

CS 80 MAGNEO

Automatic sliding door operator

Installation and maintenance manual

Contents	02.2012	Page
1. Technical Data and Features		3
2. Greetings/Required Tools		4
3. Important Installation Instructions		5
4. Safety Instructions		6
5. Functional Characteristics		9
6. System Overview		11
7. Before Mounting		12
8. Installation Instructions for On-Wall Mounting		15
9. Installation Instructions for In-Wall Mounting		23
10. Connection Diagrams		29
11. Cable Channel		30
12. Connection of Closing Edge Protection		31
13. Commissioning		32
14. Operation Instructions		34
15. Daily Safety Checks		36
16. Troubleshooting Instructions		37

„Original documentation“

Read this manual carefully before starting the installation.



REMARK A remark will call your attention to important information that will facilitate your work with the CS 80 MAGNEO.



ADVISE An advice will warn you that you could damage the CS 80 MAGNEO and explain how to avoid this.



ATTENTION Here we will inform you of dangers that might cause damage to property or injure or kill people.

1. Technical data and features

Power supply: 115VAC $\pm 10\%$; 50/60 Hz
 Branch circuit protection (by others): 15 A
 Cable type: 14 AWG (12 Max) [max. 3 x 1.5 mm²]

Power consumption without external accessories:

Stand-By-Mode: 5.6W
 Automatic-Mode: max.60W

General information:

Temperature range: 0 - 104° F [0 - 40° C]
 Operating noise of operator: max.55 dB (A)
 Door panel height: max. 118" [max. 3000 mm]
 Door panel weight: 44 lbs - 175 lbs [20 kg - 80 kg]

Weight of operator:	max.passage width	Operator length without cover	Weight of operator
	34.4" [875 mm]	68.9" [1750 mm]	18.9 lbs [8.6 kg]
	39.4" [1000 mm]	78.7" [2000 mm]	20.7 lbs [9.4 kg]
	44.3" [1125 mm]	88.6" [2250 mm]	22.4 lbs [10.2 kg]



FCC 15.105 (a)

NOTE:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Dear customer,

We are pleased that a DORMA automatic sliding door has been chosen for this installation. DORMA carefully designed, tested and built the door of high quality materials as it will provide many years of service.

Now the door must be installed and adjusted properly to ensure its proper operation and safe use.

To install and adjust the door for proper and safe operation, the installer must carefully read this instruction book before proceeding, then follow the instructions exactly.

The door is designed to be installed only by trained and knowledgeable installers. The installation technician should be experienced in the installation of the automatic entrance product line.

After installation, the door must be adjusted to confirm with DORMA recommendations and all code requirements. Be sure to carefully study the requirements in these instructions.

After installation and adjustment, the installer's final responsibility is to properly instruct the owner in the safe use of the door. He must also present the owner with the CS 80 MAGNEO Owner's Manual and carefully explain how to perform the daily safety check test.

Each step of the installation, adjustment and instructions are important for proper and safe use of the door being installed. If there are any questions about any items contained in these instructions, call the DORMA Technical Support Group for assistance.

Yours faithfully,
The DORMA-Team

Required tools:

- Tape measure
- Spirit level
- Pencil
- Electric Drill
- Masonry drill bit Ø 1/4"
- Metal drill bit Ø 1/8" + Ø5/16"
- Socket wrench (10mm)
- Small flat head screwdriver to connect the terminals on the control unit.
- Phillips screwdriver for countersunk screws of wall connection.
- Allen (Hex) key, 4mm
- Combination wrench, wrench size 10 mm and 13 mm
- Long-nosed pliers for connection to terminals.
- Adequate screws and wall anchors for the structures, in case they are not made of brickwork or concrete.

Additionally for DORMA MANET fixing:

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

Important Installation Instructions

ALL INSTALLATIONS AND SERVICE SHOULD ONLY BE PERFORMED BY TRAINED OR AUTHORIZED PERSONS

Warning - To reduce the risk of injury or death:

1. Carefully Read And Follow All Installation Instructions.
2. This unit should only be installed in a rough opening capable of providing proper structural support.
3. Always disconnect the power supply before servicing.
4. To install and adjust the door for proper and safe operation, the installer must carefully read this instruction book before proceeding, then follow the instructions exactly.
5. The door is designed to be installed only by trained and knowledgeable installers. The installation technician should be experienced in the installation of automatic entrances. They should know all local code requirements and be familiar with the requirements of the current ANSI A156.10 & 156.19 Standards for Power Operated Pedestrian Doors.
6. After installation, the door must be adjusted to conform with DORMA recommendations and all code requirements. Carefully study the requirements in these instructions.
7. After installation and adjustment, the installers final responsibility is to properly instruct the owner in the safe use of the door. He must also present the owner with this manual.
8. Each step of the installation, adjustment and instructions are important for proper and safe use of the door being installed. If there are any questions about any items contained in these instructions, call the DORMA Technical Assistance Group for assistance.
9. Save these instructions for future reference.

Compliance with Safety Standards

Your door system was designed to the latest operating and safety standards. In order to ensure the continued safe operation of your door, it is important that:

- Your door system be maintained in compliance with the standards of the industry, BHMA/ANSI.
- Proper decals and labels be applied, per BHMA/ANSI Standards, and maintained on your doors. If decals are removed, or cannot be read, request labels to be replaced when calling for service.

4. Safety Instructions

4.1 Specified standard operation



The CS 80 MAGNEO is only designed to open and close doors.

Do not allow children to play with the CS 80 MAGNEO or rigidly mounted adjustment and/or control devices. Keep remote controls out of reach of children.

4.2 Product-specific characteristics

The CS 80 MAGNEO is intended for use on interior single-panel sliding doors.

The CS 80 MAGNEO is neither suitable for application in escape routes, nor on fire and smoke doors nor on exterior doors.

4.3 Standards, laws, codes and regulations

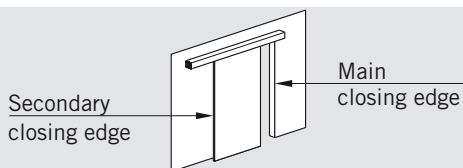
CS 80 MAGNEO is a low energy product and complies with the kinetic force limitations of the ANSI 156.19 Low Energy Standards.

The standard only covers swing doors at this point.



Danger spots at closing edges

Automatic doors might cause hazards by crushing, shearing, hitting and closing edges.



Systems with CS 80 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.

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 sensor 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. We would therefore ask you to have a look at our risk assessment form, which is available on our homepage www.dorma-magneo.com and will help you to perform the risk assessment.

Special requirements regarding the protection of people in need of protection. In case the risk assessment reveals that there is a health 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.


4.4 Limitation of liability

The CS 80 MAGNEO must only be used according to its specified standard operation. DORMA will not accept any liability for damages resulting from unauthorized modifications, unsafe, or improper installation or use of the CS 80 MAGNEO.

4.5 Documentation


 Using control elements, making adjustments or performing procedures that are not described herein 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 CS 80 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.

4.6 General information regarding the installation of the system

 The CS 80 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, like for example screws and wall plugs, have to be adequate with regard to the structural conditions (concrete, wood, plasterboard etc.)
- As soon as you have loosen 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 CS 80 MAGNEO.
- Never stick metal objects inside the openings of the CS 80 MAGNEO. Otherwise you could sustain an electric shock.
- Never put your hand inside the CS 80 MAGNEO in order to avoid injuries.
- Lay the power cord so that nobody can trip over the cable or unplug it by mistake.
- Do not operate the CS 80 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.
- If a switch is used for activation of the door it must be located so that the door operation can be observed by the person operating the switch.
- Following the successful installation of the system, you have to check the settings as well as the CS 80 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.
- Permanent wiring is to be employed as required by local codes.

4.7 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 can not be excluded.

4.8 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.

CS 80 MAGNEO - Awarded safety



Developed according to the latest safety standards:

- + Low-Energy-Mode in accordance with DIN standard
- +  Tested Safety
- +  -mark
- +  -mark (UL 325/CSA 22.2)
- +  -mark (Part 15.105(a))

5. Functional Characteristics

5.1 General information

The CS 80 MAGNEO is a single-panel Low-Energy-Mode sliding door operator for small and light interior doors with an admissible weight from 44 lbs to 175 lbs 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).

5.2 Commissioning

During the first commissioning of the operator, the installer has to perform a learning cycle according to the commissioning instructions. When the installer 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.

5.3 Energy Modes (Maximum Force Limited)

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

The standard ANSI 156.19 states the energy with which a swing door panel hits an obstacle must be limited. The CS 80 MAGNEO operator moves the sliding panel at a low speed corresponding to ANSI 156.19 energy. The potentiometer (located inside the operator) can only be used to reduce this calculated speed.


Full-Energy-Mode

The forces are limited in this mode as well. The speed is infinitely variable with the aid of a potentiometer (located inside the operator). Even though the door may open at a fast speed. The closing cycle always remains in Low-Energy-Mode

5.4 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 after expiration of the adjusted hold-open time.
PERMANENT OPEN:	The operator opens the door and holds it in "open" position until it receives an other signal.

When the system is delivered, the CS 80 MAGNEO is adjusted to AUTOMATIC Mode.

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

5.5 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 push button (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.

5.6 Safety functions

Static forces in Low-Energy-Mode.
The system does not exceed a value of 15 lb 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.


5.7 Safety sensors

You can install sensors to detect obstacles. 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 completion of the adjusted hold-open time. The door will stop immediately and reverse when the sensor detects an obstacle during the closing cycle. This function is not activated while the door is in closed position (then the sensor is deactivated).

5.8 Power failure

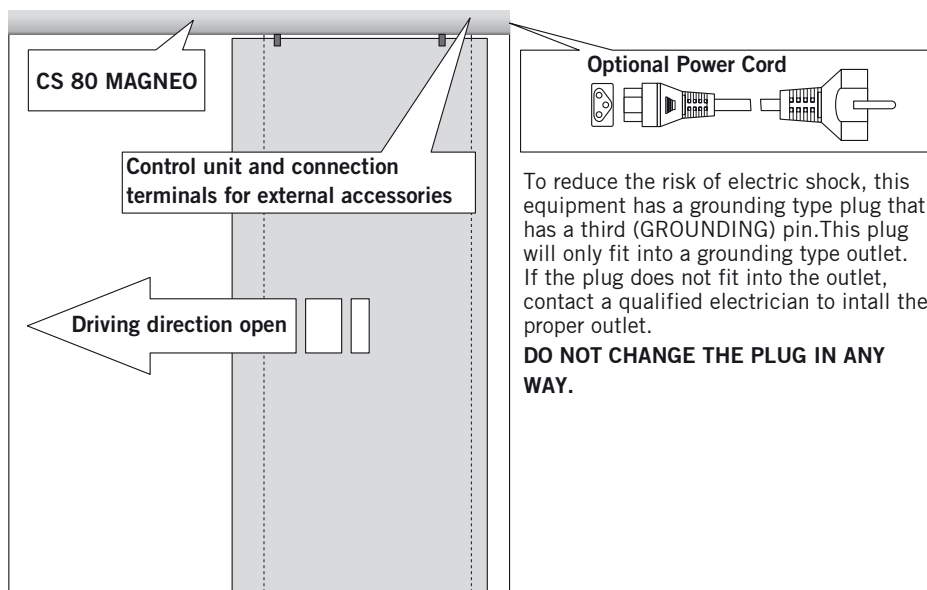
In the event of a power failure, the door can be opened and closed by hand.

 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.

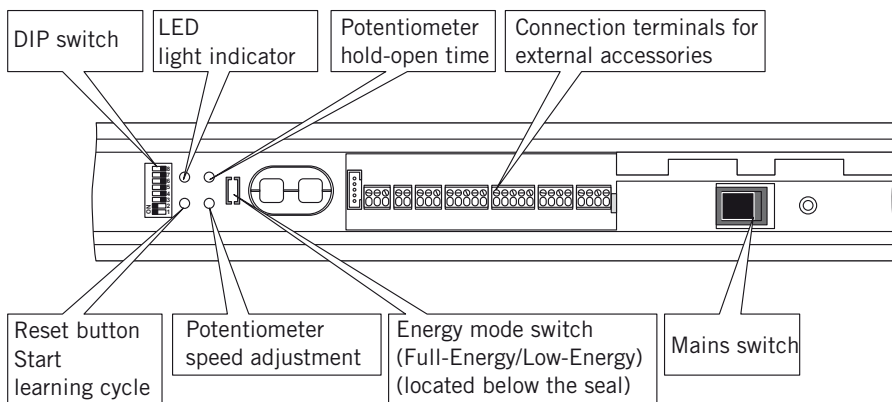
As soon as the voltage returns, the operator will automatically perform a position initialization.

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

6. System Overview



Control unit and connection terminals for external accessories



7. Before Mounting

Basic requirements:

- ⚠ Work on electrical equipment may only be performed by properly qualified personnel (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. (See Page 12)
- With In-Wall 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 must have the appropriate fuse protection in compliance with electrical codes. Use only copper conductors for permanent connection, or use DORMA'S optional power cord (refer to "For optional power cord connection" below for more details).

Opening direction:

- 🔧 The connections of the operator are always located on the side where the door is when it is in the 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 orientation of the operator.

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:



1-877-367-6211

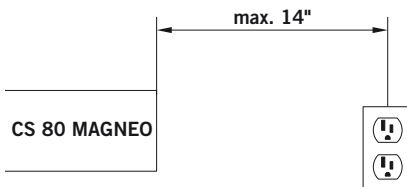
For optional power cord connection


- ⚠ Use only DORMA'S DX3310-010 18" [457 mm]. (Nema 5-15 compatible). UL listed power cord.

- ⚠ The flexible power cord should not be routed through doorways, window openings, walls, ceilings, floor, or the like. The cord should also not be attached or secured to the building structure; the cord cannot be concealed behind walls and the like. Make sure the power cord does not become entrapped in any moving parts of the operator, door, or system.

For in-wall mounting:

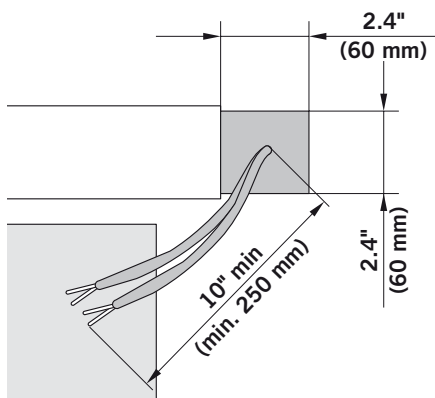
- 🔧 When installing the socket, please remember that you should be able to reach it by hand. (Max 14" away)



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

For on-wall 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 2.4" x 2.4" on the side where the connections of the operator are located.

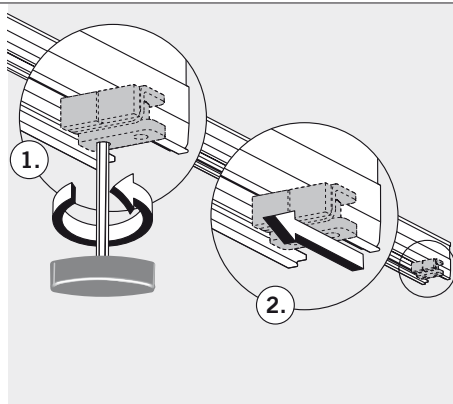


Installation with permanent power supply: When the system is installed with permanent power supply, the internal power supply socket has to be removed.


Proceed as follows:

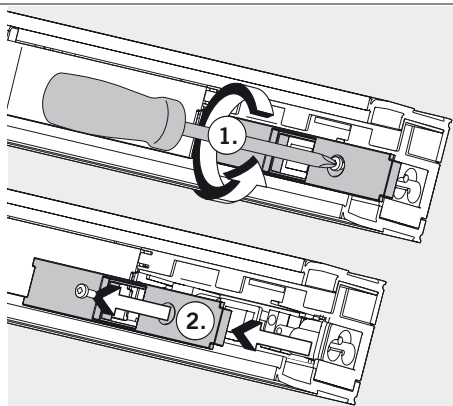
Loosen the screws at the end stop and move the end stop to the center of the system.

 Do not remove or screw down the end stop.

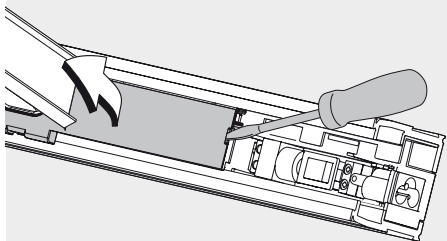


Then loosen the screw in the cover of the power supply housing and remove the cover (on the side where the connections are located).

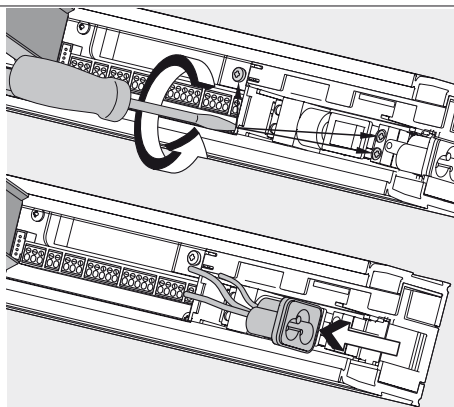
 Keep the cover and the screw in a safe place as you will require it later.




Carefully open the cover of the control unit housing by levering it out with the tip of a flat screwdriver

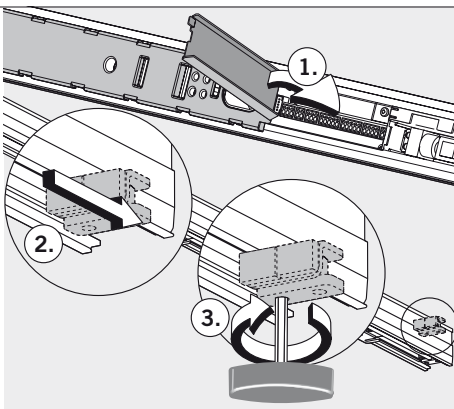


Loosen the screws of the connection terminals and remove the internal Schuko-type shockproof socket.



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 overlap.



8. Installation instructions for on-wall 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 Page 16 and 17.
- 2.b Installation with shim plate. See Page 18.
3. Further installation. See Page 19 - 22.

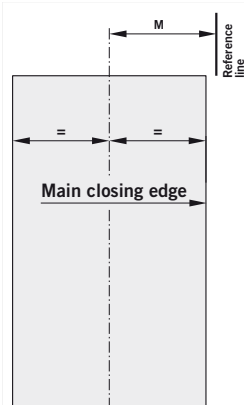
****Dimensions marked (=) are equal.****

Positioning Guide

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

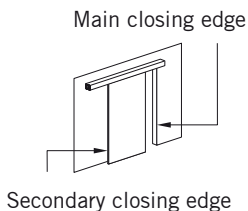
For the installation with shim plate mark the center of the passage on the wall. Please have a look at the table for the required dimension M for your operator. L corresponds to the operator length.

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

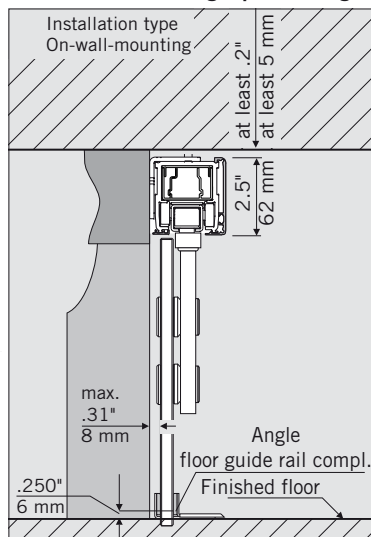


	34.4" [875]	39.4" [1000]	44.3" [1125]
L	68.9" [1750]	78.7" [2000]	88.6" [2250]
M	17.2" [437.5]	19.7" [500]	22.1" [562.5]

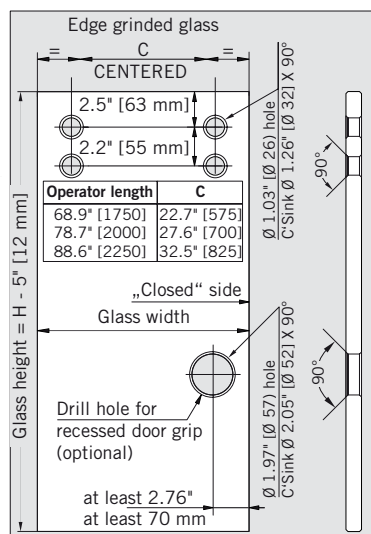
In case the door panel shall not be positioned in the center of the passage, the bracket or shim plate has to be shifted by the desired dimension.

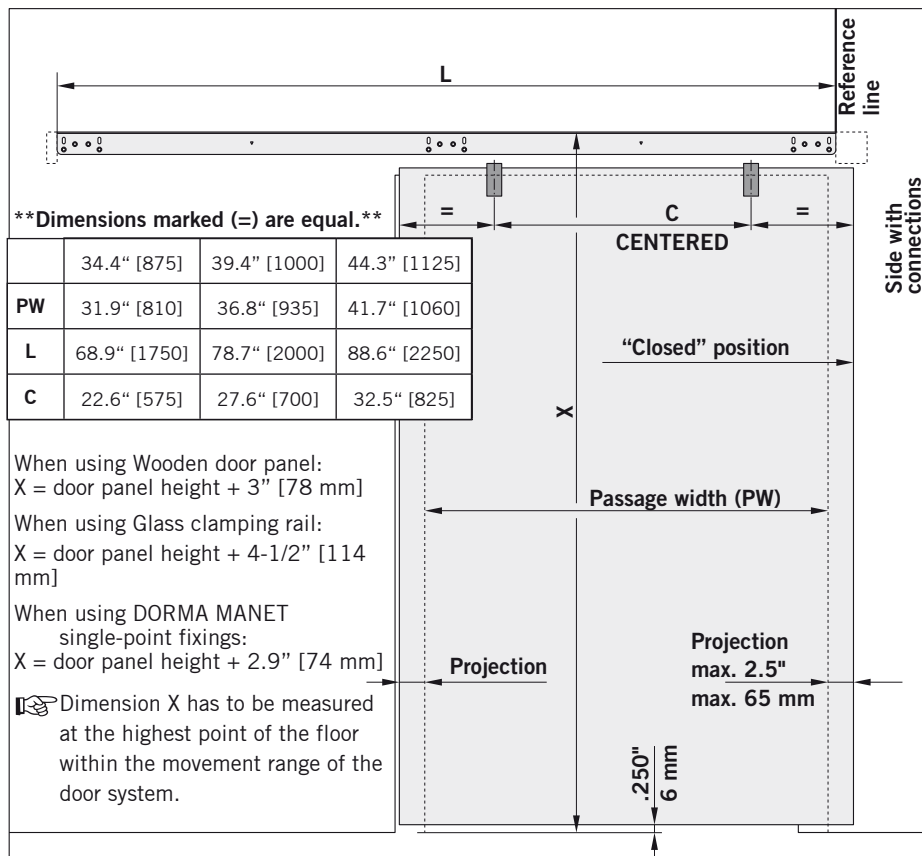


Glass door panels with MANET single-point fixings



Door panel information






- 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 .250" [6 mm], however, it must not exceed .3125" [8 mm].

 Before drilling any holes, make sure there are no cables and/or pipes in the way. 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.

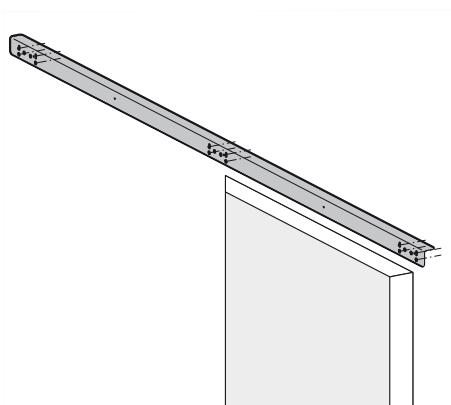
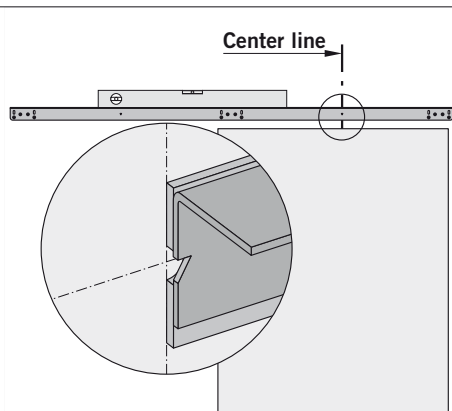
Fix the bracket with screws (one screw respectively per one oblong hole on each side).

 Use adequate wall plugs and screws depending on the prevailing structure when fixing the bracket.

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

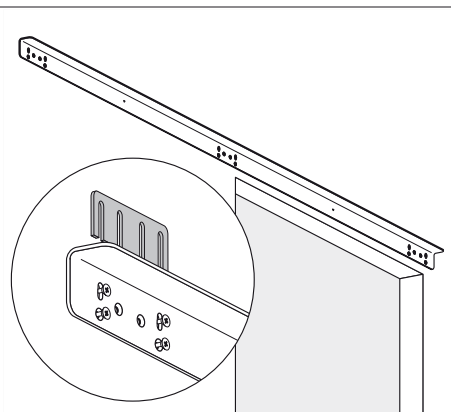
Recheck the fixing bracket for exact positioning.

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



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 + 3.1" [78 mm]


When using DORMA MANET single-point fixings:

Door panel height + 2.9" [74 mm]


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

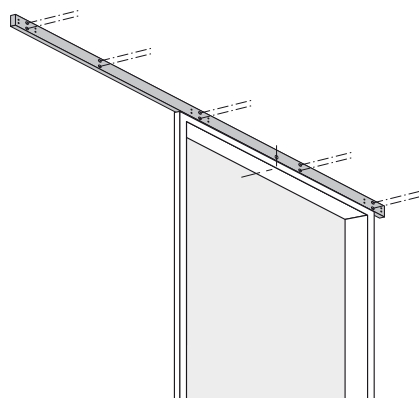
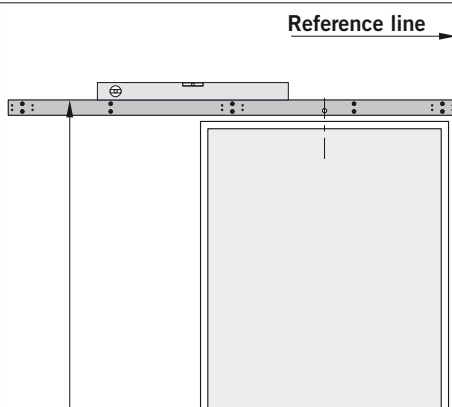
 Before drilling any holes, make sure there are no cables and/or pipes in the way.


Drill the marked holes and fix the shim plate.

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

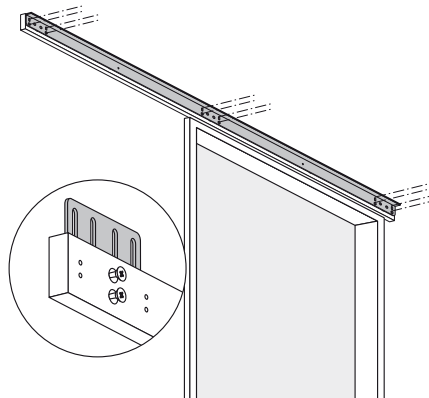
The supplied screws and wall plugs are suitable for concrete and brickwork.

 The load-bearing capacity of the fixing bracket must amount to at least 528 lbs.

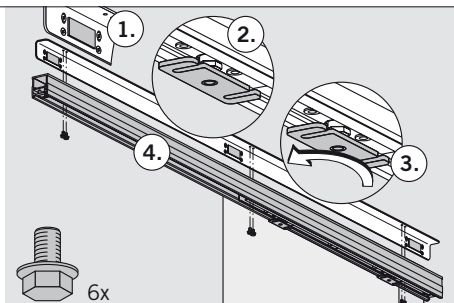


 In case the frame is thicker than .375" you have to underlay the shim plate with the enclosed distance plates so that it is flush with the door frame.

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

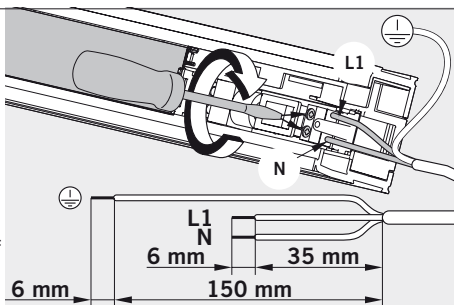


1. Adhere 3 pieces of felt equally onto the bracket.
2. The openings of the door panel suspension have to point to the front
3. Wenn using MANET fixings, the door panel suspensions have to be unscrewed.
4. Fix the operator below the bracket with 6 hexagon screws (lock screws) (8 Nm).
You will have to move the carrier in order to reach all 6 holes.



Connection of 120 V permanent power supply.

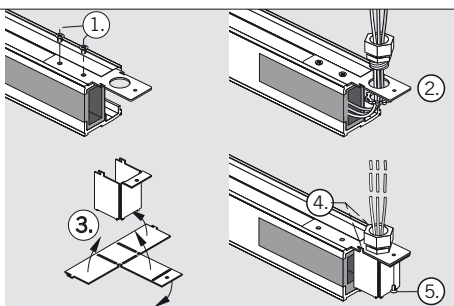
! Working on electrical equipment may only be performed by properly qualified staff (electricians). Before starting with the installation, make sure that the power supply lines are dead (disconnected).
Loosen the end stop and move it to the center of the system (see page 13, picture in the middle). Cut the leads to length, dismantle them and connect L1 and N to the connection terminals of the power supply.



When connecting to conduit, use the included conduit cover, mounting plate and phillips screws

Step:

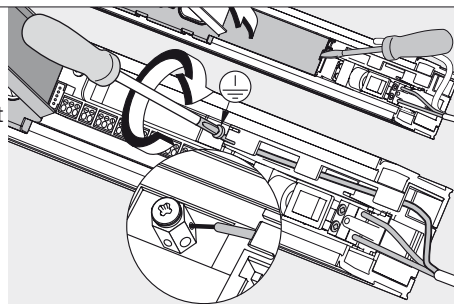
1. Attach plate to operator with (2) screws.
2. Route the wires and connect to the operator.
3. Fold the conduit cover as shown.
4. Hook conduit cover to the plate.
5. Secure conduit cover onto the plate with remaining screw.



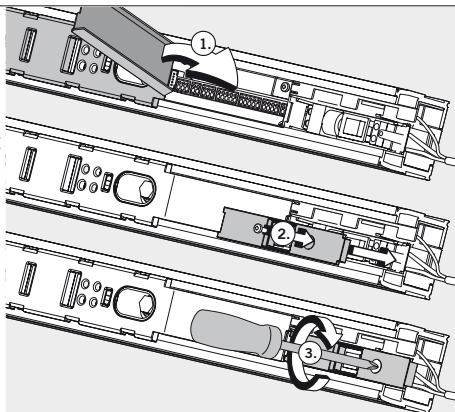
Lever out the cover at the control unit housing with the aid of a screwdriver.
Lay the grounding line through the housing of the operator as shown in the picture and connect it to the grounding terminal (PE).

! 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 30.

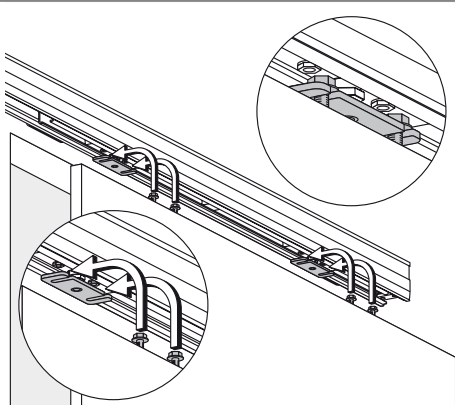



Close the cover of the control unit housing.
Fix and screw down the cover of the power supply housing.
Move the end stop to the end of the channel and screw it down thoroughly (see page 14, picture at the bottom).

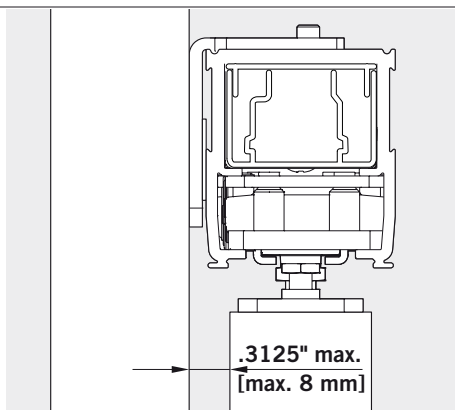


Insert the panel into the door panel suspension as indicated in the picture, align it so that it is parallel to the wall and screw it down.


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

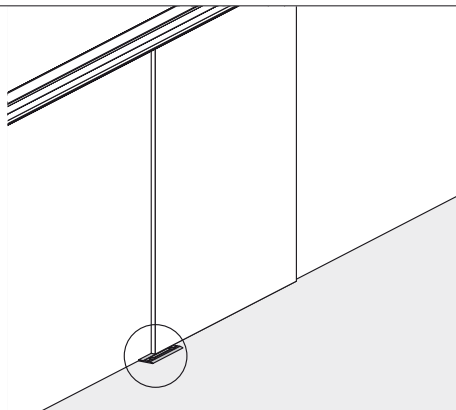


 The distance between door panel and wall must not exceed .3125".




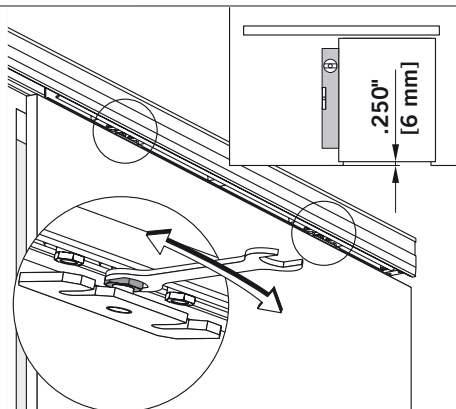
Locate and fix the provided floor guide rail. Please refer to the mounting instructions of the floor guide.

 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.

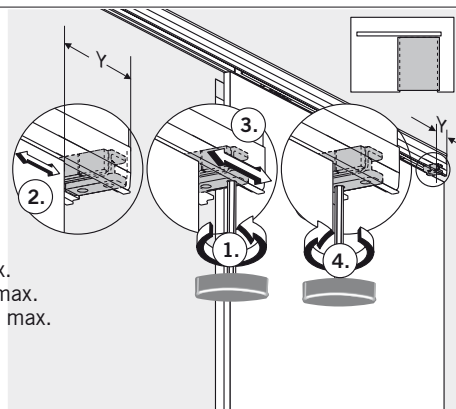
 The distance between the bottom edge of the door panel and the floor should amount to .250", however, it must not exceed .3125"




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 (5Nm).

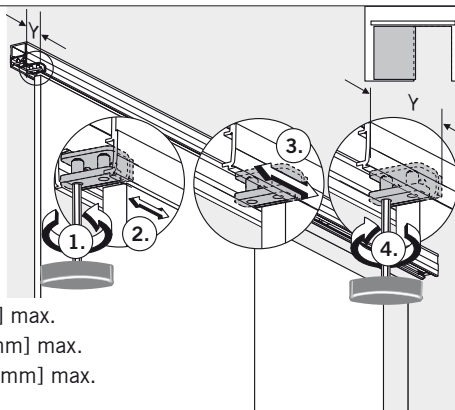
 The end stop may only be moved to the inside by a certain dimension.

34.4" [875 mm] operator => 7.9" [200 mm] max.
39.4" [1000 mm] operator => 9.5" [250 mm] max.
48.2" [1125 mm] operator => 11.8" [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 (3.7 ft/lb).

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




34.4" [875 mm] operator=>7.9" [200 mm] max.

39.4" [1000 mm] operator => 9.5" [250 mm] max.

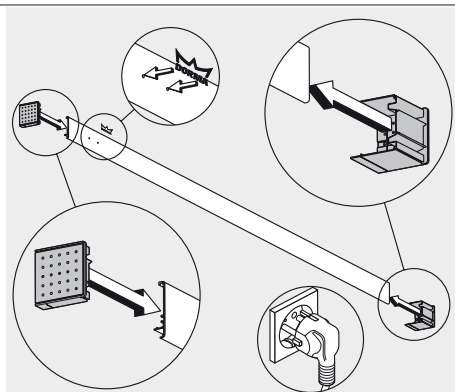
48.2" [1125 mm] operator => 11.8" [300 mm] max.

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.

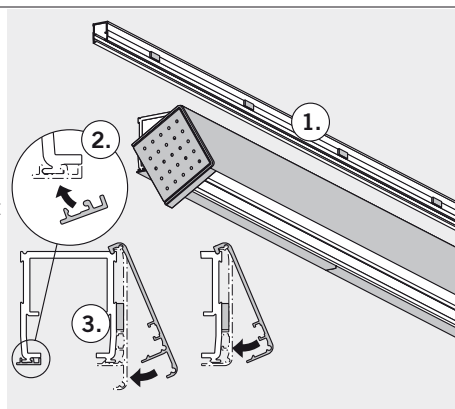
Please install radio receivers, program switches and/or sensors and lay the cables as indicated in the enclosed instructions.

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 fixings, you have to use the shorter cover (displayed on the right side).

Continue with the commissioning of the system as indicated starting from page 32.

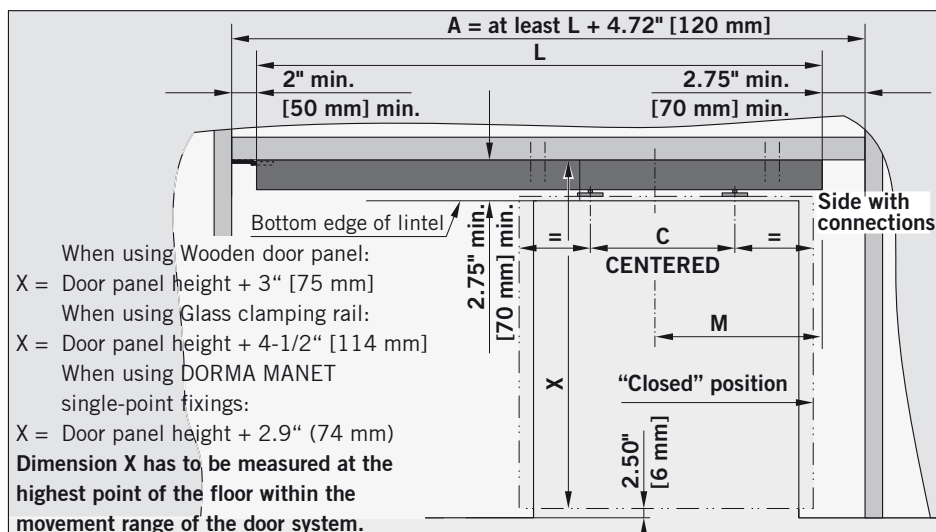
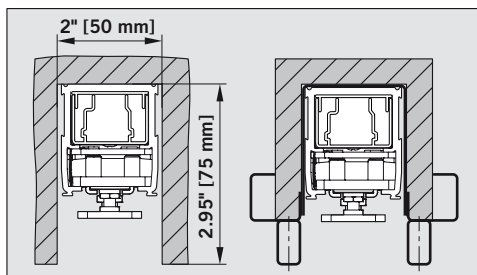


9. Installation instructions for in-wall mounting

The CS 80 MAGNEO sliding door operator is also suitable for an “invisible” in-wall mounting. For this kind of mounting a recess with a width of at least 2" [50 mm] and a depth of 2.95" [75 mm] is required. Furthermore a special door frame made by BOS can be used. For this purpose you will have to talk about some details with the manufacturer. Phone number BOS: 877-367-6211

URL: BestOfSteel.de

****Dimensions marked (=) are equal.****



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.

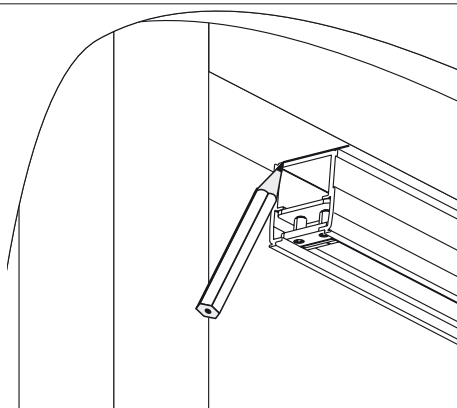
- Dimension L stands for the operator length.
- Dimension M indicates the distance from the centre of the passage area to the side of the operator where the connections are located.
- The distance between the door

panel and the floor should amount to .24" [6 mm] and must not exceed .315" [8 mm].

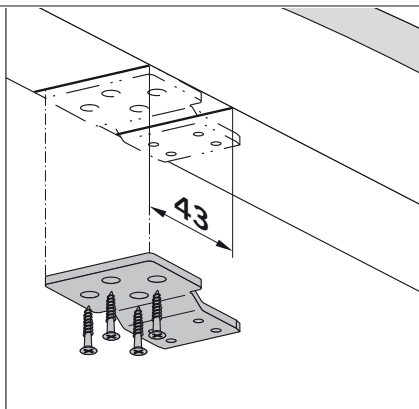
The holes for the cables must be sufficiently big and must not have sharp edges. Please have a look at the table and the drawing for the dimensions regarding your operator.

L	68.9" [1750 mm]	78.7" [2000 mm]	88.6" [2250 mm]
M	17.2" [437,5 mm]	19.7" [500 mm]	22.1" [5625 mm]
A	73.6" min. [1750 mm] min.	83.5" min. [2120 mm] min.	93.3" min. [2370 mm] min.
C	22.6" [575 mm]	27.6" [700 mm]	32.5" [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 1.7" [43 mm]. Then position the fixing bracket at the second line and mark the drill holes. Drill the holes and fix the fixing bracket with adequate screws.

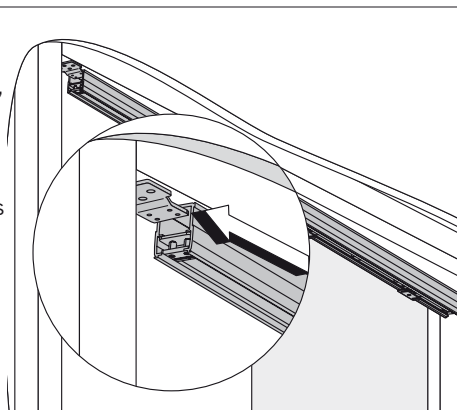


Then move the operator over the fixing bracket as far as it will go.


 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.

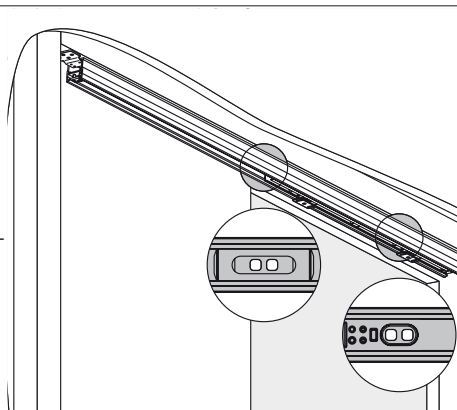
Align the operator so that it is parallel to the wall.




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 .165" [4.2 mm] for the supplied sheet metal screws. The sheet metal must at least be .08" [2 mm] thick and the subconstruction must at least carry 528 lbs. [240 kg.]

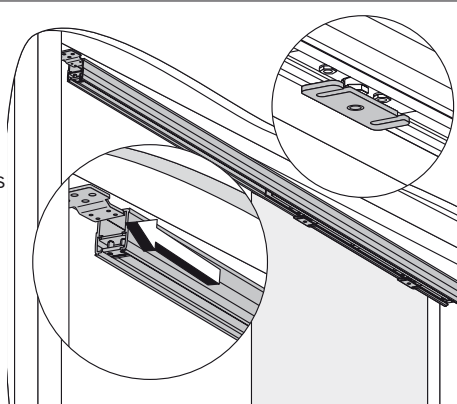


Then move the operator over the fixing bracket as far as it will go.


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

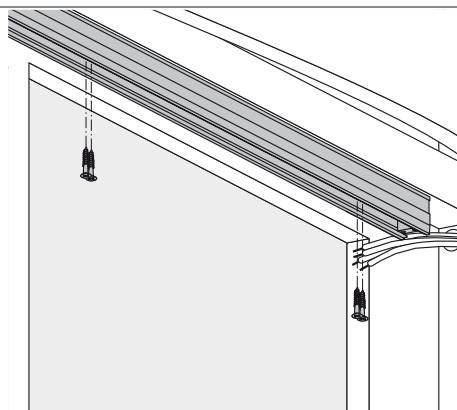
 Never leave the operator on the fixing bracket without holding it in position as this would deform the fixing bracket.

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



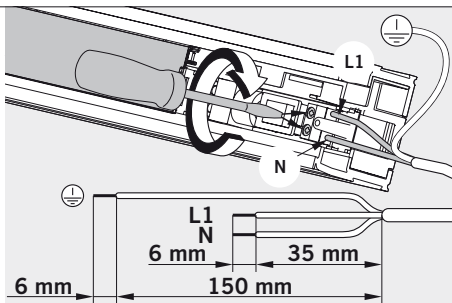
Fix the operator under the cross girder with the selected screws.

 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.

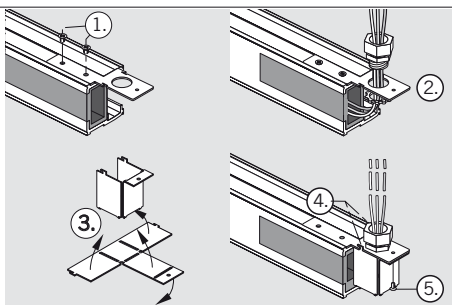
⚠ Work on electrical equipment may only be performed by properly qualified staff (electricians) before starting with the installation, make sure that the power supply lines are dead (disconnected). Relax the end stop and move it to the center of the system (see page 13, picture in the middle). Cut the leads to length, dismantle them and connect L1 and N to the connection terminals of the power supply.



When connecting to conduit, use the included conduit cover, mounting plate and phillips screws

Step:

1. Attach plate to operator with (2) screws.
2. Route the wires and connect to the operator.
3. Fold the conduit cover as shown.
4. Hook conduit cover to the plate.
5. Secure conduit cover onto the plate with remaining screw.

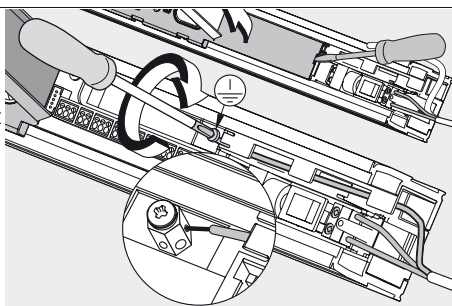


Lever out the cover at the control unit housing with the aid of a screwdriver.

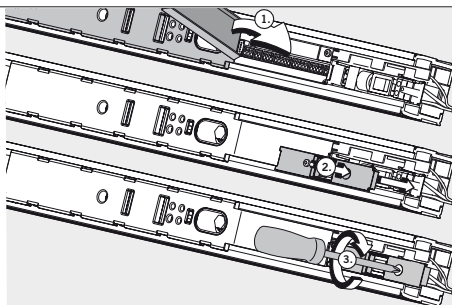
Lay the grounding line through the housing of the operator as shown in the picture and connect it to the grounding terminal (PE).

⚠ 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 30.




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 14, picture at the bottom).

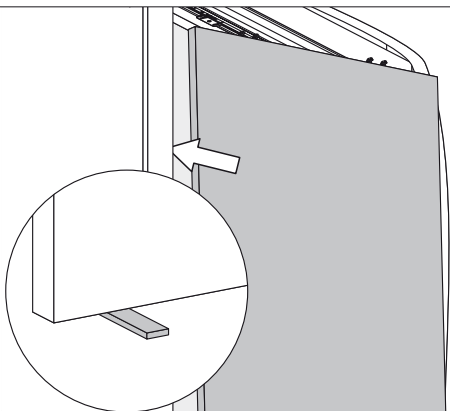


Move the end stop to the end of the channel.

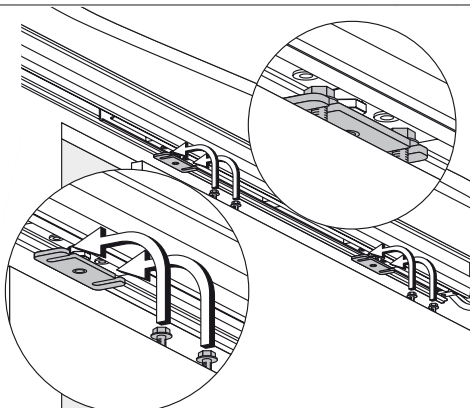
 The end stop must not fall out of the operator.

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 in-wall mounting, you should use wooden wedges to help you to lift the door panel.

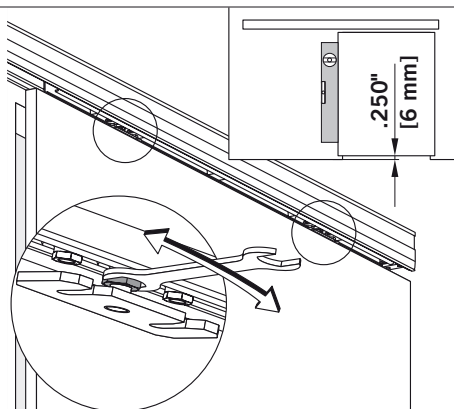


Insert the door panel into the door panel suspension, align it so that it is parallel to the wall and screw it down.




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

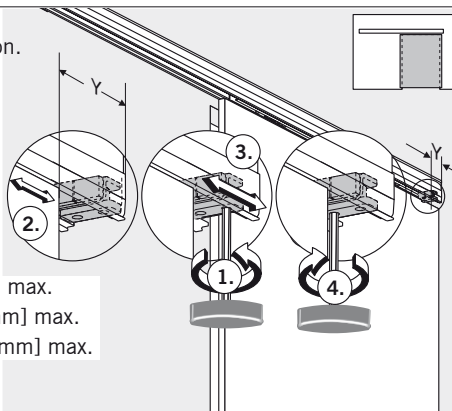
 The distance between the bottom edge of the door panel and the floor should amount to .250" [6 mm], however, it must not exceed .3125" [8 mm].




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.

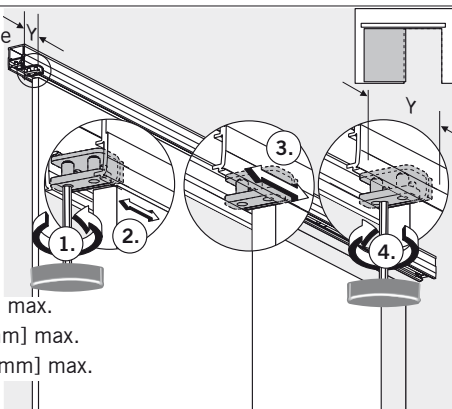
34.4" [875 mm] operator=>7.9" [200 mm] max.
39.4" [1000 mm] operator => 9.5" [250 mm] max.
48.2" [1125 mm] operator => 11.8" [300 mm] max.




Relax 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 door panel and screw down tight (3.7 ft/lb).

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

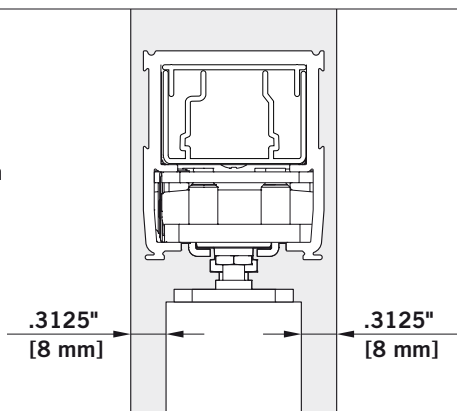
34.4" [875 mm] operator=>7.9" [200 mm] max.
39.4" [1000 mm] operator => 9.5" [250 mm] max.
48.2" [1125 mm] operator => 11.8" [300 mm] max.



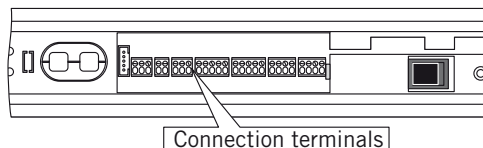
 The distance between door panel and wall must not exceed .3125" [8 mm]
The clearance has to be covered with brushes or similar, if required.


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 32.

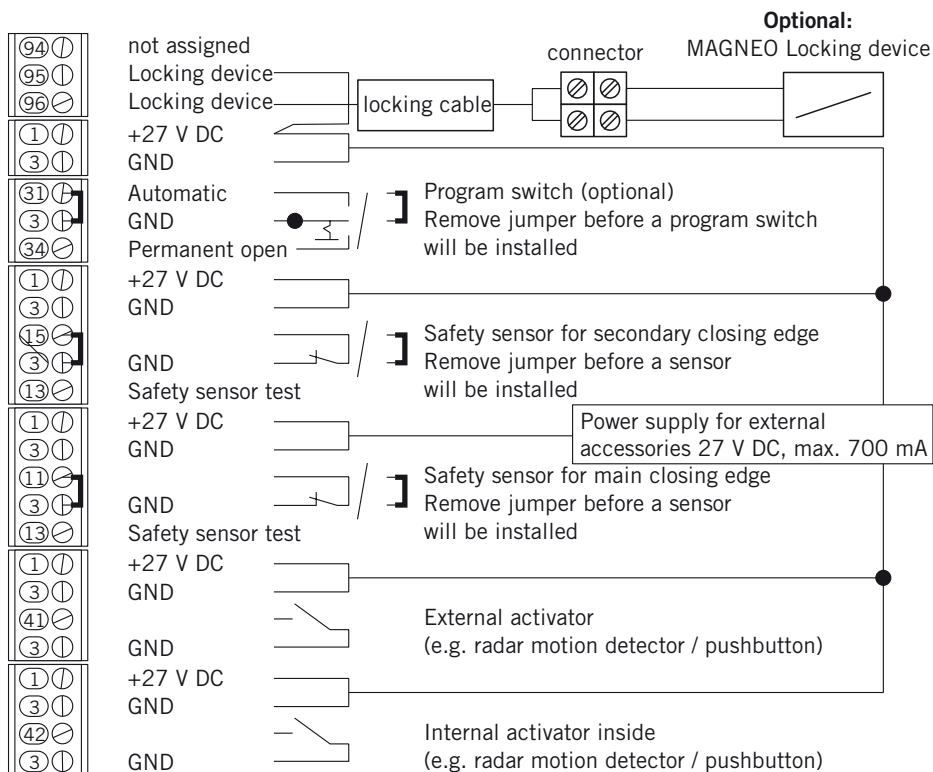


In order to facilitate the connection of the wires, the different terminal blocks can be removed with pointed pliers.



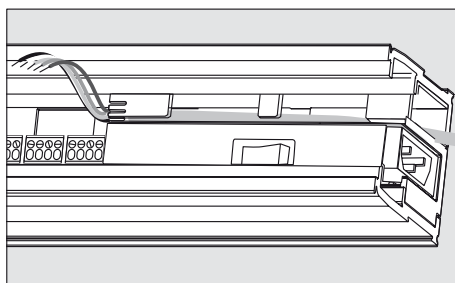
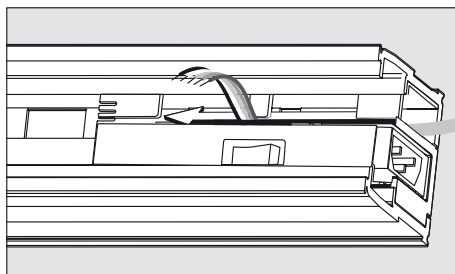
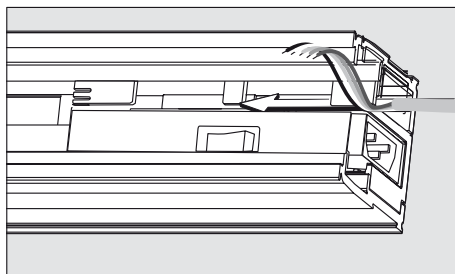
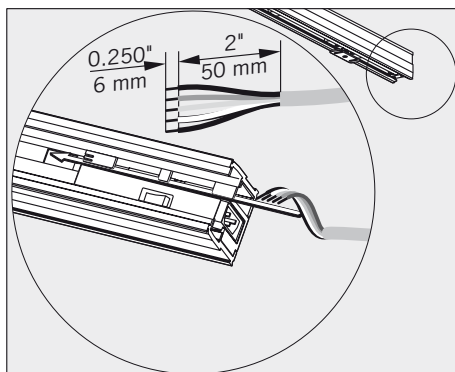
-  Main closing edge is the leading edge of the door.
 Activating the sensor will disable automatic operation in the closing direction.
 Secondary closing edge is the trailing edge of the door. Activating the sensor will disable automatic operation in the opening direction.

- 1.Remove short-circuit.
- 2.Switch mains switch off and on again.



11. Cable channel

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



12. Connection of closing edge protection

 This work may only be performed by properly qualified staff.

 Main closing edge is the leading edge of the door.

Activating the sensor will disable automatic operation in the closing direction.

Secondary closing edge is the trailing edge of the door.

Activating the sensor will disable automatic operation in the opening direction.

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

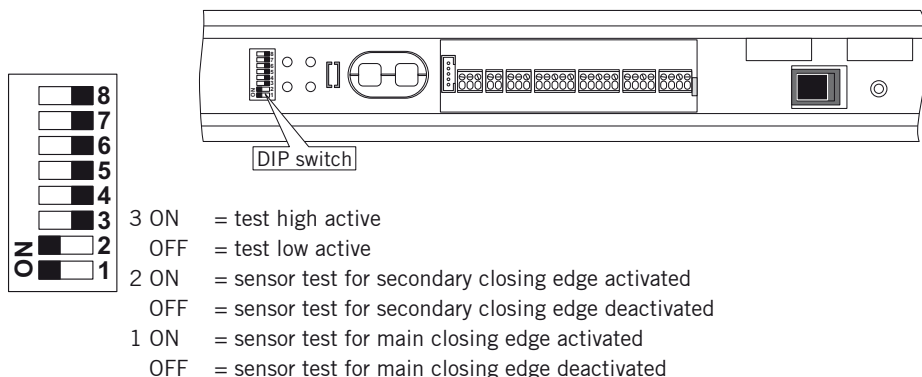
When a sensor is connected to the main closing edge

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



12. Commissioning

Basic requirements


- The CS 80 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 CS 80 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 CS 80 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 CS 80 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 /
Geschwindigkeit 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 /
Offenhaltezeit The door will close automatically on expiry of the adjusted hold-open time following it has 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

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.

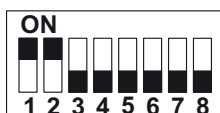
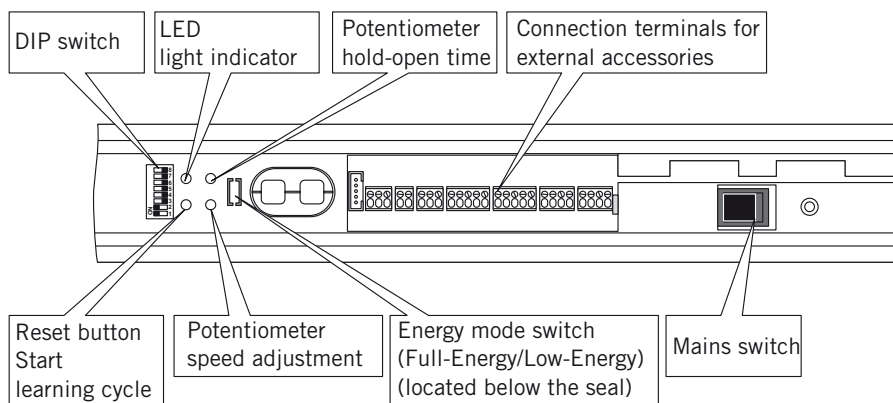
Closing force

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.

Compliance check

Check speed, forces, and function of sensors to ensure safe operation.



DIP switch settings

You can activate different inputs at the connection terminals via these switches and thus adjust different operation modes.

- | | |
|---|--|
| 8 OFF = No locking function | ON = Locking function |
| 7 OFF = Reduced closing force | ON = Enhanced closing force |
| 6 OFF = Automatic Function activated | ON = Permanent Open Function activated |
| 5 OFF = External motion detector activated | ON = External pushbutton activated |
| 4 OFF = Internal motion detector activated | ON = Internal pushbutton activated |
| 3 OFF = Test low active | ON = Test high 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 | |

14. Operating instructions

1. Opening the door in AUTOMATIC Function

When the system is delivered, the CS 80 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 .4" [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:

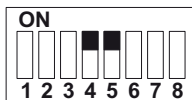
Where presence sensors (radar motion detectors or similar) are connected, the door opens automatically as soon as a person approaches the door system.

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.

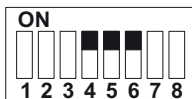
To activate this function set DIP switch 4 and 5 to ON position.



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 operational 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 / Geschwindigkeit 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 / Offenhaltezeit The door will close automatically on expiry of the adjusted hold-open time following it has reached "open" position. You can adjust the hold-open time infinitely from 5 to 30 seconds with the aid of the potentiometer.



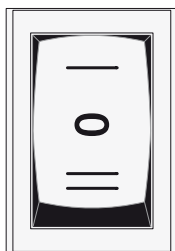
4. Closing force

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.

15. Daily Safety Checks

The following points have to be observed:

- An inspection and acceptance test according to the below-mentioned checklist has to be performed after 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 CS 80 MAGNEO by properly trained staff.
- According to safety standards, documentation of the daily safety check should be kept for a minimum of 1 year.

Checklist (start-up test, maintenance, regular inspections) according to standards.

- ☐ The system has been installed properly in accordance with the instructions of the manufacturer.
- ☐ The door panel runs smoothly.
- ☐ The door works properly (check the opening and closing cycle respectively).
- ☐ Function if installed activators like radar motion detectors, pushbuttons or remote controls has been checked.
- ☐ The contactless safety equipment (safety sensors), if installed, has been checked for proper function.
- ☐ Effective safety equipment if 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 CS 80 MAGNEO has to be switched off and secured against unintended and unauthorized switching on before performing maintenance work (cleaning or maintenance).

Care

Prior to first use and periodically thereafter, but at least once a year, the system must be checked and maintained by a qualified, knowledgeable technician. During the cleaning operation the Program Switch must be either be in the "OFF" or HOLD OPEN" position to avoid automatic movement of the door. Always disconnect the power before servicing. The entire door (Aluminum, Glass, Stainless Steel) can be cleaned with a moist towel and/or common commercial cleaners. Any safety sensors are to be cleaned with a dry, soft, non-abrasive towel. The floor and or threshold (if any) must be kept clean.

16. Troubleshooting

Malfunction	Possible causes	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 32).
	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.
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 32).
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.

16. Troubleshooting

Malfunction	Possible causes	Remedy
The red LED blinks 3 times at regular intervals.	The power mode switch of the door has been switched to an other position.	Switch on mains switch off and on.
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 32).
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 32).
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 32).
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 the following number in case
of technical problems or further questions:**



1-877-367-6211

If the unit is defective and needs to be replaced, please contact the local distributor where the unit was purchased from. If the product needs to be replaced, the entire unit would have to be returned, except for the door panel, mounting hardware and any hanging brackets.

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