

QIK80EH

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Installation and maintenance manual for electromechanical barrier. (Translation of the original instructions)



CE

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CAPTION

This symbol indicates instructions or notes regarding safety issues which require particular attention.

This symbol indicates informations which are useful for correct product function.

This symbol indicates instructions or notes intended for technical and expert personnel.

This symbol indicates operations not to be effected for not compromise the correct operation of the automation.

This symbol indicates options and parameters which are only available with the indicated item.

This symbol indicates options and parameters which are not available with the indicated item.

All right reserved

All data and specifications have been drawn up and checked with the greatest care. The manufacturer cannot however take any responsibility for eventual errors, ommisions or incomplete data due to technical or illustrative purposes.

1. GENERAL SAFETY PRECAUTIONS

This installation manual is intended for professionally competent personnel only.

Installation, electrical connections and adjustments must be performed in accordance with Good Working Methods and in compliance with applicable regulations.

Before installing the product, carefully read the instructions. Bad installation could be hazardous. 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 hazard.

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

Do not install the product in an explosive environment and atmosphere: gas or inflammable fumes are a serious hazard risk.

Before installing the motors, make all structural changes relating to safety clearances and protection or segregation of all areas where there is risk of being crushed, cut or dragged, and danger areas in general.

Make sure the existing structure is up to standard in terms of strength and stability. The motor manufacturer is not responsible for failure to use Good Working Methods in building the frames to be motorized or for any deformation occurring 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 motorized barrier.

The safety devices must protect any areas where the risk exists of being crushed, cut or gragged, or where there are any other risks generated by the motorized barrier.

Apply hazard area notices required by applicable regulations.

Each installation must clearly show the identification details of the motorized barrier.

Before making power connections, make sure the plate details correspond to those of the power mains. Fit an omnipolar disconnection switch with a contact opening gap of at least 3 mm.

Make sure an adequate residual current circuit breaker and overcurrent cutout are fitted upstream of the electrical system. When necessary, connect the motorized barrier to a reliable earth system made in accordance with applicable safety regulations.

During installation, maintenance and repair, interrupt the power supply before opening the lid to access the electrical parts.

To handle electronic parts, wear earthed antistatic conductive bracelets. The motor manufacturer declines all responsibility in the event of component parts being fitted that are not compatible with the safe and correct operation.

For repairs or replacements of products only original spare parts must be used. The installer shall provide all information relating to automatic, manual and emergency operation of the motorized barrier, and provide the user with operating instructions.

2. EC DECLARATION OF CONFORMITY

Manufacturer: DITEC S.p.A.

Address: Via Mons. Banfi, 3 21042 Caronno P.IIa (VA) - ITALY

Declares that the motorised barrier product, such as QIK80EH conforms to the essential requisites of the following EC directives:

- Electromagnetic Compatibility Directive 2004/108/EC
- Machine Directive 2006/42/EC
- Building Products Directive 89/106/EC

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

- Production controls in the factory (in conformity)
- Release of dangerous substances (in conformity)
- Resistance to wind load (Class 5)
- Safe opening (in conformity)
- Mechanical resistance and stability (in conformity)

- Manoeuvring forces (in conformity)

Organization notified: Treviso Tecnologia - CERT

Registration number: 1600

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Caronno Pertusella, 19-01-2010

Silvano Angaroni Managina

3. TECHNICAL DATA

	QIK80EH
Power supply	230 V~ / 50-60 Hz
Absorption	1.2 A
Torque	200 Nm
Opening time	6÷12 s/90°
Closing time	6÷12 s/90°
Rod length (max)	7950 mm
Service class	4 - INTENSE
Intermittence	S2 = 50 min
Internitterice	S3 = 50%
Temperature	-20° C / +55° C
Degree of protection	IP24D
Control panel	EL34
Fuse F1	F2A
Motor power supply	24 V= / 16 A

Degree of protection IP55

Accessories power supply 24 V= / 0.5 A

3.1 Operating instructions

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

Applications: INTENSE (for condominial, industrial and commercial entrances, parking spaces with intense vehicle or pedestrian access)

- 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.

3.2 Dimensions

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NOTE: unless otherwise specified, all measurements are expressed in millimetres (mm).

4. STANDARD INSTALLATION



Ref.	Code	Description	
1	QIK80EH	Barrier enclosure	
	QIK80Z	Enclosure fastening base	
2	QIKC40	Rod 3975 mm	
	QIKC55	Rod 5550 mm	
	QIKCG	Joint for rod	
	QIKLUX	Light kit for rod	
	QIKC	10 reflectors box for rod	
	QIKAM	Mobile support	
	QIKGR	Aluminium barrier 2000 mm	
3	QIKAF	Fixed support	
	QIKAFE	Fixed support with electromagnetic block	
	QIKAFZ	Fixed support fastening base	
4	LAMPH	Flashing light	
5	XEL5	Key selector switch	
	LAN4	Combination keyboard	
	LAN7	Card decoder	
	XELCA	Column for control accessories	
6	GOL4	Radio	
7	XEL2	Photocells	
	XELCQ	Photocell container	
	XELCB	Photocell column	
8	LAB9	Magnetic loop detection device for traffic monitoring	
Α		Connect the power supply to an approved omnipolar switch with an opening distance	
		of the contacts of at least 3mm (not supplied).	
		The connection to the mains must be made via an independent channel, separated	
		from the connections to command and safety devices.	



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

5. MAIN COMPONENTS



Ref.	Code	Description
1		24 V= motor with encoder
2		Opening/closing limit switches
3		Limit switch adjusting
4		Mechanical stop adjusting
5		Key release
6		Blue spring Ø63 mm
7		Control panel
8	BATKH	Continuous mode battery kit
9	MD2	Display module for diagnostics and advanced controls

6. MECHANICAL INSTALLATION



- If the surface does not permit strong, firm fastening of the enclosure, prepare a concrete base with the anchor ties and base plate QIK80Z embedded which must be level and clean.
- Insert elements made of iron or other material through the anchor ties so that the ties are attached 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 enclosure.

NOTE: to open the enclosure, release the automation as described on page 23 and unscrew the 4 screws on the front.

7. ROD INSTALLATION



- Cut the length of the rod to L=PL+350 mm.
- Install the rod as shown in the figure.

8. ROD BALANCING

PL

(mm) 4600 - 4799

4800 - 6199

- Release the automation as described on page 23 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 12.
- Using the nuts placed above the spring (see ref. [B] on page 12), compress the spring until the rod is balanced at an angle of 5°-30° to the floor (in this position, the rod must be stationary or point slightly upwards).
- WARNING: compression of the spring must comply with measurement A indicated on page 12.
 Make sure that the rod remains still when in the open or closed position.
- WARNING: never use the force of the motor to support the weight of the rod. Always use the balancing spring.





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QIKM5







QIKM5

1

WARNING: for PL≥4000 mm, you must use the fixed support QIKAF-QIKAFE or mobile support QIKAM.

With the fixed support with the electromagnetic block QIKAFE installed, use the configurations indicated for the mobile support QIKAM.

9. CHOICE OF OPENING DIRECTION



- Select the opening direction as shown in the figure.
- Assemble the spring using the special screw M12x40 [C], apply a thread locking compound and tightly fasten as shown in the figure.
- Set DIP2 on the EL34 control panel as shown in the figure.
- Once you have installed the rod, adjust the compression of spring QIKM5 using the nuts [B] until A≥245 mm.

10. LIMIT SWITCH ADJUSTMENT



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

11. ACCESS TO CONTROL PANEL



- Unscrew and remove the front screws [D].
- Pull the ring [E] and lift the enclosure cover [F].

12. ELECTRICAL CONNECTIONS



The figure shows the main connections of the control panel EL34.

13. COMMANDS

Command		b	Function	Description	
1	2	N.O.	AUTOMATIC	The permanent closing of the contact enables automatic clo-	
			CLOSING	sing.	
1	3	N.O.	OPENING	With DIP1=ON, the closing of the contact activates the ope-	
				ning operation.	
			STEP-BY-STEP	With DIP1=OFF, the closing of the contact activates opening	
				or closing operations in the following sequence: open-stop-	
				close-open.	
				NOTE: if automatic closing is enabled, the stop is not permanent	
				but lasts for a duration set by TC.	
1	4	N.O.	CLOSING	The closing of the contact activates the closing operation.	
1	8	N.C.	REVERSE	The opening of the safety contact triggers a reversal of motion	
			SAFETY CONTACT	(re-opening) during closing.	
1	9	N.C.	STOP	The opening of the safety contact stops the current operation.	
1	9	N.O.	HOLD-TO-RUN	The opening of the 1-9 contact enables the hold-to-run function.	
			FUNCTION	 hold-to-run opening 1-3 with DIP1=ON; 	
				- hold-to-run closing 1-4.	
				NOTE: any safety devices, automatic closing and plug-in cards	
				inserted in AUX1, AUX2 and RDX are disabled.	
1	G1	N.C.	REVERSE	The opening of the safety contact triggers a reversal of motion	
			SAFETY CONTACT	(re-opening) during closing.	
		N.O.	TRANSMITTERS	WARNING: the BIXMR2 storage module must be inserted.	
			STORAGE AND	Transmitter storage:	
			CANCELLATION	 press the PRG key (the SIG LED comes on), 	
				- transmit the transmitter to be stored (the SIG LED flashes),	
				- wait 10 s to complete storage (the SIG LED goes out).	
				Transmitter cancellation:	
				 press the PRG key for 3 sec (the SIG LED flashes), 	
				- press the PRG key for another 3 sec (the SIG LED flashes	
PRG				quickly).	
O			SETTINGS RESET	WARNING: the BIXMR2 storage module must not be inserted.	
				 press the PRG key for 4 sec (the IN LED flashes), 	
				- press the PRG key within 4 sec for another 2 sec (the IN LED	
				comes on).	
				The SETTINGS RESET deletes all the remote software set-	
				tings made using MD2. After SETTINGS RESET it is possible	
				to adjust the control panel directly.	
				WARNING: if the MD2 display module is disconnected from	
				the control panel, a SETTINGS RESET must be performed.	



WARNING: make a jumper for all the N.C. contacts if not in use. The terminals with the same number are equal.

14. OUTPUTS AND ACCESSORIES

Output	Value - Accessories	Description	
0 1	24 V= / 0.5 A	Accessories power supply. Power supply output for external accessories, including automation status lamp.	
C NO 14 0	LAMPH	Flashing light. Activated during opening and closing operations.	
0	QIKAFE 24 V= / 1 A	Electric lock. Activated when the barrier is closed.	
+G2	QIKLUX 24 V= / 300 mA max	Light kit. On with barrier closed, flashing with barrier operating and off with barrier open.	
1 —⊗— G3	24 V= / 3 W	Automation status lamp (proportional). The light goes off when the automation is closed; the light comes on when the automation is open; the light flashes with a variable frequency while the automation is operating.	
ANT	BIXAL	If the GOLR radio receiver is used, connect the antenna wire (173 mm) supplied or connect the BIXAL antenna via RG58 coaxial cable.	
0 1 2122	MD2 DMCS	Used to connect the MD2 display module for advanced functions control or connect the DMCS software.	
AUX1 AUX2		The control panel has two housings for plug-in cards such as a radio receiver type, magnetic loops, etc. Plug-in card operating is selected using DIP1. WARNING: the plug-in cards must be inserted and removed with the power supply disconnected.	
RDX [••••• [•••]	RDX GOLR The control panel has a housing for a plug-in card such a GOLR radio receiver type. ••••• ••• Flug-in card operating is selected using DIP1. WARNING: the plug-in cards must be inserted and removed the power supply disconnected. Flug-in cards must be inserted and removed the power supply disconnected.		
СОМ	COMBIXMR2If the GOLR radio receiver is used, the storage module ca used to store the remote controls. It allows the operating configurations to be saved using function $5F \ge RC$ of the MD2 display module. The saved configurations can be recalled using the function $\ge RC$ of the MD2 display module. If the control panel is replaced, the BIXMR2 storage module b used can be inserted in the new control panel. WARNING: the storage module must be inserted and rem with the power supply disconnected		
BAT	BATKH 2 x 12 V / 2 Ah	Battery operating. The batteries are kept charged when the power supply is on. If the power supply is off, the control panel is powered by the batteries until power is re-established or until the battery voltage drops below the safety threshold. If this occurs, the control panel turns off. <i>WARNING: the batteries must always be connected to the control panel for charging. Periodically check the efficiency of the batteries.</i> <i>NOTE: the operating temperature of the rechargeable batteries is approximately</i> +5°C/+40°C.	

15. ADJUSTMENTS

	Description	OFF	ON
DIP1	Command 1-3 operation.	Step-by-step	Opening.
	NOTE: it also sets operating mode of the		
	plug-in cards connected on AUX1, AUX2		
	and RDX.		
DIP2	Opening direction selection.	Opens towards right.	Opens towards left.
	The opening direction is intended by viewing		
	the automation from the side being exami-		
	ned.		
DIP3	Opening with safety devices open.	Enabled.	Disabled.
		Opening contacts 1-8 with	Opening contact 1-8 with the
		the automation idle allows	automation idle prevents all
		immediate opening using	operations.
		command 1-3 or remote	
		control.	
DIP4	FUTURE USE	/	/
DIP5	Electronic antifreeze system.	Enabled.	Disabled.
	Maintains motor function even at low am-		
	bient temperatures.		

Trimmer	Description
VA-VC	Opening speed adjustment. Adjusts the opening speed.
min max	Closing speed adjustment. Adjusts the closing speed.
	Setting automatic closing time. From 0 to 120 s.
R1 🔨	Thrust on obstacles adjustment.
min 🖉 max	The control panel is equipped with a safety device that stops motion if an obstacle is encountered during the opening operation and reverses motion during the closing operation.
	R1=MIN gives maximum obstacle sensitivity (minimum thrust).
	With R1=MAX, maximum thrust is obtained.
RC	Deceleration distance during closing.
min 🖉 max	Adjusts the deceleration distance when closing to allow optimum approach.

LED	On	Flashing
SIG	Transmitter enabling/storage phase.	Reception of a radio transmission.
		Cancellation of transmitters in progress.
		BIXMR2 memory damaged.
12	0-12 limit switch contact is open.	1
		7
11	0-11 limit switch contact is open.	
		/
SA	At least one of the safety contacts is open.	
		/
IN	Receipt of command or change in status of	SETTINGS RESET in progress.
	a dip-switch.	
POWERALARM	Power supply on.	Encoder fault.

16. RADIO RECEIVER OPERATION

The control panel has a housing for a plug-in card such as a GOLR radio receiver type with a frequency of 433.92 MHz. The antenna consists of a 173 mm long rigid wire.

It is possible to increase the range of the radio by connecting the external antenna of the flashing lights, or by installing the tuned antenna (BIXAL).

NOTE: to connect the external antenna to the control panel, use a coaxial cable type RG58 (max 10 m). Up to 200 remote controls can be stored in the storage module.

Refer to the transmitters user manual to store, clone and delete transmitters.

From one to four CH keys of a single transmitter can be stored in the control panel.

If only one (any) CH key of the transmitter is stored, command 1-5 (step-by-step/opening) is carried out.

If from two to four CH keys of a single transmitter are stored, the functions matched with the CH keys are as follows:

- CH1 = command 1-5 step-by-step/opening;
- CH2 = opening command;
- CH3 = command to switch on/off the courtesy light;
- CH4 = stop command, equivalent to impulsive command 1-9.

If the control panel is replaced, the storage module being used can be inserted in the new control panel. *WARNING: the storage module must be inserted and removed with the power supply disconnected.*

17. START-UP

<u>/</u>]

WARNING	The operations in point 5 are performed without safety devices.
	The trimmer can only be adjusted with the automation idle.
	The automation automatically slows when approaching the stops.

- 1- Make a jumper for the N.C. safety contacts.
- 2- Manually place the rod in the open and closed position. Adjust the mechanical stops and limit switches as indicated on page 13.
- 3- Use DIP2 to set the required direction as indicated on page 12.
- 4- Connect the power supply cable to the terminals L-N- (as indicated on pages 7-14.
- 5- Switch on and check that the automation is operating correctly with subsequent opening and closing commands.
 - Check that the limit switches are activated.
- 6- Connect the safety devices (removing the relative jumpers) and check they work correctly.
- 7- If required, activate automatic closing using command 1-2 and adjust the time using the TC trimmer.
- 8 Set the desired opening and closing speed using the VA and VC trimmers. Adjust the deceleration distance when closing using the RC trimmer.
- 9- Set the obstacle thrust with the R1 trimmer. WARNING: check that the working forces exerted by the door wings are compliant with EN12453-EN12445 regulations.
- 10- Connect any other accessories and check they operate correctly.

NOTE: in the event of servicing or if the control panel is to be replaced, repeat the start-up procedure.

18. TROUBLESHOOTING

Problem	Possible causes	Remedy
The automation does not	No power.	Check that the control panel is powered
open or close.	(POWER ALARM led off).	correctly.
	Short circuited accessories.	Disconnect all accessories from termi-
	(POWER ALARM led off).	nals 0-1 (voltage must be 24 V=) and
		reconnect one at a time.
	Blown line fuse.	Replace F1 fuse.
	(POWER ALARM led off).	
	Safety contacts are open.	Check that the safety contacts are clo-
	(SA led on).	sed correctly (N.C.).
	Release SAFETY SWITCH micro-	Check that the hatch is closed correctly
	switch open.	and the microswitch makes contact.
	(11 and 12 leds on).	
	The remote control does not work.	Check that the radio receiver and stora-
		ge module are present.
		Check that the transmitters have been
		stored correctly on the radio.
The automation opens but	Safety contacts are open.	Check that the safety contacts are clo-
does not close.	(SA led on).	sed correctly (N.C.).
	Photocells are activated.	Check that the photocells are clean
	(SA led on).	and operating correctly.
	The automatic closing does not work.	Check that contact 1-2 is closed.
External safety devices not	Incorrect connections between the	Connect N.C. safety devices together in
activating.	photocells and the control panel.	series and remove any bridges on the
		control panel terminal board.
The automation opens/clo-	Encoder disconnected, false encoder	Check that the encoder is connected
ses briefly and then stops.	contacts, encoder fault.	correctly, clean the contacts by con-
	(POWER ALARM led flashing).	necting and disconnecting the encoder
		plug on the contacts, replace encoder.
	Motor leads crossed.	Check the motor leads.
	(POWER ALARM led flashing).	
	There is friction or the spring is not ten-	Manually check that the automation
	sioned correctly.	moves freely, check the R1 adjustment
		and check spring tensioning.
The remote control has li-	The radio transmission is impeded by	Install the antenna outside. Substitute
mited range and does not	metal structures and reinforced con-	the transmitter batteries.
work with the automation	crete walls.	
moving.		

I NOTE: if the MD2 display module is present, consult the **Visualization of alarms and faults** chapter in the relative installation manual.

19. 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 spring-post as shown in the figure.
- Check the electrical connections as shown on page 14.
- Check that the manual release is operating correctly.
- Check that the rod is balanced correctly as shown on page 11.

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

- Check that obstacle detection is operating correctly.
- Check that all control and safety functions are working correctly.

NOTE: for spare parts, see the spares price list.

20. OPERATING INSTRUCTIONS



20.1 General safety precautions

The following 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.

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

Do not enter within the operating range of the motorized barrier while it is moving.

Do not block the movement of the motorized barrier since this may be dangerous.

Do not allow children to play or stay within the operating range of the motorized barrier.

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

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

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

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

To ensure that the system works efficiently and correctly, the manufacturer's indications must be complied with and routine maintenance of the motorized barrier must be performed by professionally competent personnel. 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.

For the correct disposal of electric and electronic equipment, waste batteries and accumulators, the user must take such products to the designated municipal collection facilities.



20.2 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 rod. Perform rod locking and release with the motor switched off. Do not enter the operating range of the rod. When the barrier is released, the rod may move of its own accord.

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

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



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	Installer:
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