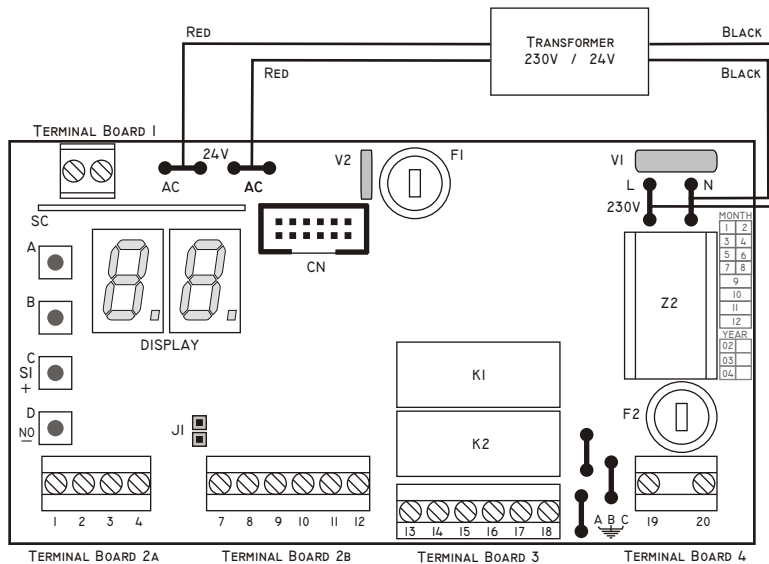


# Q36 A CONTROL UNIT FOR SWING GATE 1 OR 2 LEAVES

## CONTROL UNIT COMPONENTS

- A SELECTION BUTTON A
- B SELECTION BUTTON B
- C BUTTON CONFIRMATION (YES) / INCREASE
- D BUTTON NEGATION (NO) / DECREASE
- F1 FUSE 24 VAC 800 MA
- F2 POWER CURRENT FUSE 230 VAC 5A
- DISPLAY 7 SEGMENTS DISPLAY
- M1 TERMINAL BOARD FOR RADIO OR ANTENNA
- M2A / M2B TERMINAL BOARD FOR CONTROLS AND SECURITY
- M3 TERMINAL BOARD FOR MOTORS
- M4 TERMINAL BOARD FOR POWER SUPPLY
- A B C EARTH TERMINAL BOARDS
- SC RADIO BOARD
- J1 PROGRAMMING JUMPER
- CN EXPANSION SERIAL CONNECTOR
- Z2 FILTER
- K1/K2 RELAY
- V1 PRIMARY VARISTOR
- V2 SECONDARY VARISTOR



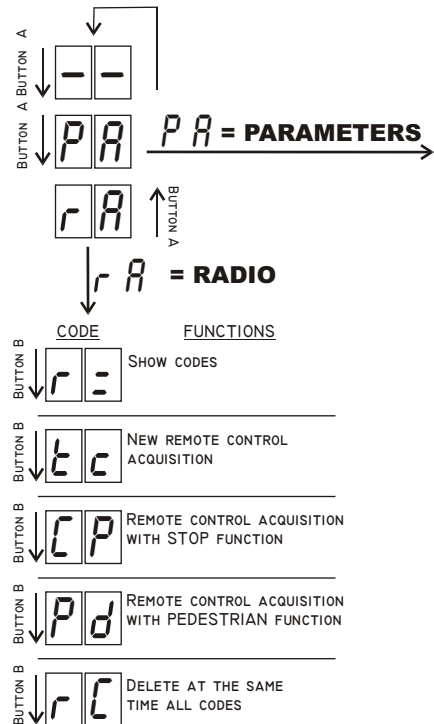
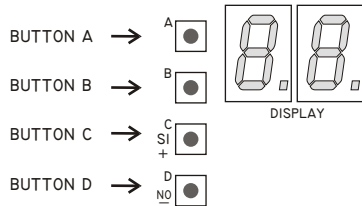
## PARAMETERS

### PARAMETERS VARIATIONS

Each time you press the button **A**, you enter in the menu; with the button **B** you can choose the suitable parameter. In order to change the pre - set parameters, use buttons **C** and **D** in the following way:

- A)** The button **C** confirms or puts the selected parameter; it increases at each impulse the value of the selected parameter;
- B)** The button **D** erases or puts out the selected parameter; it decreases at each impulse the value of the selected parameter.

When you change one or more parameters with the buttons **C** and **D**, you have to store the variations in the following way: enter in the function **"store parameters" SU** (the last of the menu **PA**) and confirming pressing the button **C**.



CODE	FUNCTIONS	VALUES		FUNCTIONS	FUNZIONI PRE-IMPOSTATE
		VARIATIONS	VARIATIONS		
DOWN BUTTON B: 01	MOTOR 1 WORKING TIME 0 - 99	21	21	BUTTON C = INCREASE BUTTON D = DECREASE	NO
DOWN BUTTON B: 02	MOTOR 2 WORKING TIME 0 - 99	21	21	BUTTON C = INCREASE BUTTON D = DECREASE	NO
DOWN BUTTON B: F1	MOTOR 1 POWER 6 - 19	10	10	BUTTON C = INCREASE BUTTON D = DECREASE	NO
DOWN BUTTON B: F2	MOTOR 2 POWER 6 - 19	10	10	BUTTON C = INCREASE BUTTON D = DECREASE	NO
DOWN BUTTON B: r1	MOTOR 1 DECELERATION TIME 0 - 99	8	8	BUTTON C = INCREASE BUTTON D = DECREASE	NO
DOWN BUTTON B: r2	MOTOR 2 DECELERATION TIME 0 - 99	8	8	BUTTON C = INCREASE BUTTON D = DECREASE	NO
DOWN BUTTON B: t5	MOTORS TIME OF PHASE DISPLACEMENT 0 - 99	3	3	BUTTON C = INCREASE BUTTON D = DECREASE	NO
DOWN BUTTON B: tP	AUTOMATIC CLOSING TIME 0 - 99	3	3	BUTTON C = INCREASE BUTTON D = DECREASE	NO
DOWN BUTTON B: Pd	PEDESTRIAN OPENING TIME 0 - 99	7	7	BUTTON C = INCREASE BUTTON D = DECREASE	NO
DOWN BUTTON B: Fr	MOTOR POWER DURING DECELERATION 6 - 19	10	10	BUTTON C = INCREASE BUTTON D = DECREASE	NO
DOWN BUTTON B: tc	CLOSING PULSE TIME 0,1/2, 1, 1 1/2, ..2,5 SECONDS	0	0	BUTTON C = INCREASE BUTTON D = DECREASE	NO
UP BUTTON B: 5U	YES = TO SAVE VARIATIONS NO = TO CANCEL ANY OPERATION NOTHING = KEEPS IN TEMPORARY STORAGE				NO
UP BUTTON B: P8	SI = PHOTOCELLS TEST				SI
UP BUTTON B: P7	SI = MOTORS TEST				SI
UP BUTTON B: P6	SI = DECELERATION				SI
UP BUTTON B: P5	SI = MOTOR 1				NO
UP BUTTON B: P4	SI = PRE BLINKING				NO
UP BUTTON B: P3	SI = AUTOMATIC CLOSING STEP BY STEP				SI
UP BUTTON B: P2	SI = CONDOMINIAL				NO
UP BUTTON B: P1	SI = ELETRIO LOCK				NO
UP BUTTON B: P0	SI = WATER HAMMER				NO

## SELF DIAGNOSIS

**ANOMALIES SIGNALLING**  
 The display shows possible damages of each component of the control board.  
*Ex. Disconnect or obscure the photocell and verify that the display shows the code tc*

tc	PHOTOCELL IN OPENING PHASE
tc	PHOTOCELL IN CLOSING PHASE
St	STOP
FR	LIMIT SWITCH IN OPENING PHASE
FC	LIMIT SWITCH IN CLOSING PHASE
PE	PEDESTRIAN START
Go	START
-.	RADIO CODE IN CONTINUOUS TRANSMISSION
01	MOTOR 1 TEST
02	MOTOR 2 TEST
0r	BOTH MOTORS TEST

## RADIO RECEIVER PROGRAMMING

- r** - Display the stored code scanning from 1 to 16  
**ERASURE OF EACH SINGLE RADIO CODE**  
 During the scanning press the button D when the display shows the number of the code you want to erase.

### **ε c** RADIO CODE ACQUISITION

PROCESS 1 = **STANDARD** acquisition  
 PROCESS 2 = **SEQUENTIAL** acquisition

#### PROCESS 1

- Press the button **A** several time until when the display shows the symbol **r R**
  - Press the button **B** until when the display shows the symbol **ε c**
  - Give an impulse with the transmitter and keep it pressed
  - At the same time press the button **C** to confirm the program storage
- Repeat the same procedure for all the other transmitters that have different codes.

#### PROCESS 2

Connect Jumper **J1**

- Codify the transmitter with your personal code changing the position of some of the Dip-switch.
- Give an impulse with the transmitter and keep the transmitter button pressed.
- At the same time press the button **A** for the code acquisition.
- Repeat the procedure for all the remaining codes.
- Remove the jumper **J1** (without switching off the power supply).
- The double click of the relay confirms the code storage.

- CP** Press the button **A** until when the display shows the symbol **r R**
- Press the button **B** until when the display shows the symbol **CP**
  - Give an impulse with the transmitter and keep it pressed
  - At the same time press the button **C** to confirm the program storage
- Repeat the same procedure for all the other transmitters that have different codes.

- Pd** Press the button **A** until when the display shows the symbol **r R**
- Press the button **B** until when the display shows the symbol **Pd**
  - Give an impulse with the transmitter and keep it pressed
  - At the same time press the button **C** to confirm the program storage
- Repeat the same procedure for all the other transmitters that have different codes.

- r c** When the display shows the symbol **r c**  
 Keep the button D pressed until when the display shows the symbol **r :**  
 (Now all the codes have been erased)

## CONTROL UNIT PARAMETERS PROGRAMMING

Process 1 = **STANDARD**  
 Process 2 = **SEQUENTIAL**

#### Warning:

- 1 Check that the connection to the **motors** follows the diagram
  - 2 Check that the connection of the **security** devices follows the diagram
- Note:** If you do not install the photocells in closing phase, please jump terminal 3 and 9.  
 If you do not install the rubber edge in opening phase, please jump terminal 4 and 9.
- 3 Check that the connections of the Controls follow the diagram
  - 4 The gate has to reach the **closing** position
  - 5 Switch on the control unit.
- Note:** If the **Stop** function is not in use for the time being Jump terminal 2 and 8.

### STANDARD PROGRAMMING (Process 1)

- Give a **START** impulse (terminal 1 and 8)
- You should wait that the gate has accomplished a whole phase :  
**Opening - Stop - closing** because the control unit is pre-programmed.
- Give a further **START** impulse to see which are the non suitable times and functions of the device and note them in the boxes "values and changes".
- Step in the programming phase using the buttons **A** and **B** to join the wished parameter.
- Use the buttons **C** and **D** to change or confirm every single parameter.

**EXAMPLE 1:** Addition the working time of the motor 1 within 2 sec.

**EXAMPLE 2:** Reduce the deceleration time of the motor 2 within 1 sec.

**EXAMPLE 3:** Delete the break time

#### EXAMPLE 1

While the control board is switched on check that display shows :	--
Press the button <b>A</b>	the display shows the symbols <b>PR</b>
Press several times the button <b>B</b>	when display shows the symbols <b>PI</b>
Wait a little	when the display shows the symbols <b>20</b>
Press 2 times the button <b>C</b>	the display shows the symbols <b>23</b>
Press several time the button <b>B</b>	when the display shows the symbols <b>5U</b>
Press the button <b>C</b>	the display shows the symbols <b>--</b>

The working time of the motor 1 is boosted within 20-23 seconds.

#### EXAMPLES 2

While the control board is switched on check that the display shows	--
Press the button <b>A</b>	the display shows the symbols <b>PR</b>
Press moreover the button <b>B</b>	when the display shows the symbols <b>r2</b>
Wait a minute	when the display shows the symbols <b>08</b>
Press twice the button <b>D</b>	the display shows the symbols <b>07</b>
Press several times the button <b>B</b>	when the display shows the symbols <b>5U</b>
Press the button <b>C</b>	the display shows the symbols <b>--</b>

The deceleration time of the motor 2 has been reduced within 1 second

#### EXAMPLE 3

When the control board is switch on check that the display shows:	--
Press the button <b>A</b>	the display shows the symbol <b>PR</b>
Press several times the button <b>B</b>	when the display show t he symbol <b>P3</b>
Wait 1-2 seconds	the display will show the symbol <b>51</b>
Press once button <b>D</b>	the display will show the symbol <b>PD</b>
Press several times button <b>B</b>	the display will show the symbol <b>5U</b>
Press button <b>C</b>	the display will show the symbol <b>--</b>

It has been removed the automatic closing and it has been inserted the step by step function.

### SEQUENTIAL PROGRAMMING (Process 2)

- Insert Jumper **J1**
- Press button **B** to select  
**PI = MOTOR 1**  
**PI2 = MOTOR 2**

When the display shows the required position you should wait a moment without pressing any button.

- When the display will show the symbol **00** you can **START** the **Sequential programming**.  
You can go on using the START button or the radio transmitter button if it has been already programmed.

1° Impulse: **OPEN** (the first leaf starts and then starts the second one)

2° Impulse: the deceleration begins

3° Impulse: **STOP** of the opening phase and **start** to calculate the **Break Time**

4° Impulse: **STOP** of the **Break Time** and the motor 2 start to **CLOSE**

5° Impulse: **STOP** of the phase displacement. The motor 1 start to **CLOSE**

- Wait for the complete end of the cycle until when the blinker is off
- Remove the jumper (without switching off the power supply) the double click of the relay shows that the stated values have been stored.
- Give a **START** impulse and control that times are responding to the needs.
- If the times of **Working, Deceleration** and **Pause** do not respond to your needs you can:
  - 1 Repeat the sequence from step A) or
  - 2 Set up in the programming with the buttons and modify the time that you want to change.

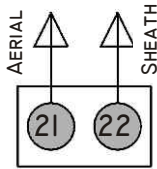
#### **P3 = YES = AUTOMATIC CLOSING INSERTED**

- A **START** Impulse during the opening phase stops the leaves (they stay unmoved until a new impulse)
  - A **START** impulse during the closing phase changes the working. If you do not want that the Start impulse during the opening phase stops the gate you have to insert the condominium function (function **P2 = yes**)
- = NO = STEP BY STEP INSERTED**  
 - An impulse opens An impulse blocks An impulse closes

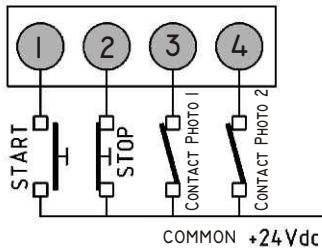
#### **P2 = YES = CONDOMINIAL FUNCTION INSERTED**

The control board does not accept any command during the opening phase.

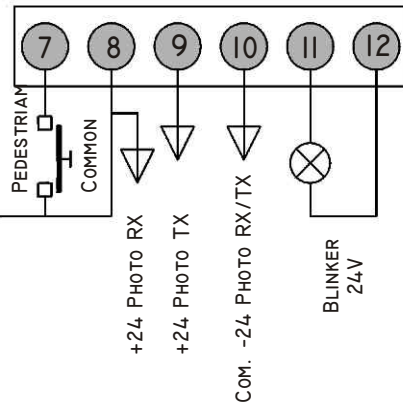
## TERMINAL BOARD 1



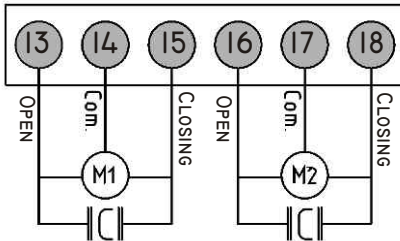
### TERMINAL BOARD 2A



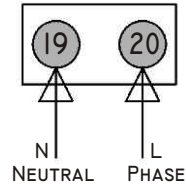
### TERMINAL BOARD 2B



### TERMINAL BOARD 3



### TERMINAL BOARD 4



## TERMINAL BOARDS CONNECTIONS

All the connections must be done without power supply.

### EARTH TERMINAL BOARD CONNECTIONS

Connect the yellow/green motors cable to earth terminals **A / B**.  
Connect the yellow/green network cable to earth terminal **C**.

### TERMINAL BOARD 1 CONNECTIONS

**21** Aerial or radio receiver signal  
**22** Sheath or negative for radio receiver

### TERMINAL BOARD 2 CONNECTIONS

<b>1-8</b>	<b>Start control</b> normally open (NA) for button, key selector and radio connection. The Start control starts the programmed running cycle.
<b>2-8</b>	<b>Stop control</b> normally closed (NC). Emergency button. <u>When pressed the gate stops immediately.</u> In opening phase: at the first impulse the gate closes. Break-time: at the first impulse the gate closes In closing phase: at the first impulse the gate opens. <b>If temporarily the Stop contact is not used, jump terminal 2 with terminal 8.</b>
<b>3-8</b>	<b>Input of one safety photocell in closing phase.</b> <b>Input of several safety photocells in closing phase.</b> The receiver contacts must be connected in series. Normally closed (NC). In opening phase: does not work In closing phase: Stop, break-time for 2 seconds, opening phase again. <b>If temporarily the photocell contacts are not used, jump terminal 3 with terminal 9.</b>
<b>3-9</b>	<b>Input only for safety rubber edges in closing phase.</b> The contacts must be connected in series if there is more than one safety rubber edge. Normally closed (NC). In opening phase: does not work. In closing phase: Stop, break-time for 2 seconds, opening phase again.
<b>4-8</b>	<b>Input for safety photocells in opening phase (for swing gate).</b> Normally closed (NC). In opening phase: Stops until the obstacle has not been removed In closing phase: Stops and changes direction when the obstacle has been removed If you also want to connect the safety rubber edges, you must connect in series their contacts with the photocell ones. <b>If temporarily the photocell contacts are not used, jump terminal 4 with terminal 9.</b>
<b>4-9</b>	<b>Input for safety rubber edges in opening phase (for swing gate).</b> Normally closed (NC). In opening phase: Stops until the obstacle has not been removed In closing phase: Stops and changes direction when the obstacle has been removed The contacts should be connected in series.
<b>7-8</b>	<b>Pedestrian start input.</b> Normally open (NA).
<b>8-10</b>	<b>Output for photocell receiver power supply.</b> <b>Output for extra 24V dc accessories power supply.</b> With all Standard accessories included 100 m A are still available for extra accessories.
<b>9-10</b>	<b>Output for photocell transmitter power supply.</b>
<b>11-12</b>	<b>Blinker intermittent output.</b> 24V dc 10W max.

### TERMINAL BOARD 3 CONNECTIONS

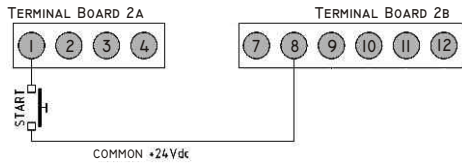
<b>13</b>	<b>Motor 1 M1- output</b> (13 Brown; 14= Blue; 15= Black)
<b>14</b>	Leaf that opens firstly and that delays in closing phase.
<b>15</b>	In case of a gate of one single leaf connect the motor to output M1, select parameter <i>P5</i> on SI, confirm with <i>SU</i> and save
<b>16</b>	with push button C. Capacitor between terminal 13 and 15
<b>17</b>	Output motor 2 M2 (16=brown - 17=Blue - 18= Black)
<b>18</b>	Leaf that opens secondly. Capacitor between terminal 16 and 18

### TERMINAL BOARD 4 CONNECTIONS

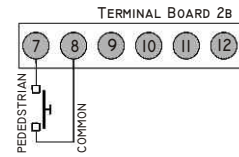
**19-20** Power input 230-240 Vac - 50/60 Hz. (19=Neutral - 20=phase)

# MEMORANDUM FOR WIRING AND PROGRAMMING THE CONTROL UNIT Q36A

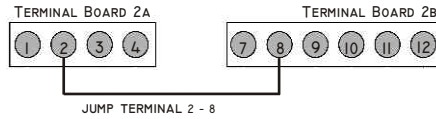
## 1 START



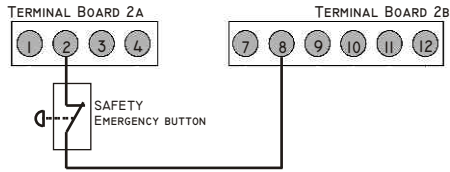
## 2 PEDESTRIAN START



**N.B.:** Jump terminals 2 and 8 if, temporarily, the STOP contacts is not used



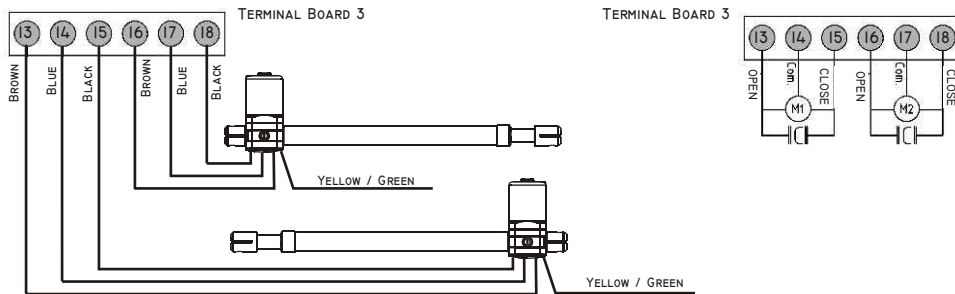
## 3 EMERGENCY PUSH BUTTON STOP CONTACT



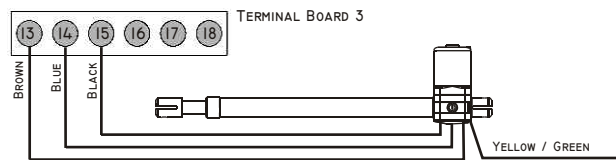
## 4 MOTORS CONNECTIONS

**MOTOR 1 LEAF WITH ELECTRO-LOCK OR LEAF THAT OPENS FIRSTLY**  
 13 OPEN + CONDENSER  
 14 COMMON (BLUE WIRE OF THE MOTOR)  
 15 CLOSE + CONDENSER

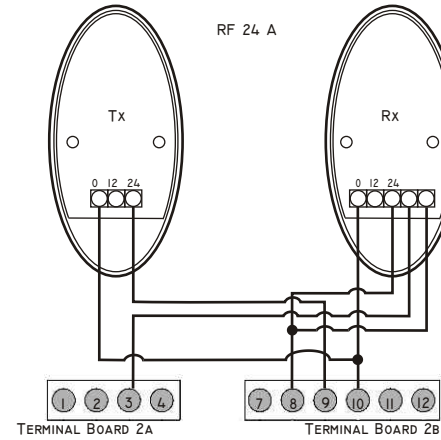
**MOTOR 2 LEAF THAT OPENS SECONDLY**  
 16 OPEN + CONDENSER  
 17 COMMON (BLUE WIRE OF THE MOTOR)  
 18 CLOSE + CONDENSER



IF YOU CONNECT ONLY ONE MOTOR



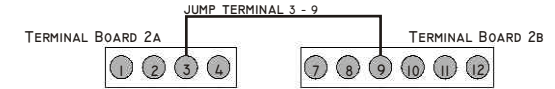
## 5 CONNECTION PHOTOCELL IN CLOSING PHASE



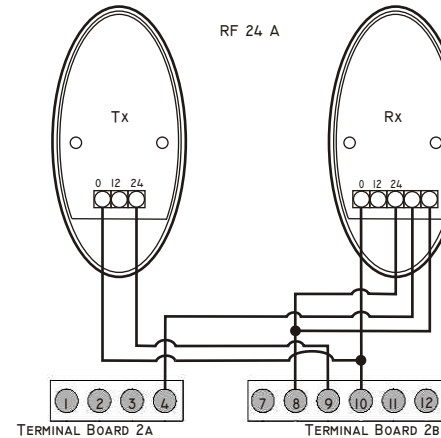
### CONNECTION PHOTOCELL

- 8 = Power supply + 24 PHOTO RX
  - 9 = Power supply + 24 PHOTO TX
  - 10 = Power supply - COM. PHOTO TX/RX
- 3 - 8 = Connection photocell

3 - 9 : Jump terminals 3 and 9 if the photocell in closing phase has not been installed.



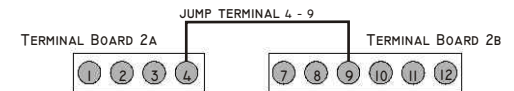
## 5 CONNECTION PHOTOCELL IN OPENING PHASE



### CONNECTION PHOTOCELL

- 8 = Power supply + 24 PHOTO RX
  - 9 = Power supply + 24 PHOTO TX
  - 10 = Power supply - COM. PHOTO TX/RX
- 4 - 8 = Connection photocell

4 - 9 : Jump terminals 4 and 9 if the photocell in opening phase has not been installed.



## 7 ELECTRO LOCK DEVICE (MEL)

IF YOU WANT TO INSERT THE DEVICE MEL IN THE CN

- CONNECT THE ELECTRO LOCK
- CHANGE THE PARAMETERS  $PQ - P1$  AND  $t_c$

