

Q45



Control panel for electric rolling shutters – 230Vac


- Built-in radio receiver 433Mhz
- Adjustable pause time for automatic closing function
- Adjustable working time
- Output for safety photocells or safety edges
- Output for safety flashing light connection
- It can be connected to a timer-clock for pre-set time opening and closing

TECHNICAL FEATURES

Item code	PQ45
Control Panel Dimensions	130x90x45 mm
Box dimensions	110x150x70 mm
Radio reciver	In-built, 433Mhz
Main Power	230Vac ~ 50Hz
Current in stand-by mode	3 W
Main fuse 230V (F2)	5 A
Accessory fuse 24V (F1)	1.6 A
Blinker power supply	230 Vac, max 100 W
Courtesy light	230 Vac, max 100 W – still light for 90 seconds
Working time	Adjustable, up to 120 seconds
Pause time for automatic closing	Adjustable from 5 to 120 seconds
Working temperature	-20 +50 °C
Protection Level (with box)	IP55

1. WARNINGS

WARNING: This manual contains important information concerning personal safety. An incorrect installation or an improper use may lead to severe injuries.

Read carefully and pay particular attention to the safety sections marked by the symbol .

Store this manual safely for future use.

 **Do not allow children or pets near your electric rolling shutter. Never let children operate or play with the controls. Keep the remote controls away from children and unauthorised users.**

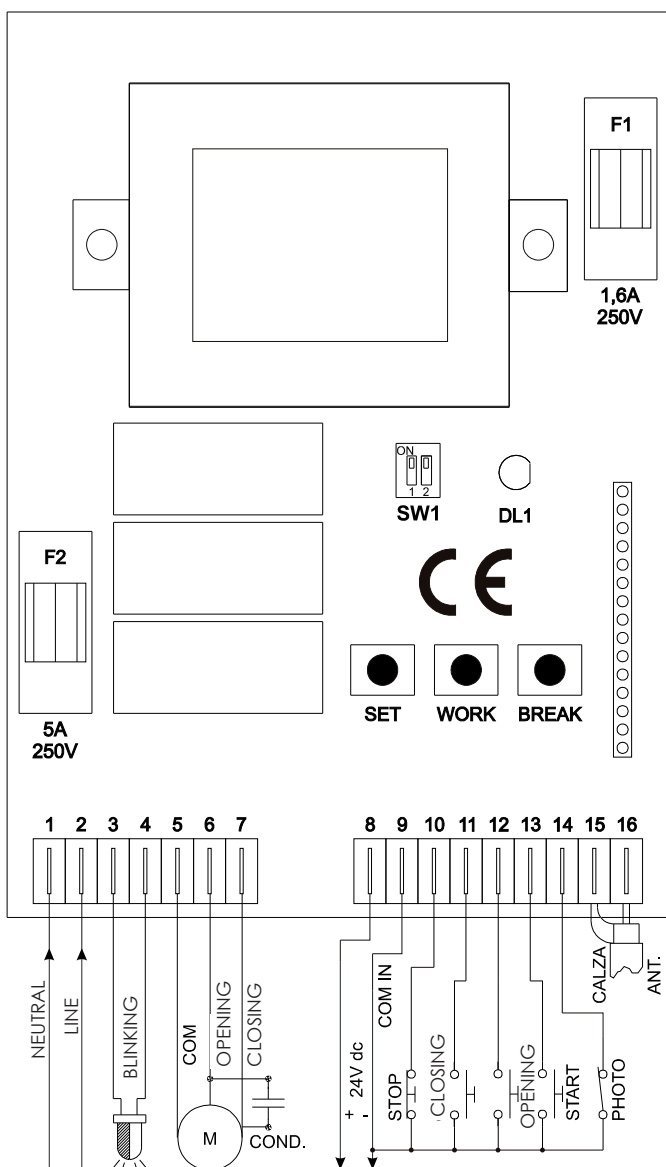
 **All wirings or operations on the control panel must be performed with the control panel disconnected from the power supply.**

 **Connect the control panel only to a power supply line equipped with safety grounding system.**

Means for disconnections must be incorporated in the fixed wiring in accordance with the wiring rules and wiring diagram

Wiring, settings and commissioning of this control board must be carried out by qualified and experienced personnel only. The installation has to comply to laws and regulations in force, with particular reference to EN 12445 provisions.

2. WIRING DIAGRAM



Polarity in main power supply line connection must always be respected

(plug 1 = Neutral, plug 2 = Phase).

Minimum wire-section size for 230Vac outputs (motors and light) is 1.5mm²

Always use separate wires for accessories and controls wiring (24V) to avoid disturbances or damages caused by synchronous generated voltage. **Do not use only one multi-core cable for wiring.**

In case of wirings longer than 50m, we recommend to decouple the command circuits by using suitable relays on main electric board.

Main components description

- F1** = Accessories protection fuse 24V, 1.6A
- F2** = Main power and motor protection fuse 230V, 5A
- RADIO** = Radio receiver
- DL1** = Control panel's status LED
- SW1** = Programming dip-switches block
- SET** = Control panel Programming key
- WORK** = Working time adjustment key
- BREAK** = Pause time setting key for automatic closing

2. ELECTRIC WIRINGS

1 - 2 = MAIN POWER 230Vac ~ 50Hz

- 1 Neutral
- 2 Line

3 - 4 = FLASHING LIGHT. Blinking signal
FLASH 230Vac, max 100W

5 - 6 - 7 = MOTOR output. Max 700W.

- 5 Neutral
- 6 Open
- 7 Close

8 - 9 = PHOTOCELLS output 24Vdc. Max 500 mA

- 8 Positive
- 9 Negative

9 - 10 = STOP command (NC contact).

STOP Always stops the motor.
If the stop command is given during the pause time, automatic closing will be disabled.

9 - 11 = CLOSING command (NO contact).

9 - 12 = OPENING command (NO contact).

9 - 13 = START command (NO contact).
Step-by-step mode (open, stop, close)

9 - 14 = CLOSING PHOTOCELL input (NC contact).
Active only when closing (stops and reopens).

15 - 16 = AERIAL terminal block
15 aerial SIGNAL
16 aerial EARTH

9 - 13 = CLOCK Timer input (NO contact).
To enable pre-set open/close timing

4. PROGRAMMING

4.1 WORKING MODE setting

Use SW1 dip-switches to select the working mode.

While setting SW1 dip-switches make sure that the control panel is not powered (main power supply disconnected).

SW1	ON	OFF
1	“Hold-to-run” working mode: <ul style="list-style-type: none">• OPEN command: opens as long as the key is holded pressed, if released the motor stops• CLOSE command: closes as long as the key is holded pressed, if released the motor stops• START command = step-by-step mode (open, stop, close)	Standard working mode: <ul style="list-style-type: none">• OPEN command: complete opening only• CLOSE command: complete closing only• START command = step-by-step mode (open, stop, close)
2	COURTESY LIGHT mode (90 seconds)	BLINKING flashing light mode

4.2 WORKING TIME adjustment

4.2.1 WORKING TIME adjustment – WITHOUT opening delay

- 1) Close the rolling shutter and power the control panel on. Then press SET key once: DL1 will flash to confirm that the control panel is now on programming mode.
- 2) Press once WORK key on the control panel: motor will start running
- 3) When the rolling shutter is completely open wait for a few seconds more (maximum 7) and then press WORK key again. The motor will stop running and after few seconds it will automatically close.
Closing time will be equal to opening time.
- 4) Once the motor has completed the closing it will stop and the control panel will automatically exit from the programming mode. DL1 light stops blinking and stays on still.

To further changes to the working times, please repeat the above procedure.

4.2.2 WORKING TIME adjustment – WITH opening delay

Opening delay is recommended in case of several control panes wired in series to avoid over-loadings.

- 1) Close the rolling shutter and power the control panel on. Then press SET key once: DL1 will flash to confirm that the control panel is now on programming mode.
- 2) Press and hold WORK key on the control panel as long as you want to set the opening delay and then release the key. The motor will start running
- 3) When the rolling shutter is completely open wait for a few seconds more (maximum 7) and then press WORK key again. The motor will stop running and after few seconds it will automatically close.
Closing time will be equal to opening time.
- 4) Once the motor has completed the closing it will stop and the control panel will automatically exit from the programming mode. DL1 light stops blinking and stays on still.

To further changes to the working times, please repeat the above procedure.

4.3 AUTOMATIC CLOSING adjustment

- 1) Close the rolling shutter and power the control panel on.
Then press SET key once: DL1 will flash to confirm that the control panel is now on programming mode.
- 2) Press BREAK key once: the control panel starts counting the pause time for the automatic closing (minimum 5 seconds)
- 3) Once the suitable pause time has been reached press again BREAK key on the control panel. The pause time is now saved and the control panel will automatically exit from the programming mode. DL1 light stops blinking and stays on still.

To further changes to the pause time, please repeat the above procedure.

To disabled the AUTOMATIC CLOSING function, please follow the procedure here below:

- 1) Close the rolling shutter and power the control panel on.
Then press SET key once: DL1 will flash to confirm that the control panel is now on programming mode.
- 2) Press and hold BREAK key on the control panel until DL1 light stops blinking and stays on still. Now release the key, the control panel automatically exits form the programming mode. DL1 light remains on still.

4.4 RADIO CODING

The control panel can store up to 10 different radio codes.

Please follow this procedure to save a radio code on the control panel:

- 1) Close the rolling shutter and power the control panel on. Then press SET key once: DL1 will flash to confirm that the control panel is now on programming mode.
- 2) Press and hold the remote control's key until DL1 light stops blinking and stays on still.
- 3) The radio code is now stored and the control panel will automatically exit from the programming mode. DL1 light stops blinking and stays on still.

Please follow the same procedure to store further radio codes (maximum 10).

To delete all radio codes previously stored, please follow the procedure here below:

- 1) Close the rolling shutter and power the control panel on. Then press and hold the SET key on the control panel until DL1 light turns off (about 10 seconds)
- 2) Now release SET key: DL1 will turn on again and stays still. All radio codes have been deleted and the control panel returns to stand-by mode.

5. COMMISSIONING and TROUBLE-SHOOTING

Once all electrical and safety devices have been wired (push buttons, photocells, flashing light, etc.) power the control panel and make sure that DL1 light is on.

If it is not, please:

- Check main power supply wiring on terminals 1 and 2;
- Check for burnt fuses and, if needed, replace them with same capacity new ones

Check the motor working keeping in mind that the control panel will perform opening as first movement.

If not used, Normally Closed contacts (for photocells and stop-button) need a jumper to plug 9 (common).



**Instruct end-user about the controls and correct use of the electric shutter.
Also inform end-users about safety devices and danger involved when using the automation.**

Fill in the technical file for the installation and fulfill any obligations required by regulations in force.

6. DISPOSAL



Do not pollute the environment

Some electronic components may contain polluting substances.

Ensure materials are passed to the authorised collection centres, according to the laws and the regulations on force, for safe disposal.

CE COMPLIANCE DECLARATION

Manufacturer: **PROTECO S.r.l.**

Address: Via Neive, 77 – 12050 Castagnito (CN) – ITALIA

declares that

The product type: **Q45** electronic controller for rolling shutters, 220V

Models: PQ45

Is built to be integrated into a machine or to be assembled with other machinery to create a machine under provisions of 2006/42/EC Machinery Directive.

It complies with the essential requirements of EEC Directives:

2006/95/EC Low Voltage Directive

2004/108/EC Electromagnetic Compatibility Directive

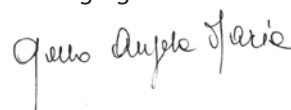
R&TTE 99/5 Radio & Telecommunications Terminal Equipments Directive

The manufacturer declares that the start-up of the machinery is not permitted unless the machine, in which the product is incorporated or of which is becoming a component, has been identified and declared as conformed to 2006/42/EC Machinery Directive.

Note: These products have undergone test in a typical uniform configuration

Castagnito, April 17th 2013

Angela Gallo
Managing Director

A handwritten signature in black ink that reads "Angela Gallo".