycle, it will immediately stop and remain in its position for 3 seconds. Then the operator will try to continue the opening cycle. If the door panel hits an obstacle three times during an opening cycle, it will close.

Closing cycle

When the door panel hits an obstacle while closing, it will immediately stop and perform an opening cycle.

2.7 Safety sensors

You can install sensors to detect obstacles. According to DIN 18650, an automatic sensor test can be activated or deactivated via the DIP switches located inside the operator.

The door will stop immediately when the sensor detects an obstacle during an opening cycle and will continue the cycle as soon as the obstacle has been removed. In case the obstacle is not removed, the door will close on expiry of the adjusted hold open time.

The door will stop immediately and reverse when the sensor detects an obstacle during an closing cycle. This function is not activated while the door is in CLOSED position (then the sensor is deactivated).

2.8 Power failure

In the event of a power failure, the door can be opened and closed by hand.



However, in this case the operator does not slow down (brake) the door panel, so that the user has to move (hold) it all the way by hand.

As soon as the voltage returns, the operator will automatically perform a position initialization.



During this position initialization, it is essential that the movement range of the door be free of obstacles.

3. Technical data and features

Power supply	115V AC $\pm 10\%$; 50/60 Hz
Brauch circuit protection (by others)	15 A
Cable type:	12 Ga. max (14 Ga.)

Power consumption without external accessories:

Stand-by mode	5.6 W
Automatic mode	max. 60 W

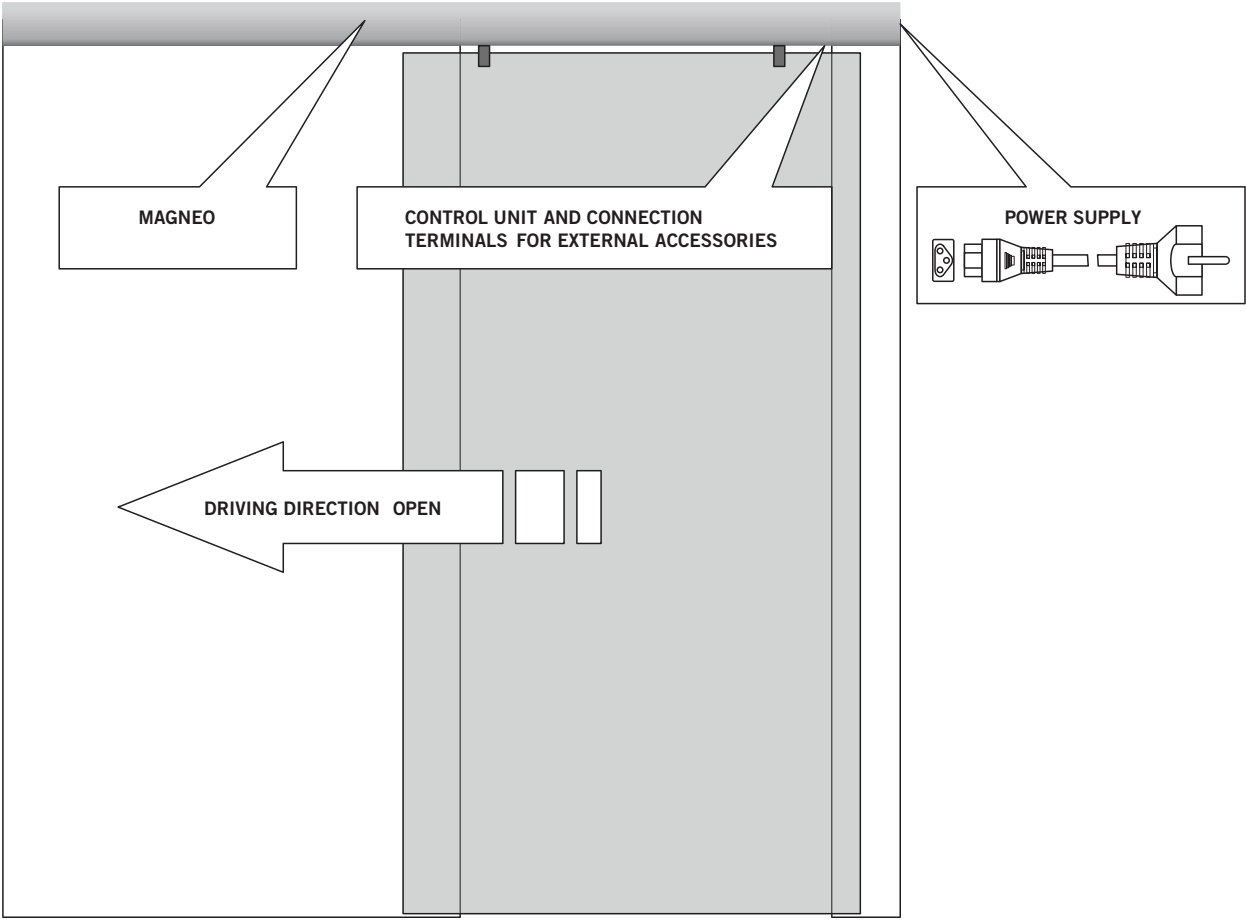
General information:

Temperature range	0-104° F
Operating noise of operator:	max. 55 dB (A)
Door panel height	max. 118" (2297 mm)
Door panel weight	44 lb (20 kg) – 176 lb (80 kg)

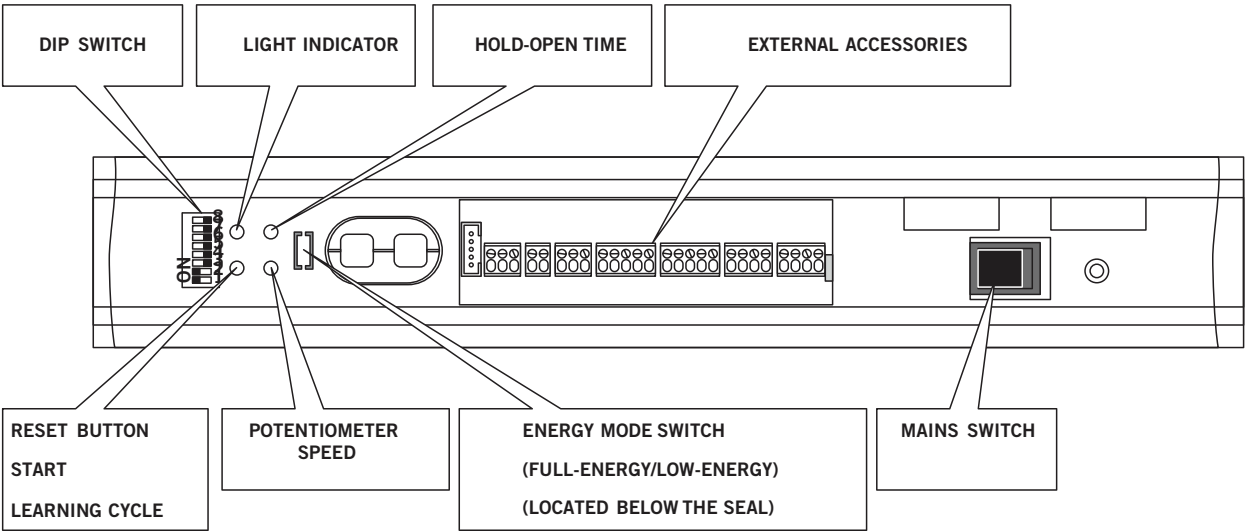
Weight of operator:

Max. passage width	Operator length without cover	Weight of operator
34-7/16" (875 mm)	68-7/8" (1750 mm)	18.9 lb (8.6 kg)
39-3/8" (1000 mm)	78-3/4" (2000 mm)	20.7 lb (9.4 kg)
44-1/4" (1125 mm)	88-9/16" (2250 mm)	22.4 lb (10.2 kg)

4. System overview



Control unit and connection terminals for external accessories



5. Before mounting

Basic requirements:



Work on electrical equipment may only be performed by properly qualified staff ill (electricians).

- The floor has to be level.
- Glass door panels have to be made of safety glass.
- The connection cables for external accessories (program switch etc.) must be located in the close range of the operator before starting the installation of the system.
- With recessed mounting, the wall must not be closed before the system has been mounted.



When the system is installed with permanent power supply (the cable comes directly out of the wall), ensure that the power supply line is dead (de-energized) during installation.



The power supply line, max. 1/8" × 1/16" (3 × 1.5 mm) (Schuko-type shockproof socket or permanent power supply) must have a 10 A fuse protection.

Opening direction:



The connections of the operator are always located on the side where the door is when it is in CLOSED position.

Therefore the operator is symmetrical and can be turned the way you require it. This installation instructions show the system with connection on the right side. For left hand, just reverse the connections.

Please note: In case you require additional accessories, please contact your local dealer.

If you have technical questions or require help during the installation of the system, please contact our hotline under the following number:

Please call the following number in case of technical problems or further questions:

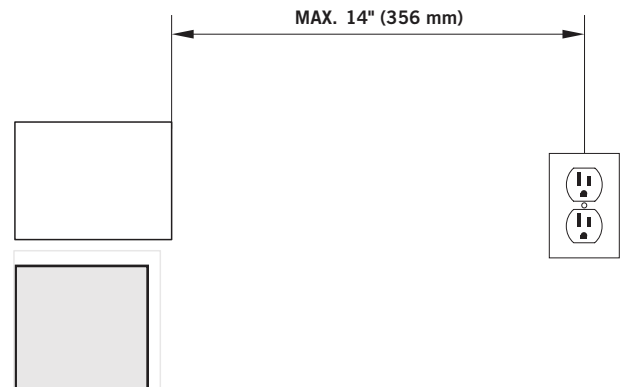


800.451.0649

The cable of the power supply line has a length of 17-11/16" (450 mm).



For recessed mounting: When installing the socket, please remember that you should be able to reach it by hand.

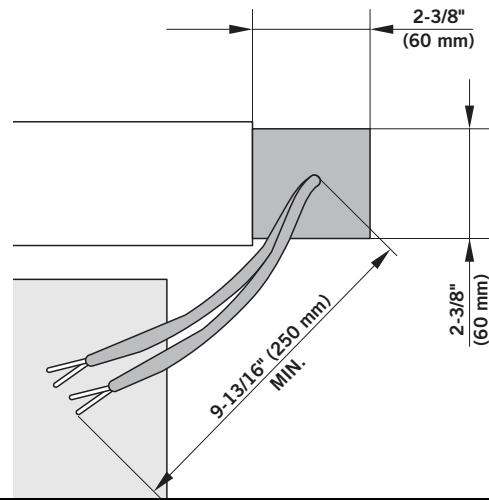




In order to facilitate the cabling inside the operator, all cables should have a length of at least 10" (254 mm).

For surface mounting:

If you want all connection cables that are coming out of the wall not to be seen after the installation (only possible with permanent power supply), they have to come out of the wall within an area of 2-3/8" × 2-3/8" (60 mm × 60 mm) on the side where the connections of the operator are located.



Installation with permanent power supply:

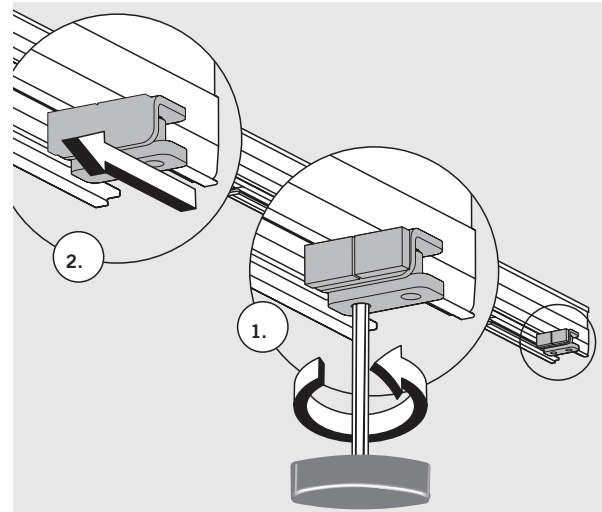
When the system is installed with permanent power supply, the internal power supply socket has to be removed.

Proceed as follows:

Loosen the screws at the end stop and move the end stop to the center of the system.



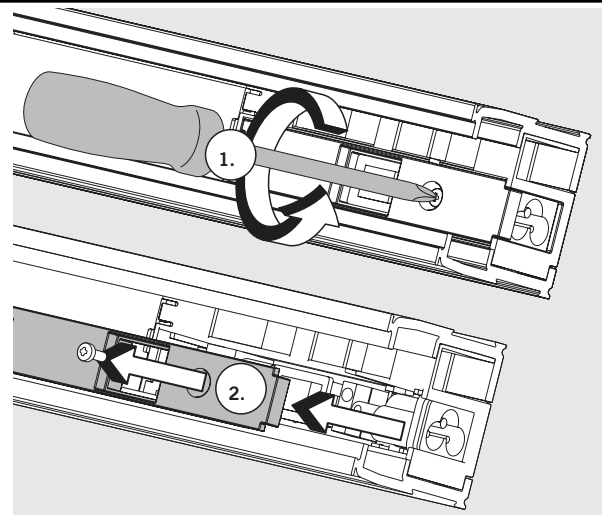
Do not remove or screw down the end stop.



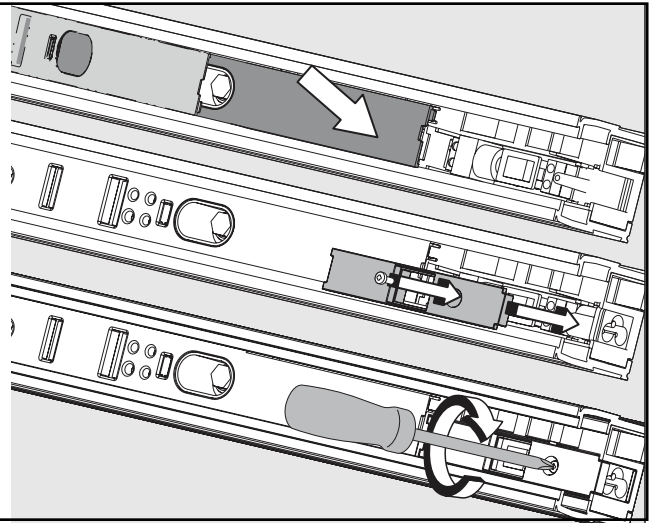
Then loosen the screw in the cover of the power supply housing and remove the cover (on the side where the connections are located).



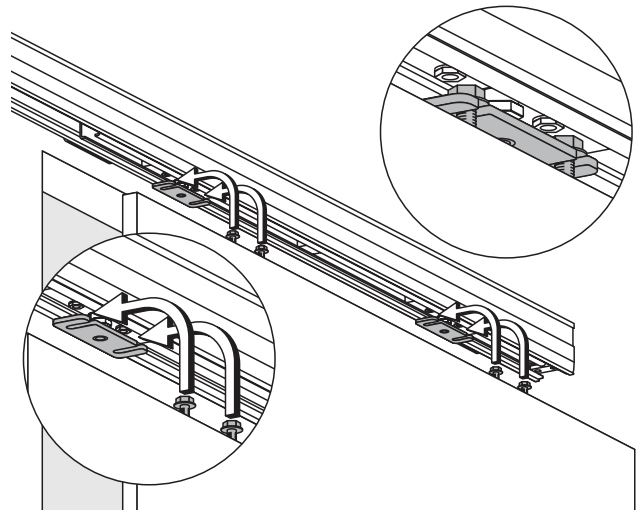
Keep the cover and the screw in a safe place as you will require it later.



Open the cover of the control unit housing by levering it out with the tip of a screwdriver.



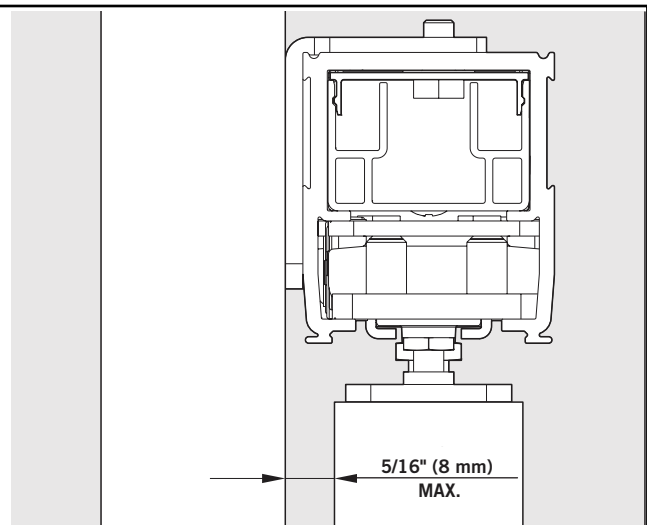
Loosen the screws of the connection terminals and remove the internal Schuko-type shockproof socket.



Then close the cover of the control unit housing.

Move the end stop to the end of the channel and screw it down.

 The end stop must not overlap.



6. Installation instructions for surface mounting

Mounting procedure:

If there is a door frame, you have to shim the angle brackets with the shim plate (optional).

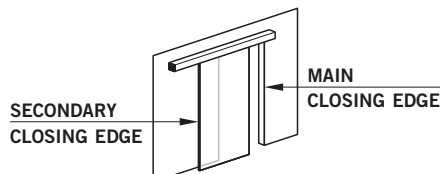
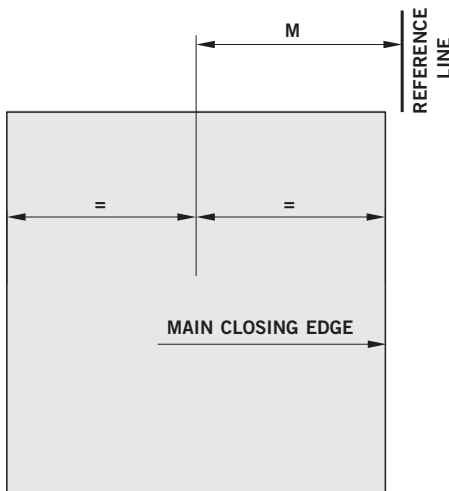
1. Auxiliary lines for positioning purposes: see bottom of this page.
- 2.a Installation without shim plate: see pages 15 and 16.
- 2.b Installation with shim plate: see Page 17.
3. Further installation: see pages 18 and 21.

Positioning Guide

For the installation without shim plate, mark the center of the passage on the wall.

For the installation with shim plate, mark the center of the passage on the wall. Please look at the table for the required dimension M for your operator. L corresponds to the operator length.

Now mark the reference line. Always mark the reference line on the side of the main closing edge.



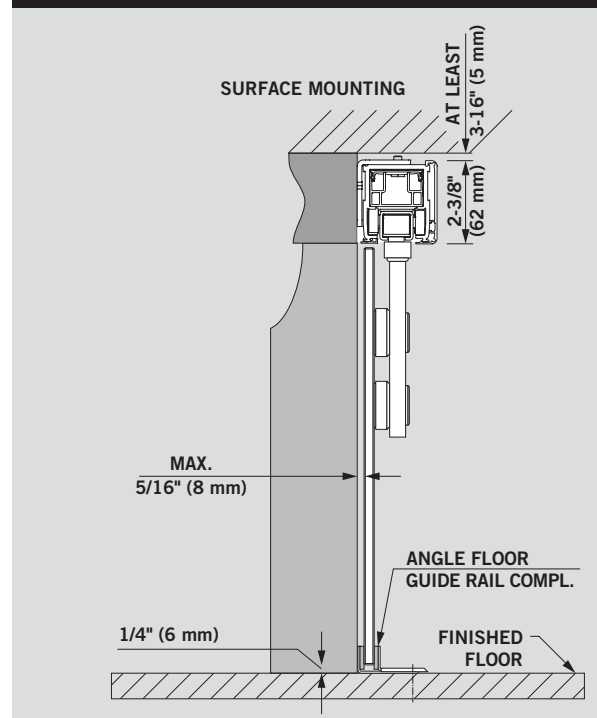
	34-7/16" (875 mm)	39-3/8" (1000 mm)	44-1/4" (1125 mm)
L	68-7/8" (1750 mm)	78-3/4" (2000 mm)	88-9/16" (2250 mm)
M	17-13/16" (437.5 mm)	19-11/16" (500 mm)	22-1/8" (562.5 mm)



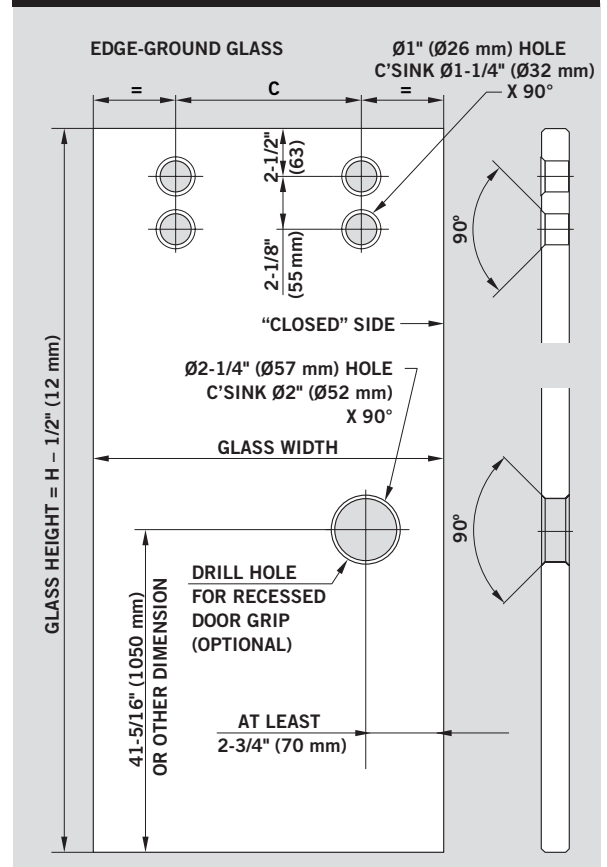
In case the door panel is not positioned in the center of the passage, the bracket or shim plate has to be shifted by the desired dimension.

Glass door panels with MANET single-point fittings

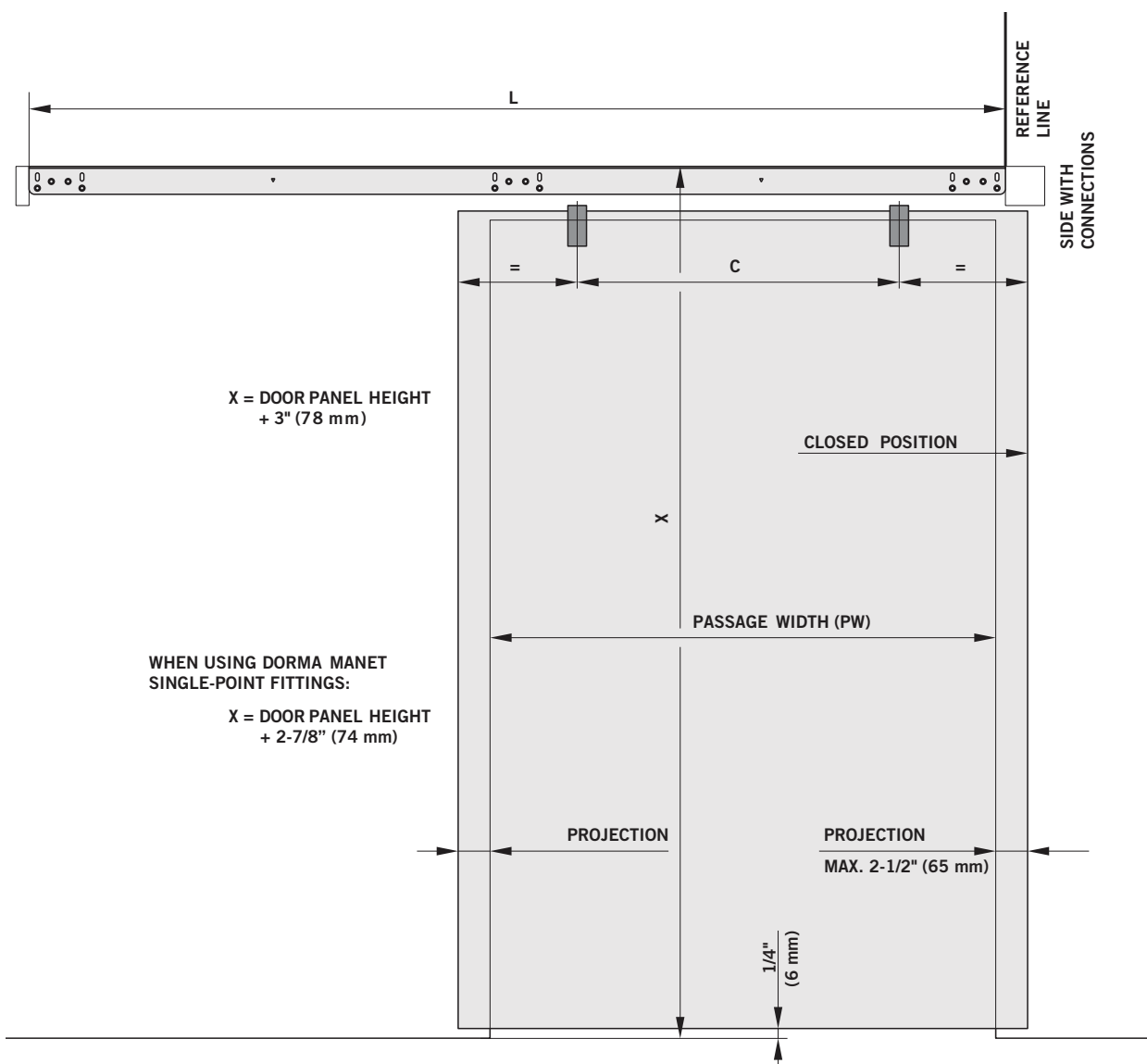
INSTALLATION TYPE



DOOR PANEL INFORMATION



Operator	C
68-7/8" (1750 mm)	22-5/8" (575 mm)
78-3/4" (2000 mm)	27-9/16" (700 mm)
88-9/16" (2250 mm)	32-1/2" (825 mm)



	34-7/16" (875 mm)	39-3/8" (1000 mm)	44-1/4" (1125 mm)
PW	31-7/8" (810 mm)	36-3/4" (935 mm)	41-3/4" (1060 mm)
L	68-7/8" (1750 mm)	78-3/4" (2000 mm)	88-9/16" (2250 mm)
M	22-5/8" (575 mm)	27-9/16" (700 mm)	32-1/2" (825 mm)

- The CLOSED position is always located on the side where the connections are.
- Dimension L (length of operator and fixing bracket) is measured without end caps.

Take dimension X from floor level; then position and mark the upper edge of the fixing bracket onto the wall.



Dimension X has to be measured at the highest point of the floor within the movement range of the door system.



The distance between the bottom edge of the door panel and the floor should amount to 1/4" (6 mm), however, it must not exceed 5/16" (8 mm).

- ☞ Before drilling the holes, check if there are cables or pipes in the close range of the drill holes.

Position the fixing bracket onto the center line.

Ensure that the bottom vertex of the triangle is located exactly on the center line.

Align the fixing bracket so that it is level.

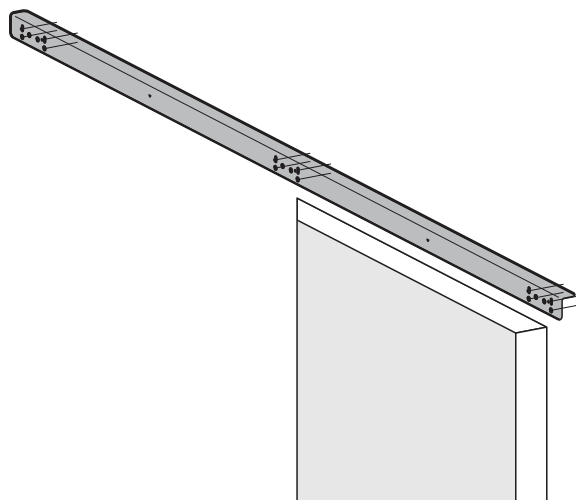
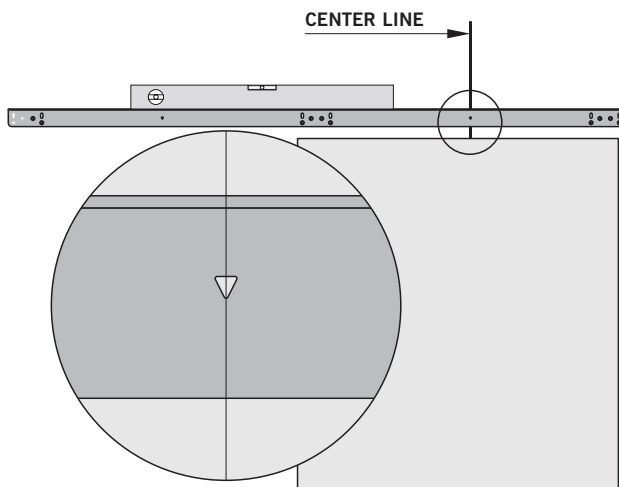
Fix the bracket with screws (one screw respectively per one oblong hole on each side).

- ☞ Use adequate wall plugs and screws depending on the existing structure when fixing the bracket. The supplied screws and wall plugs are suitable for concrete and brickwork.

Recheck the fixing bracket for exact positioning.

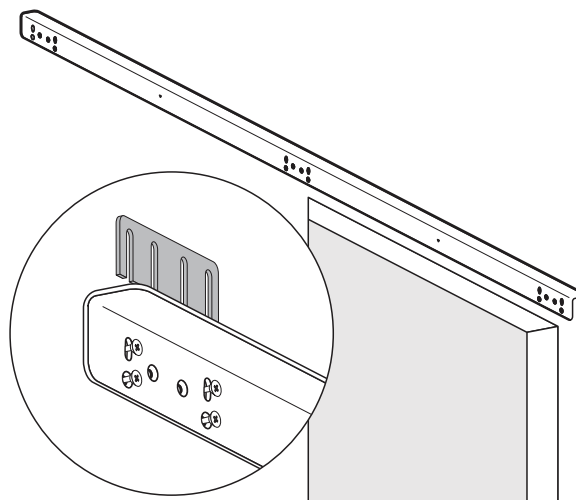
Drill the further holes through the drill holes in the fixing bracket and fix the bracket with at least 12 screws.

- ⚠ The load-bearing capacity of the fixing bracket must amount to at least 528 lb (240 kg).



In case of uneven walls you have to shim the bracket so that it does not bend.

Use the enclosed distance plates in different sizes for this purpose.



Mounting with shim plate

Position the shim plate at the reference line.


Calculate the dimension from the floor to the upper edge of the shim plate as follows:

Door panel height + 3" (78 mm)


When using DORMA MANET single-point fittings:

Door panel height + 2-7/8" (74 mm)


Align the shim plate so that it is level and mark the drill holes.

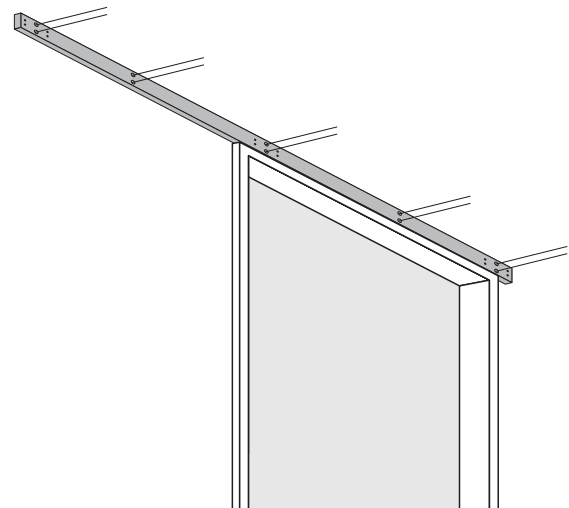
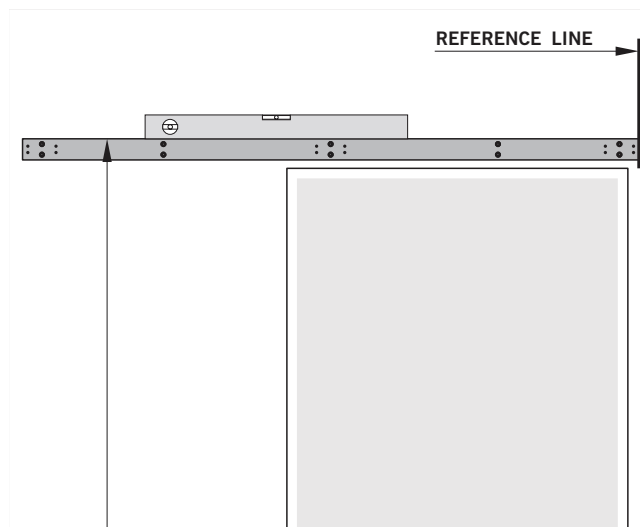
 Before drilling the holes, check if there are cables or pipes in the close range of the drill holes.


Drill the marked holes and fix the shim plate.

 Use adequate wall plugs and screws with respect to the prevailing structure.

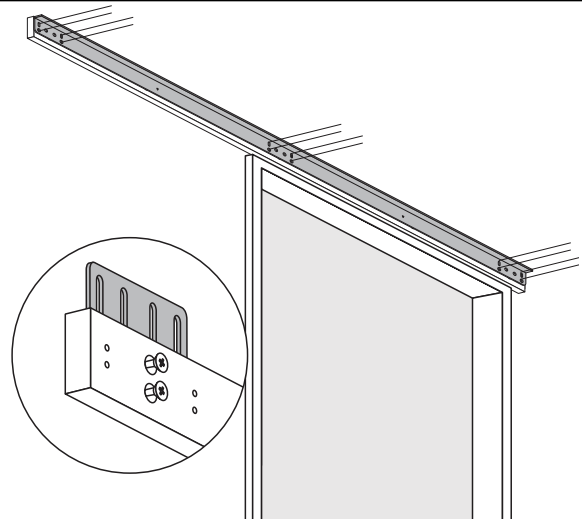
The supplied screws and wall plugs are suitable for concrete and brickwork.

 The load-bearing capacity of the fixing bracket must amount to at least 528 lb (240 kg).



 In case the frame is thicker than 3/8" (9 mm) you have to underlay the shim plate with the enclosed distance plates so that it is flush with the door frame.

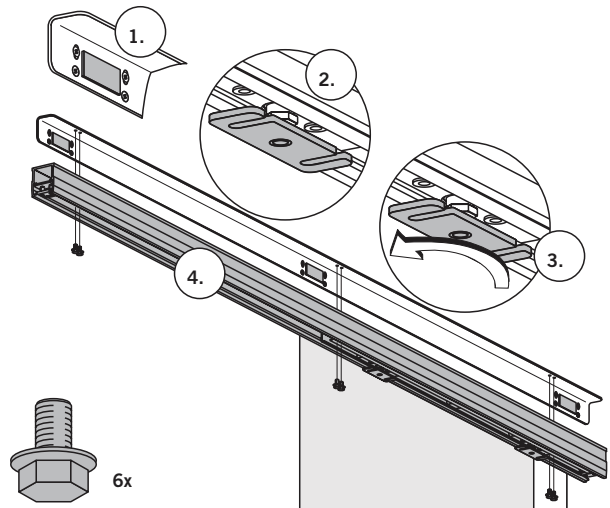
Use 12 screws to fix the bracket to the shim plate.



1. Adhere 3 pieces of felt equally onto the bracket.
2. The openings of the door panel suspension have to point to the front.
3. When using MANET fittings, the door panel suspensions have to be unscrewed.
4. Fix the operator below the bracket with 6 hexagon screws (lock screws)(8 Nm).



You will have to move the carrier in order to reach all 6 holes.



Connection of 120 V permanent power supply.

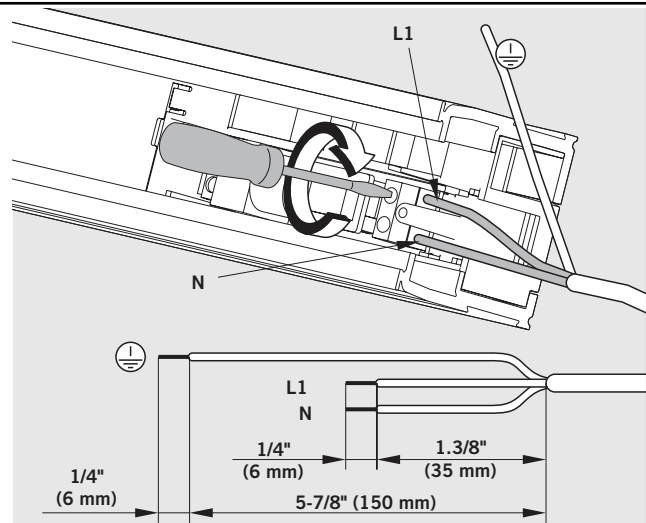


Work on electrical equipment may only be performed by properly qualified staff (electricians).

Before starting with the installation, make sure that the power supply line is dead (de-energized).

Loosen the end stop and move it to the center of the system (see page 11, picture in the middle).

Cut the leads to length, dismantle them and connect L1 and N to the connection terminals of the power supply.



Lever out the cover at the control unit housing with the aid of a screwdriver.

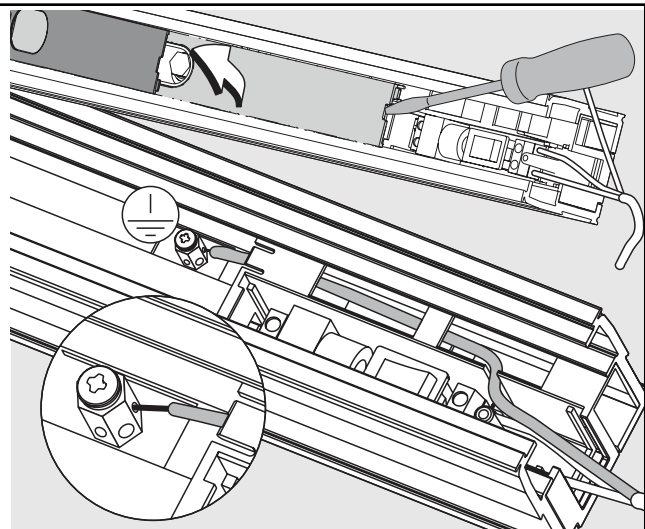
Lay the grounding line through the housing of the operator as shown in the picture and connect it to the grounding terminal (PE).



The grounding (PE) has to be connected in any case.

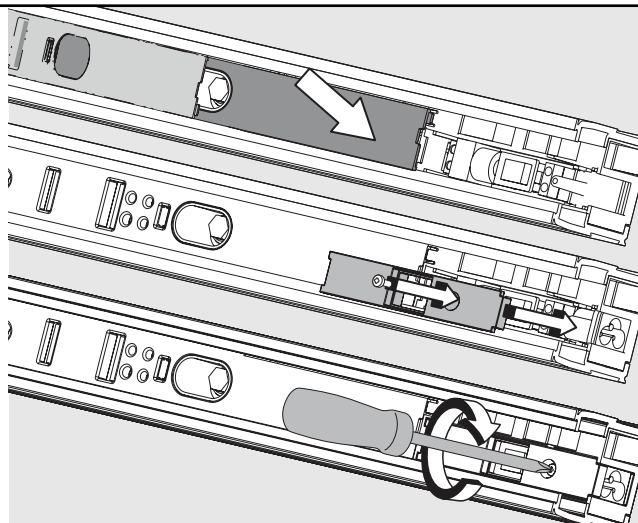
Connect all external accessories but the safety sensors.

Please refer to the instructions for the cable channel on page 26.



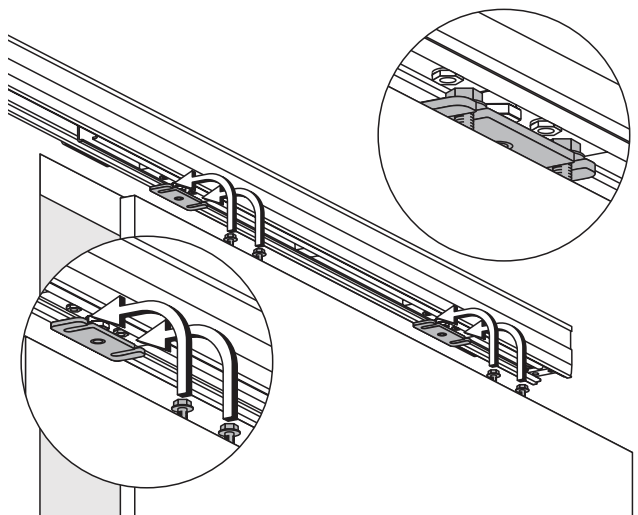
Close the cover of the control unit housing.
Fix and screw down the cover of the power
supply housing.

Move the end stop to the end of the channel
and screw it down thoroughly (see page 12,
picture at the bottom).

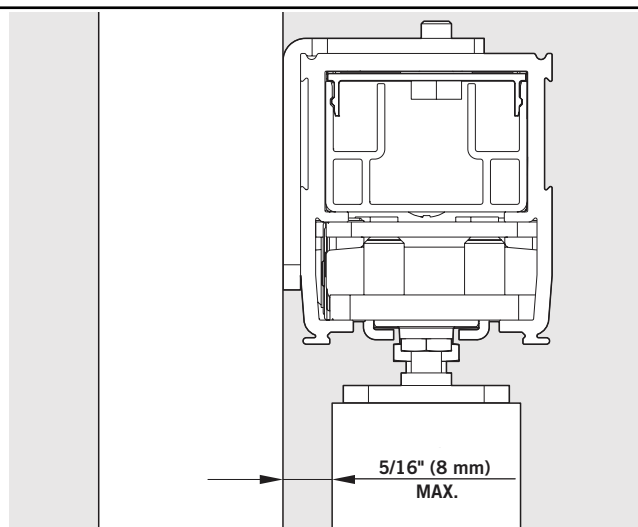


Insert the panel into the door panel
suspension as indicated in the picture, align
it so that it is parallel to the wall and screw
it down.

When using MANET fittings, please consider
the instructions enclosed with the MANET
fittings.



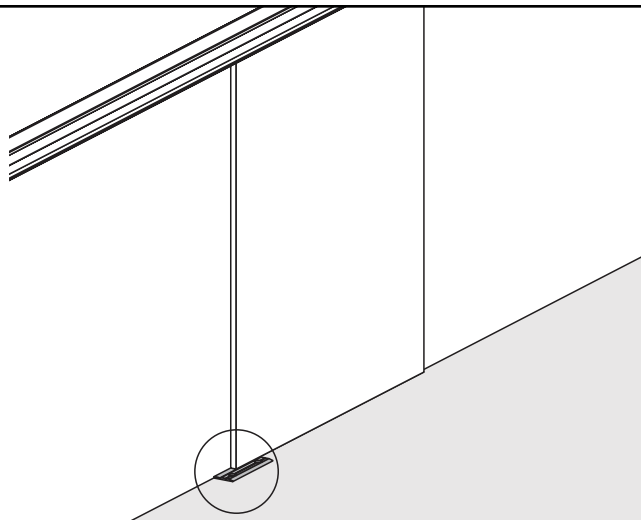
The distance between door panel and wall
must not exceed 5/16".



Locate and fix the provided floor guide rail.
 Please consider the mounting instructions of
 the floor guide.



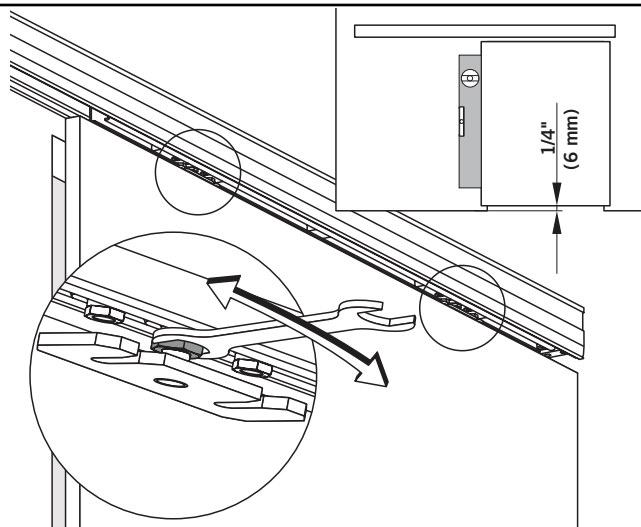
When adjusting the floor guide you have
 to make sure that the door panel runs
 smoothly through the floor guide (does
 not rub against the floor guide).



Align the door panel with the aid of the
 adjustment nuts so that it is level.



The distance between the bottom edge of
 the door panel and the floor should amount
 to 1/4", however, it must not exceed 5/16".

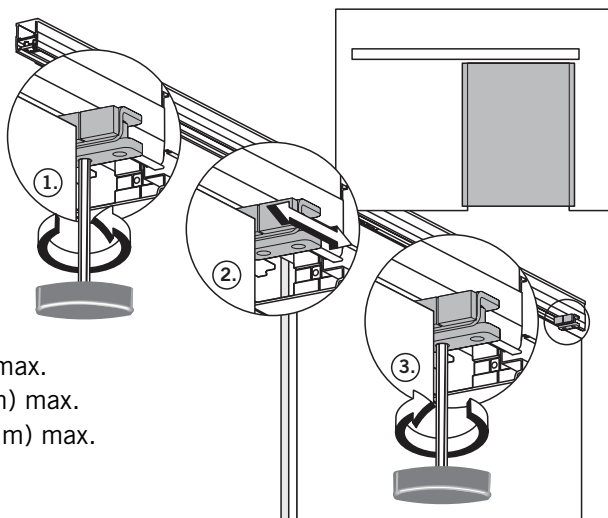


Loosen the screws of the end stop on the side
 where the connections are and move the door
 to the desired CLOSED position. Move the end
 stop next to the door panel and screw down
 tight (5 Nm).




The end stop may only be moved to the
 inside by a certain dimension.

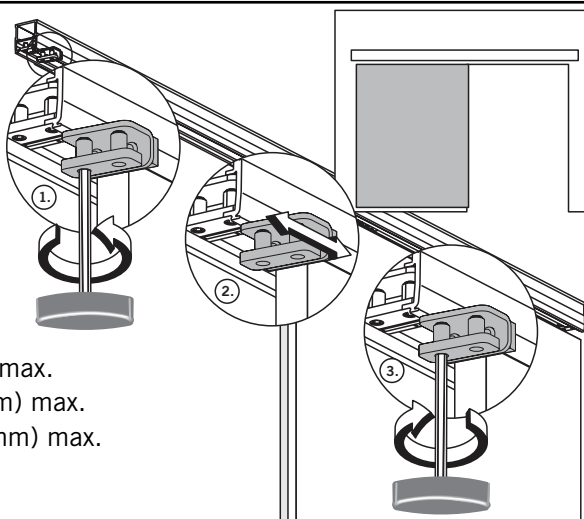
34-7/16" (875 mm) operator => 7-7/8" (200 mm) max.
 39-3/8" (1000 mm) operator => 9-13/16" (250 mm) max.
 44-1/4" (1125 mm) operator => 11-13/16" (300 mm) max.




Loosen the screws of end stop on the other side and move the door to the desired open position. Move the end stop next to the door panel and screw down tight (3-11/16 ft/lb).

 The end stop may only be moved to the inside by a certain dimension.

34-7/16" (875 mm) operator => 7-7/8" (200 mm) max.
 39-3/8" (1000 mm) operator => 9-13/16" (250 mm) max.
 44-1/4" (1125 mm) operator => 11-13/16" (300 mm) max.

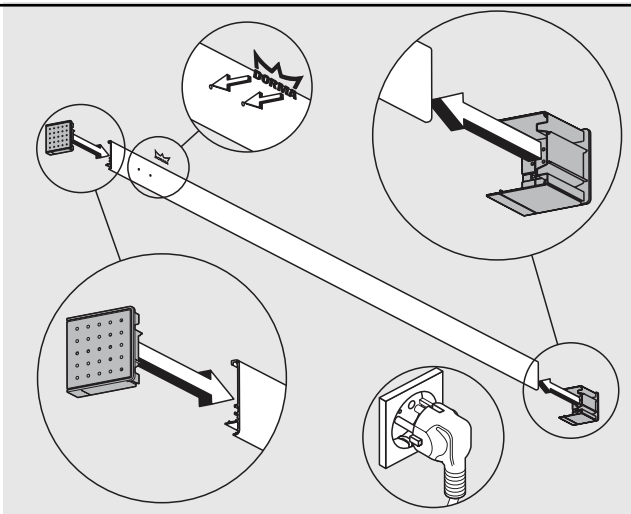


Fix the DORMA logo in the two drill holes.
 Insert the end caps into the cover.

 Depending on the prevailing structural conditions, the end caps can either be cut to length or broke out at the predetermined breaking points.

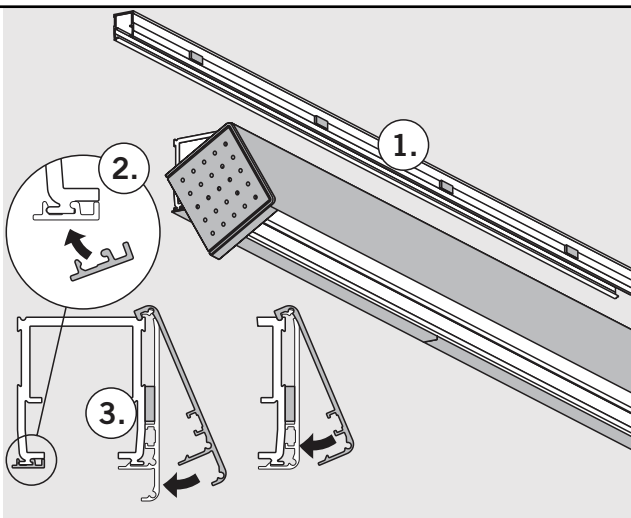
Please install radio receivers, program switches and/or sensors and lay the cables as indicated in the enclosed instructions.

When the system is operated with a power plug, plug it in.



1. Adhere the 4 provided pieces of foam rubber equally onto the operator.
2. Fix the black wall connection profiles at the bottom of the operator on the side where it is connected to the wall. Cut the last profile to length with the aid of a knife.
3. Place the cover onto the operator and clip it shut. When using DORMA MANET single-point fittings, you have to use the shorter cover (displayed on the right side).

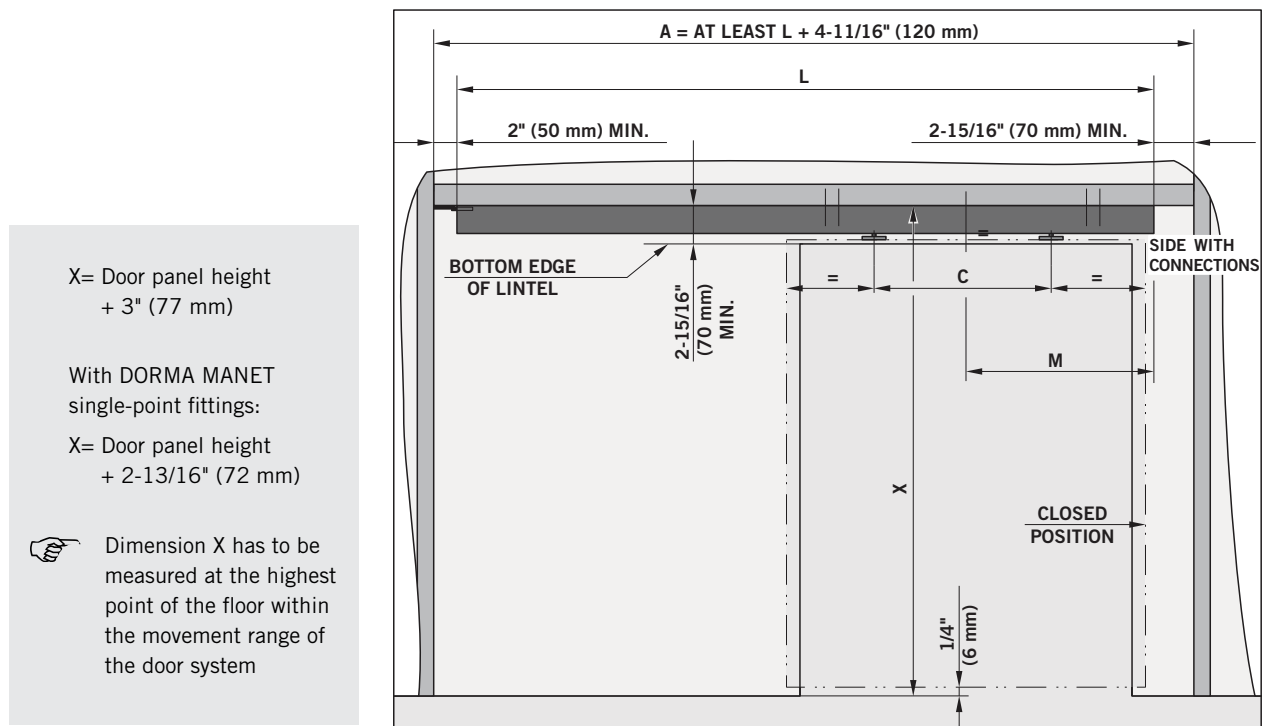
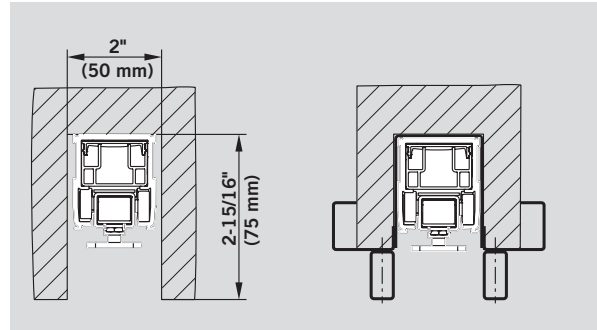
Continue with the commissioning of the system as indicated starting from page 31.



7. Installation instructions for recessed mounting

The MAGNEO sliding door operator is also suitable for an "invisible" recessed mounting. For this kind of mounting a recess with a width of at least 2" (50 mm) and a depth of 2-15/16" (75 mm) is required.

A special door frame made by BOS can also be used. For further information, refer to the BOS website at www.BestOfSteel.de or call us at 800-451-0649.



The wall must not be closed before the system has been installed.

- The connections should always be on the side where the door panel is when the door is in CLOSED position.
- Dimension L stands for the operator length.
- Dimension M indicates the distance from the center of the passage area to the side of the operator where the connections are located.
- The distance between the door panel and the floor should amount to 1/4" (6 mm) and must not exceed 5/16" (8 mm).

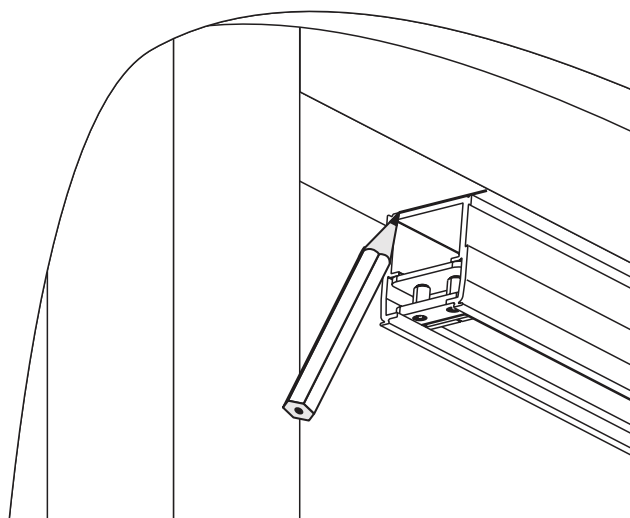


The holes for the cables must be sufficiently big and must not have sharp edges.

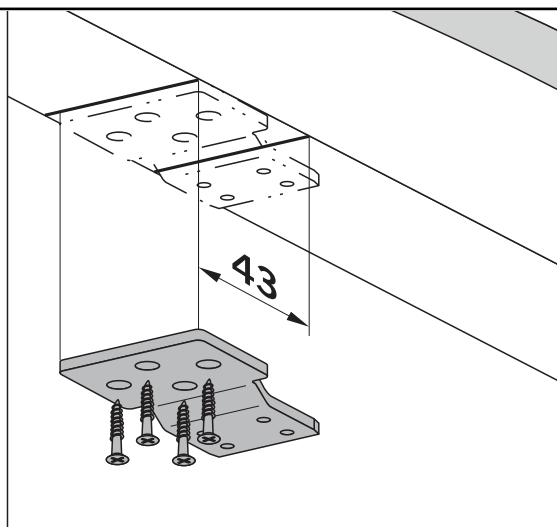
Please refer to the table and the drawing for the dimensions regarding your operator.

L	68-7/8" (1750 mm)	78-3/4" (2000 mm)	88-9/16" (2250 mm)
M	17-3/16" (437.5 mm)	19-11/16" (500 mm)	22-1/8" (562.5 mm)
A	73-5/8" (1850 mm) min.	83-7/16" (2120 mm) min.	93-5/16" (2370 mm) min.
C	22-5/8" (575 mm)	27-9/16" (700 mm)	32-1/2" (825 mm)

Hold the operator in the desired position and mark the end of the operator on the side opposite the connections.



Draw a further line at a distance of 1-11/16" (43 mm). Then position the fixing bracket at the second line and mark then drill holes. Drill the holes and fix the fixing bracket with adequate screws.



Then move the operator over the fixing bracket as far as it will go.

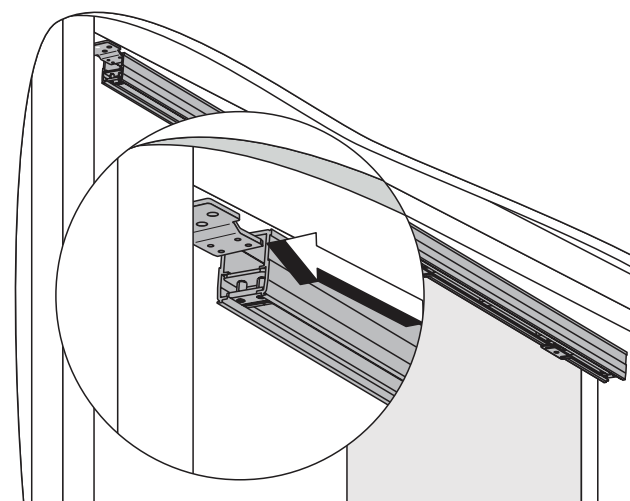


Make sure to position the operator correctly, i.e. the side with the connections must be opposite the fixing bracket.



Never leave the operator on the fixing bracket without holding it in position as this would deform the fixing bracket.

Align the operator so that it is parallel to the wall.



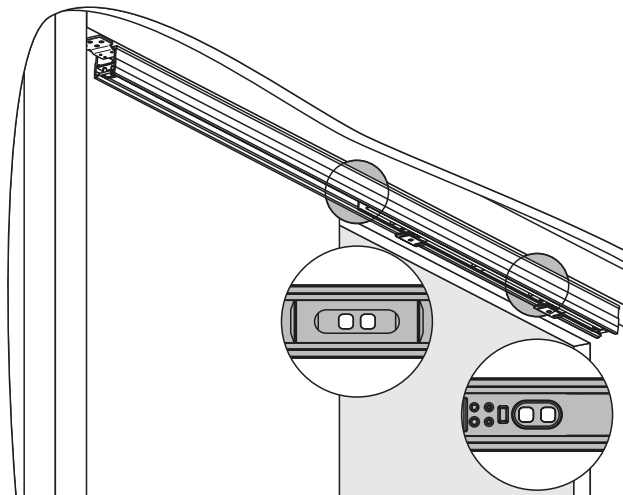
Then mark the fixing holes through the holes in the operator.



In order to reach all 4 holes, you have to move the carrier.

Remove the operator and drill fixing holes with a diameter of 5/32" (4.2 mm) for the supplied sheet metal screws.

The sheet metal must at least be 3/32" (2 mm) thick and the subconstruction must at least carry 528 lb (240 kg).



Then move the operator over the fixing bracket as far as it will go.



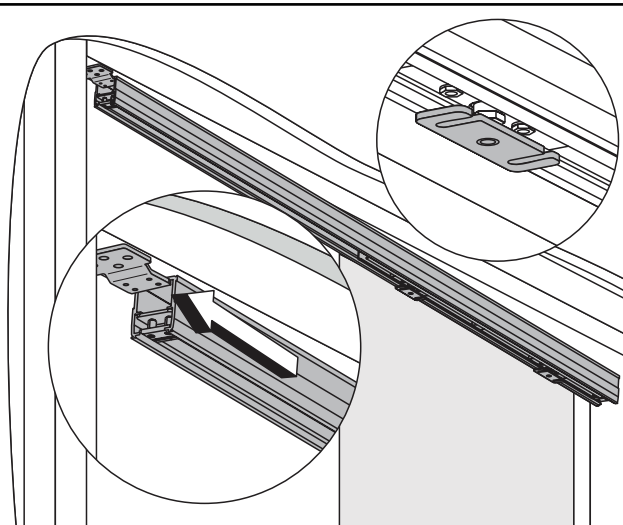
The side with the connections must be opposite the fixing bracket.



Never leave the operator on the fixing bracket without holding it in position as this would deform the fixing bracket.



The openings of the door panel suspension have to point to the front as you cannot turn them following the installation of the system.



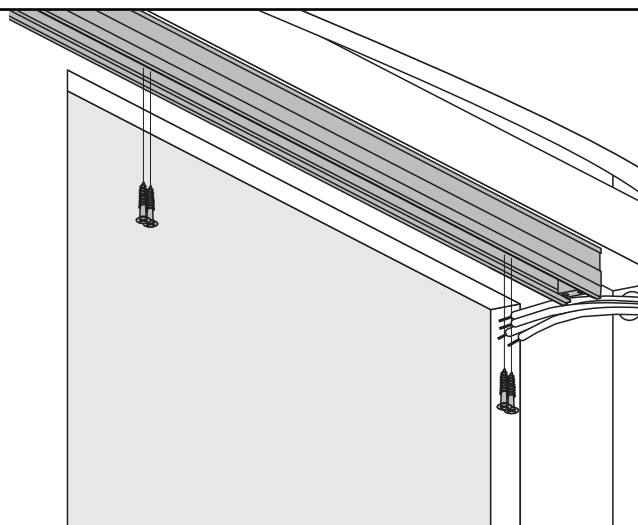
Fix the operator under the cross girder with the selected screws.



The operator has to be fixed so that it is exactly level and parallel to the wall.

All connection cables have to be laid in the close range of the operator at this point.

The holes for the cables must be sufficiently big and must not have sharp edges.



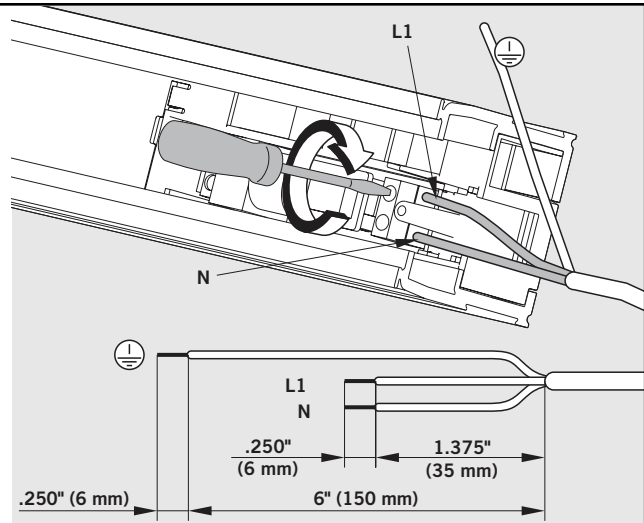
Connection of 120 V permanent power supply

- ⚠ Work on electrical equipment may only be performed by properly qualified staff (electricians).

Before starting with the installation, make sure that the power supply line is dead (de-energized).

Loosen the end stop and move it to the center of the system (see page 11, picture in the middle).

Cut the leads to length, dismantle them and connect L1 and N to the connection terminals of the power supply.



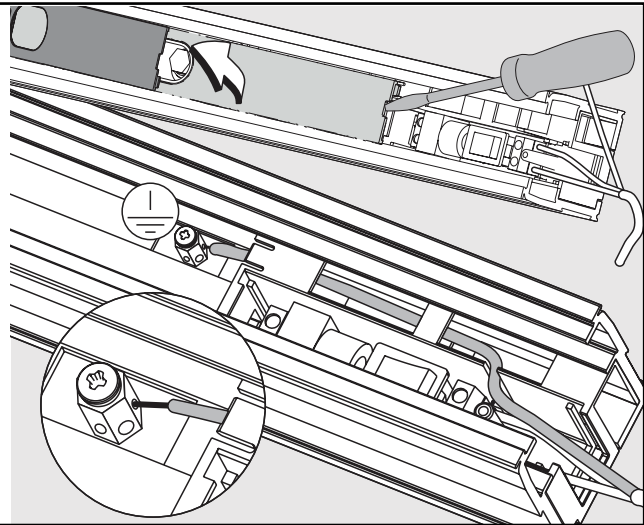
Lever out the cover at the control unit housing with the aid of a screwdriver.

Lay the grounding line through the housing of the operator as shown in the picture and connect it to the grounding terminal (PE).

- ⚠ The grounding (PE) has to be connected in any case.

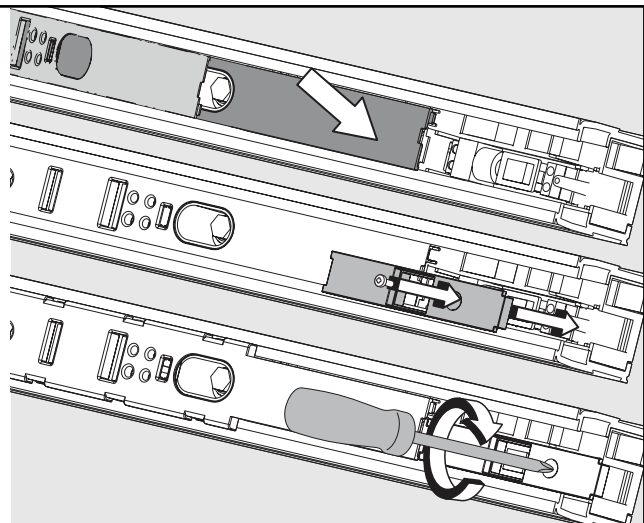
Connect all external accessories but the safety sensors.

Please refer to the instructions for the cable channel on page 26.




Close the cover of the control unit housing. Fix and screw down the cover of the power supply housing.


Move the end stop to the end of the channel and screw it down thoroughly (see page 12, picture at the bottom).

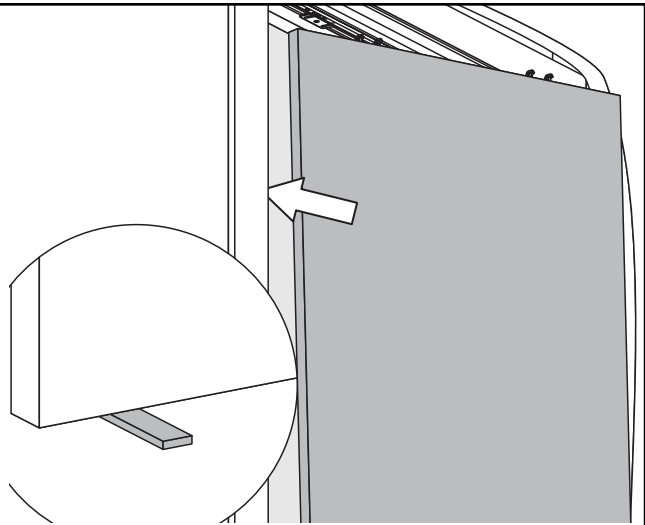


Move the end stop to the end of the channel.

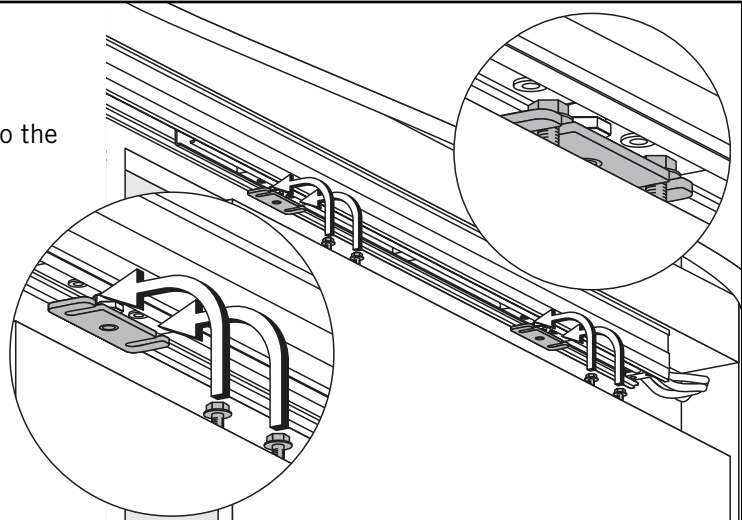
 The end stop must not fall out of the operator.

Place the door panel inside the door frame. As the door panel is wider than the doorway, you will have to tilt it.


 As it will be difficult to get hold of the door panel with recessed mounting, you should use wooden wedges to help you to lift the door panel.

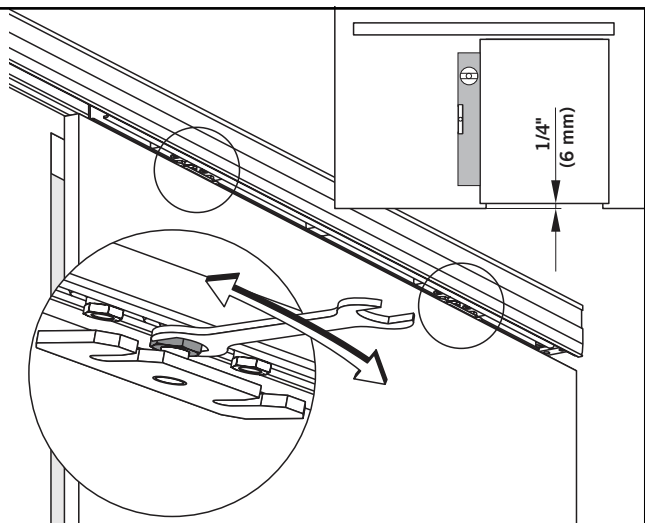


Insert the door panel into the door panel suspension, align it so that it is parallel to the wall and screw it down.




Align the door panel with the aid of the adjustment nuts so that it is level.

 The distance between the bottom edge of the door panel and the floor should amount to 1/4" (6 mm), however, it must not exceed 5/16" (8 mm).

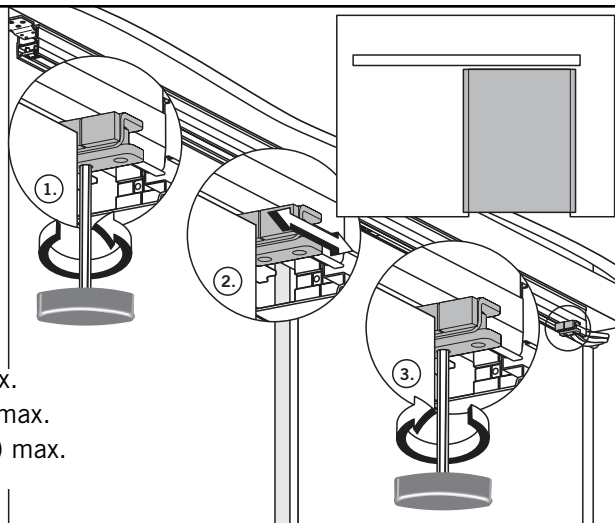


Move the door panel to the desired
CLOSED position.


Move the end stop next to the door panel
and screw down tight (3.7 ft/lb).

 The end stop may only be moved to the
inside by a certain dimension.

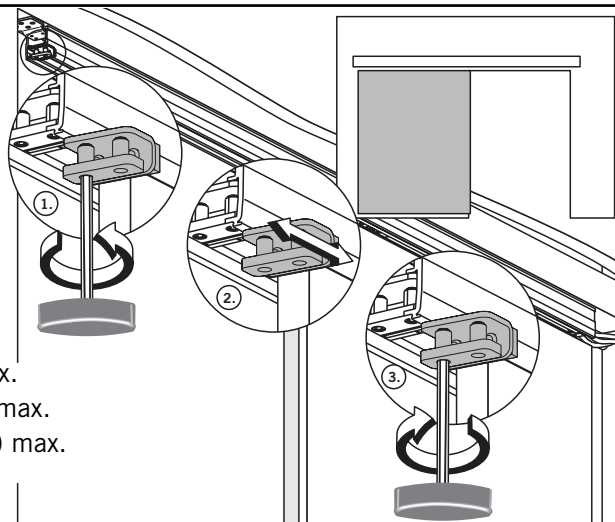
34-7/16" (875 mm) operator => 7-7/8" (200 mm) max.
 39-3/8" (1000 mm) operator => 9-13/16" (250 mm) max.
 44-1/4" (1125 mm) operator => 11-13/16" (300 mm) max.




Loosen the screws of the end stop on the
other side and move the door to the desired
OPEN position. Move the end stop next to

 The end stop may only be moved to the
inside by a certain dimension.

34-7/16" (875 mm) operator => 7-7/8" (200 mm) max.
 39-3/8" (1000 mm) operator => 9-13/16" (250 mm) max.
 44-1/4" (1125 mm) operator => 11-13/16" (300 mm) max.



 The distance between door panel and
wall must not exceed 5/16" (8 mm)

The clearance has to be covered with
brushes or similar, if required.

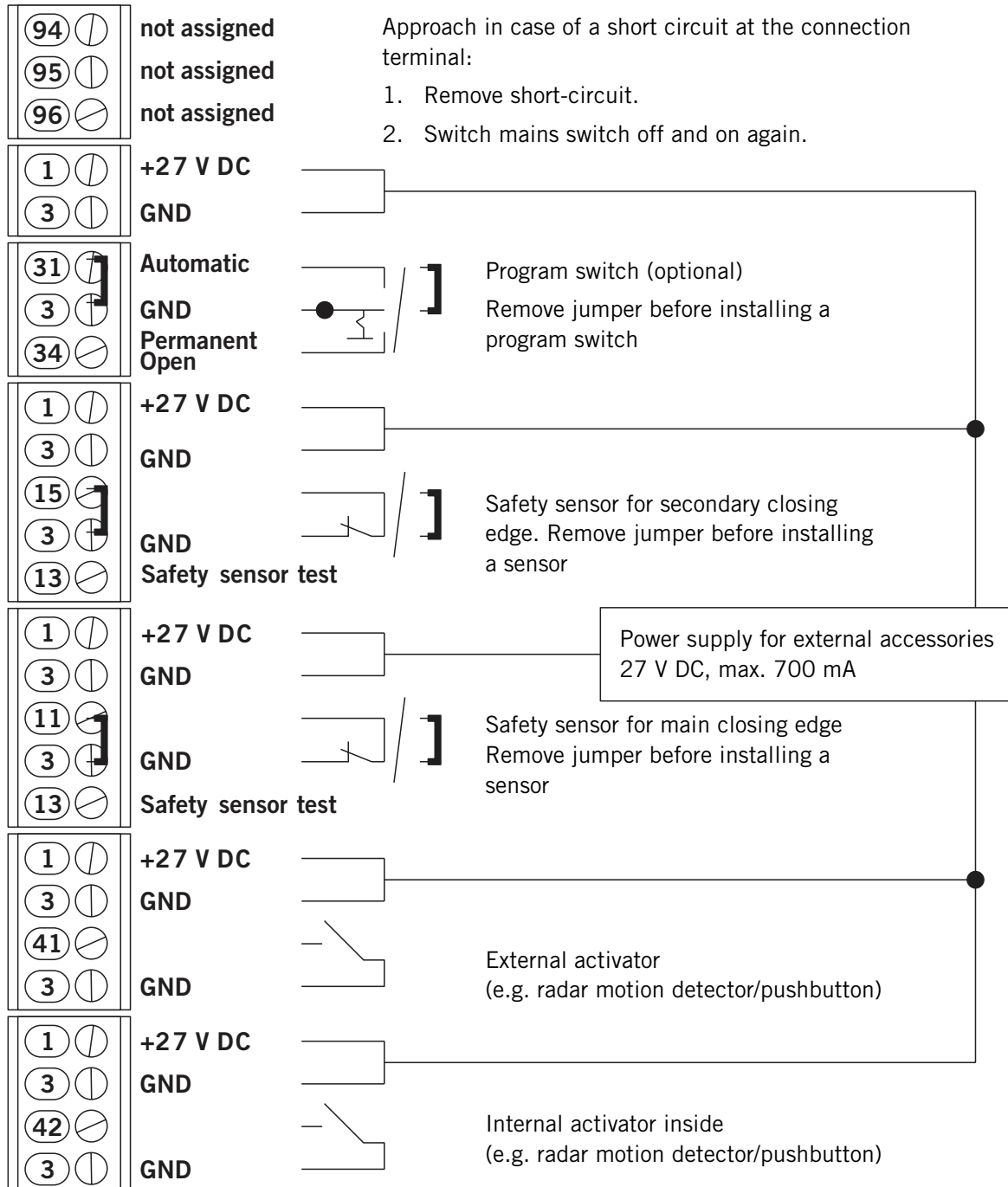
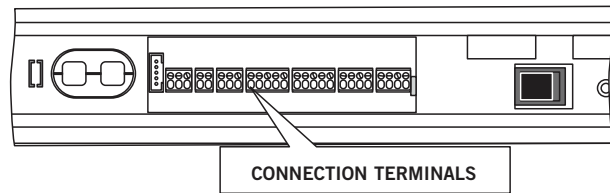
Please install radio receivers, program
switches and/or sensors and lay the cables
as indicated in the enclosed instructions.

Continue with the commissioning of the
system as indicated starting from page 31.

5/16"
(8 mm) → ← 5/16"
(8 mm)

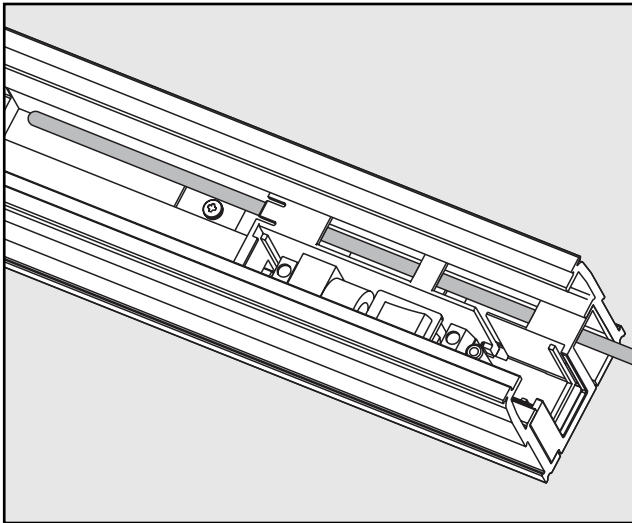
8. Connection diagrams

In order to facilitate the connection of the wires, the different terminal blocks can be removed with pointed pliers.



9. Cable channel

The cables for external accessories (sensors, pushbuttons, etc.) have to be laid inside a cable channel as indicated in the picture.



10. Connection of closing edge protection

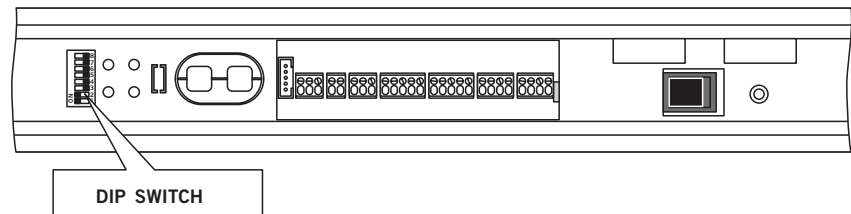
 **This work may only be performed by properly qualified staff.**

When testable sensors for the protection of the closing edges are connected, the control unit has to be adjusted to the sensors via the 01 P switches.

When a sensor is connected to the main closing edge, set DIP switch 1 to ON and DIP switch 3 to OFF.

When a sensor is connected to the secondary closing edge, set DIP switch 2 to ON and DIP switch 3 to OFF.

When sensors are connected to the main and secondary closing edge:



- 3 ON = test high active
OFF = test low active
- 2 ON = sensor test for secondary closing edge activated
OFF = sensor test for secondary closing edge deactivated
- 1 ON = sensor test for main closing edge activated
OFF = sensor test for main closing edge deactivated

11. Commissioning

Basic requirements


- The MAGNEO is completely mounted.
- You can move the door smoothly over the complete movement range.

General information

When you connect the system to the power supply (plug it in) the green light indicator blinks and the operator has no function. You can access the door manually.

In order to make the operator ready for operation, you have to perform a learning cycle.

The green LED goes on following the learning cycle. The MAGNEO is now ready for operation and operates in Low-Energy Mode.

 Apart from during commissioning, a learning cycle has to be performed every time the position of an end stop has been adjusted or the weight of the door has changed.

This approach describes the commissioning of the standard door system. Accessories and different operation modes can be adjusted after the system has been commissioned. Sensors are connected and adjusted following the successful commissioning of the system. The light indicator (LED) will give you visual feedback.

The settings stored during the commissioning of the system can be overwritten by performing a new commissioning.


Learning cycle

In order to start the learning cycle:

- The door must be open.
- The operator must be switched on.
- The movement range of the door must be free of obstacles.

The green LED will blink before the first learning cycle.

Press and hold the RESET button for more than 3 seconds.


 Do not interrupt the learning cycle as the system currently learns all values it requires.

During the learning cycle the door will:


Open twice and close again. The LED will blink green at certain intervals then it will show a permanent green light.

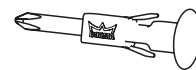
The MAGNEO is now ready for operation.

How to switch the system from Low Energy to Full Energy Mode

 Only authorized staff (authorization on the part of DORMA required) may switch the MAGNEO to Full-Energy Mode. As there are higher forces in Full-Energy Mode, the closing edges have to be protected by safety sensors.

Therefore we do not explain how to switch the system to Full-Energy Mode in these instructions.

 Only use the enclosed red screwdriver to perform potentiometer adjustments!



Speed adjustment

speed



The maximum speed depends on the weight of the door panel. You can reduce the speed with the aid of the potentiometer (infinitely variable).

Adjustment of hold-open time

hold open time



The door will close automatically on expiry of the adjusted hold-open time following the moment it reached OPEN position. You can adjust the hold-open time infinitely from 5 to 30 seconds with the aid of the potentiometer.

PERMANENT OPEN Function via double-click

This function can only be adjusted when a pushbutton is connected.

In order to activate this function, DIP switches 4 and 5 at the control unit have to be set to ON position.

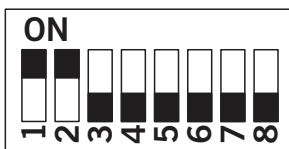
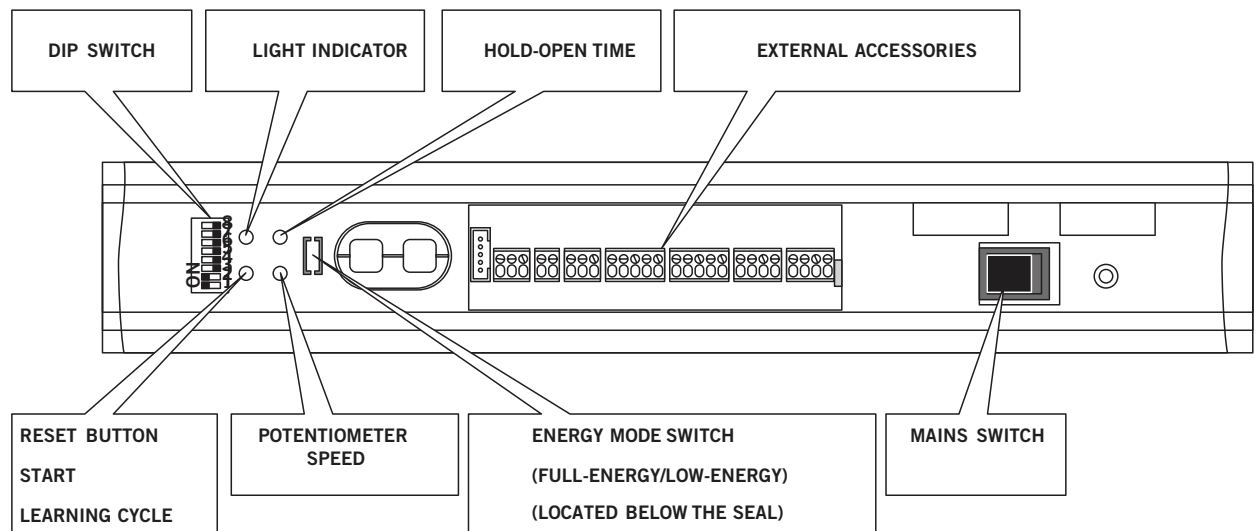
**Opening/closing via pushbutton
(Alternate Action)**

This function is only available with pushbutton or Push & Go Function. In order to activate it, DIP switches 4, 5, and 6 have to be set to ON position.

Closing force

In case the door does not close properly due to the door seals, you can increase the force with which the operator presses the door against the seal.

In order to do so, set DIP switch 7 to ON position.



8 No function

7 OFF = Reduced closing force

6 OFF = Automatic Function activated

5 OFF = External motion detector activated

4 OFF = Internal motion detector activated

3 OFF = Test low active

2 OFF = Sensor test at secondary closing edge deactivated

ON = Sensor test at secondary closing edge activated

1 OFF = Sensor test at main closing edge deactivated

ON = Sensor test at main closing edge activated

ON = Enhanced closing force

ON = Permanent Open Function activated

ON = External pushbutton activated

ON = Internal pushbutton activated

12. Operating Instructions

1. Opening the door in AUTOMATIC Function

When the system is delivered, the MAGNEO is adjusted to AUTOMATIC Function. Depending on the installed accessories, the door can be opened in different ways.

Push & Go:

As soon as the door is moved manually into opening direction by approximately 13/32" (10 mm), the operator automatically moves the door panel further in the desired direction.

The door closes automatically.

Pushbutton:

Following the activation of the pushbutton (e. g. wall-mounted pushbutton or radio transmitter) the operator opens and closes the door.

Sensors:

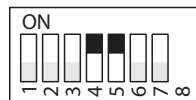
Where presence sensors (radar motion detectors or similar) are connected, the door opens automatically as soon as a person approaches the door system.

The door closes automatically.

PERMANENT OPEN via double-click:

When this function is activated, the door can be opened permanently by double-clicking the pushbutton. In order to close the door, a further double-click on the pushbutton is required.

To activate this function set DIP switch 4 and 5 to ON position.



Opening/Closing via pushbutton (Alternate Action)

As soon as you push the button or move the door manually the door will open. When you push the button for a second time or move the door panel by hand, the door will close.

To activate this function set DIP switch 4, 5 and 6 to ON position.



Express-Function

The door can be moved manually into its driving direction without extra resistance. When the maximum speed is exceeded, the driving resistance will increase in line with the speed by which it is exceeded.

As soon as the user has released the door panel, the operator will softly slow it down to maximum speed. This function is activated during all opening and closing cycles.

2. In the event of a power failure

In the event of a power failure, the door can be opened and closed by hand.

However, in this case the system does not brake the door panel, which means that the user has to move (hold) it all the way by hand.

As soon as the voltage returns, the operator will automatically perform a position initialization.

During this position initialization, the movement range of the door has to be free of obstacles.

3. Adjustments

⚠ Only use the enclosed red screwdriver to perform potentiometer adjustments!



Speed adjustment

speed



The maximum speed depends on the weight of the door panel. You can reduce the speed with the aid of the potentiometer (infinitely variable).

Adjustment of hold-open time

hold open time



The door will close automatically on expiry of the adjusted hold-open time following the moment it reached OPEN position. You can adjust the hold-open time infinitely from 5 to 30 seconds with the aid of the potentiometer.

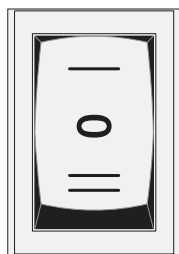
4. Closing force

In case the door does not close properly due to the door seals, you can increase the force with which the operator presses the door against the seal.

In order to do so, set DIP switch 7 to ON position.

5. Internal program switch (optional)

The internal program switch (if available) is installed in the lateral cover on the side where the door is when CLOSED.



AUTOMATIC
OFF
PERMANENT OPEN

Changing the operation mode

In order to change the operation mode, just adjust the program switch to the desired function.

13. Commissioning and maintenance according to DIN 18650-2, 5.1–5.4

Where the door is operated in accordance with DIN 18650, the following points have to be observed:

- An inspection and acceptance test according to the below-mentioned checklist has to be performed before the first commissioning of the system by trained staff (trained by DORMA).
- Regular maintenance and inspections have to be performed (at least once a year) under consideration of our specifications for the MAGNEO by properly trained staff.
- Documentation of the results in accordance with DIN 18650-2 paragraph 5.1-5.4. The facility operator has to keep the properly filled-out checklist according to our specifications for at least 1 year.

Checklist (start-up test, maintenance, regular inspections) according to DIN 18650-2, paragraph 5.1-5.4

- ☐ The system has been installed properly in accordance with the instructions of the manufacturer.
- ☐ The door panels run smoothly/have been readjusted (if required).
- ☐ The door works properly (check the opening and closing cycle respectively).
- ☐ Function of installed activators like radar motion detectors, push buttons or remote controls has been checked.
- ☐ The contactless safety equipment (safety sensors), if installed, has been checked for proper function.
- ☐ Effective safety equipment has been installed to avoid or protect danger spots between certain parts of the door system and between the door and its structural environment (like for example safety clearances or the protection of the secondary closing edges).
- ☐ Test badge has been fixed.
- ☐ The inspection and maintenance work has been documented.

The MAGNEO has to be switched off and secured against unintended and unauthorized switching on before performing maintenance work (cleaning or maintenance).

Care

Only use commercial cleaning agents to clean the operator.

Scrubbing cleansers might damage (scratch) the surface of the operator.

14. Troubleshooting

Malfunction	Possible cause	Remedy
The door does not respond. The green LED light indicator is off.	No power supply.	Switch on mains switch.
	Loose cable connections.	Connect cable connections thoroughly.
	Damaged power cord.	Replace power cord.
	Damaged power plug.	Replace operator.
The door does not respond. The green LED light indicator is on.	The program switch is set to [0] (OFF).	Set the program switch to the desired function.
	The program switch is set to [II] (Permanent Open).	Set the program switch to the desired function.
	The door has been adjusted to Permanent Open Function via double-click.	Close door via double-click.
	The safety sensors at the door are activated (there is something within the detection range of the sensor).	Remove obstacles. Adjust safety sensors if required.
	Damaged sensor cable.	Check and replace cables if required. Check and replace jumpers if required.
	No safety sensors are connected.	Terminals must be bridged.
	The operator is defective.	Replace operator.
The green LED light indicator blinks at certain intervals.	The learning cycle has not been performed properly.	Restart learning cycle (Page 31).
	The operator is defective.	Replace operator.
The door stops during a cycle.	The door does not run smoothly.	Check movement range and remove cause for unsmooth running.
		Check guide rail and floor guide for dirt or wear and clean or replace if required.
The door moves beyond the adjusted open or closed position.	The corresponding end stop has shifted its position.	Readjust end stop and tighten screws. Start learning cycle (Page 31).
The red LED light indicator illuminates permanently.	Defective control unit.	Switch mains switch off and on.
		Replace operator.
The red LED light indicator blinks twice at certain intervals.	Defective control unit.	Switch mains switch off and on.
		Replace operator.
The red LED blinks 3 times at regular intervals.	The power mode switch of the door has been switched to another position.	Switch mains switch off and on.

Malfunction	Possible cause	Remedy
The red LED blinks 4 times at regular intervals.	Testable safety sensors are defective.	Check and replace safety sensors if required.
	Damaged sensor cable.	Check and replace cables if required.
	DIP switches 1 to 3 are not set correctly.	Check settings of DIP switches and readjust if required.
The red LED blinks 5 times at regular intervals.	Incremental encoder or cable of incremental encoder is defective.	Switch mains switch off and on. Replace operator.
	The opening width is adjusted incorrectly.	Readjust opening width (end stops). Start learning cycle (Page 31).
The red LED blinks 6 times at regular intervals.	There is an obstacle within the door's movement range.	Remove obstacles from movement range.
	The opening width has been adjusted incorrectly.	Readjust opening width (end stops).
		Start learning cycle (Page 31).
The red LED blinks 10 times at regular intervals.	Stator or cable of stator is defective.	Switch mains switch off and on. Replace operator.
	Short circuit at the terminal connection.	1. Remove the short circuit. 2. The operator has to be switched off and then on with the aid of the mains switch.
Humming noise while door is in end position.	Inappropriate end position of door panel.	Shift end stop by at least 2 mm. Start learning cycle (Page 31).
The door panel vibrates when moving.	The guide mechanism is under tension.	Readjust the door panel connection and the floor guide if required. Turn the nuts several times in order to fix the door panels.

Operating cycle indicator

When you press the RESET button on the control unit for a short time, the door will open. In case the LED light indicator lights up for one second (yellow light), the system has performed more than 200,000 cycles.

You should contact the Service Department in order to have the system checked.

Please call this number in case of technical problems or further questions:



800.451.0649

In case a defective operator has to be replaced, please contact your authorized dealer at the respective point of purchase with the respective proof of purchase. However, you have to consider that the complete basic operator including carriers has to be returned.

DORMA GmbH & Co. KG
Breckerfelder Str. 42-48
58256 Ennepetal
Germany

erklärt hiermit nach Artikel 4, Absatz 2 der Richtlinie des Rates zur Angleichung der Rechtsvorschriften der Mitgliedsstaaten für Maschinen (98/37/EG), daß der

hereby confirms in accordance with Article 4, Paragraph 2 of the European Council Directive on the approximation of the laws of the Member States relating to machinery (98/37/EG) that the

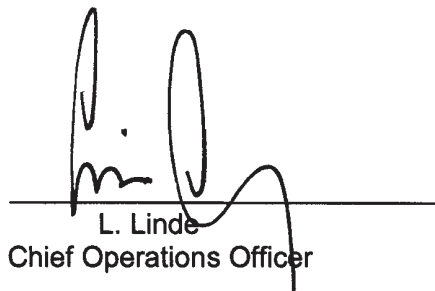
suivant l'article 4, paragraphe 2 de la directive pour les machines du Conseil Européen pour l'harmonisation des prescriptions légales des pays membres (98/37/EG), déclare par la présente que

Schiebetürantrieb
CS80 MAGNEO

allen zutreffenden Vorschriften entspricht. Er darf in automatischen Türanlagen gemäß der o.g. Richtlinie eingebaut und betrieben werden, wenn der Hersteller der Anlage sicherstellt, daß alle Anforderungen, die sich aus der Maschinenrichtlinie ergeben, eingehalten werden sowie eine EG Konformitätserklärung ausstellt. /

complies with all relevant regulations. It may be incorporated and operated in automatic doors systems in accordance with the above Directive, provided that the manufacturer of the door system ensures compliance with all requirements emanating from said Directive and duly issues an EC Declaration of Conformity. /

est conforme à toutes les prescriptions correspondantes. Il peut être intégré et utilisé dans les systèmes de porte automatiques conformes à la directive mentionnée ci-dessus, si le fabricant du système garantit que toutes les exigences de la directive pour les machines sont respectées, et s'il établit une déclaration de conformité.



L. Linde
Chief Operations Officer

Ennepetal, 12.02.08

DORMA GmbH & Co. KG
Breckerfelder Str. 42-48
58256 Ennepetal
Germany

als verantwortlicher Hersteller des / as the manufacturer responsible for the / en tant que fabricant responsable du

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erklärt hiermit die Übereinstimmung der, nach oben genannter Bauart gefertigten, Anlagen mit den wichtigsten Angaben über die Sicherheitsziele folgender Richtlinie des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten der EG /

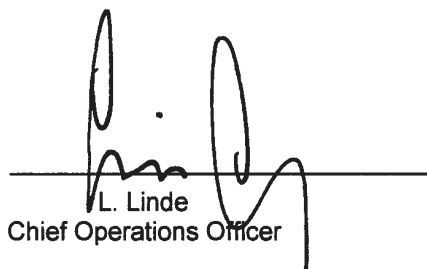
hereby confirms that products/systems corresponding to the above type of construction comply with all the essential health and safety requirements applying to them as pursuant to the European Council Directive on the Approximation of the Laws of the Member States, and specifically with the following European Council Directives /

déclare par la présente la concordance des installations, fabriquées suivant le modèle mentionné ci-dessus, avec les indications essentielles de sécurité des directives du Conseil Européen pour l'harmonisation des prescriptions légales des pays membres de la CE:

- | | | |
|-------------------------------------|--------------------|--|
| <input checked="" type="checkbox"/> | 2006/95/EG | Niederspannungsrichtlinie / Low voltage directive / Directive basse tension |
| <input type="checkbox"/> | 89/106/EWG/EEC/CEE | Bauprodukte / Building products / Produits de construction |
| <input checked="" type="checkbox"/> | 2004/108/EG | Elektromagnetische Verträglichkeit / Electromagnetic compatibility / Compatibilité électromagnétique |
| <input type="checkbox"/> | 98/37/EG | Maschinenrichtlinie / Machinery directive / Directive machine |

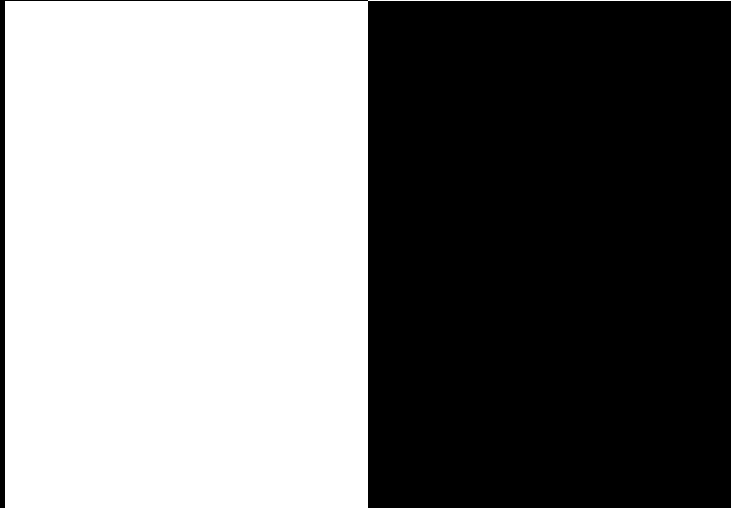
Es wurden die produktrelevanten Abschnitte der folgenden Normen und Bestimmungen angewandt / In view of the relevant paragraphs for our product, this declaration is based on the following applied standards and rules / En tenant compte les paragraphes pertinents de produits, cette déclaration est basée sur normes et règles suivantes appliquées:

- | | | | |
|---|--|--|----------------------------------|
| Harmonisierte europäische Norm, nationale Regel / | <input type="checkbox"/> EN 292-2 | <input checked="" type="checkbox"/> EN 61000 - 3 - 2 | <input type="checkbox"/> EN 1154 |
| Harmonized European standards, national rule / | <input checked="" type="checkbox"/> EN 954 | <input checked="" type="checkbox"/> EN 61000 - 3 - 3 | <input type="checkbox"/> EN 1155 |
| Norme européenne harmonisée, règle nationale: | <input checked="" type="checkbox"/> EN ISO 12100-1 | <input type="checkbox"/> EN 55014 | <input type="checkbox"/> EN 1158 |
| | <input checked="" type="checkbox"/> BGR 232 | <input type="checkbox"/> EN 55022 | <input type="checkbox"/> EN 1125 |
| | <input checked="" type="checkbox"/> EN 61000 - 6 - 2 | <input checked="" type="checkbox"/> EN 60335 - 1 | <input type="checkbox"/> EN 179 |
| | <input checked="" type="checkbox"/> EN 61000 - 6 - 3 | <input checked="" type="checkbox"/> EN 60950 - 1 | <input type="checkbox"/> |


 L. Linde
 Chief Operations Officer



Ennepetal, 12.02.08



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