

Ditec



Ditec QIK4E-7EH-7YEH

IP1861EN
Technical Manual

Electromechanical barrier

(Original instructions)

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Key



This symbol indicates instructions or notes regarding safety, to which special attention must be paid.



This symbol indicates useful information for the correct functioning of the product.

1. General safety precautions



This installation manual is intended for qualified personnel only.

Installation, electrical connections and adjustments must be performed in accordance with Good Working Methods and in compliance with the present standards.

Read the instructions carefully before installing the product.

Bad installation could be dangerous.



The packaging materials (plastic, polystyrene, etc.) should not be discarded in the environment or left within reach of children, as these are a potential source of danger.

Before installing the product, make sure it is in perfect condition.

Do not install the product in explosive areas and atmospheres: the presence of inflammable gas or fumes represents a serious safety hazard.

Before installing the motorisation device, make all the necessary structural modifications in order to create safety clearance and to guard or isolate all the crushing, shearing, trapping and general hazardous areas.

Make sure the existing structure is up to standard in terms of strength and stability. The motorisation device manufacturer is not responsible for failure to observe Good Working Methods when building the frames to be motorised or for any deformation during use.

The safety devices (photocells, safety edges, emergency stops, etc.) must be installed taking into account: applicable laws and directives, Good Working Methods, installation premises, system operating logic and the forces developed by the motorised door.

The safety devices must protect the crushing, cutting, trapping and general hazardous areas of the motorised door.

Display the signs required by law to identify hazardous areas.



Each installation must bear a visible indication of the data identifying the motorised door.

When requested, connect the motorised door to an effective earthing system that complies with current safety standards.

During installation, maintenance and repair operations, cut off the power supply before opening the cover to access the electrical parts.

The automation protection casing must be removed by qualified personnel only.



The electronic parts must be handled using earthed antistatic conductive arms. The manufacturer of the motorisation declines all responsibility in the event of component parts being fitted that are not compatible with the safe and correct operation.

Use original spare parts only for repairs or replacements of products.

The installer must supply all information on automatic, manual and emergency operation of the motorised door and must provide the user with the operating instructions.

2. EC Declaration of Conformity

(Directive 2006/42/EC, Annex II-B)

The manufacturer ASSA ABLOY ES AB, with headquarters in Lodjursgatan 10, SE-261 44 Landskrona, Sweden,

declares that the Ditec QIK4E-QIK7EH-QIK7YEH type motorised barrier complies with the essential requirements of the following EC directives:

- Electromagnetic Compatibility Directive 2004/108/EC
- Machinery Directive 2006/42/EC
- Construction Products Directive 89/106/EC

conforms to the following characteristics of the standard EN 13241-1 (Attachment ZA):

- Factory production control (Conforming)
- Release of hazardous substances (Conforming)
- Resistance to wind load (Class 5)
- Safe opening (Conforming)
- Mechanical strength and stability (Conforming)
- Manoeuvring forces (Conforming)

Notified body: Treviso Tecnologia - CERT

Registration number: 1600

Address: Via Pezza Alta, 34 31046 Rustignè di Oderzo (TV)

Landskrona, 12-02-2013

Marco Pietro Zini
(BA President)



2.1 Machinery Directive

Pursuant to Machinery Directive (2006/42/EC) the installer who motorises a door or gate has the same obligations as the manufacturer of machinery and as such must:

- prepare the technical file which must contain the documents indicated in Annex V of the Machinery Directive;
(The technical file must be kept and placed at the disposal of competent national authorities for at least ten years from the date of manufacture of the motorised door);
- draw up the EC Declaration of Conformity in accordance with Annex II-A of the Machinery Directive and deliver it to the customer;
- affix the EC marking on the motorised door in accordance with point 1.7.3 of Annex I of the Machinery Directive.

3. Technical specifications

	QIK4E	QIK7EH-QIK7YEH
Power supply	230 V~ 50 Hz	230 V~ 50/60 Hz
Absorption	1,5 A	1 A
Line fuse	F1,6A	F1,6A
Torque	90 Nm	70 Nm
Insulation class	Class 1	Class 1
Opening time	4 s/90°	2÷6 s/90°
Closing time	4 s/90°	2÷6 s/90°
Bar length (max)	3700 mm	6000 mm
Service class	4 - INTENSE	5 - VERY INTENSE
Intermittence	S2 = 15 min S3 = 30%	S2 = 60 min S3 = 60%
Temperature	min -20° C max +55° C	min -20° C max +55° C
Degree of protection	IP24D	IP24D
Control panel	E1A	EL31R

3.1 Operating instructions

Service class: 4 (minimum 10÷5 years of working life with 100÷200 cycles per day).

Applications: INTENSE (for apartment block, industrial and commercial entrances and car parks with vehicle access or access for intense pedestrian use).

Service class: 5 (minimum 5 years of working life with 600 cycles per day).

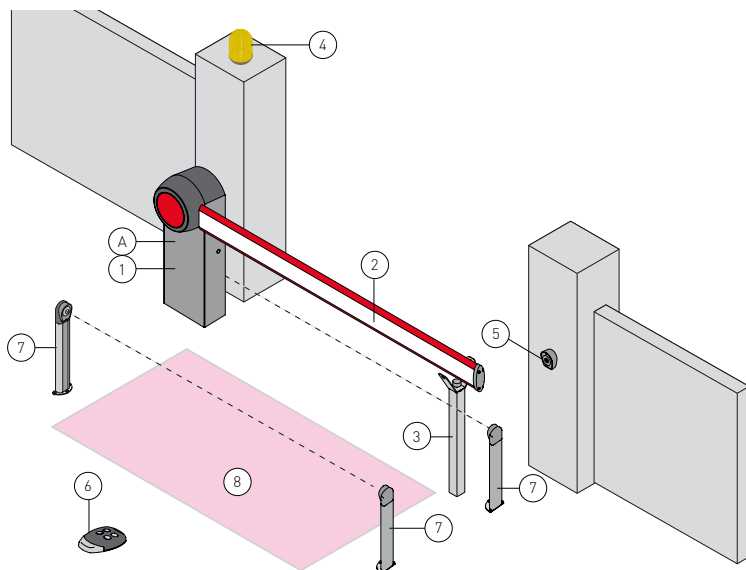
Applications: VERY INTENSE (for apartment block, industrial and commercial entrances and car parks with vehicle access or access for very intense pedestrian use).

- Performance characteristics are to be understood as referring to the recommended weight (approx. 2/3 of maximum permissible weight). When used with the maximum permissible weight a reduction in the above mentioned performance can be expected.
- Service class, running times, and the number of consecutive cycles are to be taken as merely indicative, having been statistically determined under average operating conditions, and are therefore not necessarily applicable to specific conditions of use.
- Each automatic entrance has variable elements such as: friction, balancing and environmental factors, all of which may substantially alter the performance characteristics of the automatic entrance or curtail its working life or parts thereof (including the automatic devices themselves). The installer should adopt suitable safety conditions for each particular installation.



Every automatic system contains variable elements (friction, balancing and environmental factors) that may substantially alter both the lifespan and performance of the system or its components (including the spring). Tests have shown that the average spring lifespan is around 300.000 cycles, so you are advised to check its state of wear when this limit is reached. If there are clear signs of wear, or it is difficult to balance the bar correctly, replace the spring.

4. Standard installation

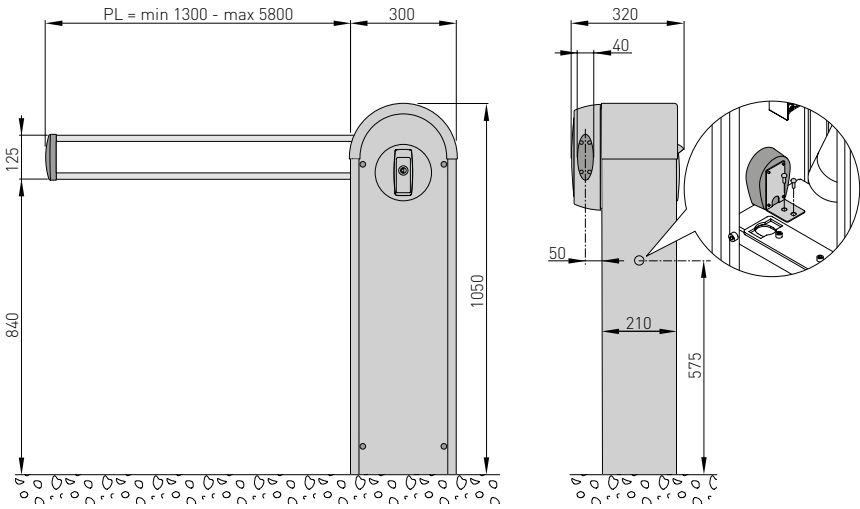


Ref.	Code	Description
1	QIK4E	Barrier cabinet
	QIK7EH	Barrier cabinet
	QIK7YEH	Stainless steel barrier cabinet
	QIKZ	Cabinet fastening base
2	QIKB37	Elliptical bar 3700 mm
	QIKB50	Elliptical bar 5000 mm
	QIKB60	Elliptical bar 6000 mm
	QIKSN	Articulated joint for elliptical bar
	QIKBG	Joint for elliptical bar
	QIKLUX	Bar lighting kit
	QIKC	Box of 10 bar reflectors
	QIKAM	Mobile support
	QIKGR	Aluminium skirt 2000 mm
3	QIKAF	Fixed support
	QIKAFE	Fixed support with electromagnetic block
	QIKAFZ	Fixed support fastening base
4	LAMPH	Flashing
5	XEL5	Key selector switch
	LAN4	Combination keyboard
	LAN7	Card decoder
	XELCA	Column for control accessories
6	GOL4	Remote control
7	XEL2	Photocells
	XELCB	Photocell column
8	LAB9	Magnetic loop detector for passage control
A		Connect the power supply to a type-approved omnipolar switch, with a contact opening distance of at least 3 mm (not supplied). Connection to the mains must be via independent channel and separate from the connections to the control and safety devices.

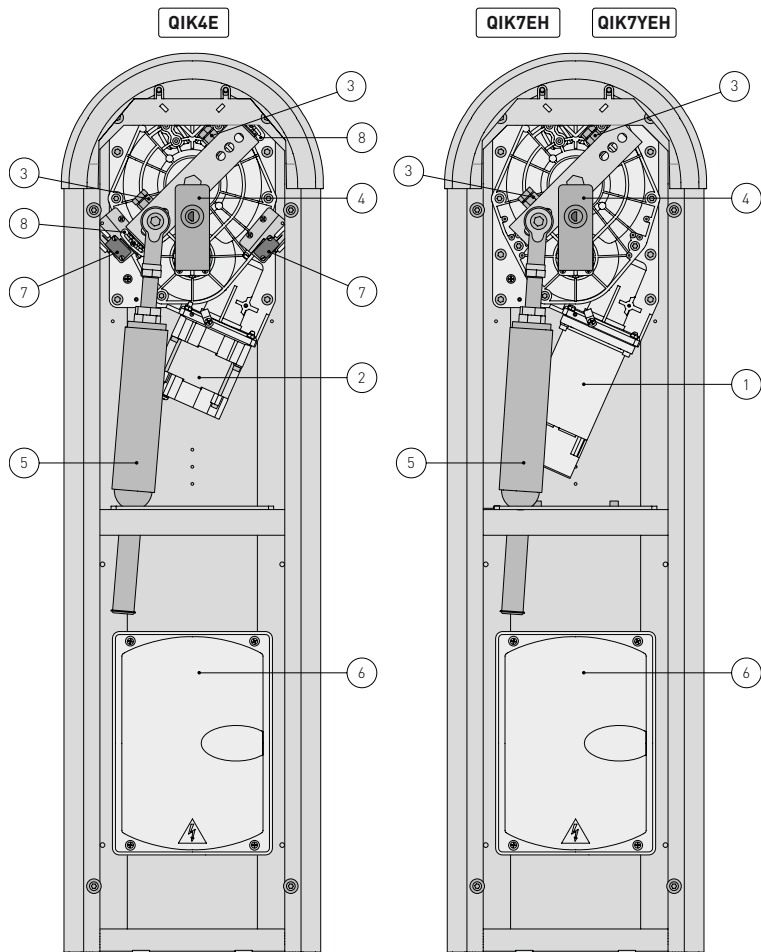


The given operating and performance features can only be guaranteed with the use of DITEC accessories and safety devices.

5. Dimensions



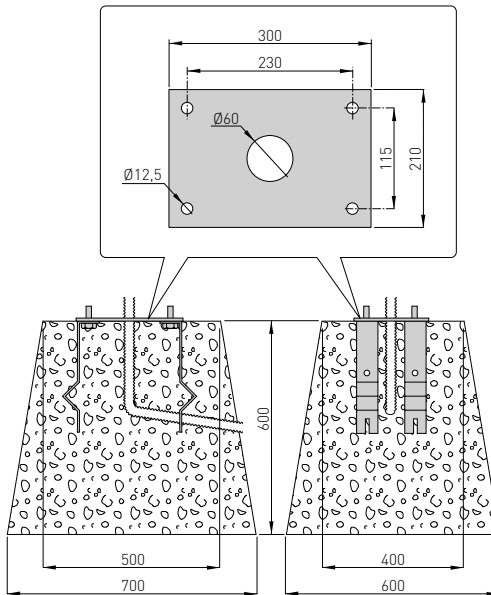
6. Main components



Ref.	Code	Description
1		24 V \overline{m} motor with encoder
2		230 V \sim motor
3		Mechanical stop adjustment
4		Key release
5	QIKM1	Grey spring
	QIKM2	Green spring
	QIKM3	Red spring \varnothing 38 mm
	QIKM4	Red spring \varnothing 51 mm
6		Control panel
7		Limit switch
8		Limit switch sliding block

7. Mechanical installation

Unless otherwise specified, all measurements are expressed in mm.

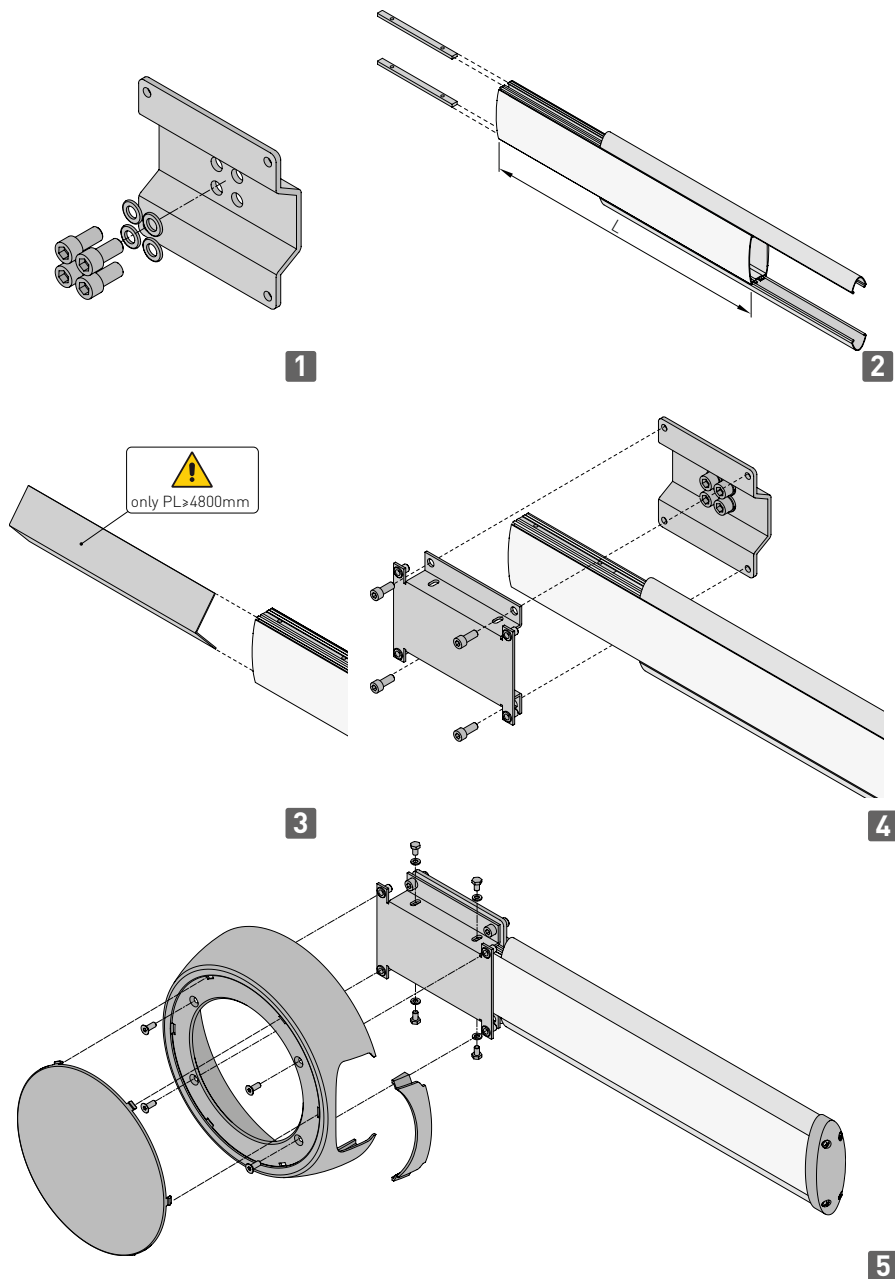


- If the surface does not allow the cabinet to be fastened strongly and firmly, prepare a concrete base with embedded anchor ties and QIKZ base plate which must be level and clean.
- Insert elements made of iron or another material in the anchor ties to attach the ties to the concrete reinforcement.
- Pass the cable ducts through the central hole of the plate.
WARNING: make sure that the fastening is strong and firm.
- Secure the cabinet.



N.B.: to open the cabinet, release the automation as described on page 40 and unscrew the 4 screws on the front.

8. Installation of bar

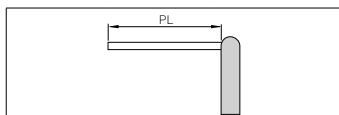


- Cut the length of the bar to $L=PL+275$ mm.
- Install the bar as shown in the figure.

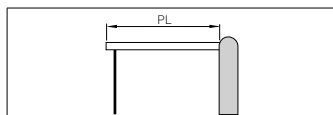
9. Bar balancing

- Release the automation as described on page 40 and place the bar in the vertical opening position.
 - Place the spring in the correct position depending on the choice of opening direction as described on page 35.
 - Using the nuts placed above the spring (see ref. [B] on page 35), compress the spring until the bar is balanced at an angle of 5°-30° to the floor (in this position, the bar must be stationary or point slightly upwards).
- WARNING: compression of the spring must comply with measurement A indicated on page 35.
- Make sure that the bar remains still when in the open or closed position.

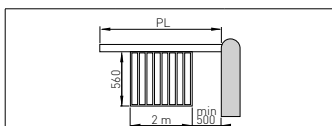
! WARNING: never use the force of the motor to support the weight of the bar. Always use the balancing spring.



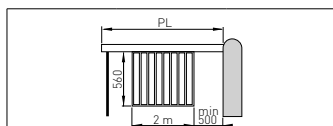
PL (mm)			
1300 - 1699	QIKM1	/	/
1700 - 1999	/	QIKM1	/
2000 - 2499	QIKM2	/	/
2500 - 2999	/	QIKM2	/
3000 - 3499	/	/	QIKM2
3500 - 4499	QIKM3	/	/
4500 - 5199	/	QIKM3	/
5200 - 5800	/	QIKM4	/



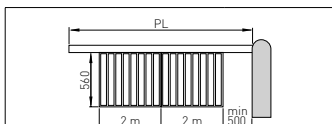
PL (mm)			
1900 - 1999	/	/	QIKM1
2000 - 2299	QIKM2	/	/
2300 - 2899	/	QIKM2	/
2900 - 3199	/	/	QIKM2
3200 - 4099	QIKM3	/	/
4100 - 4799	/	QIKM3	/
4800 - 5800	/	QIKM4	/



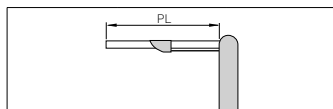
PL (mm)			
2500 - 2999	/	/	QIKM2
3000 - 3600	QIKM3	/	/



PL (mm)			
2700 - 3399	QIKM3	/	/
3400 - 3600	/	QIKM3	/



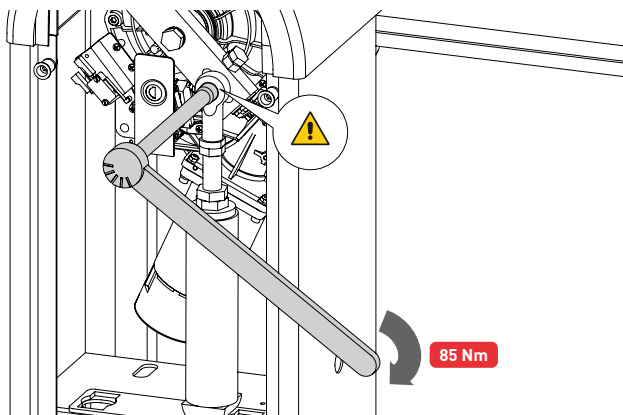
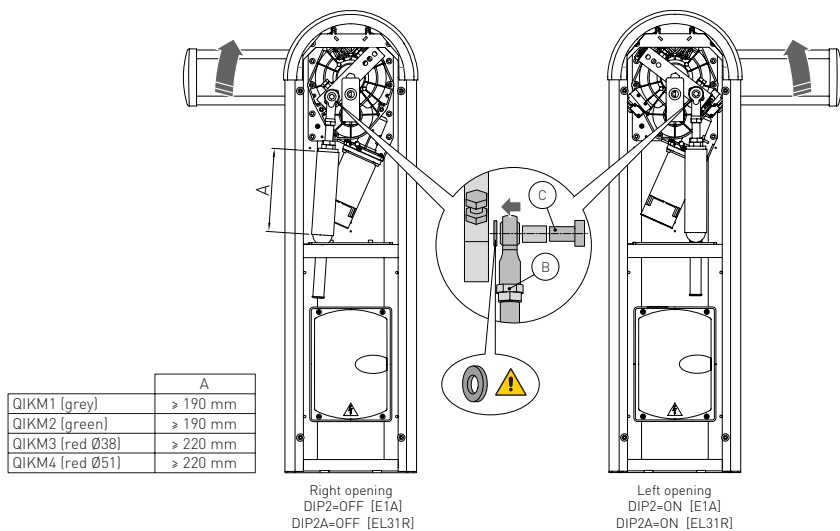
PL (mm)			
4600 - 5000	/	QIKM4	/



PL (mm)			
2000 - 2299	QIKM2	/	/
2300 - 2899	/	QIKM2	/
2900 - 3199	/	/	QIKM2
3200 - 4099	QIKM3	/	/
4100 - 4450	/	QIKM3	/

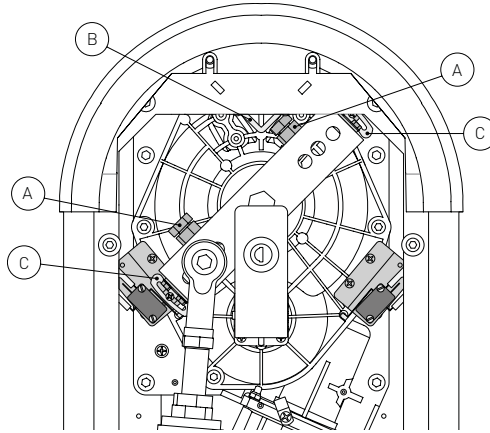
! WARNING: for PL > 4000 mm, you must use the fixed support QIKAF-QIKAFE or the mobile support QIKAM. With the fixed support with the electromagnetic block QIKAFE installed, use the configurations indicated for the mobile support QIKAM.

10. Selecting opening direction



- Select the opening direction as shown in the figure.
- Mount the spring using the special screw M12x40 [C] with thread locking compound and tightly fasten as shown in the figure.
- [QIK4E] Set the DIP2 on the control panel E1A as shown in the figure.
[QIK7EH] Set the DIP2A on the control panel EL31R as shown in the figure.
- Once you have installed the bar, adjust spring compression using the nuts [B] until measurement A in the table is obtained.

11. Limit switch adjustment (QIK4E only)



- Adjust the opening and closing position of the bar using the special screws [A].
- Adjust the opening and closing limit switches using the special cams [C] so that the switches are activated approx. 3 mm before the mechanical stop [B].

12. Electrical connections



N.B.: The electrical wiring and start-up of the gearmotors are shown in the control panel installation manuals.

	QIK4E	QIK7EH - QIK7YEH
Control panel	E1A	EL31R

Before connecting the power supply, make sure the plate data correspond to that of the mains power supply.

An omnipolar disconnection switch with minimum contact gaps of 3 mm must be included in the mains supply.

Check that upstream of the electrical installation there is an adequate residual current circuit breaker and a suitable overcurrent cutout.

Use a H05RN-F 3G1.5 or H05RR-F 3G1.5 type electric cable and connect it to terminals L (brown) and N (blue) inside the automation.

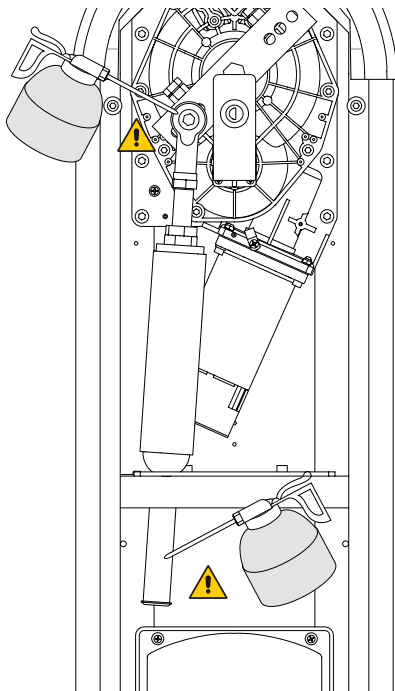
Connect the earth wire

Connection to the mains power supply, in the section outside the automation, is made with independent channel and separated from the connections to the control and safety devices.

The channel must penetrate the automation through the holes on the base plate at least 50 mm. Make sure there are no sharp edges that may damage the power supply cable.

Make sure the mains power conductors (230 V) and accessory power conductors (24 V) are separated.

13. Routine maintenance plan



Perform the following operations and checks every 6 months according to intensity of use of the automation.

Disconnect the 230 V~ power supply and batteries (if present):

- Clean and oil the levers and check the nuts and screws are all well tightened.
- Clean and grease the articulated joint and spring-post as shown in the figure.
- Check the electrical connections.
- Check that the manual release is operating correctly.
- Check that the bar is balanced correctly as shown on page 34.
- [QIK4E] Check the capacity value of the motor condenser.
- Check the state of wear of the mechanical parts, in particular the spring after about 300,000 work cycles.

Reconnect the 230 V~ power supply and batteries if present:

- [QIK4E] Make sure the limit switches are working correctly.
- Check that obstacle detection is operating correctly.
- Check that all control and safety functions are working correctly.

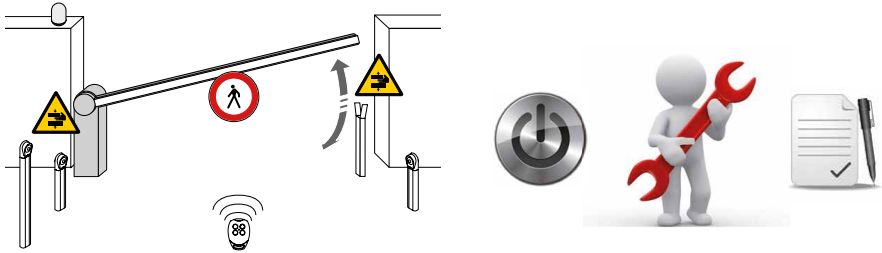


N.B.: For spare parts, see the spares price list.



Operating instructions **ENTRE/MATIC**

General safety precautions



! These precautions are an integral and essential part of the product and must be supplied to the user.

Read them carefully since they contain important information on safe installation, use and maintenance.

These instructions must be kept and forwarded to all possible future users of the system.

This product must only be used for the specific purpose for which it was designed.

Any other use is to be considered improper and therefore dangerous. The manufacturer cannot be held responsible for any damage caused by improper, incorrect or unreasonable use.

This product must not be used by people (including children) with reduced physical, sensorial or mental abilities, or lack of experience or knowledge, unless they are given proper surveillance and instructions for operating the device by a person responsible for their safety.

Avoid operating in the proximity of the hinges or moving mechanical parts.

Do not enter within the operating range of the motorised door while it is moving.

Do not block the movement of the motorised door since this may be dangerous.

Do not allow children to play or stay within the operating range of the motorised door.

Keep remote controls and/or any other control devices out of the reach of children in order to avoid possible involuntary activation of the motorised door.

In the event of a fault or a malfunction of the product, turn off the power supply switch, do not attempt to repair or intervene directly and contact only qualified personnel.


Failure to comply with the above may cause a dangerous situation.

All cleaning, maintenance or repair work must be carried out by qualified personnel.

To ensure that the system works efficiently and correctly, the manufacturer's indications must be complied with and only qualified personnel must perform routine maintenance of the motorised gate.

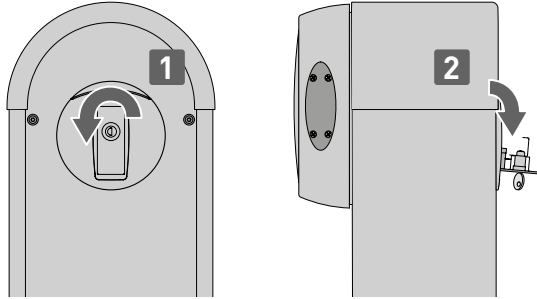
In particular, regular checks are recommended in order to verify that the safety devices are operating correctly.

All installation, maintenance and repair work must be documented and made available to the user.

 To dispose of electrical and electronic equipment as well as batteries correctly, users must take them to special "recycling centres" provided by the municipal authorities.



Manual release instructions



In the event of a fault or power failure, insert the key, turn it anticlockwise and completely open the hatch. Manually open the barrier.

To block the barrier again, close the hatch, turn the key clockwise and remove the key.



WARNING: do not release with the springs under tension without bar. Perform bar locking and release with the motor switched off. Do not enter the operating range of the bar. When the barrier is released, the bar may move of its own accord.

When the hatch is closed but the key is still horizontal, the release microswitch is open and all manoeuvres are prevented.

To deactivate the barrier, the power supply must be removed and the batteries disconnected (if present).



For any problems and/or information, contact the support service.

Installer's stamp	Operator
	Date of intervention
	Technician's signature
	Customer's signature

Intervention performed

ASSA ABLOY Entrance Systems AB

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DETACH AND DELIVER TO THE CUSTOMER

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