CENTRALE Q35S

The card has been designed in consideration of the following EU standards, Electromagnetic Compatibility Directive (89/336/EEC), Low Voltage Directive (73/23/EEC), Machine Directive (89/392/EEC). Costruction Produtct Directive (89/106/EEC)
The manufacturer declares that the equipment bears the CE mark, The manufacturer issues, upon request, the Conformity Declaration to Standard UNI 8612.

SAFETY CRITERIA

A) Every time the control unit is connected to the power supply wait at least 2 seconds before giving commands. In order to avoid disturbance during the start-up phase, the microprocessor rejects every type of command for the first 2 seconds.
B) After every START command to the microprocessor, carry out the following checks before starting movement of the gate:
1 Central control unit functionality
2 Functionality of all the signals on the input circuits
3 Presence and functionality of motors
4 Functionality of motor control Triac
5 Functionality of safety devices
6 Cut-off of the power to safety devices and check that:
All contacts have made the exchange
7 Restoration of power to safety devices and check that:
All contacts have made the exchange. If one or more of the above criteria has not been met, the microprocessor will not accept the START command.
C) All connections must be made with the power supply off.
D) The Stop (emergency) button provided for by UNI 8612 must be easily accessible and be of the rotation hook/unhook type. In an emergency it stops the gates instantly.
E) Supply power to the motors paying attention that the direction of rotation is the one indicated.
F) Always protect the power supply using a 6A automatic switch or a 16A single-phase switch with fuse.

ATTENTION:
For the reasons listed above and to swiftly and correctly execute programming, it is most important that the following procedure is observed:
1. Read this manual completely
2. Carefully observe the installation sequence
3. Make the connections, and definitive or temporary bridges indicated, to the various points.

INSTALLATION ADVICE

Electrical system:
- The electrical system must be fitted in accordance with the standards in force in the country of installation and by qualified fitters.
- Always use different cables which comply to standards to make the electrical connections for the various power, control (inputs) and auxiliary circuits in order to prevent the tension induced by the power supply cables and by the motors from issuing incorrect commands or even causing failure.
- A section of 0.25 mm² is more than sufficient for the control circuits given their exceptionally low absorption.
- With lines longer than 50 m it is best to uncouple them using relays in the control panel.

Connections:
- Make the connections as described above and install all the safety devices provided for by the standards in force before connecting power to the central control unit.
- All the safety device (photocells, Stop buttons and coasts) contacts normally closed must be connected to the corresponding inputs on the central control unit. If it is necessary to use two safety devices in one input, connect the related contacts in series.
  If the standards in force allow for the exclusion of one or more safety devices, bridge the unused Stop contact (terminal 2)) with the common one (terminal 8) and the photocell contacts (terminals 3 and/or 4) with terminal 9 in the central control unit.
- Foresee a omnipolar breaking device near to the apparatus (the contact must measure at least 3 mm)

INSTALLATION INSTRUCTION SEQUENCE

1 Fasten the cabinet using only the fastening holes outside the container.
2 Lay the cables for the system following the instructions in the "INSTALLATION ADVICE" chapter.
3 Connect terminals 2 - 3 in sequence.
4 Prepare the programming dip-switch for the functions required. See the "DIP-SWITCH PROGRAMMING" table.
5 Check the power supply system, ensuring that the power line is protected by a magnet-thermal differential switch with suitable characteristics and gauging for the system and in compliance with the standards in force.
6 Connect terminal 4 (Power supply).
7 Connect the central control unit and the motors to earth using the faston located above the fuse.
8 Check that:
a) The photocells are perfectly aligned;
b) All the connections have been made in accordance with the procedure above.
c) The green power led (Led 1) is on;
d) The green work signal led (Led 2) is off;
e) The green led (Led 3) on indicates that the central control unit constantly receives a Start impulse;
f) The red leds (Leds 4/5/6) is on. Signal normally closed inputs if on and open inputs if off (breaking contact they must switch off);
g) The red leds (Leds 7/8) signal normally closed inputs if on and open inputs if off (breaking contact they must switch off);
9 Program the radio receiver.
10 Program the running times.
11 Regulate the motor trust to a maximum stopping force of 150N. (approximately 15Kg)
12 Perform a few manoeuvres simulating various situations and checking perfect performance of the safety devices.
13 Check and complete the technical file (list of components and list of cables used).
14 Perform the risk analysis.
15 Fill in the conformity certificate.

TERMINAL BLOCK CONNEC

All the connections must be made in absence of electricity.

TERMINAL HOLDFAST TO EARTH

⏚	Connect the green/yellow cable of the motors to the respective ground terminal T1/T2 and the feeding cable to the ground terminal T2

TERMINAL HOLDFAST 1

21	Radio receiver signal or antenna
22	Radio receiver negative or sheath

TERMINAL HOLDFAST 2

1-8	Start control normally open (NA) for button, key selector and radio connection. The Start control starts the programmed running cycle.
2-8	Stop control normally closed (NC). Emergency button. When pressed the gate stops immediately. Opening / Break. Riarming at first impulse the gate closes. Closing: Riarming at first impulse the gate opens. If, temporarily, the Stop contact has not been used, bridge terminal 2 with terminal 8.
3-8	Input 1 closure safety photocell. Input coasts plus closure safety photocell. Input of several closure safety photocells. The receiver contacts must be connected in series. Normally closed (NC). Opening: does not function Closure: Stops movement, pauses for 2 seconds, begins opening movement again. If, temporarily, the photocell contacts have not been used, bridge terminal 3 with terminal 9.
3-9	IInput solely for closure safety coasts. The receiver contacts must be connected in series. Normally closed (NC). Opening: does not function. Closure: Stops movement, pauses for 2 seconds, begins opening movement again.
4-8	Input of opening safety photocells for sliding gate. Normally closed (NC). Opening: Stops movement and inverts direction for 3 seconds Closure: does not function If the coasts are included the contacts must be connected in series with those of the photocell. If, temporarily, the photocell contacts have not been used, bridge terminal 4 with terminal 9..
4-9	Input of opening safety photocells for sliding gate. Normally closed (NC). Opening: Stops movement and inverts the direction for 3 seconds Closure: does not function
5-8	Input of closure stroke-end stop device. If the travel-ends are not installed let the inpust free
6-8	Input of opening stroke-end stop device. If the travel-ends are not installed let the inpust free.
7-8	It sets the opening for about 1 meter
8-10	Power output for photocell receiver. Power output for extra 24V dc accessories. With all Standard accessories included 100 m A are still available for the supply of power to extra accessories.
9-10	Power output for photocell transmitter.
11-12	Intermittent output for flashing light or courtesy lights. (for swivel gates) 24V dc 10W max.

TERMINAL HOLDFAST 3

13 14 15	Output for motor 1 M1 (13=Brown - 14=Blue - 15=Black) Flap which opens first and has delayed closure or sliding or swivel gate. The gear reducer is prepared for the assembly of the gate on the right-hand side (as seen from inside); if it is mounted on the left-hand side it is necessary to invert wire 13 with wire 15 (motor) and wire 5 with wire 6 (end-stroke) inside the electric control panel. Condenser between terminals 13 and 15.
16 17 18	Output for motor 2 M2 (16=Black - 17=Blue - 18=Brown) Flap which opens second. Condenser between terminals 16 and 18.

TERMINAL HOLDFAST 4

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

DIP-SWITCH SW3 PROGRAMMING

Dip	Function		Description
1	Condominium	On	During opening and pause does not accept further Start commands.
		Off	It is possible to intervene during opening and pause. Condominium excluded.
2	Connectable pre-warning flash	On	The flashing light starts about 2 seconds before the movement.
		Off	Flashing light and movement start together.

JAMPER SW4 PROGRAMMING

Man present	The opening and closing cycles take place maintaining the Start engaged input, every activation of the Start input instigates one movement (open-pause-close). Normal function

RADIO RECEIVER PROGRAMMING

MEMORISING CODES

1 Disconnect the power supply to the central control unit.
2 Extract the Jumper from position SW1 - SW2 (Work) and connect it in the CODE LEARN - SW1 position.
3 Reconnect the power supply to the central control unit.
4 Set the personal code into the transmitter with the 10 Dip-Switches. Avoid placing all the Dip-Switches in the OFF position or in the ON position.
5 Transmit a signal by pressing one of the buttons on the handset.
The flashing light and led 2 respond with a number of flashes equal to the position in which the code has been memorised. Code 1 has been memorised. The receiver is ready to receive the second code.
6 Proceed to memorise the subsequent codes as indicated at points 4 and 5.
The card will respond with 2 flashes for the 2nd code, 3 for the 3rd code and so on. When there are no more free positions the card responds with a series of rapidly successive flashes.
7 Disconnect the power supply to the central control unit.
8 Extract the Jumper from the CODE LEARN- SW1 position and connect it in position SW1 - SW2 (Work).

The receiver programming procedure is complete and the codes programmed have been digitally memorised inside the microprocessor, eliminating the possibility of changes due to the variation of the components or power failure.
ATTENTION: The third code memorised will be used exclusively for PEDESTRIAN opening.

DELETING CODES

1 Disconnect the power supply to the central control unit.
2 Extract the Jumper from position SW1 - SW2 (Work) and connect it in the CODE LEARN - SW1 position.
3 Reconnect the power supply to the central control unit.
4 Give a Start impulse. (not with the remote control)
The memorised codes will be displayed.
The led will flash a number of times equal to the number of codes memorised. A flash lasting 1 second indicates that the position is occupied. A quick double flash indicates that the position is free.
This display procedure is repeated three times.
5 Give a Start impulse while an occupied position is flashing and maintain it.
When the led flashes three times the corresponding code is deleted.
The position is free for memorising a new code.
6 Proceed to memorise a new code, if necessary following the procedure indicated in the previous paragraph.
7 Disconnect the power supply to the central control unit.
8 Extract the Jumper from the CODE LEARN- SW1 position and connect it in position SW1 - SW2 (Work).

PEDESTRIAN

The pedestrian opening is set on the third code of the radio receiver and through the terminal 7 (terminal board 2).
The gate opens for 7" (about 1 meter) with the same programmed functions.

PROGRAMMING RUNNING TIMES

The control unit is pre-programmed for standard 4 mts. opening.
Give a pulse with the transmutter and verify the gate opening an closing if you need further programmation please follow following instructions.
Using the Start control or the handset (in this case we must have already carried out the Sself-code learning procedure) it is possible to sequentially program the running, slowing, phase difference and automatic re-closure times.

1 Disconnect the power supply to the central control unit.
2 Extract the Jumper from position SW1 - SW2 (Work) and connect it in the TIME LEARN - SW1 position.
3 If, temporarily, the Stop contact has not been used, bridge terminal 2 with terminal 8.
4 If, temporarily, the photocell contacts have not been used, bridge terminal 3 and/or 4 with terminal 9.
5 Check that the end-stroke micros are connected to the central control unit.
6 Close the gate.
7 Check that the end stroke slides have been correctly positioned and that the closure micro is pressed.
8 Reconnect the power supply to the central control unit.
9 1st Start impulse
The gate opens
10 2nd Start impulse
The motors switch to low speed (SLOWING).
If this function is not required, allow the manoeuvre to continue until the opening end stroke. When the opening end stroke is reached the motor stops and the warning light goes off.
11 3st Start impulse
The central control unit begins to calculate the pause time before AUTOMATIC CLOSURE.
If this function is not required, give a further Start impulses within 2 seconds to confirm acquisition.
The flashing will stop. In this way the STEP-BY-STEP function is engaged.
With the STEP-BY-STEP function connected, the sequence at every impulse is the following: OPEN-STOP-CLOSE.
Wait please minimum 4 secods between the 3th end 4th impulse.
12 4st Start impulse
The timing pause is memorised and the motor starts the closure manoeuvre.
13 Wait for the manoeuvre to end, including the slowing phase (where programmed).
14 Disconnect the power supply to the central control unit.
15 Extract the Jumper from the CODE LEARN- SW2 position and connect it in position SW1 - SW2 (Work).

The programming of the running times is terminated and the times programmed are digitally memorised inside the microprocessor, eliminating the possibility of changes due to the variation of the components or power failure.

TIME MEMORY

If a safety device is activated or a Start impulse is given to invert movement during opening or closure, the central control unit automatically calculates the time that has not been used for the original manoeuvre and decreases the time of the second manoeuvre so that the slowing is always efficient. Subsequent inversion manoeuvres result in the temporary deletion of the memory and the manoeuvres are performed in the times normally memorised.

THRUST CONTROL

All the control unit have the possibility to set the thrust from the 40% to the 100% of the total available power.
If you cut the card track between the pad in the back part of the board "W2" it will be possible to set the thrust from the 25% to the 75% of the total available power.

SPARE PARTS

TIMER:

It is possible to connect parallely to the Start control a switch or a timer contact. The timer control controls the opening of the gate. As long as this control is active the gate remains opened.
The end of this programming provokes the automatic re-closing (if this one is inserted), after the established pause.

SAFETY PHOTOCELLS (RF 24 A)

The **Kit** contains a pair of photocells which must be positioned as close as possible to the gate (5 to 10cm maximum) on the outer side of the two posts (safe closure).
Fix the photocells at a height of about 40-60cm from the ground.
We recommend the installation of a second set of photocells inside the gate (safe opening) using special posts. For the entry of wires from the rear, push in the pre-hole on the base and insert the plug in the lower part of the cover.
For the entry of wires from below, where using only the wire, remove the plug; where there is also a protective sheath, use the special connection piece provided.
NB: All holes to allow the passage of wires, even those not in use, must be sealed with silicon putty.

Safe opening photocells: (optional)

These must be installed inside the gate on stable supports and must protect the entire area of action of the gate wing.

Connecting photocells

- Where only one set of photocells is used, connect them as indicated in.
- If two sets are used, connect them as indicated in the control unit functional layout.

BLINKER (RL 11)

The blinker is available in two versions, oval or round, and must be positioned at the top of the post where it can be seen from all angles.

- Fasten the power cable to the tongues of the lamp holder, slotting it through the hole on the bottom of the plastic base.
- Introduce and screw in the bulb.
- Having completed this operation, fasten the blinker to the post using the special bolts provided. Then fasten the yellow or orange plastic dome onto the black base.
- Seal all the wire passages with silicon.

KEY SELECTOR (RS 15)

The key selector is an added comfort which enables the use of the system using the same methods as a radio transmitter. Install using the two plugs and screws provided in the pre-holes on the rear.

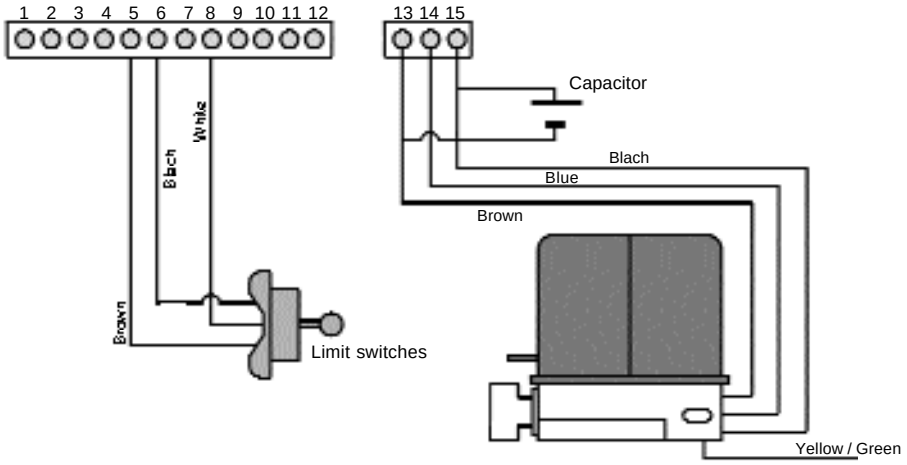
- To open the selector insert the key and turn it a quarter either to the left or the right, then incline and lift the upper part of the mobile plaque away (as indicated above). (Fig. Q)
- We recommend passing the wires through the rear of the selector and sealing all the holes with silicon putty.
- Having completed these operations, fasten the selector to the post or where required, then close the front repeating the operations used to open it in reverse order.

CONNECTING EXTERNAL CONTROLS

It is possible to connect a control panel, an intercom, etc., to the control unit.
Before connecting one of these controls, make sure that the device in question does not transmit a 12V signal.
If this is the case, contact our nearest service centre.

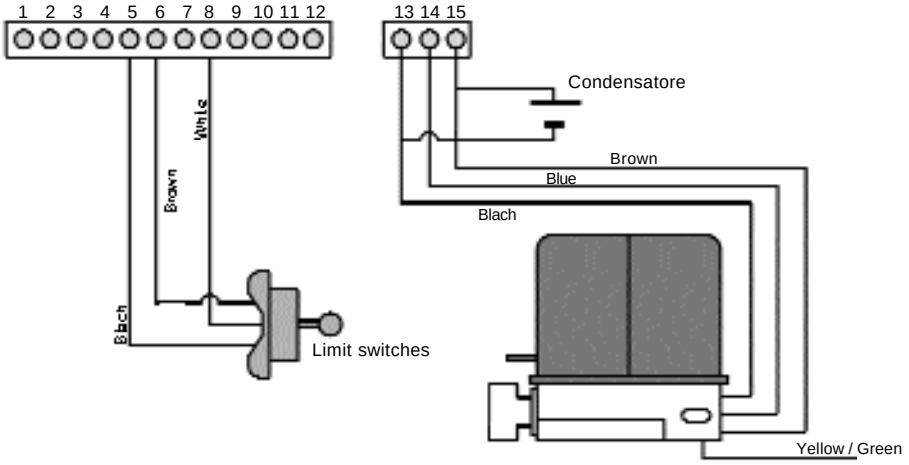
MEMORANDUM FOR WIRING AND PROGRAMMING THE CONTROL UNIT Q 35S

1 CHECK THAT THE MOTOR AND THE LIMIT AWITCHES ARE CONNECTED TO THE CONTROL UNIT

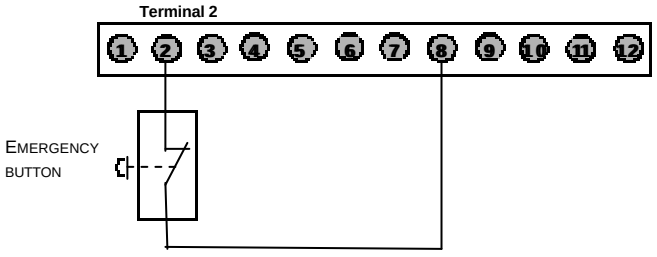


2 IF IT IS MOUNTED ON THE LEFT-HAND DIDE
(looking the inside)

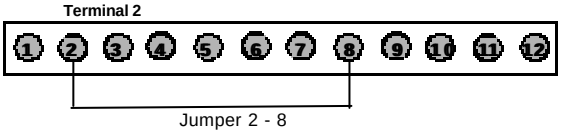
TO INVERT WIRE 13 WITH WIRE 15
END WIRE 5 WITH WIRE 6



3 CONNECT THE EMERGENCY PUSHBUTTO
STOP CONTACT

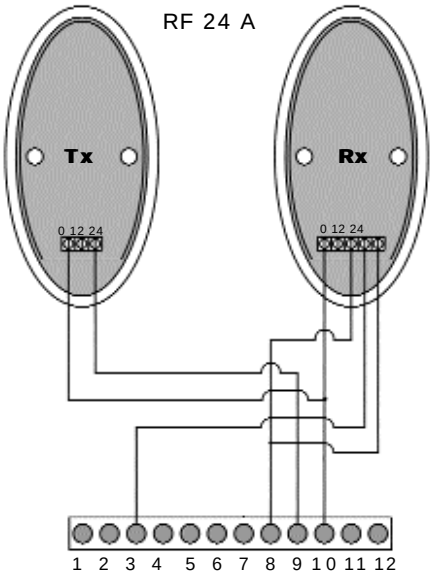


N.B.: Jump terminals 2 and 8 if, temporarily, the STOP contacts is not used.

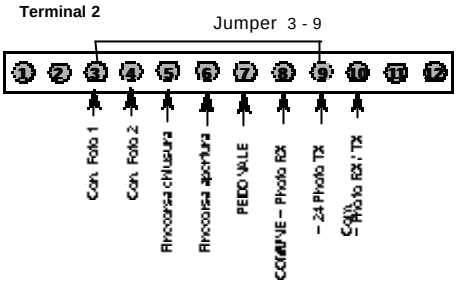


4 CONNECT THE PHOTOCELL

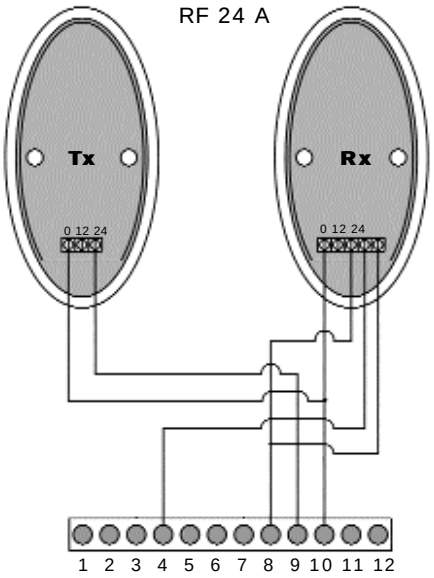
- Connect the photocell in CLOSURE as the following diagram.



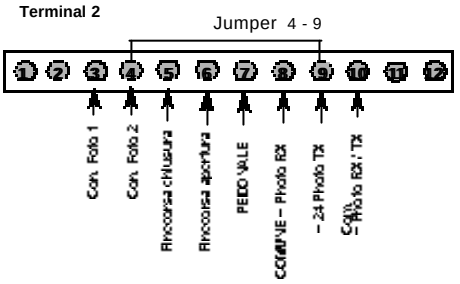
N.B.: Jump terminals 3 and 9 if the photocell in CLOSING has not been installed.



- Connect the photocell in OPENING as the following diagram.

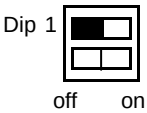


N.B.: Jump terminals 4 and 9 if the photocell in OPENING has not been installed

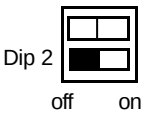


5 DIP-SWITCH PROGRAMMING

- DIP SWITCH 1 COLLECTIVE — IN OFF = LEFT DISCONNECTED FUNCTION
  IN ON = RIGHT CONNECT FUNCTION



- DIP SWITCH 2 PRE-WARNING FLAS — IN OFF = LEFT DISCONNECTED FUNCTION
  IN ON = RIGHT CONNECT FUNCTION



6 JAMPER SW4 PROGRAMMING (FUNCTION)

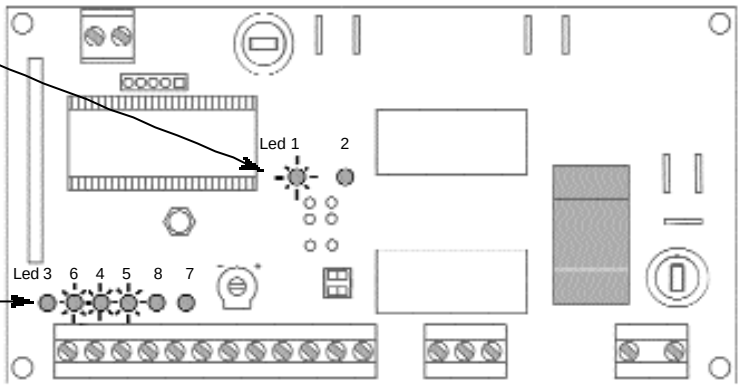
JAMPER SW4 — JAMPER SW4 MAN PRESENT — TO PUT THE JAMPER FOR CONNECT FUNCTION

7 RECONNECT THE POWER SUPPLY IT THE CONTROL UNIT

8 CHECK THAT

LED 1 ON (230V) → ON
LED 2 WORK → OFF

LED 3 START → OFF
LED 6 STOP → ON
LED 4 PHOTO 1 → ON
LED 5 PHOTO 2 → ON
LED 8 FC CLOSE → OFF
LED 7 FC OPEN → OFF



9 DISCONNECT THE POWER SUPPLY TO THE CONTROL UNIT

10 DEPLACE THE JAMPER FROM THE VERTICAL POSITION TO THE HORIZONTAL POSITION IN HEIGHT


Basic Position


Jamper position in codes learning

11 RECONNECT THE POWER SUPPLY IT THE CONTROL UNITE

12 PCUSTOMIZE THE RADIO TRANSMITTER DEPLACING SOME DIP-SWICH

13 GIVE 1 PULSE WITH RADIO TRASMITTER

14 DISCONNECT THE POWER SUPPLY TO THE CONTROL UNIT

15 DEPLACE EL THE JAMPER FROM THE HIGH HORIZONTAL POSITION TO THE DOWN VERTICAL ONE


Jamper position in codes learning


Jamper position in ctiming learning

16 RECONNECT THE POWER SUPPLY IT THE CONTROL UNITE

17 TO GIVE THE 1ST IMPULSE BY RADIO TRASMITTER — START RUNNING THE FIRST WING AND THEN THE SECOND

18 TO GIVE THE 2ST IMPULSE BY RADIO TRASMITTER — BEGIN THE SLOWING-DOWN (about 15 cm before the complete opening of the gate)

19 TO GIVE THE 3ST IMPULSE BY RADIO TRASMITTER — BEGINS OF THE PAUSE TIME OPENING (if you don't like the function step-by step point 28)

20 TO GIVE THE 4ST IMPULSE BY RADIO TRASMITTER — END OF THE PAUSE TIME OPENING AND/OR BEGINNING OF CLOSING

21 WAIT THE COMPLETE CLOSING OF THE GATE AND THE POWER DOWN OF THE BLINKER IF INSTALLED

22 DISCONNECT THE POWER SUPPLY TO THE CONTROL UNIT

23 DEPLACE THE JAMPER FROM THE HORIZONTAL DOWN POSITION DOWN TO THE VERTICAL RIGHT POSITION


Jamper position in ctiming learning

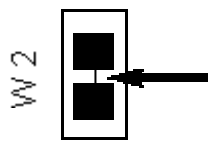

Final Jamper position for opening mode

24 RECONNECT THE POWER SUPPLY IT THE CONTROL UNITE

25 GIVE THE IMPULSE BY RADIO TRASMITTER TO CONTROL THAT ALL THE TIMES HAVE BEEN MEMORIZED IN THE RESTED WAYS.

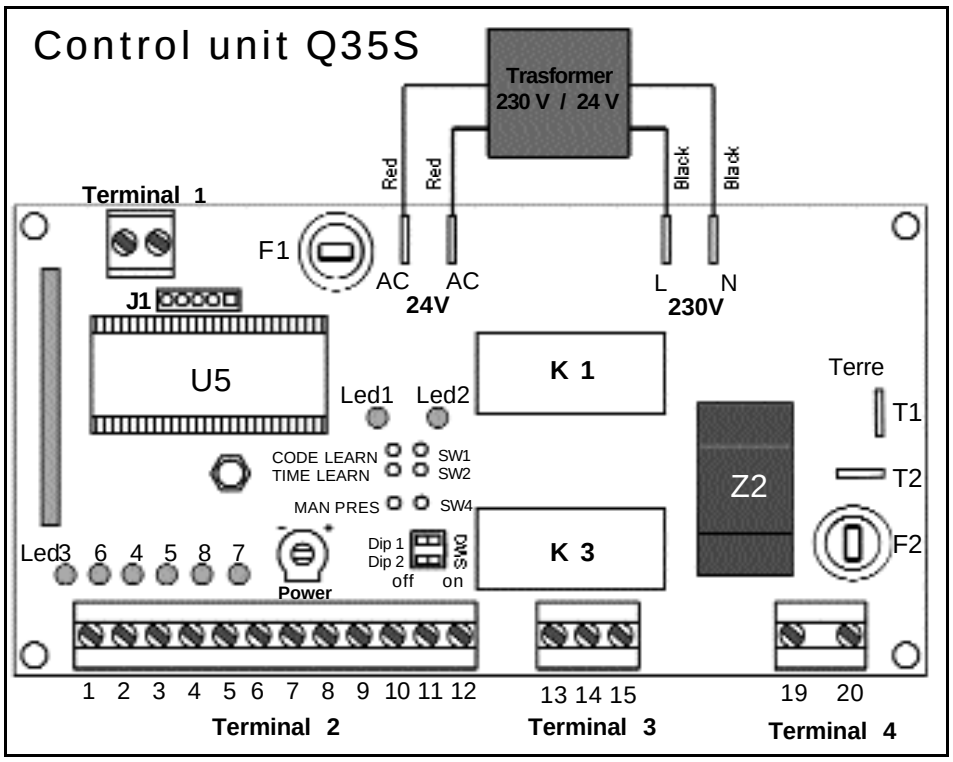
26 TRUST CHECKING AND SETTING - POWER POTENTIOMETER

It is possible tostop the leaf stroke during its working raising a POWER of max. 150N (about 15 Kg.)
Using the potentiometer POWER. (increasing in clockwise, decreasing in anti-clockwise)
Even if setting the potentiometer POWER at the minimum this condition has not been obtained, cut the card track between the pad in the back part of the board "W2", than repeat the checking and the regulation.



27 IF YOU DON'T LIKE TO PROGRAMM THE SLOWING-DOWN
WAIT THAT THE MANOEUVRE TO CONTINUE UNTIL THE OPENING END LIMIT SWITCHES

28 IF YOU DON'T LIKE TO PROGRAMM THE PAUSE TIME IN OPENING BUT YOU THE FUNCTION STEP-BY-STEP
TO GIVE THE 3rd IMPULSE (in 2 sec) A FURTHER IMPULSE
TO GIVE AFTER SOME SECOND THE 4 IMPULSE FOR CLOSING PHASE



COMPONENTS CONTROL UNIT

F1	Fuse 24 Vac 800 mA
F2	Fuse of line 230 Vac 5A
LED 1	Present 230 V
LED 2	Work signal
LED 3	Start button present signal
LED 4	Photocell 1 present signal
LED 5	Photocell 2 present signal
LED 6	Stop button present signal
LED 7	Opening stop present signal
LED 8	Closing stop present signal
M1	Terminal holdfast for radio or aerial
M2	Terminal holdfast order for radio or aerial
M3	Terminal holdfast motor
M4	Terminal holdfast Power supply
T1 / T2	Terminal holdfast to aerth
POWER	Thrust control
DIP 1 SW3	Condominium
DIP 2 SW3	Pre-warming flash
SW4	Man present
J 1	Connection Electric lock (for swivel gate)
U5	Microprocessor
Z2	Filter
K1 / K3	Relé
SW1/SW2	Common for programming
CODE LEARN	Programming codes
TIME LEARN	Programming times