

Q60A



Control unit for single and double-leaf gates 230V ac

- Integrated LED display for programming and fault diagnostics.
- Advanced programming with manual adjustment of individual parameters.
- Electronic adjustment of forces, work time and slowdown, separate for each motor.
- Adjustable leaf delay time.
- Single leaf function for single gates.
- Adjustable pedestrian opening.
- Multi-occupation function with priority to opening.
- Automatic, semi-automatic, and step-by-step closing.
- Motor and photocell test function.
- Electric-lock optional card with "reversing stroke" and "lock pulse" functions.
- Plug-in terminal blocks.
- Input for timer function.
- Pre-wired 433.92MHz radio receiver.

TECHNICAL FEATURES

Item code	PQ60AR, PQ60ARD
Control unit dimensions	136 x75 x 35 mm
Housing dimensions	220 x 290 x 90 mm
Weight	160 g
Power supply voltage	230V ~ 50-60Hz
Power supply voltage tolerance	-10% +20%
Transformer	230/21Vac – 15VA
Main fuse	5 A
Rated power	600 W
Maximum power consumption	3,5 A
Standby power consumption	30 mA
Flashing light power supply	24Vac, max 20 W
Accessories power supply	24 Vdc , max 5 W
Electric lock power supply	12Vdc, max 15 W
Operating temperature	-20 +50 °C
Protection degree (boxed)	IP55

Index

1.	WARNINGS AND INSTALLATION TIPS	p. 01
2.	WIRING DIAGRAM AND COMPONENT DESCRIPTION	p. 02
3.	WIRINGS	p. 03
3.1	MOTORS	p. 05
3.2	Main POWER LINE	p. 06
3.3	START contacts	p. 06
3.3.1	Timer as permanent START contact	
3.3.2	KEY SWITCH	
3.3.3	FLASHING LIGHT	
3.4	PEDESTRIAN OPENING	p. 06
3.5	STOP push button	p. 06
3.6	ELECTRIC LOCK	p. 07
3.7	PHOTOCELLS	p. 07
3.7.1	CLOSING photocell	
3.7.2	OPENING photocell	
3.8	SAFETY EDGES	p. 08
3.8.1	CLOSING safety edge (mechanical)	
3.8.2	CLOSING safety edge (resistive)	
3.8.3	OPENING safety edge (mechanical)	
3.8.4	OPENING safety edge (resistive)	
	PROGRAMMING MENU	p. 10
	MAIN MENU	p. 11
4.	PROGRAMMING	p. 11
4.1	FUNCTIONS MENU	p. 11
4.2	USER MENU	p. 16
4.3	INPUTS MENU	p. 17
4.4	RADIO	p. 19
4.5	DEFAULT	p. 20
4.6	SEQUENTIAL PROGRAMMING	p. 20
5.	FAULT MESSAGE LIST / DIAGNOSTICS / TROUBLE SHOOTING	p. 21
6.	PAR04 HOUSING INSTALLATION	p. 23
7.	DISPOSAL	p. 23

1. WARNINGS AND INSTALLATION TIPS

WARNING: This manual contains important safety information. Improper installation or misuse can cause serious harm to people and objects.

Please read these instructions carefully, paying particular attention to the sections marked with the symbol .

Keep this manual in a safe and sheltered place for future reference.



Do not allow children to play with the equipment or fixed control devices. Keep remote controls out of reach of children.



Always disconnect the electrical power before making any type of connection or intervention on the control unit.



Always connect the earth cable.

The connection, programming, and commissioning of the control unit must be carried out by qualified and experienced personnel, fully complying with the laws, regulations, and standards, with particular attention to the requirements specified by the EN 12453 standard.

This device is designed to be used exclusively with the power supply unit (transformer) provided.

A disconnect device must be incorporated into the wiring in accordance with the wiring diagram and instructions (refer to paragraph 3).

In case of dead man command, make sure the area is free and clear.

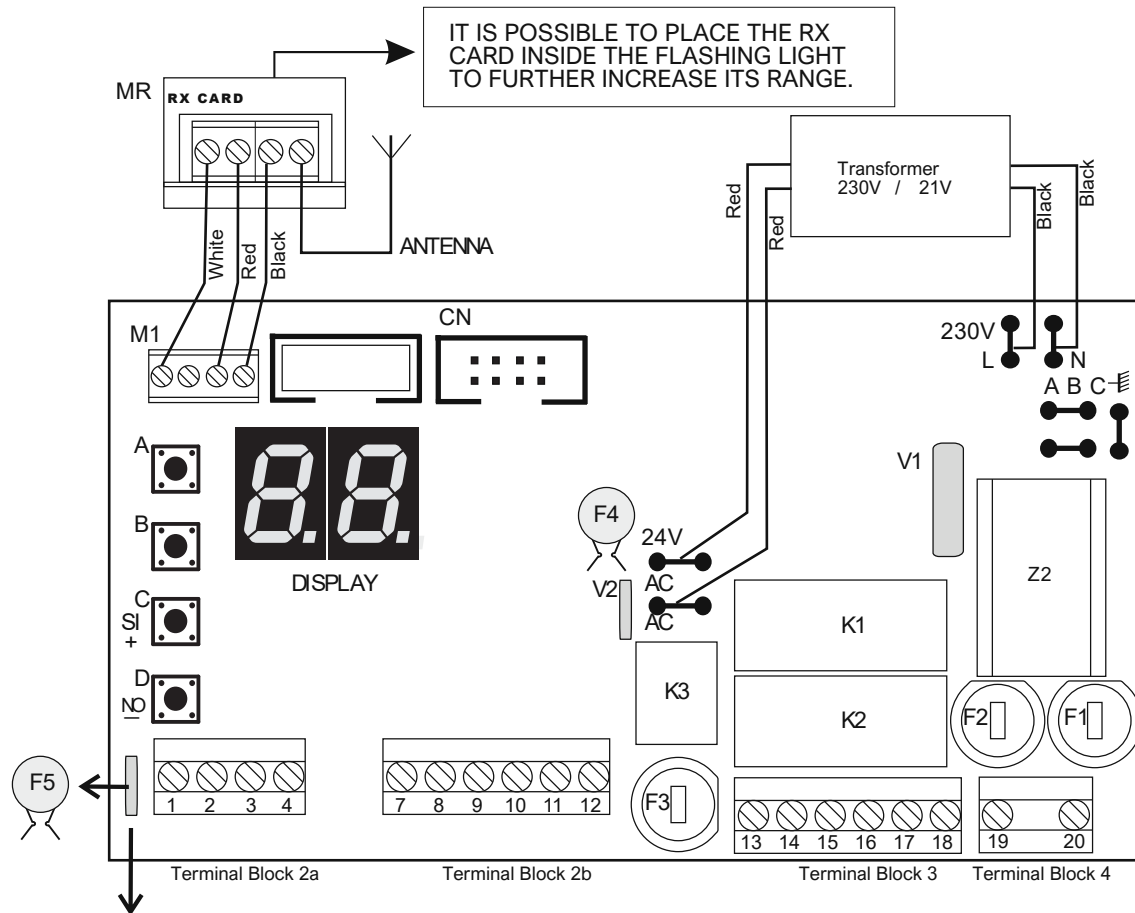
Regularly inspect the installation and check for any signs of wear or damage in the cables. If maintenance or repair is necessary, do not use the device until the correct functioning of the system has been restored.

The control unit is designed to manage single and double-leaf gates.

In case of single-leaf gates, pay particular attention to the paragraphs marked with the symbol:



2. WIRING DIAGRAM AND COMPONENT DESCRIPTION

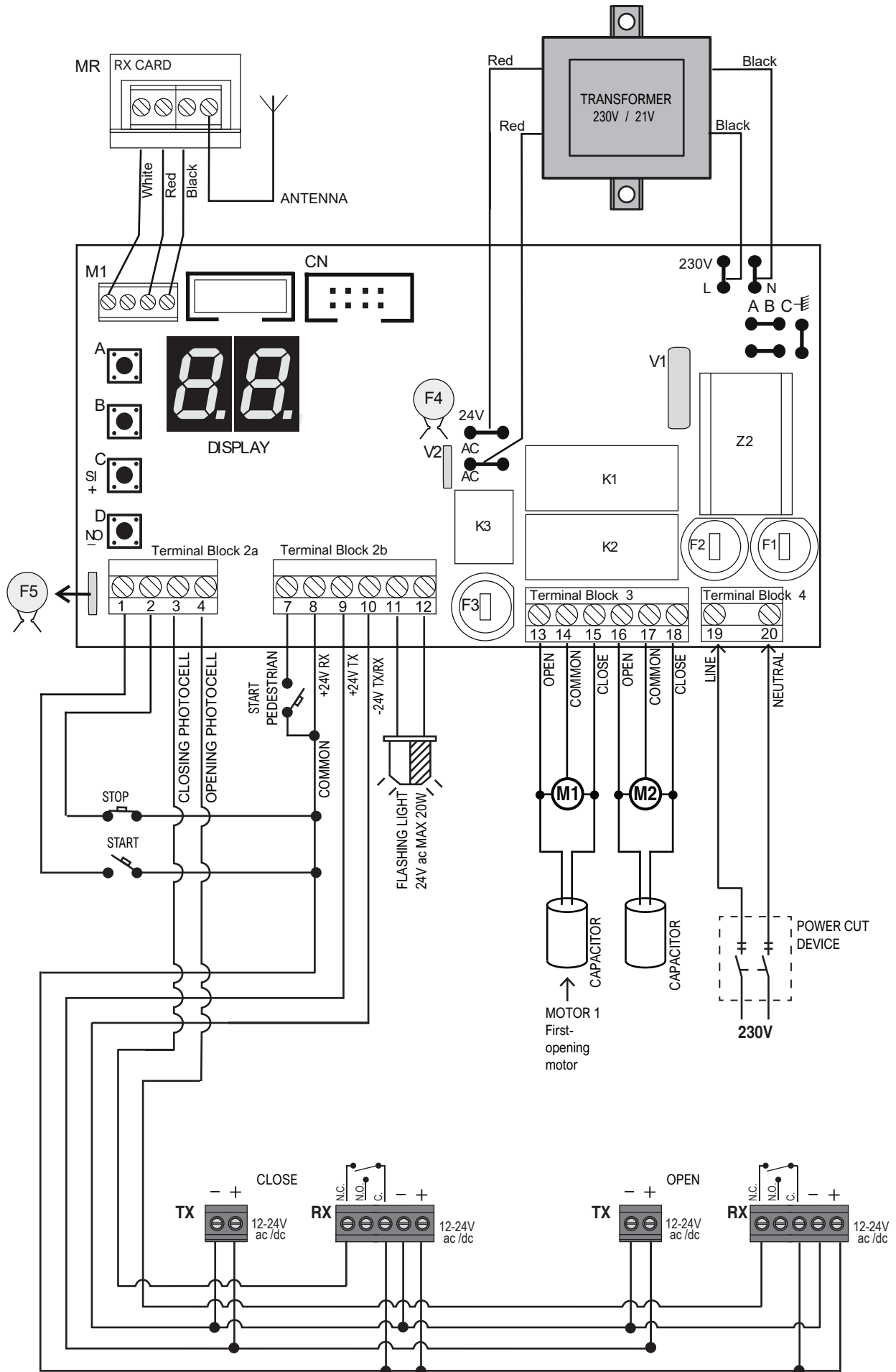


- DISPLAY = 7-segment display
 F1 = Line fuse 230 Vac 5A
 F2 = Motor protection fuse 2 - 2A
 F3 = Motor protection fuse 1 - 2A
 F4 = Self-restoring fuse 24 V 1,6A
 F5 = Self-restoring fuse 24 V 0,6A
 M1 = RX or antenna
 M2a/M2b = START and safety
 M3 = Motors
 M4 = Power supply
 A B C \perp = Earth connection
 MR = RX card
 CN = Electric lock card (MEL01)
 Z2 = Filter
 K1/ K2 = Motor relays
 K3 = Flashing light relay
 V1 = Primary varistor
 V2 = Secondary varistor

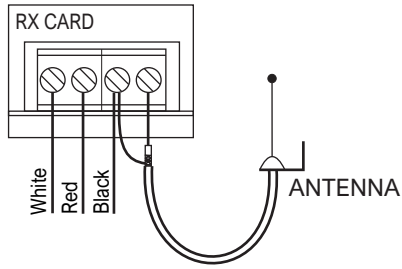
A		Main Menu
B		Parameters/Functions
C		Confirm / +
D		Back / -

3. WIRINGS

DIAGRAM FOR MOTORS **230Vac**

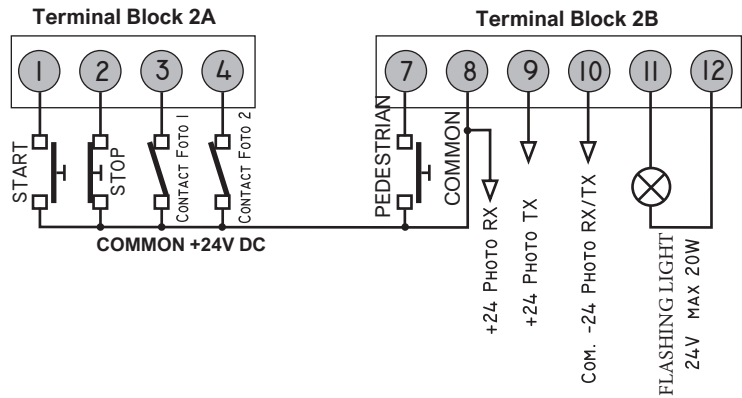


Radio card



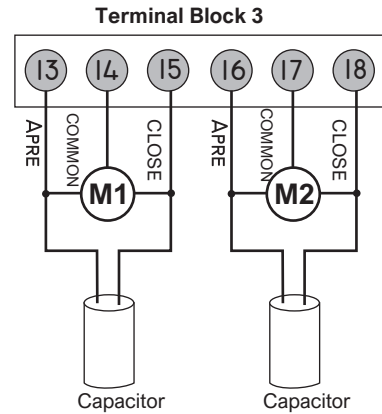
Terminal block 2A / 2B = START contacts / POWER SUPPLY / PHOTOCELLS and FLASHING LIGHT

- 1 START (contact N.O.)
- 2 STOP (contact N.C.)
- 3 CLOSING PHOTOCELL / SAFETY EDGE (contact N.C./8K2)
- 4 OPENING PHOTOCELL / SAFETY EDGE (contact N.C./8K2)
- 7 PEDESTRIAN START (contact N.O.)
- 8 COMMON / +24V PHOTO RX
- 9 + 24V TX FOTO
- 10 COMMON / -24V PHOTO RX/TX
- 11 } Flashing light power supply 24V ac -max 20W
- 12 }



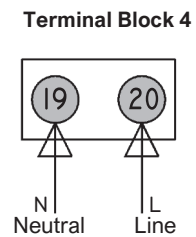
Terminal block 3 = MOTORS (M1 / M2)

- 13 OPEN } MOTOR M1
- 14 NEUTRAL }
- 15 CLOSE }
- 16 OPEN } MOTOR M2
- 17 NEUTRAL }
- 18 CLOSE }

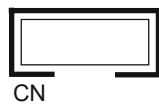


Terminal block 4 = MAIN LINE 230V

Make sure the electrical circuit is equipped with a disconnect device wired to the control panel.



Electric lock plug



3.1 MOTORS



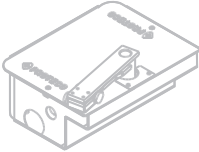

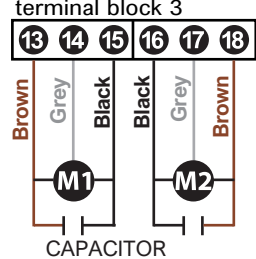
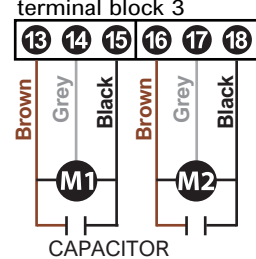
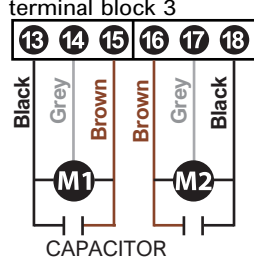

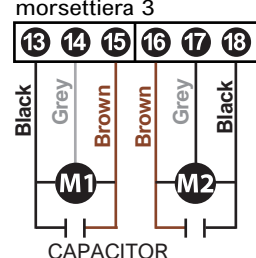
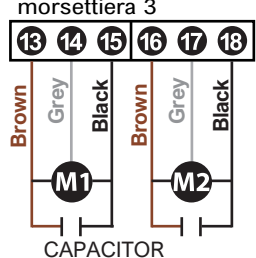
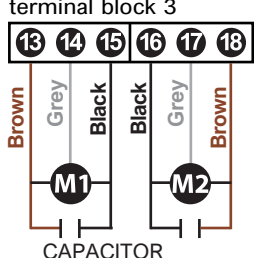
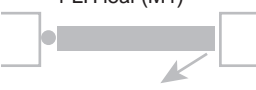
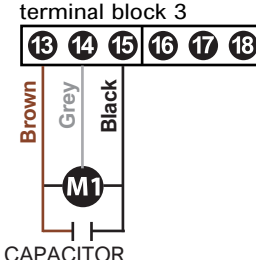
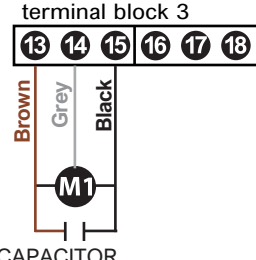
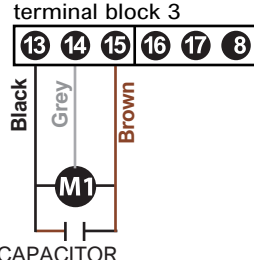
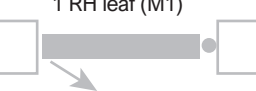
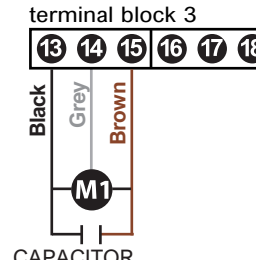
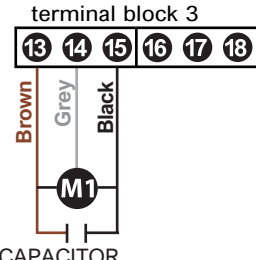
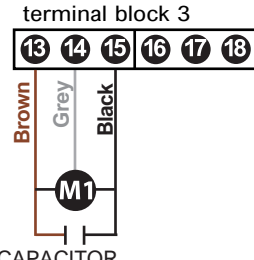
- M1** motor 1 → Leaf that opens first and **closes last**.
- M2** motor 2 → Leaf that opens second and **closes first**.

Wire motor **M1** to terminals **13 - 14 - 15** terminal **block 3**.
 Wire motor **M2** to terminals **16 - 17 - 18** terminal **block 3**.



In case of single-leaf gate, wire the motor to terminals **13 - 14 - 15** terminal **block 3**.

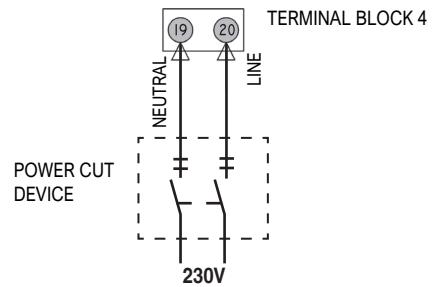
Identify the type of automation being installed and make connections according to the below table:

GATE TYPE	AUTOMATION TYPE		
	Traditional ram 	Linear ram 	Underground motor 
LH leaf opens 1st (M1) 	terminal block 3 	terminal block 3 	terminal block 3 
RH leaf opens 1st (M1) 	morsettiera 3 	morsettiera 3 	terminal block 3 
1 LH leaf (M1) 	terminal block 3 	terminal block 3 	terminal block 3 
1 RH leaf (M1) 	terminal block 3 	terminal block 3 	terminal block 3 

3.2 MAIN POWER LINE

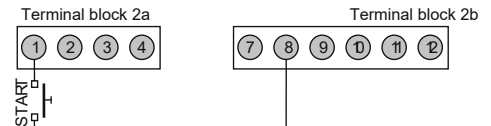
The power line to the control unit must be protected by a suitably rated **POWER CUT DEVICE**.

Connect the 230V power line to terminals **19-20** of terminal block 4, respecting polarity. (19 NEUTRAL - 20 LINE).



3.3 START contacts

Wire any START contact (contact N.O.) to terminals **1-8**, terminal block **2a - 2b**. An additional START contact can be wired in **PARALLEL** (contact N.O.)

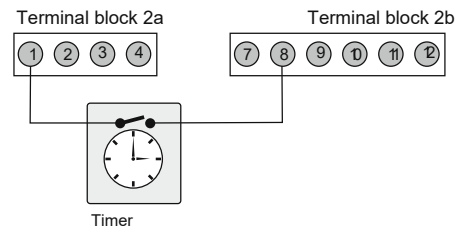


3.3.1 TIMER as permanent START contact

Wire the TIMER (contact N.O.) to terminals **1-8**, terminal block **2a - 2b**.

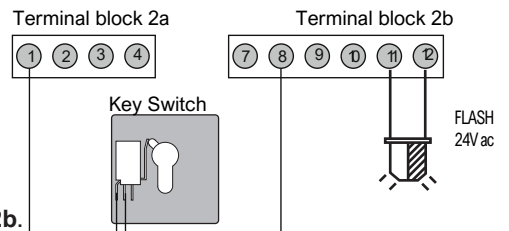
WARNING!

USING THE TIMER IT IS MANDATORY TO ACTIVATE THE MULTI-OCCUPATION FUNCTION "P1"



3.3.2 KEY SWITCH

Wire the KEY SWITCH as START command (contact N.O.) to terminals **1-8**, terminal block **2a - 2b**.



3.3.3 FLASHING LIGHT

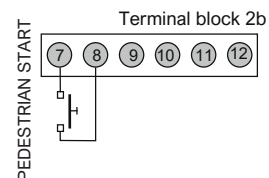
Wire the FLASHING LIGHT (max 20W) to terminals 11 - 12 terminal block **2b**.

- FAST flashing → OPENING
- SLOW flashing → CLOSING
- Flashing light ON → PAUSE

3.4 PEDESTRIAN OPENING

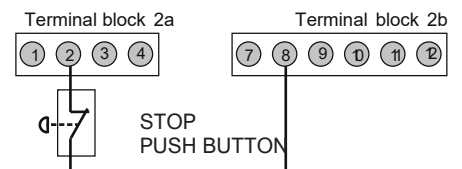
Wire the PEDESTRIAN OPENING contact (contact N.O.) to terminals **7- 8**, terminal block **2b**.

Additional PEDESTRIAN OPENING contact can be wired in **PARALLEL** (contact N.O.)



3.5 STOP push button

Wire the STOP push button (contact N.C.) to terminals **2-8**, terminal block **2a - 2b**. Additional STOP push buttons can be wired in **series** (contact N.C.).

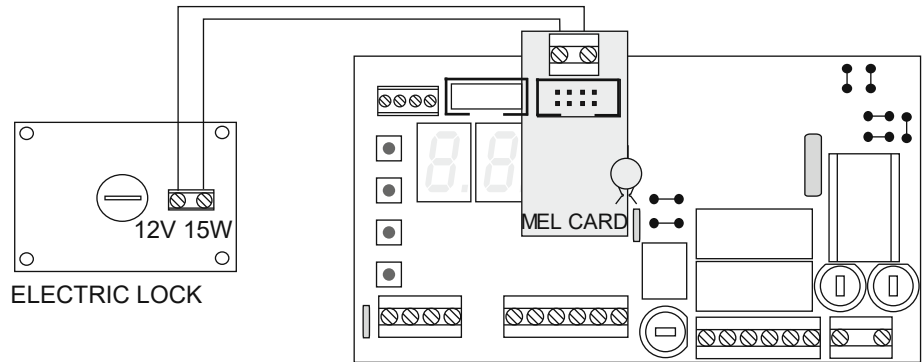


The connection of an emergency STOP button is essential for the safety of people and objects.

3.6 ELECTRIC LOCK (MEL CARD)

TURN THE POWER OFF AND PLUG THE MEL CARD INTO CN CONNECTOR

- WIRE THE ELECTRIC LOCK
- SET P0 and P1 to "SI"
- SET ϵC



3.7 PHOTOCELLS

3.7.1 CLOSING photocell

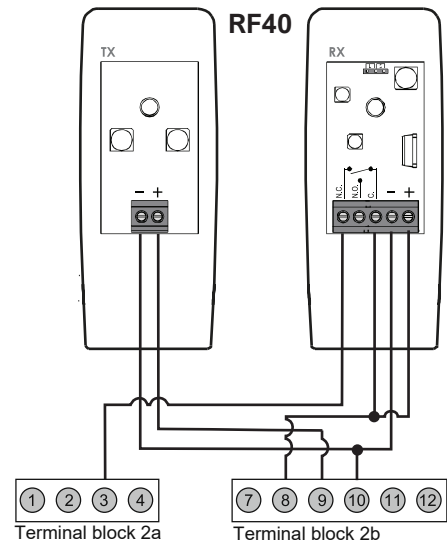
Power the photocell through terminals **8 - 9 - 10**, terminal block **2b**.
Wire the N.C. photocell contact to terminals **3 - 8**, terminal block **2a - 2b**.
Additional PHOTOCELL can be wired in **SERIES** (contact N.C.).

- If the closing photocell beam is broken the gate **STOPS** and **REVERSES** after about 1,5 seconds.
- If the opening photocell beam is broken the gate keeps on working normally.



For the safety of people and objects, it is important to install at least a CLOSING photocell set.

Note: To temporarily deactivate the closing photocell only during the installation, set $\epsilon 3$ to "no"



PHOTOCELL WIRING	
8	= Power supply + PHOTO RX
9	= Power supply + PHOTO TX
10	= Power supply - COMMON PHOTO TX/RX
3 - 8	= Photocell contact

3.7.2 OPENING photocell

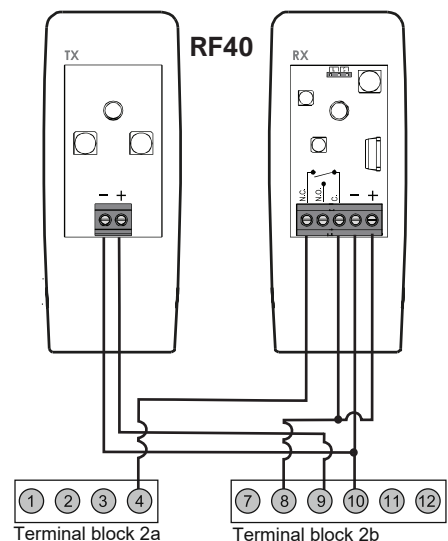
Power the photocell through terminals **8-9-10**, terminal block **2b**.
Wire the N.C. photocell contact to terminals **4-8**, terminal block **2a - 2b**.
Additional PHOTOCELL can be wired in **SERIES** (contact N.C.).

- If the opening photocell beam is broken the gate **STOPS** temporarily.
- As soon as the opening photocell beam is **FREE**, the gate keeps on opening.
- If the closing photocell beam is broken the gate **STOPS** and **REVERSES** after about 1,5 seconds.



For the safety of people and objects, it is important to install at least an OPENING photocell set.

Note: Set $\epsilon 4$ to ϵA to activate the output.



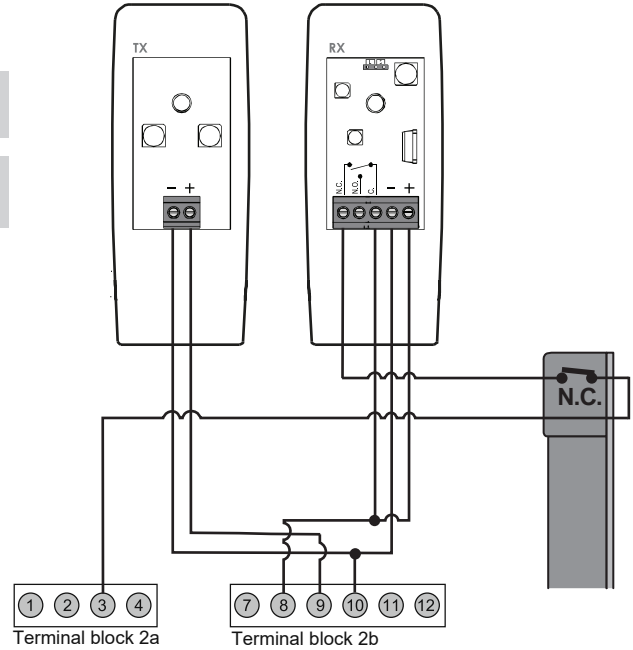
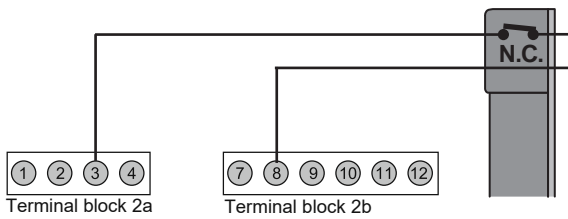
PHOTOCELL WIRING	
8	= Power supply + PHOTO RX
9	= Power supply + PHOTO TX
10	= Power supply - NEUTRAL PHOTO TX/RX
4 - 8	= Photocell contact

3.8 SAFETY EDGES

3.8.1 CLOSING SAFETY EDGE (mechanical)

Wire the SAFETY EDGE to terminals **3 - 8**, terminal block **2a - 2b**.

- If the CLOSING safety edge is activated the gate **STOPS** and **REVERSES** after about 1,5 seconds.
- If the safety edge is activated during **OPENING** the gate keeps on working normally.



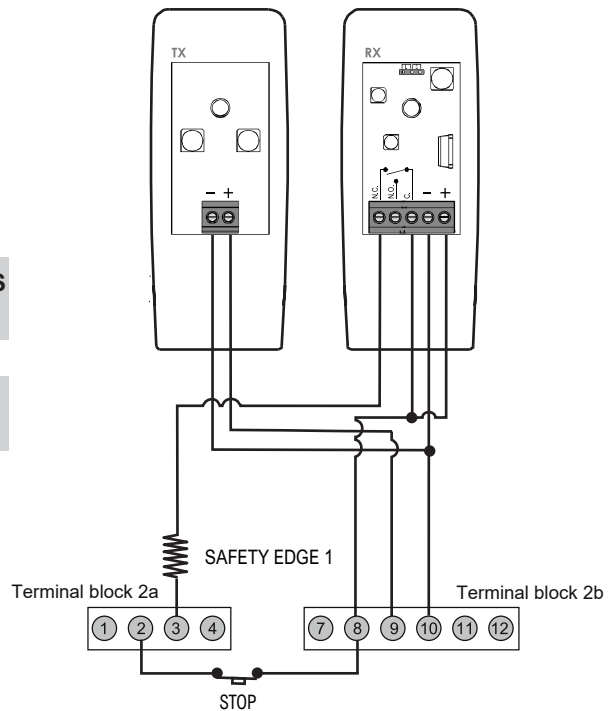
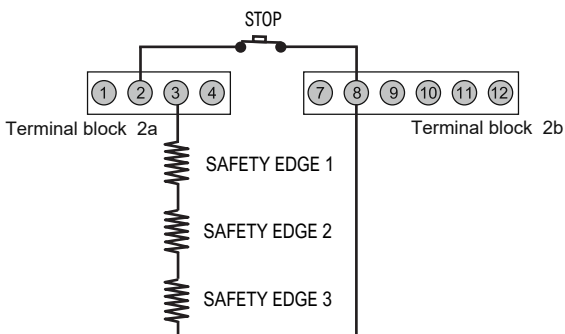
3.8.2 CLOSING SAFETY EDGE (resistive)

Wire the SAFETY EDGE to terminals **3 - 8**, terminal block **2a - 2b**.

Bridge the **STOP contact**, terminals **2 - 8** and set ξ 3 as follows:

- Safety Edge no. 1 set to 1C
- Safety Edge no. 2 set to 2C
- Safety Edge no. 3 set to 3C
- If the **CLOSING** safety edge is activated the gate **STOPS** and **REVERSES** after about 1,5 seconds.
- If the safety edge is activated during **OPENING** the gate keeps on working normally.

The input can support up to a maximum of three 8K2 sensitive edges as per the diagram.



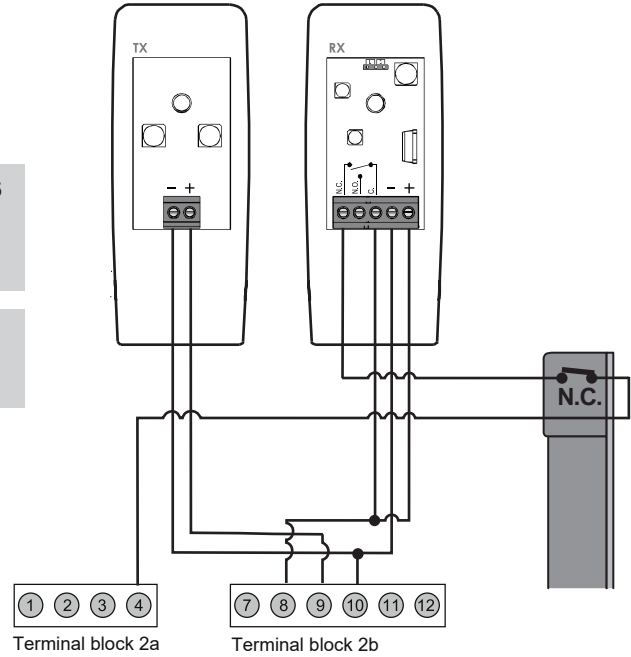
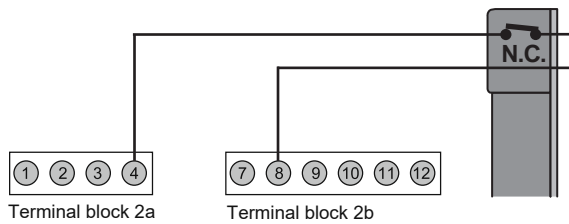
3.8.3 OPENING SAFETY EDGE (mechanical)

Wire the SAFETY EDGE to terminals 4 - 8, terminal block 2a - 2b.

Note: Set E4 to EC to activate the output

- If the **OPENING** safety edge is activated the gate **STOPS** temporarily.
- As soon as the contact is **RELEASED**, the gate keeps on opening.

- If the **OPENING** safety edge is activated during **CLOSING**, the gate **STOPS** and **REVERSES** after about 1,5 seconds.



3.8.4 OPENING SAFETY EDGE (resistive)

Wire the SAFETY EDGE to terminals 4 - 8, terminal block 2a - 2b.

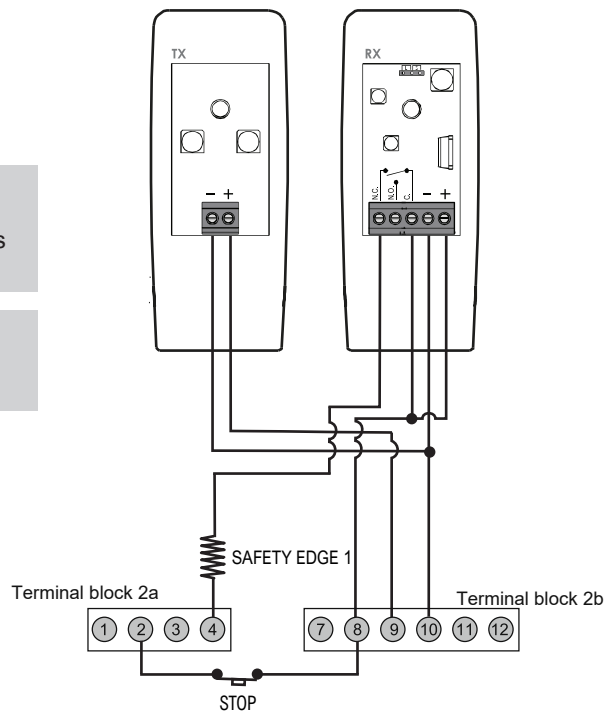
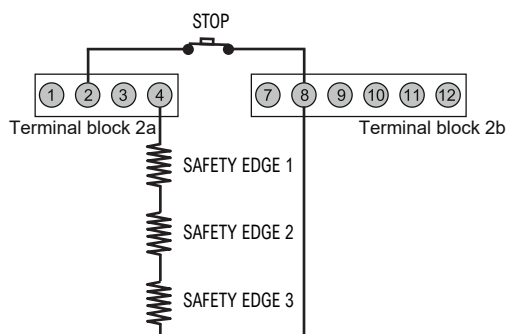
Bridge the **STOP** contact, terminals 2 - 8 and set E4 as follows:

- Safety Edge no. 1 set to 1o
- Safety Edge no. 2 set to 2o
- Safety Edge no. 3 set to 3o

- If the **OPENING** safety edge is activated the gate **STOPS** temporarily.
- As soon as the contact is **RELEASED**, the gate keeps on opening.

- If the **OPENING** safety edge is activated during **CLOSING**, the gate **STOPS** and **REVERSES** after about 1,5 seconds.







The input can support up to a maximum of three 8K2 sensitive edges as per the diagram.



PROGRAMMING MENU - Functions and Parameters
DEFAULT





PA	FUNCTIONS/PARAMETERS LIST	rP	dS	dr
n1	Work time MOTOR 1	21	13	9
n2	Work time MOTOR 2	21	13	9
F1	Force MOTOR 1	14	10	12
F2	Force MOTOR 2	14	10	12
Fr	Force during SLOWDON	19	19	19
r1	Slowdown time MOTOR 1	7	4	4
r2	Slowdown time MOTOR 2	7	4	4
tS	Delay time in CLOSING	3	3	2
SA	Delay time in OPENING	3	3	2
tP	Automatic closing PAUSE time	3	3	3
Pd	PEDESTRIAN opening time	7	7	3
tC	LOCK PULSE	0	0	0
P0	REVERSING STROKE	no	no	no
P1	ELECTRIC LOCK	no	no	SI
P2	MULTI-OCCUPATION	no	no	no
P3	Automatic CLOSING	SI	SI	SI
P4	PRE-BLINKING	no	no	no
P5	Single LEAF GATE	no	no	no
P6	SLOWDOWN	SI	SI	SI
P7	MOTOR test	SI	no	SI
P8	PHOTOCELL test	no	no	no
P9	SOFT START	SI	SI	SI
SU	SAVE SETTINGS	SI ^{key C}	SI ^{key C}	SI ^{key C}
PU				
UA	OPEN / CLOSE MOTOR 1 using onboard keys C/D			no
Ub	OPEN / CLOSE MOTOR 2 using onboard keys C/D			no
SU	SAVE SETTINGS			SI ^{key C}
EE				DEFAULT
E1	INPUT 1			Go
E2	INPUT 2			no
EE	INPUT 3			tC
E4	INPUT 4			no
E7	INPUT 7			PE
SU	SAVE SETTINGS			SI ^{key C}
rA	Radio capacity 56 codes totally			
r =	Display RADIO CODES			
tC	Store a new REMOTE CONTROL			
CP	Store a REMOTE CONTROL as STOP function			
Pd	Store a REMOTE CONTROL as PEDESTRIAN function			
EL	Store a REMOTE CONTROL as ELECTRIC LOCK function			
rC	Delete all EXISTING REMOTE CONTROLS			
dE				
rP	RAM OPERATOR - RESET TO DEFAULT VALUES			
dS	ARTICULATED ARM OPERATOR - RESET TO DEFAULT VALUES			
dr	WHEEL OPERATOR - RESET TO DEFAULT VALUES			
AS				
1n	SEQUENTIAL programming 1 motor			
2n	SEQUENTIAL programming 2 motors			

MAIN Menu





	Symbol	Parameter
A 	- -	STAND BY
B 	<i>PA</i>	PARAMETERS/FUNCTIONS
C 	<i>PU</i>	USER MENU
YES + 	<i>EE</i>	INPUTS MENU
D 	<i>RA</i>	RADIO
NO 	<i>dE</i>	DEFAULT
	<i>RS</i>	SEQUENTIAL PROGRAMMING

4. PROGRAMMING





4.1 *PA* PARAMETERS AND FUNCTIONS

- Press A  and select menu *PA*
- Press B  to scroll the menu and get to the desired parameter
- Press C  to confirm or D  to go back





n1 Work time MOTOR 1

1	Use keys C  and D  to set the WORK TIME	01 ↓ 99 (max)
2	Press B  to scroll the menu till displaying	SU
3	Press and hold C  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





n2 Work time MOTOR 2

1	Use keys C  and D  to set the WORK TIME	01 ↓ 99 (max)
2	Press B  to scroll the menu till displaying	SU
3	Press and hold C  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





F1 Force MOTOR 1

1	Use keys C  and D  to set the MOTOR FORCE	08 ↓ 19
2	Press B  to scroll the menu till displaying	SU
3	Press and hold C  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





F₂ Force MOTOR 2

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the MOTOR FORCE	08 ↓ 19
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	SU
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





F_r Force during SLOWDOWN

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the FORCE during SLOWDOWN	10 ↓ 19
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	SU
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





r₁ Slowdown time MOTOR 1

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the SLOWDOWN time of Motor 1 ATTENTION: if the slowdown time is increased, the work time shall be increased accordingly with the same value.	0 ↓ (n1-2")
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	SU
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





r₂ Slowdown time MOTOR 2

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the SLOWDOWN time of Motor 2 ATTENTION: if the slowdown time is increased, the work time shall be increased accordingly with the same value.	0 ↓ (n2-2")
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	SU
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





5 S Delay time in CLOSING

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the Delay Time in CLOSING	0 ↓ n2
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	SU
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





5 R Delay time in OPENING

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the Delay Time in OPENING	0 ↓ (n1-r 1)
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	SU
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves automatically	





5 P Automatic closing PAUSE TIME

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the automatic closing PAUSE TIME	0 ↓ 99 (max)
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	SU
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves automatically	





Pd PEDESTRIAN opening time

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the PEDESTRIAN OPENING time	0 ↓ (n1-r 1)
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	SU
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves automatically	





5 C LOCK PULSE time

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the LOCK PULSE time	0 ↓ 1 → 5
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	SU
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves automatically	





P0 Reversing stroke MOTOR 1

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the REVERSING STROKE function for Motor 1	ON = 51 OFF = no
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	5U
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





P1 ELECTRIC LOCK

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the ELECTRIC LOCK function	ON = 51 OFF = no
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	5U
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





P2 MULTI OCCUPATION

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the MULTI OCCUPATION function	ON = 51 OFF = no
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	5U
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





P3 AUTOMATIC CLOSING

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the AUTOMATIC CLOSING function	ON = 51 OFF = no
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	5U
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





P4 PRE-BLINKING

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the PRE-BLINKING function	ON = 51 OFF = no
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	5U
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





P5 SINGLE LEAF GATE

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the SINGLE LEAF GATE function	ON = 51 OFF = no
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	5U
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





P6 SLOWDOWN

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the SLOWDOWN function	ON = 51 OFF = no
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	5U
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	





P7 Motor TEST

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the Motor TEST function	ON = 51 OFF = no
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	5U
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	


P8 Photocell TEST

1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the Photocell TEST function	ON = 51 OFF = no
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	


P9 SOFT START


1	Use keys $\overset{C}{+}$  and $\overset{D}{-}$  to set the SOFT START function	ON = 51 OFF = no
2	Press $\overset{B}{\square}$  to scroll the menu till displaying	5U
3	Press and hold $\overset{C}{+}$  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically	



SU SAVE

1	Press and hold ^C  during 5 seconds to save the setting	SI
---	--	----





4.2 PU USER menu

Press ^A  and select menu **PU**





Press ^B  to scroll the menu and get to the USER menu

Press ^C  to confirm or ^D  to go back


UA OPEN/CLOSE MOTOR 1 using onboard keys C and D


1	Use keys ^C  and ^D 	C = OPEN D = CLOSE	AP CH
2	Press ^B  to scroll the menu till displaying		SU
3	Press and hold ^C  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically		



UB OPEN/CLOSE MOTOR 2 using onboard keys C and D

1	Use keys ^C  and ^D 	C = OPEN D = CLOSE	AP CH
2	Press ^B  to scroll the menu till displaying		SU
3	Press and hold ^C  during 5 seconds to save the setting or wait 30 seconds, the control unit saves the setting automatically		





4.3 EE INPUTS menu

Press **A**  and select menu **EE**





Press **B**  to scroll the menu and get to the USER menu

Press **C**  to confirm or **D**  to go back





E1 INPUT 1

1	Use keys C  and D  to set INPUT 1	OFF = no START = Co OPEN = oP CLOSE = CL SEPARATED BUTTON OPEN = PO SEPARATED BUTTON CLOSE = PC ELECTRIC LOCK ON = EL
2	Press B  to scroll the menu till displaying	SU
3	Press and hold C  during 5 seconds to save the setting	
	or wait 30 seconds, the control unit saves the setting automatically	

E2 INPUT 2

1	Use keys C  and D  to set INPUT 2	OFF = no STOP = St
2	Press B  to scroll the menu till displaying	SU
3	Press and hold C  during 5 seconds to save the setting	
	or wait 30 seconds, the control unit saves the setting automatically	

E3 INPUT 3

1	Use keys C  and D  to set INPUT 3	OFF = no CLOSING PHOTOCELL = CC 1 CLOSING SAFETY EDGE 8K2 = 1c 2 CLOSING SAFETY EDGE 8K2 = 2c 3 CLOSING SAFETY EDGE 8K2 = 3c
2	Press B  to scroll the menu till displaying	SU
3	Press and hold C  during 5 seconds to save the setting	
	or wait 30 seconds, the control unit saves the setting automatically	

E4 INPUT 4

1	Use keys $\overset{C}{SI}$ and $\overset{D}{ON}$ to set INPUT 4	<p>OFF = 70</p> <p>OPENING PHOTOCELL = 7A</p> <p>CLOSING PHOTOCELL = 7C</p> <p>1 OPENING SAFETY EDGE 8K2 = 10</p> <p>2 OPENING SAFETY EDGE 8K2 = 20</p> <p>3 OPENING SAFETY EDGE 8K2 = 30</p>
<p>If the beam of the closing photocell 7C (refer to chapter 3.7.1) is cut, the gate will not accept any OPENING command, even if the photocell test is OFF.</p>		
2	Press $\overset{B}{}$ to scroll the menu till displaying	5U
3	Press and hold $\overset{C}{+}$ during 5 seconds to save the setting	
	or wait 30 seconds, the control unit saves the setting automatically	



E7 INPUT 7


1	Use keys $\overset{C}{SI}$ and $\overset{D}{ON}$ to set INPUT 7	<p>OFF = 70</p> <p>PEDESTRIAN START = PE</p> <p>OPEN = OP</p> <p>CLOSE = CL</p> <p>SEPARATED BUTTON OPEN = PO</p> <p>SEPARATED BUTTON CLOSE = PC</p> <p>ELECTRIC LOCK ON = EL</p>
2	Press $\overset{C}{}$ to scroll the menu till displaying to scroll the menu till displaying	5U
3	Press and hold $\overset{C}{+}$ during 5 seconds to save the setting during 5 seconds to save the setting	
	Press and hold or wait 30 seconds, the control unit saves the setting automatically	

5U SAVE SETTINGS

1	Press and hold $\overset{C}{+}$ during 5 seconds to save the setting	5I
---	--	----


4.4 RADIO

Press ^A  and select menu 


Press ^B  to scroll and get through the menu

Total radio capacity = 56 codes


Display RADIO CODES STORED

1	The display shows the number of stored codes from 1 to 56.	1 → 56
2	It is possible to delete one single radio code. Choose the radio code you wish to delete and press ^D 	


Store a new remote control

1	Press and hold the remote control. A red dot will appear on the display to confirm a code is being transmitted.	
3	Simultaneously press ^C  to save the storage	1 → 56


Store a remote control as STOP function

1	Press and hold the remote control.	
2	A red dot will appear on the display to confirm a code is being transmitted.	
3	Simultaneously press ^C  to save the storage	1 → 56

Store a remote control as PEDESTRIAN function

1	Press and hold the remote control.	
2	A red dot will appear on the display to confirm a code is being transmitted.	
3	Simultaneously press ^C  to save the storage	1 → 56



Store a remote control as ELECTRIC LOCK function

1	Press and hold the remote control.	
2	A red dot will appear on the display to confirm a code is being transmitted.	
3	Simultaneously press ^C  to save the storage	1 → 56


Delete all EXISTING REMOTE CONTROLS

1	Press and hold ^D  until the display shows	
	All radio codes have been deleted	


4.5 dE DEFAULT - Factory values

Press ^A  and select menu **dE**
Press ^B  to scroll and get through the menu


rP Ram operator - reset to Factory values

Press and hold ^C_{IS}  to restore the default values.



dS Articulated arm operator - reset to Factory values

Press and hold ^C_{IS}  to restore the default values.

dr Wheel operator - reset to Factory values

Press and hold ^C_{IS}  to restore the default values.

4.6 AS SEQUENTIAL programming

Press ^A  and select menu **AS**
Press ^B  to scroll and get through the menu

1n SEQUENTIAL programming 1 motor

1	Send a START pulse, the gate opens and the display shows	n1
2	When the door has completed approximately 90% of the cruise send a START pulse; "START" will appear on the display, and SLOWDOWN will begin.	r1
3	Upon reaching the opening position let the motor running still another 4/5 seconds and then send a START pulse.	
4	The control unit has stored the OPENING and SLOWDOWN times The display shows and starts counting the PAUSE TIME	tP
5	Upon reaching the desired PAUSE TIME, send another START pulse. The control unit has stored the PAUSE TIME, and the gate begins the CLOSING cycle.	
6	Let the gate reaching the closing position. The control unit goes automatically out of the programming mode, the procedure is completed.	

27 SEQUENTIAL programming 2 motors

1	Send a START pulse, the 1st leaf opens and the display shows	n1
2	When MOTOR 1 has completed approximately 90% of the cruise send a START pulse; "START" will appear on the display, and SLOWDOWN will begin.	r1
3	When MOTOR 1 is in opening position, wait 4/5 seconds and send a START pulse. The display shows and MOTOR 2 begins to open.	n2
4	When MOTOR 2 has completed approximately 90% of the cruise send a START pulse; "START" will appear on the display, and SLOWDOWN will begin.	r2
5	When MOTOR 2 is in opening position, wait 4/5 seconds and send a START pulse.	
6	The display shows The control unit has stored the OPENING and SLOWDOWN times and starts counting the PAUSE TIME.	tP
7	Upon reaching the desired PAUSE TIME, send another START pulse. The control unit has stored the PAUSE TIME, and both motors begin the CLOSING cycle.	
8	Let the motors reaching the closing position. The control unit goes automatically out of the programming mode, the procedure is completed.	

5. LIST OF FAULTS

In case of fault check the below error list:

St	STOP	STOP pulse has been sent
tC	Closing photocell	The closing photocell has been activated
tA	Opening photocell	The opening photocell has been activated
CC	8K2 Closing safety edge	8K2 safety edge has been activated
oo	8K2 Opening safety edge	8K2 safety edge has been activated
Go	START	Start pulse has been sent
PE	PEDESTRIAN START	Pedestrian Start pulse has been sent
AP	OPENING	Gate opening
CH	CLOSING	Gate closing
Po	DEAD MAN OPENING	Dead man opening pulse has been sent
PC	DEAD MAN CLOSING	Dead man closing pulse has been sent
EL	ELECTRIC LOCK	Electric lock releasing pulse has been sent
- :	Radio code transmitting	Receiving unknown radio code

Error	Fault	Cause	Solution
EF	PHOTOCELL TEST	• Incorrect wiring.	Check the wiring according to the diagram.
		• Photocell is not compatible.	Fit original photocells.
EA	OPENING PHOTOCELL	• Photocell is not aligned	Check the position of the transmitter and the receiver.
		• Obstacle cutting the photocell beam	Clear the photocell beam from obstacle and dust.
		• Incorrect wiring	Double check the wiring according to the diagram.
		• Photocell is not powered.	Check the voltage.
		• Photocell not connected. • Input not disabled.	Disable the input (refer to chapter E 4)
EC	CLOSING PHOTOCELL	• Photocell is not aligned	Check the position of the transmitter and the receiver.
		• Obstacle cutting the photocell beam	Clear the photocell beam from obstacle and dust.
		• Incorrect wiring	Double check the wiring according to the diagram.
		• Photocell is not powered.	Check the voltage.
		• Photocell not connected. • Input is enabled.	Disable the input (refer to chapter E 3)
FH	OPENING CLOSING PHOTOCELL	• Fault on both photocells	Check the control unit is properly powered. Check the wiring.
OO	OPENING 8K2 SAFETY EDGE	• Safety edge is not wired.	Double check the wiring according to the diagram.
		• Incorrect input setting	Set the input as resistive safety edge (refer to chapter E 4)
		• STOP jumper missing	Bridge the STOP input according to the diagram.
CC	CLOSING 8K2 SAFETY EDGE	• Unwired safety edge	Check the wiring according to the diagram.
		• Input not enabled as resistive safety edge	Set the input as resistive safety edge (refer to chapter E 3)
		• STOP jumper missing	Bridge the STOP input according to the diagram.
St	STOP	• Unwired emergency STOP button	Wire the emergency push button or disable the input (refer to chapter E 2)
		• Incorrect wiring	Check the wiring according to the diagram (refer to chapter 3.5)
PE	PEDESTRIAN START	• Permanent PEDESTRIAN START signal	Check the perfect operation of all accessories connected to the pedestrian start input. (N.O. contact)
CO	START	• Permanent START signal	Check the perfect operation of all accessories connected to the start input. (N.O. contact)
- -	PERMANENT RADIO CODE SIGNAL	• Permanent RADIO CODE signal	Check the efficiency of the keys on each individual remote control. If a key is stuck, the LED on the remote control remains steadily lit. Remove the battery and check the fault is cleared.
			Same radio frequency interference.
n1	TEST MOTOR 1	• Motor is not wired	Wire Motor 1 as per diagram. Check the integrity of the fuse.
		• Incorrect wiring	Check the correct wiring of Motor 1 (refer to chapter 3.1).
		• Faulty stator	Use a "tester device" to check the stator voltage.
n2	TEST MOTOR 2	• Motor is not wired	Wire Motor 2 as per diagram. Check the integrity of the fuse.
		• Incorrect wiring	Check the correct wiring of Motor 2 (refer to chapter 3.1).
		• Faulty stator	Use a "tester device" to check the stator voltage.
nr	MOTORS TEST	• Motors are not wired	Check the wiring of the motors.
		• Fuses blew	Check the fuses.

6. FITTING THE CONTROL UNIT HOUSING PAR04

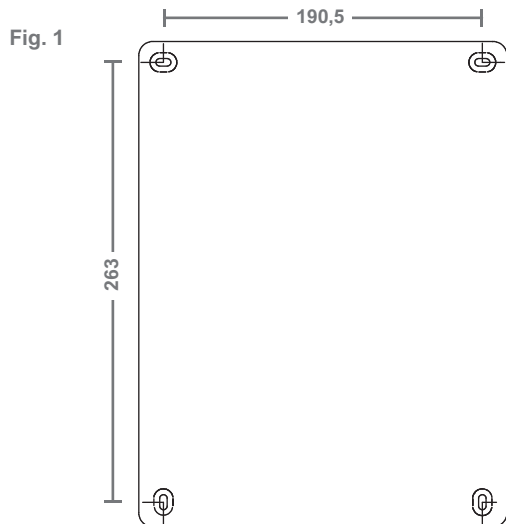


Fig. 3

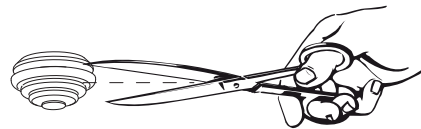


Fig. 4

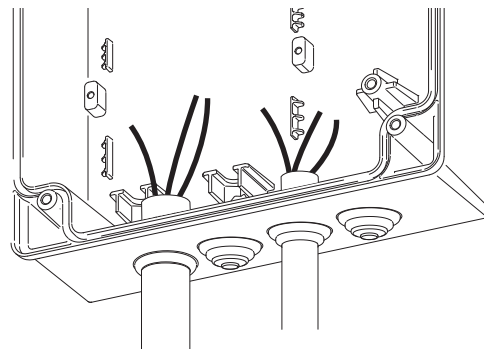


Fig. 2

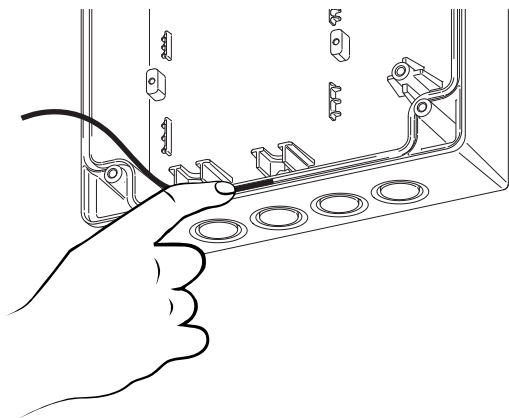
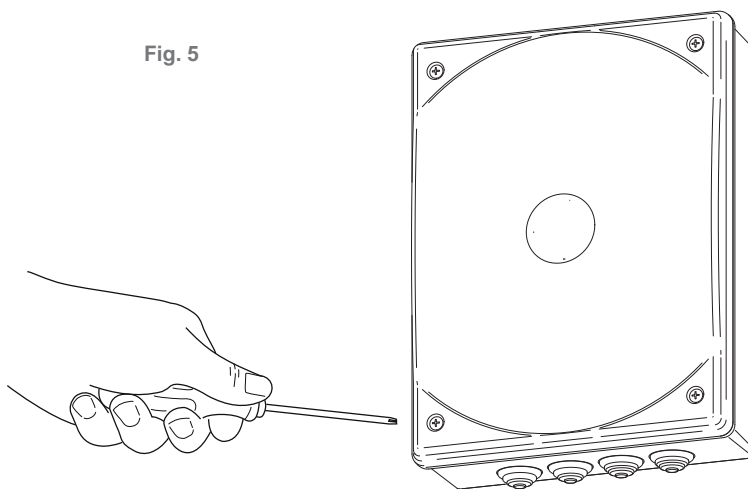


Fig. 5



- 1) ⇒YbhzmfhY`cWUjcb`k\YfY`hY`WUW]bYhk]`VY`]bghU`YX`UbX`a Uf`hY`a ci bh]b[`dc]bhg`cb`hY`k U`z`WXYW]b[`hY`X]ghUWg Zca `dc]bhtc`dc]bhfgY`D]W`'
- 2) :]hY`WUW]bYhtc`hY`k U`za U]bHU]b]b[`hY`WUW`Y [`UbXg`Xck`bk`UFX`cf]YbhYX`
- 3) #bgYfhhY` [Ug_YhUcb[`hY`dYf]a`YHf`cZ`hY`WUW]bYhVtgi`fY`ghUf]b[`Zca`hY`W`bHf`cZ`hY`Vchca`YX[`Y`fgY`D]W`' 8c`bchdi` `hY` [Ug_Yh`di`g`h]bhc`]hg`dfcdYf`gYU`
- 4) 7i`hY`WUW`Y [`UbXg`dfcj`]YX`UWVtfx]b[`hc`hY`YI`UW`X]Ua`YHf`cZ`hY`Y`WUW]W`k`]fYg` 8c`bchW`hY`WUW`Y [`UbXg`h`U`hUfY`bchVY]b[`i`gYX`fgY`D]W`(`t`
- 5) Di` [`hY`WUW`Y [`UbXg]bhc`hY`Uddfcdf]UfY`c`Yg`cb`hY`Vchca`cZ`hY`WUW]bYhUbX`YhY`k`]fYg`dUgg`h`fci` [`\"
- 6) Proceed to`k`]f]b[`g`UbX`cbW`hY`]bghU`U]cb`]g`Vta`d`YHf`cZ`Wtgi`hY`WUW]bYhVtj`Yf`i`g]b[`hY`(`gWYk`g`dfcj`]YX`fD]W`'`

7. DISPOSAL



Do not pollute the environment

Gca`Y`Y`WUW]cb]WUta`dcbYbhg`a`UmVtcbU]b`dc`i`h]b[`gi`VghUWg` 8]gdcgY`h`fci` [`X`Yg] [bUHYX`Vt`Y`WUW]cb`W`bHf`g`UbX`]b`UWVtfxUbW`k`]h`c`WU` fY[`i`U]cbg`

CE COMPLIANCE DECLARATION

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

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

declares that:

The product type : Q60A Control Unit for swing gates (1 or 2 motors) 230V

Models: PQ60AR, PQ60ARD

Accessories: MEL01

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:

2014/30/UE (EMC

2014/35/UE (LVD)

2014/53/UE (RED)

RoHS 3 UE 2015/863


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 been tested in a typical homogeneous configuration.

Castagnito, April 30th 2024

Marco Gallo

Ceo



Q60A_08_24