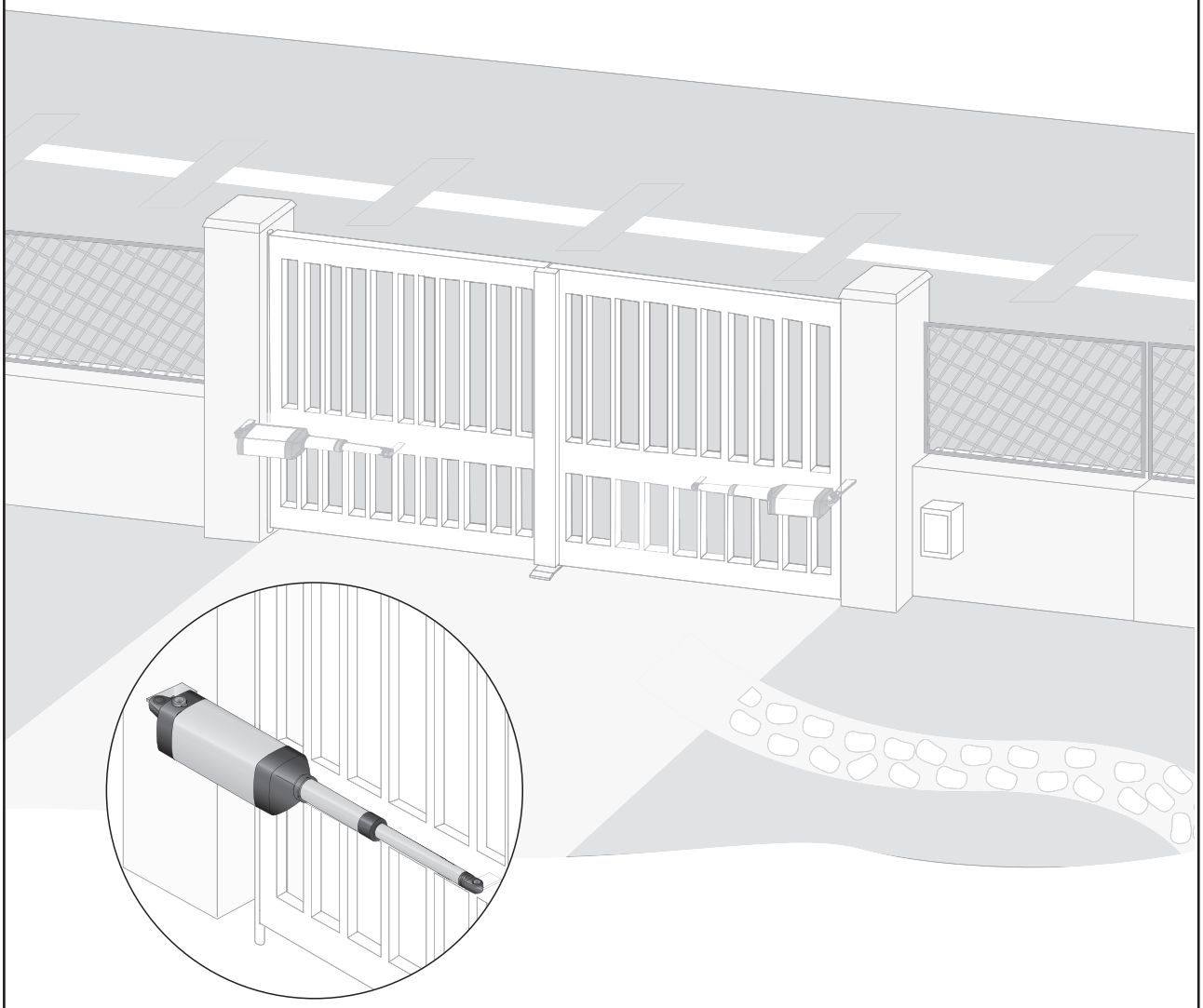
Ixengo S

EN **Installation manual**

ES **Manual de instalación**

PT **Manual de instalação**

EL **Εγχειρίδιο εγκατάστασης**



CONTENTS

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GENERAL

This product, installed in accordance with this guide, complies with EN 12453 and EN 13241-1 standards.

The instructions referred to in the product Installation and Operating manuals are intended to meet the requirements of property safety, personal safety and the above-mentioned standards.

Failure to comply with these instructions releases Somfy from any liability for damage that may be entailed.

We, Somfy, declare that this product is compliant with the essential requirements and other relevant stipulations of directive 1999/5/EC. A compliance declaration is available from the following address **www.somfy.com/ce.** (Ixengo_S)

This product can be used in the European Union and in Switzerland.

SAFETY INSTRUCTIONS

Warning

Important: Please comply with all instructions, for incorrect installation may cause serious injury.

Safety instructions

Before installing the motor drive system, make sure that the driven part is in good working order, that it is correctly balanced and that it opens and closes correctly.

Ensure that danger areas (where pinching, cutting, trapping may occur) between the driven parts and fixed surrounding parts due to the opening motion of the driven part are avoided.

Retain a clear 500 mm space behind each gate section when the gate is fully opened.

Any switch that does not lock into position (interphone, key switch, etc.) must be located in plain view of the driven part but away from the moving parts.

Any switch installed must be at a minimum height of 1.5 meters and not be accessible to the public, except if it works with a key.

Ensure that the motor drive system cannot be used with gate section including a wicket gate inhibiting motion (unless the motor drive cannot operate with the wicket gate open).

After installation, make sure that the mechanism is correctly adjusted and that the protection system and any manual release mechanism operate correctly.

Permanently affix the label describing the manual release mechanism close to its operating mechanism.

Wear protective glasses while performing drilling work.

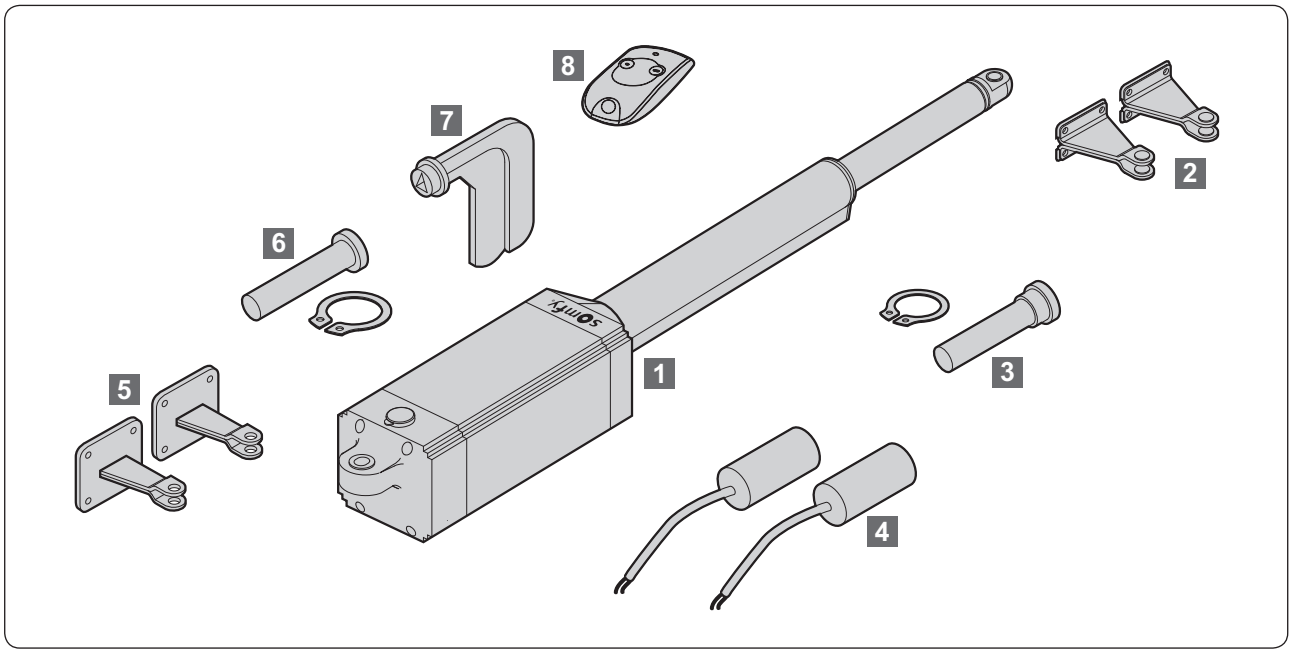
To operate, the Ixengo S system requires a 230 V - 50 Hz mains supply. The electric power line:

- must be solely reserved for use by the Ixengo S,
- must have a minimum wire cross section of 1.5 mm^2,
- must be provided with protection (a 10 A fuse or circuit breaker) and a residual current device (30 mA),
- must be fitted with an omnipolar disconnection mechanism,
- must be installed in line with applicable electrical safety standards.

We recommend providing the installation with a surge arrester (in compliance with standard NF C 61740, with a maximum residual voltage of 2 kV).

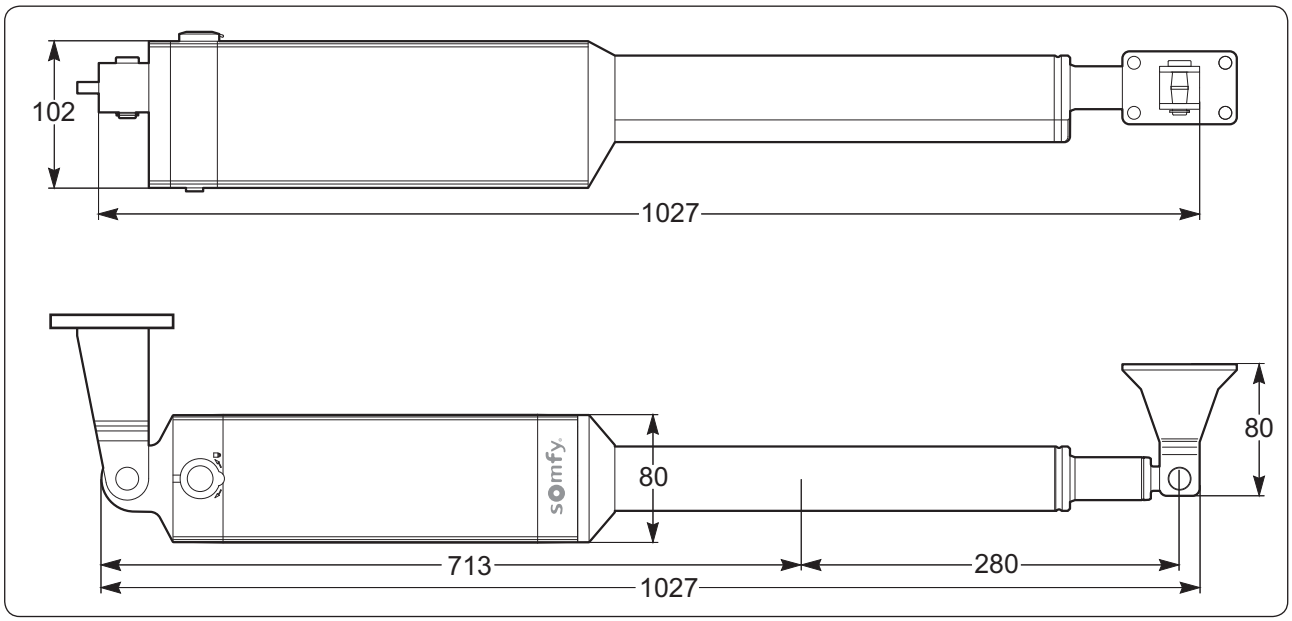
PRODUCT DESCRIPTION

Components



Key	Number	Description
1	2	Ixengo_S motor unit
2	2	Gate mounting bracket
3	2	Motor/gate mounting bracket hinge pin + circlips
4	2	Capacitor (Ixengo S 230 V only)
5	2	Gate post mounting bracket
6	2	Motor/gate post mounting bracket hinge pin
7	1	Unlocking key
8	2	KEYTIS 2 NS RTS remote control

Dimensions



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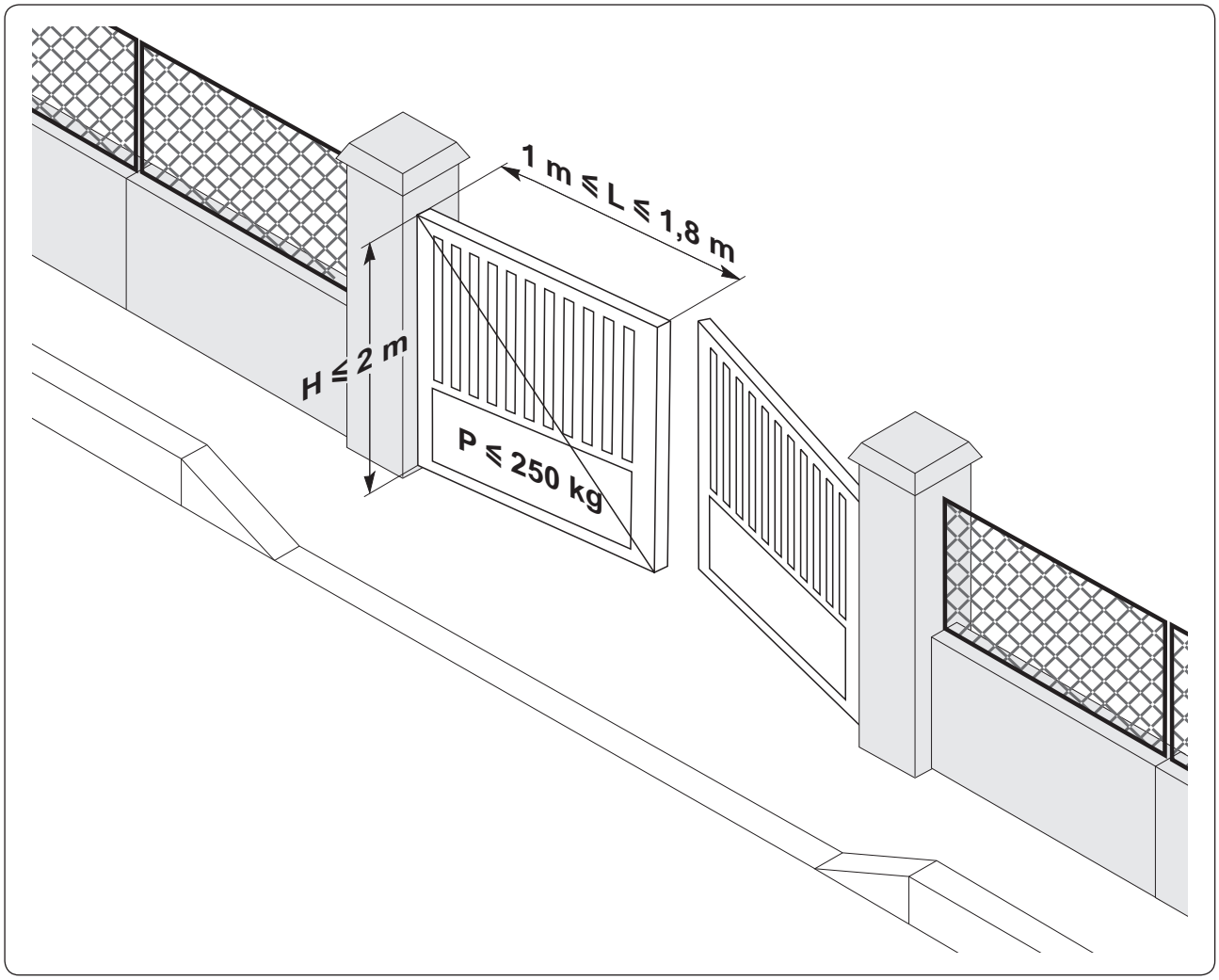
Application



POINTS TO CHECK PRIOR TO INSTALLATION

Preliminary checks

Ensure that the gate structure is strong enough. In all cases, the drive rod must push the gate section towards a reinforced point.

It must be possible to move the gate by hand without encountering any hard point. Check that the gate is in good condition and is perfectly balanced.

The gate section limit stops mounted on the ground must be provided for both the opening and closing directions. Somfy recommends installing gate open limit stops to improve the way the gate is held open.

For an existing gate, check component wear. If necessary, repair or replace faulty or worn parts.

If the gate does not include any reinforcing, use metal reinforcing plates when attaching brackets.

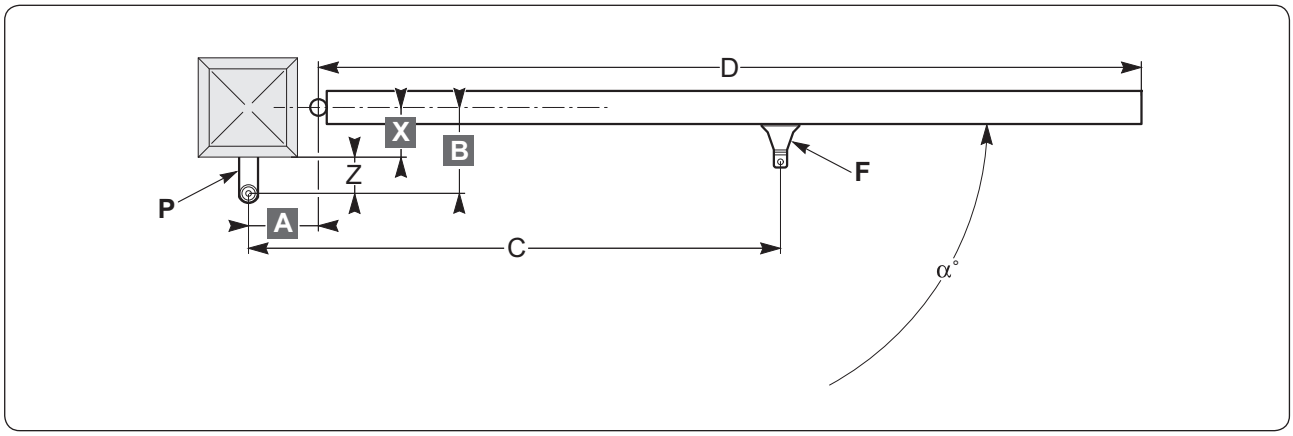
Safety instructions

Be sure to follow these safety instructions throughout installation:

- Take off any jewellery worn (bracelet, neck chain or other) during installation
- During drilling and welding operations, always wear special goggles and suitable protective clothing
- Always use proper tools
- Never connect to the mains power or the battery backup before finishing the assembly process.

INSTALLATION

The figure below illustrates the dimensions to be defined for installation.



Key:

A-**B**: dimensions used to determine where to fit the post mounting bracket **P**

C: distance between mounts (recommended value: 993 mm)

X: distance from the gate centreline to the post edge

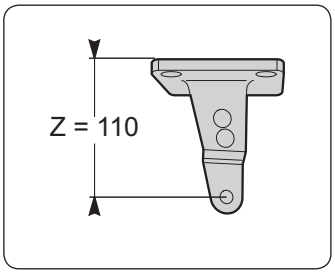
Z: distance between the post edge and the motor rotation centreline

α°: gate opening angle

P: post mounting bracket

D: gate section length

F: gate section mounting bracket

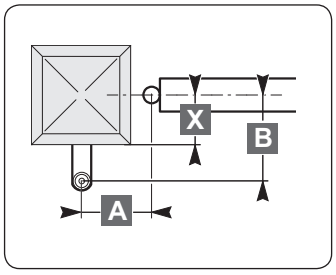


Fitting the post mounting bracket

• Define the desired opening angle **"α°"**.

• Measure the **X** dimension on the gate.

• Calculate **B** = **Z** + **X** given that **Z** = 110 mm



• From the table, choose **A** and **B** dimensions that are close to identical so as to match the opening speed and ensure proper motor drive operation. If the chosen dimensions are too far apart, gate section motion will not be constant and the push or pull torque applied will vary during motion.

The table shows the optimum **A** and **B** values for an opening of **α°** = 90° at constant speed.

B \ A	100	110	120	130	140	150	160	170	180
100				119	109	103	98	94	91
110				112	105	98	94	91	
120			117	105	99	94	91		
130			107	99	94	90			
140		112	100	94	90				
150		102	94	90					
160	104	94	89						
170	95	89							
180	88								**α°**

Values of **"A"** and **"B"** can be chosen from the table based on the desired degree of opening **"α°"**.

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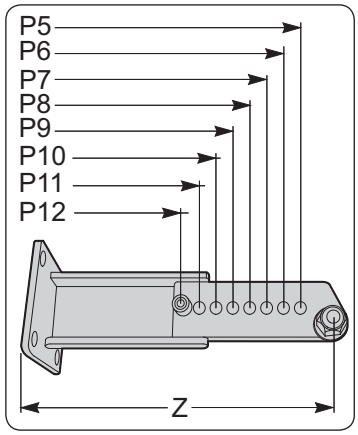
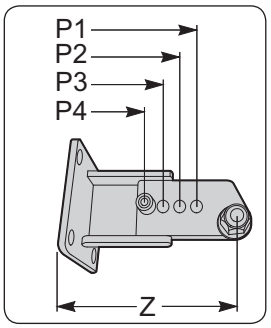
If dimension **B** is excessive:

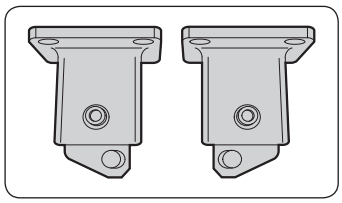
• Use adjustable mounts (9014609 or 9014610) that allow setting the following four or eight values of Z (in cases where you need to reduce or increase the value of Z):

P1: Z = 77 mm **P5: Z = 150 mm** **P9: Z = 215 mm** **P11: Z = 235 mm**
P2: Z = 90 mm **P6: Z = 165 mm** **P10: Z = 225 mm** **P12: Z = 250 mm**
P3: Z = 110 mm **P7: Z = 190 mm**
P4: Z = 150 mm **P8: Z = 200 mm**





Adjustable mount installation position



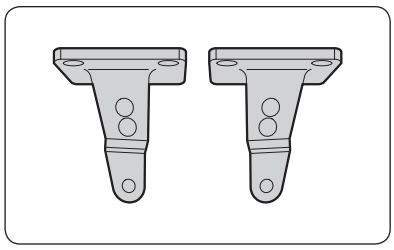
Left Right

• Or move the gate hinges so as to reduce distance **B** (refer to "Specific Installations").

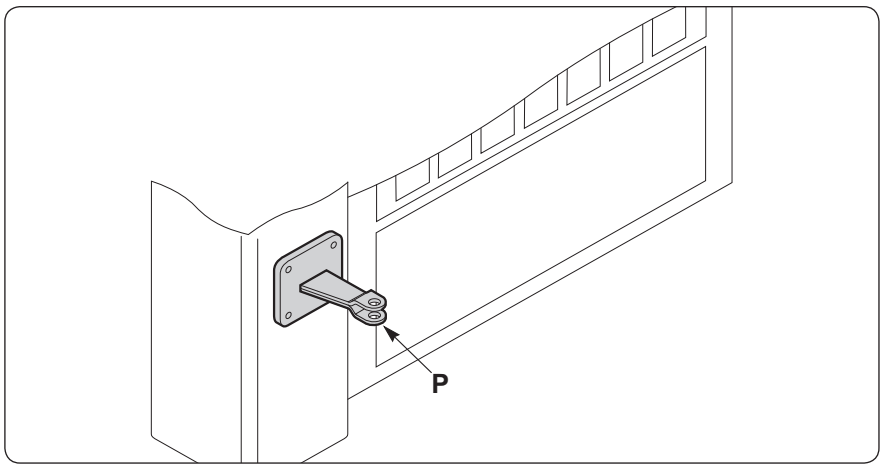
• Attach the mounting bracket **P**.

Drill and bolt the mounting bracket to the post.
Use a type of mounting that suits the post.

Mount direction



Left Right



Note: Use the large circlips to attach the mounting bracket **P**.

Example

When the desired opening angle is 90°:

• Measure dimension **X** = 30 mm.

• Calculate dimension **B** = **X** + **Z** = 30 + 110 = 140 mm.

• Apply dimension **B** = 140 to the table and use a dimension **A** = 140 for a 90° opening.

Fitting the gate section mounting bracket

Important: On the gate section, measure dimension **C** (993 mm), the length between the two mounting bracket centres. Mark the mounting axis for the gate section mounting bracket.

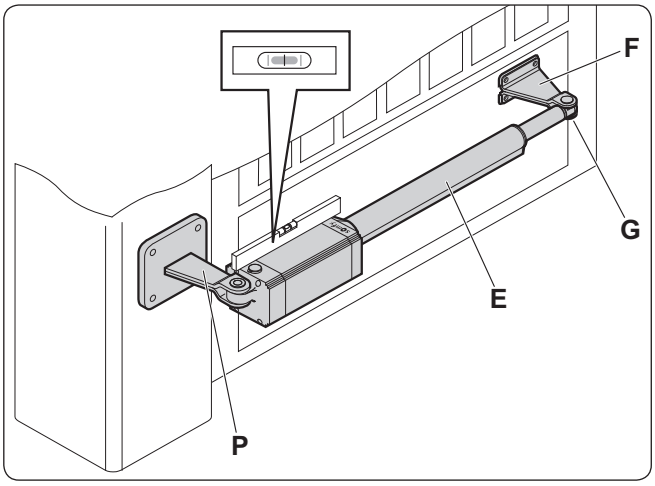
[1] Release the motor drive unit **E**. Extend the drive rod till the end of its travel.

[2] Temporarily fit the motor drive unit on its mount **P**.

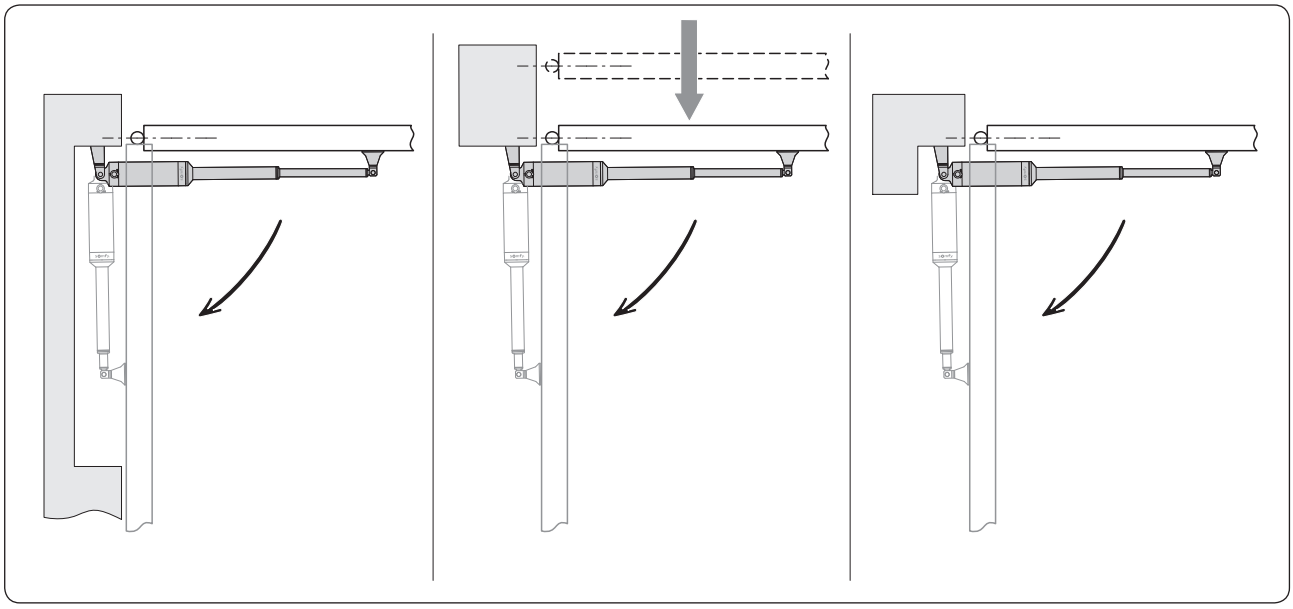
[3] Fit the gate section mounting bracket **F** onto the drive rod **E** with its pivot pin **G**.

[4] Check that the motor drive unit **E** is horizontally aligned using a spirit level.

[5] Attach the gate section mounting bracket **F**.



Specific installations

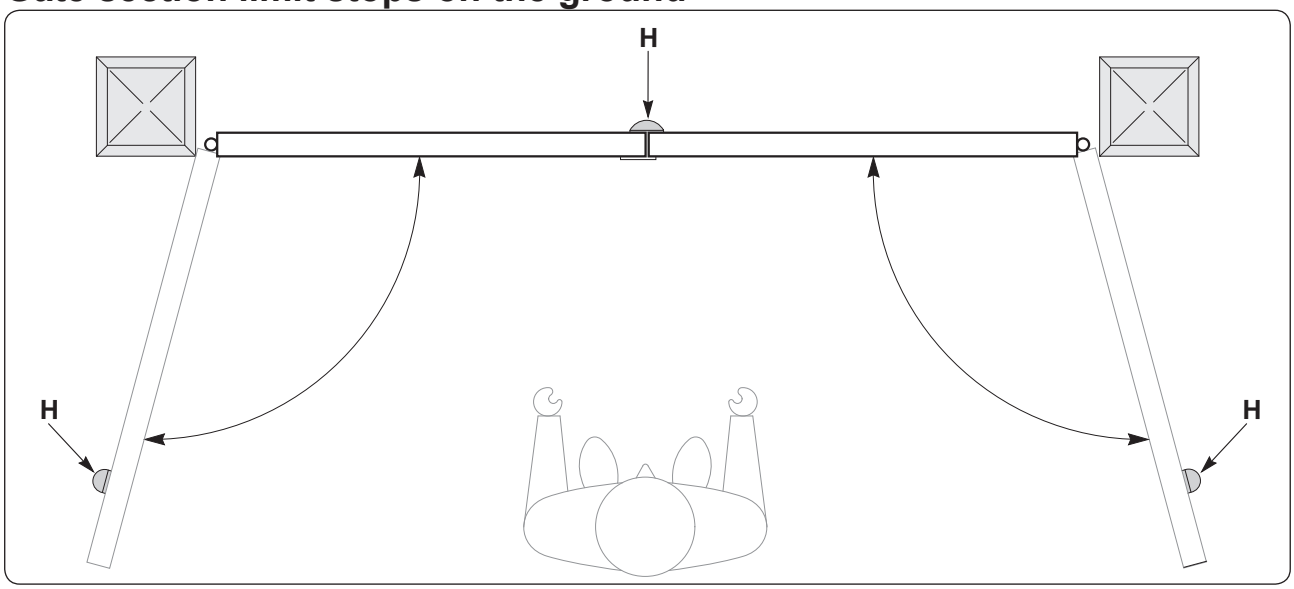


Installation with a niche in a fence

Moving the gate hinge

Installation with a niche in a gate post

Gate section limit stops on the ground

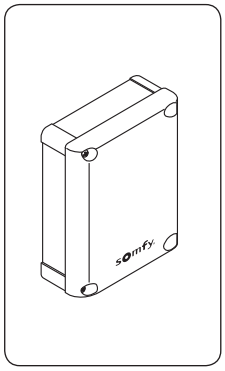


Check for the presence of the gate section limit stops **H** on the ground.

For the motor drive unit to operate correctly, using limit stops on the ground is required for both the opening and closing directions.

Electrical connections

Make the connections between the motor drive unit and the FX24 electronic controller for Ixengo S 24 V and FX 230 electronic controller for Ixengo S 230 V.



ADJUSTING THE LIMIT STOPS - IXENGO S 24 V

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Adjust the limit stops by correctly positioning the end of travel magnets on the 24 V motor drive unit.

Important: For the 230 V motor drive unit, refer to the instructions on the FX 230 electronic controller and adjust the time that the motor operates.

Adjusting the FC1 closing limit stop

[1] Close the gate section.

[2] Slacken screws **I** and **J** on the closing limit stop.

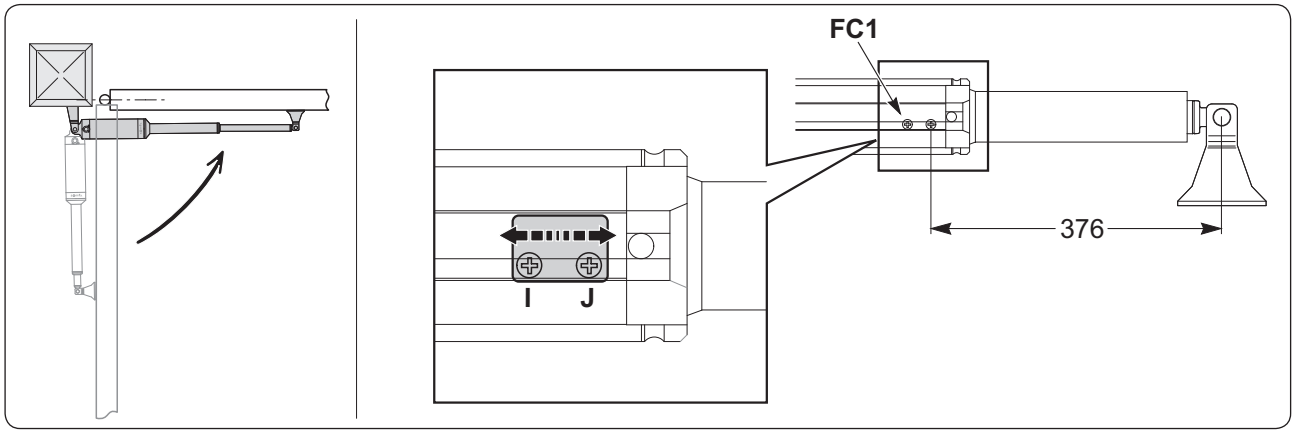
[3] Move the limit stop so that the distance between screw **J** and the gate section mounting bracket axis is some 376 mm.

[4] Close the gate.

[5] If the gate section stops too soon in relation to the desired position, slightly move the limit stop towards the end of the drive rod.

[6] If the gate section hits the limit stop on the ground when closing, and the motor drive unit reverses direction, then move the limit stop slightly towards the motor drive unit's body.

[7] After correctly defining the limit stop's position, tighten down screws **I** and **J**.



Adjusting the FC2 opening limit stop

[1] Open the gate section.

[2] Slacken screws **K** and **L** on the opening limit stop.

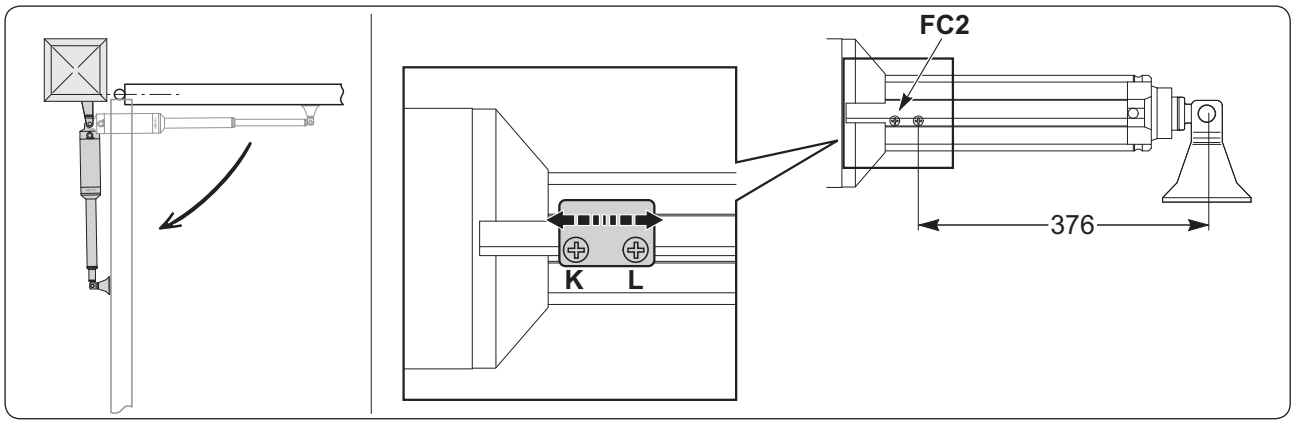
[3] Move the limit stop so that the distance between screw **L** and the gate section mounting bracket axis is some 376 mm.

[4] Open the gate.

[5] If the gate section stops too soon in relation to the desired position, slightly move the limit stop towards the motor drive unit's body.

[6] If the gate section hits the limit stop on the ground when opening, and the motor drive unit reverses direction, then move the limit stop slightly towards the end of the drive rod.

[7] After correctly defining the limit stop's position, tighten down screws **K** and **L**.



Note: When programming the electronic controller, always anticipate when the limit stops will take action. To properly press against the limit stops on the ground, the motor drive unit continues its movement for 1 or 2 cm (some 100 ms).

OPERATING TEST

Opening the gate by hand

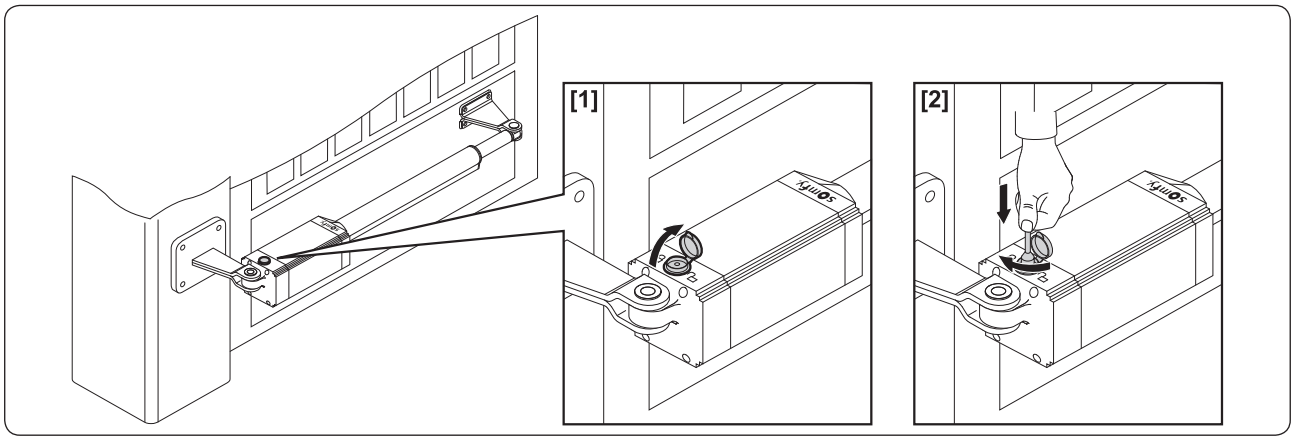
If necessary, the motor drive unit is provided with a release key so that the gate section can be moved by hand.

[1] After lifting the lock cover, insert the release key and turn it clockwise by 90°.

[2] Push the gate section by hand to open the gate.

[3] Turn the release key in the opposite direction to return to motor driven operation.

[4] Refit the lock cover.



Checking operation

Before starting up the motor drive unit:

- Check that all components are solidly mounted
- Check all safety mechanisms for correct operation
- Check the emergency operation control
- Check that the electronic controller is operating correctly.

What do I do if the motor drive unit fails?

- Use a suitable instrument to check for the presence of voltage on the ends of the motor reduction gear unit after an opening or closing operation.
- If the drive rod does not turn in the right direction, reverse the electrical operating connections on the motor reduction gear unit.
- If the gate reverses direction after opening or closing, this means that the limit stops have not been correctly set. Refer to the section called "Adjusting the limit stops" to refine the position of the limit stops.

SPECIFICATIONS

	24 V version	**230 V version**
Power supply	24 V DC	230 V AC
Rotation speed	3800 rpm	2800 rpm
Power consumption	40 W	210 W
Current consumption	1.5 A	0.8 A
Push and pull torque	2000 N	2000 N
Useful travel	280 mm	280 mm
Drive rod speed	14 mm/s	12 mm/s
Obstacle detection (impact reaction)	Built-in torque limiter	Electronic clutch on the control panel
Limit stops	Built-in, magnetic and adjustable	-
Manual operation	By unlocking key	By unlocking key
Nbr. of operations per 24 hours	60 operations	60 operations
Maximum gate section length	1800 mm	1800 mm
Maximum gate section weight	250 kg	250 kg
Ambient conditions	-20°C to +60°C	-20°C to +60°C
Protection level	IP44	IP44
Lubrication	Greased for life	Greased for life
Capacitor	-	6.3 µF

NOTES

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