

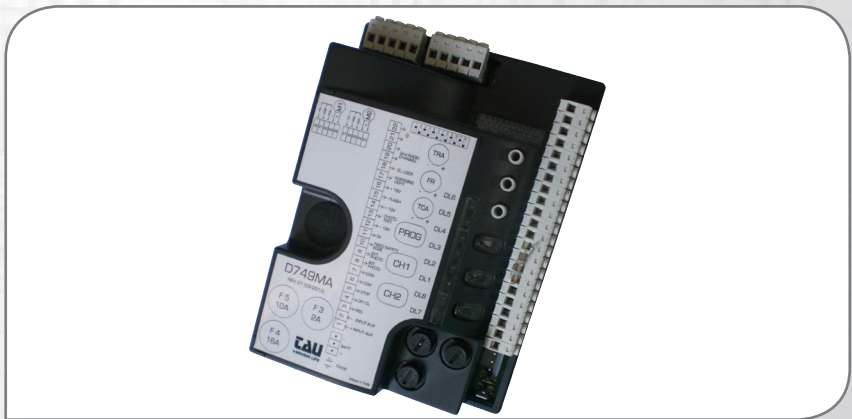
GUIDA ALL'INSTALLAZIONE
INSTALLATION GUIDE
INSTALLATIONSANLEITUNG
NOTICE D'INSTALLATION
GUÍA PARA LA INSTALACIÓN
GUIA DE INSTALAÇÃO

D749MA

Quadro di comando per uno/due motori 18V con encoder

Control panel for one-two 18V motors with encoder
Steuerplatine für einen (zwei) 18V Motor(en) mit Encoder
Logique de commande pour un ou deux moteurs 18V avec encodeur
Panel de mandos para uno or dos motores 18V con encoder
Quadro de comando para um ou dois motores de 18V com encoder

D-MNL0D749MA 28-07-2014 - Rev.04



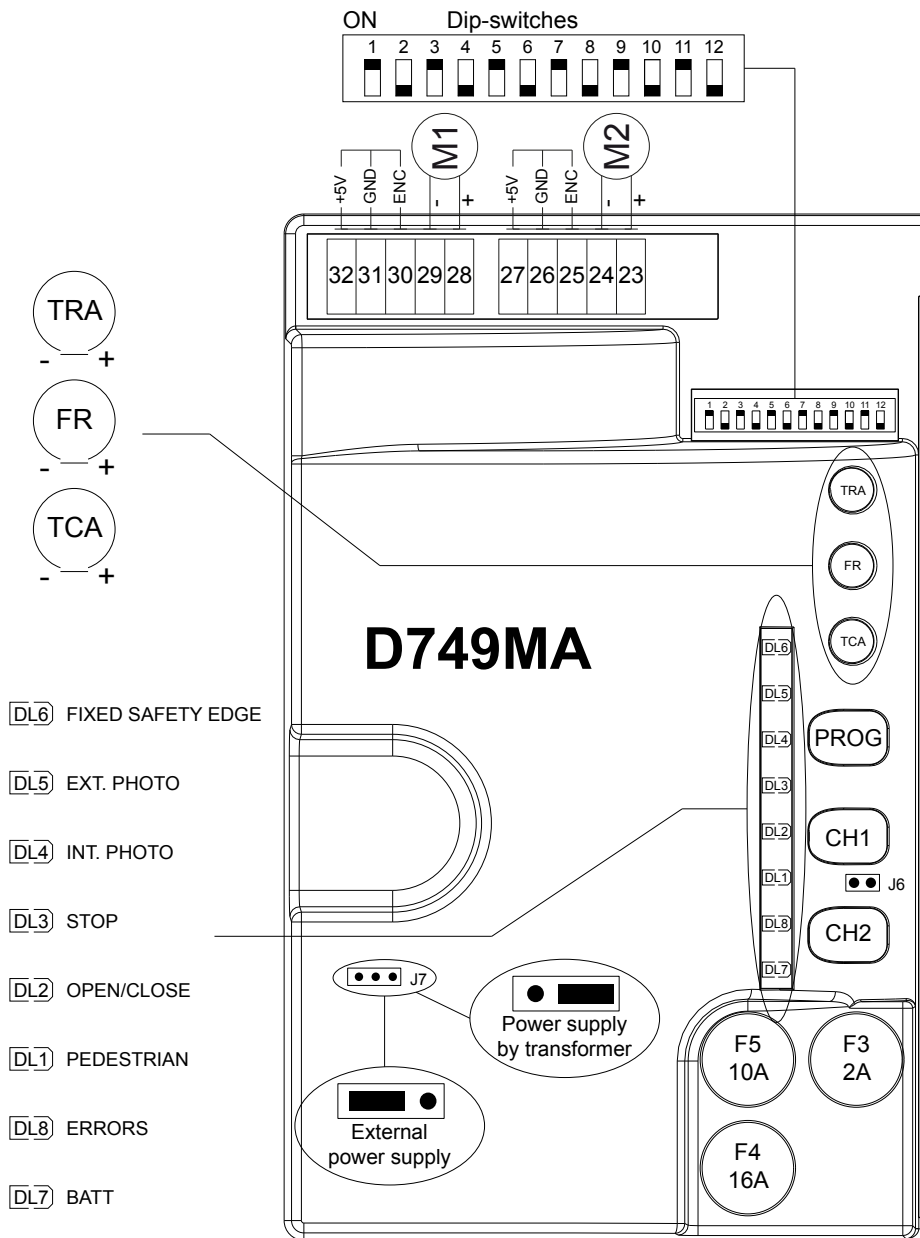
IT - Istruzioni originali

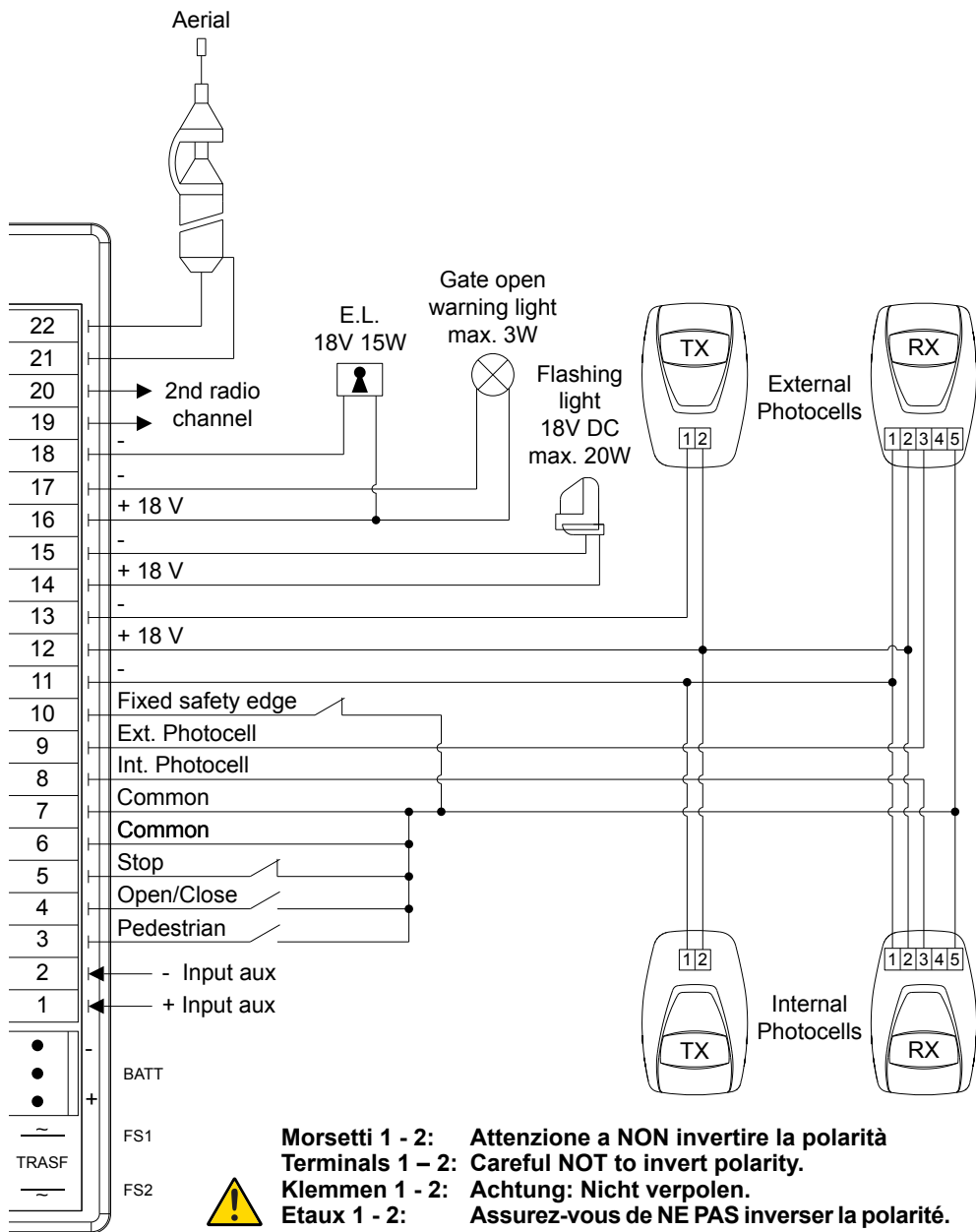


MADE IN
ITALY



Via Enrico Fermi, 43 - 36066 Sandrigo (VI) Italia
Tel +39 0444 750190 - Fax +39 0444 750376
info@tauitalia.com - www.tauitalia.com





Morsetti 1 - 2: Attenzione a NON invertire la polarità
Terminals 1 - 2: Careful NOT to invert polarity.
Klemmen 1 - 2: Achtung: Nicht verpolen.
Etaux 1 - 2: Assurez-vous de NE PAS inverser la polarité.
Bornes 1 - 2: Tenga cuidado en NO invertir la polaridad.
Terminais 1 - 2: Cuidado NÃO inverter a polaridade.

MANUFACTURER'S DECLARATION OF INCORPORATION
(in accordance with European Directive 2006/42/EC App. II.B)

Manufacturer:

TAU S.r.l.

Address:

Via E. Fermi, 43
36066 Sandrigo (Vi)
ITALY

ENGLISH

Declares under its sole responsibility, that the product:
designed for automatic movement of:
for use in a:
complete with:

Electronic control unit
Swing Gates
Residential / Communities
Radioreceiver and battery charger board

Model:
Type:
Serial number:
Commercial name:

D749MA
D749MA
see silver label
Control panel for one-two 12V motors with en-
coder

Has been produced for incorporation on an access point (*swing gate*) of for assembly with other devices used to move such an access point, to constitute a machine in accordance with the Machinery Directive 2006/42/EC.

Also declares that this product complies with the essential safety requirements of the following EEC directives:

- **2006/95/EC Low Voltage Directive**
- **2004/108/EC Electromagnetic Compatibility Directive**

and, where required, with the Directive:

- **1999/5/CE Radio equipment and telecommunications terminal equipment**

Also declares that ***it is not permitted to start up the machine*** until the machine in which it is incorporated or of which it will be a component has been identified with the relative declaration of conformity with the provisions of Directive 2006/42/EC.

The manufacturer undertakes to provide, on sufficiently motivated request by national authorities, all information pertinent to the quasi-machinery.

Sandrigo, 20/03/2013

Legal Representative



Bruno Danieli

Name and address of person authorised to draw up all pertinent technical documentation:

Loris Virgilio Danieli - via E. Fermi, 43 - 36066 Sandrigo (Vi) Italy

WARNINGS

This manual is designed to assist qualified installation personnel only. It contains no information that may be of interest to final users. This manual is attached to the D749MA control unit, therefore it may not be used for different products!

Important warnings:

Disconnect the mains power supply to the board before accessing it.

The D749MA control unit is suitable for the control of a direct-current electromechanical gearmotor for automating gates and doors of all kinds.

Any other use is considered improper and is consequently forbidden by current laws.

Please note that the automation system you are going to install is classified as “machine construction” and therefore is included in the application of European directive 2006/42/EC (Machinery Directive).

This directive includes the following prescriptions:

- Only trained and qualified personnel should install the equipment;
- the installer must first make a “risk analysis” of the machine;
- the equipment must be installed in a correct and workmanlike manner in compliance with all the standards concerned;
- after installation, the machine owner must be given the “declaration of conformity”.

This product may only be installed and serviced by qualified personnel in compliance with current, laws, regulations and directives.

When designing its products, TAU observes all applicable standards (please see the attached declaration of conformity) but it is of paramount importance that installers strictly observe the same standards when installing the system.

Unqualified personnel or those who are unaware of the standards applicable to the “automatic gates and doors” category may not install systems under any circumstances.

Whoever ignores such standards shall be held responsible for any damage caused by the system!

Do not install the unit before you have read all the instructions.

INSTALLATION

Before proceeding, make sure the mechanical components work correctly. Also check that the gear motor assembly has been installed according to the instructions. Then make sure that the power consumption of the gear motor is not greater than 3A (otherwise the control panel may not work properly).

THE EQUIPMENT MUST BE INSTALLED “EXPERTLY” BY QUALIFIED PERSONNEL AS REQUIRED BY LAW.

Note: it is compulsory to earth the system and to observe the safety regulations that are in force in each country.

IF THESE ABOVE INSTRUCTIONS ARE NOT FOLLOWED IT COULD PREJUDICE THE PROPER WORKING ORDER OF THE EQUIPMENT AND CREATE HAZARDOUS SITUATIONS FOR PEOPLE. FOR THIS REASON THE “MANUFACTURER” DECLINES ALL RESPONSIBILITY FOR ANY MALFUNCTIONING AND DAMAGES THUS RESULTING.

CONTROL PANEL FOR ONE-TWO 18V MOTORS WITH ENCODER

- LOGICS WITH MICROPROCESSOR
- STATUS OF INPUTS SIGNALLED BY LEDs
- INCORPORATED FLASHING CIRCUIT
- ENCODER SENSOR FOR SELF-LEARNING OF TRAVEL
- 433.92 MHz 2 CHANNEL BUILT-IN RADIO RECEIVER (CH)
- BATTERY CHARGER BOARD (INTEGRATED)
- BATTERY CONNECTOR
- DIAGNOSTICS OF MALFUNCTIONS SIGNALLED BY LED
- POSSIBILITY OF ENERGY SAVING OPERATION

ATTENTION:

- **do not use single cables (with one single wire), ex. telephone cables, in order to avoid breakdowns of the line and false contacts;**
- **do not re-use old pre-existing cables;**
- **we recommend to use the TAU cable code M-03000010C0 to connect the motors to the control board.**

INTRODUCTION

The D749MA board has two working modes, selectable through the J6 jumper (see wiring diagram).

- J6 Jumped: standard mode, i.e. the control unit is powered all the time;
 J6 Not jumped: low-energy mode, i.e. the control unit is switched off after each operation and on after each command (mode where power is supplied by other energy sources, ex. batteries charged by a photovoltaic panel).

Once the connection is achieved, in low-energy mode, press the PROG button briefly:

- All the green LEDs must be on (each of them corresponds to a Normally Closed input). The go off only when the controls to which they are associated are operated.
- All the red LEDs must be off (each of them corresponds to a Normally Open input). The light up only when the controls to which they are associated are operated.

TECHNICAL CHARACTERISTICS

Board power supply	13,5V AC - 50 Hz
Max motor power DC	50 W - 18V DC
Fast acting fuse for protection of input power supply 13,5 V AC (F4 - 5x20)	F 16A
Fast acting fuse for motor protection (F5 - 5x20)	F 10A
Fast acting fuse for protection of auxiliary circuits 18 V DC (F3 - 5x20)	F 2A
Motor power supply circuits voltage	18V DC
Auxiliary device circuits supply voltage	18V DC
Logic circuits supply voltages	5V DC
Operating temperature	-20 °C ÷ +55 °C

CONNECTIONS TO TERMINAL BOARD

Terminals	Function	Description
FS1 - FS2	POWER SUPPLY	13,5V AC control unit power supply input – Fed by the toroidal transformer and protected by the fuses on the 230V AC power supply.
1 - 2	INPUT AUX	external power input (ex. Photovoltaic system 12V DC). Note: if this input is used, jump J7 appropriately (see wiring diagram). ATTENTION: POWERING THE CONTROL UNIT WITH AN EXTERNAL SOURCE, ALL THE OTHER 18V DC OUTPUTS BECOME THE SAME AS THE OUTSIDE VOLTAGE.

3 - 6	PEDESTRIAN	N.O. PEDESTRIAN button contact input – commands total opening and closing of motor 1 – governed by dip-switches 2 and 3. (3= PED - 6= COM)
4 - 6	OPEN/CLOSE	OPEN/CLOSE button N.O. input – Controls the opening and closing of the automation and is regulated based on the function of dip-switches 2 and 4. (4= O/C - 6= COM)
5 - 6	STOP	STOP button N.C. input – Stops the automation in any position, temporarily preventing the automatic closure, if programmed. (5= STOP - 6= COM)
7 - 8	INTERNAL PHOTOCELLS	PHOTOCELL OR SAFETY DEVICE input INSIDE the gate (Normally Closed contact). When these devices trigger during the opening phase, they temporarily stop the gate until the obstacle has been removed; during the closing phase they stop the gate and then totally open it again. (7= COM - 8= CLOSE)
7 - 9	EXTERNAL PHOTOCELLS	PHOTOCELL OR SAFETY DEVICE input OUTSIDE the gate (Normally Closed contact). Then these devices trigger during the closing phase, they stop the gate and then totally open it again. (7= COM - 9= FOT) Note: the photocell transmitter must always be supplied by terminals no. 12 and no. 13, since the safety system test (phototest) is carried out on it. Without this connection, the control unit does not work. To override the testing of the safety system, or when the photocells are not used, set dip-switch no. 6 to OFF.
7 - 10	SENSITIVE EDGE	SENSITIVE EDGE input (resistive sensitive edge or fixed safety edge); Works only when the gate is opening; temporarily stops the gate and partially closes it by about 20 cm in order to allow the obstacle to be removed. (7= COMMON - 10= SENSITIVE EDGE)
11 - 12	AUX	auxiliary circuits output 18V DC max. 15 W for photocells, receivers, etc... (11= NEGATIVE - 12= POSITIVE)
12 - 13	TX PHOTOCELLS	18V DC output for transmitter photocell – phototest - max. no. 1 photocell transmitters. (12= POSITIVE - 13= NEGATIVE)
14 - 15	FLASHING LIGHT (LED CABINET)	18V DC max. 20W output for flashing light supply, flashing signal supplied by the control unit, rapid for closing, slow for opening. (14= POSITIVE - 15= NEGATIVE)
16 - 17	GATE OPEN LIGHT	Output for OPEN GATE LIGHT 18V DC, 3 w max; while the automation opens the light flashes slowly, when the automation is open it stays on and while closing it flashes at twice the speed. (16= POSITIVE - 17= NEGATIVE)
16 - 18	ELECTRIC LOCK	18V DC, 15 W output for electric lock. (16=POSITIVE - 18= NEGATIVE)
19 - 20	2 nd CH RADIO	2 nd radio channel output - for control of an additional automation or for switching on lights, etc... (N.O. clean contact) Warning: to connect other devices to the 2nd Radio Channel (area lighting, pumps, etc.), use an additional auxiliary relay (see note at end of paragraph).
21 - 22	AERIAL	plug-in radio-receiver aerial input , for 433.92 MHz receivers only. (21= GROUND - 22= SIGNAL)
23 - 24	MOTOR (M2)	motor (M2) supply output 18V DC max. 50 W. (23= POSITIVE - 24= NEGATIVE)
25 - 26 - 27	ENCODER (M2)	encoder supply and input (25= WHITE signal - 26= BLUE negative - 27= BROWN positive)

28 - 29	MOTOR (M1)	motor (M1) supply output 18V DC max. 50 W. (28= POSITIVE - 29= NEGATIVE)
30 - 31 - 32	ENCODER (M1)	encoder supply and input (30= WHITE signal - 31= BLUE negative - 32= BROWN positive)

IMPORTANT:

- Do not connect auxiliary relays or other devices to the 18 V DC output (terminals 11 – 12) to avoid malfunctions of the control unit. Use separated power supply / transformers instead;
- do not connect switching feeders or similar apparatus close to the automation that may be a source of disturbance.

LOGIC ADJUSTMENTS

Make the logic adjustments.

Note: when any adjusting devices (trimmers or dip-switches) on the control panel are operated, a complete manoeuvre must be carried out in order for the new settings to take effect.

TRIMMER

T.R.A. This trimmer may give some extra seconds – other than the ones already set in learning mode – to the second gate leaf closing delay. Unless necessary, leave it to the minimum value. By turning the trimmer clockwise will increase the extra the second gate leaf closing delay;

T.C.A. Automatic Closing Time adjustment: from about 1 to 120 seconds (see dip-switch no. 1);

FR. obstacle detection sensitivity adjustment.



Note: by rotating the TRIMMER FR. clockwise the sensitivity of the gear-motor to obstacles diminishes and therefore the thrust force increases; **vice-versa**, by rotating it counter-clockwise, the sensitivity of the gearmotor to obstacles increases and therefore the thrust force diminishes.

Dip switch

1	AUTOMATIC CLOSING	On	when completely open, closure is automatic after the set time on the T.C.A. trimmer has past.
		Off	the closing manoeuvre requires a manual command.
2	2 / 4 STROKE	On	when the automation is operating, a sequence of opening/closing commands causes the automation to OPEN-CLOSE-OPEN-CLOSE, etc.
		Off	in the same conditions, the same sequence of commands causes the automation to OPEN-STOP-CLOSE-STOP-OPEN-STOP, etc. (step-by step function) (see also dip switch 4).
3	CLOSES AGAIN AFTER THE PHOTOCCELL	On	after the photocell is activated (input 7 - 9), the automation closes automatically after 5 seconds.
		Off	function off.
4	NO REVERSE	On	the automation ignores the closure command during opening.
		Off	the automation responds as established by dip switch No. 2.
5	PRE-FLASHING	On	the pre-flashing function is enabled.
		Off	the pre-flashing function is disabled.
6	FOTOTEST	On	the “photocell test” function is enabled.
		Off	the “photocell test” function is disabled.

Note: to be used when the photocells are not used.

7	2 nd RADIO CHANNEL	On	2 sec. monostable function: when the impulse from the remote control is received, the contact is activated and remains like this for 2 seconds.
		Off	Active bistable function: when the impulse from the remote control is received, the contact is activated and remains like this till the following impulse.
8	MOTORS SELECTION	On	enables just one motor (M1).
		Off	enables 2 motors.

9-10-11 Automation type selection

Dip 9	Dip 10	Dip 11	Automation
Off	Off	Off	ARM up to 400 Kg; EASY12QR; ZIP12
On	Off	Off	ARM more than 400 Kg
Off	On	Off	R18
On	On	Off	R40
Off	Off	On	B12ENC
On	Off	On	not used
Off	On	On	not used
On	On	On	not used



IMPORTANT: In case the automation type change, a new setting of the dials # 9, 10 and 11 will be required. Before the new setup, however, it is necessary to proceed to a **HARD RESET** (see page 24) of the controller.

12	SENSITIVE EDGE	On	RESISTIVE SENSITIVE EDGE (terminal No. 10).
		Off	FIXED EDGE (NC contact – terminal No. 10).

MEMORIZATION PROCEDURE

WARNING: After powering the control panel, wait 2 seconds before you start performing the adjustment operations.

Note: the mechanical stops of the automation must be regulated both in opening and in closing [see motor instructions].

When you have completed the installation procedures:



Check the position of dip-switches 9, 10 and 11. Dip-switches must be set according to the automation model (see table of dip-switches 9-10-11, “Logic adjustments” section).

Press without releasing the PROG button till the DL8 LED starts flashing (yellow):

- the automation starts to open slowly looking for the opening limit stop;
Note: if the automation does not work, check the input connections. The DL6, DL5, DL4 and DL3 green LEDs must be on.
- once the limit stop is reached, the automation starts closing looking for the closing limit stop (in this phase the control unit gathers all the parameters regarding the run);
- the automation carries out one complete opening to optimize the opening power;
- after a short pause, the automation carries out one complete closure to optimize the closing power.

WARNING:

- The procedure can be stopped by pressing the STOP button.
- During the various stages of the operation, if the sensor is activated saving is stopped. To restart the procedure from the beginning (with the DL8 yellow LED flashing), use the API/CH control, the remote control (if programmed) or press the PROG button briefly.



Please remember that an obstacle during saving is interpreted as a mechanical limit stop (the system does not start any safety operation, it just stops the motors). Make sure you don't stand near the automation during saving.

D749MA CHARACTERISTICS

TIMER-OPERATED OPENING AND CLOSING CYCLES

The opening/closing of the automation can be controlled by means of a timer that has a free N.O. output contact (relay). The timer must be connected to terminals 4 - 6 (OPEN/CLOSE button) and can be programmed so that, at the desired opening time, the relay contact closes until the desired closing time (when the timer's relay contact opens, enabling the automatic closing of the gate).

Note: the automatic closing function must be enabled by setting Dip-switch no. 1 to ON).

BATTERY CHARGER BOARD (INTEGRATED)

If the battery is connected the automation will operate in any case if there is no mains power supply. If the voltage drops below 11.3 Vdc, the automation ceases to operate (the control unit remains fed); whereas, when the voltage drops below 10.2 Vdc, the card completely disconnects the battery (the control panel is no longer fed).

OBSTACLE DETECTION

If the obstacle detection function (which can be set through trimmer FR) is activated during an opening manoeuvre, the gate closes approx. 20 cm., if it is activated during a closing manoeuvre, the gate opens all the way .



WARNING: the control panel logics may interpret mechanical friction as an obstacle.

DIAGNOSTICS LED

DL1 - Red PEDESTRIAN button LED signal

DL2 - Red OPEN/CLOSE button LED signal

DL3 - Green STOP button LED signal

DL4 - Green CLOSE button LED signal

DL5 - Green PHOTOCCELL LED signal

DL6 - Green SENSITIVE EDGE LED signal

LED - DL7

Apart from highlighting the presence of the battery, LED DL7 displays any mistakes with a series of pre-set flashes in various colours:

Key:

● led always on;

◐ led flashing;

● always on (green): **fully-charged battery, main voltage present;**

● always on (yellow): **battery charging;**

● 1 flash every 4 seconds (green): **fully-charged battery, no main voltage;**

Check the main voltage;

● 1 flash every 4 seconds (yellow): **external power, charger disabled;**

● 1 flash every 2 seconds (red): **low battery;**

Charge the battery, replace the battery;

● fast flashing (red): **faulty battery;**

Replace the battery;

LED - DL8

The DL8 LED indicates mistakes in the board logic with a series of pre-set flashes in different colours:

Key:

● led always on;

◐ led flashing;

● 1 flash every 4 seconds (green): **normal operation;**

● / ● alternate flashing (red/green):	saving to be performed;
● fast flashing (yellow):	saving in progress;
● 1 flash (red):	phototest error <i>Disable phototest (dip-switch 6 OFF), check the operation of the photocells and their connection;</i>
● 1 flash (yellow):	unknown status, next operation REALIGNMENT;
● 2 flashes (red):	obstacle for motor 1; <i>Make sure there are no obstacles across the path of the gate and that it slides smoothly;</i>
● 2 flashes (yellow):	obstacle for motor 2 <i>Make sure there are no obstacles across the path of the gate and that it slides smoothly;</i>
● 3 flashes (red):	no motor 1 encoder signal; <i>Check wiring, check encoder by TEST-ENCODER (optional);</i>
● 3 flashes (yellow):	no motor 2 encoder signal; <i>Check wiring, check encoder by TEST-ENCODER (optional);</i>
● 4 flashes (red):	no motor 1 signal; <i>Check wiring, check the motor rotates freely and is powered directly by the battery, check fuse F5;</i>
● 4 flashes (yellow):	no motor 2 signal; <i>Check wiring, check the motor rotates freely and is powered directly by the battery, check fuse F5;</i>
● 5 flashes (red):	max current limit for motor 1 exceeded; <i>Excessive absorption peaks of the gearmotor, check there are no obstacles on the automation path, check the current absorption of the motor when in a no-load condition and when applied to the gate,</i>
● 5 flashes (yellow):	max current limit for motor 2 exceeded; <i>Excessive absorption peaks of the gearmotor, check there are no obstacles on the automation path, check the current absorption of the motor when in a no-load condition and when applied to the gate,</i>
● 6 flashes (red):	auto-close failed after 5 unsuccessful attempts; <i>A command input is necessary to perform closing operation;</i>
● 8 flashes (red):	Eeprom external memory fault; <i>Replace the external memory module;</i>
● 8 flashes (yellow):	Eeprom data error (internal/external); <i>Reset the radio channel;</i>

Apart from the logic mistakes, the DL8 LED indicates also the status of the control unit during the saving of the radio controls.

● always on (green):	channel CH1 waiting to be saved;
● fast flashing (green):	CH1 channel memory full;
● always on (yellow):	channel CH2 waiting to be saved;
● fast flashing (yellow):	CH2 channel memory full;
● flashing (green):	CH1 channel waiting to be cancelled;
● always on (green):	cancelling of channel CH1 in progress;

○ flashing (yellow):	CH2 channel waiting to be cancelled;
● always on (yellow):	cancelling of channel CH2 in progress;

When LEDs DL7 and DL8 flash at the same time they indicate:

flashing ● + ● (red + red):	factory reset procedure waiting for confirmation;
flashing ○ + ○ (yellow + yellow):	waiting for total cancellation of the radio channels;

Multiple errors are signalled by a 2-second pause between signals.

Should the encoder (obstacle detection) activates while closing, the controller will reverse the direction and slowly open until the leaf reaches its fully opened position. Auto Close function will be deactivated until a further command pulse is given. In case of 5 consecutive safety interventions the controller will progressively increase the Auto Close delay. Once the closing has been successfully achieved, the Auto Close delay will go back to standard setting.

RESTORING AUTOMATIC OPERATION

Should the Bar need to be operated manually, use the release system. After the manual operation:

- after a Mains Power Failure, such as a black-out (controller remains disconnected for a certain time), the automation will be moving slowly to allow the Controller to establish its Limits (REALIGNMENT procedure);
- after a Manual Operation without Mains Power Failure (controller remains connected) it will take 4 to 5 complete cycles to complete the realignment procedure. During these cycles, Limits and Soft-Stops will not be working.

433.92 MHz BUILT-IN RADIO RECEIVER

The radio receiver can learn up to a maximum of 86 rolling codes (BUG2R, BUG4R, K-SLIM-RP, T-4RP) which can be set on the two channels as required.

The first channel directly commands the control board for opening the automatic device; the second channel commands a relay for a N.O. no-voltage output contact (terminals 19 - 20, max. 24V AC, 1 A) and the third channel controls directly the pedestrian opening from the controller.

LEARNING SYSTEM FOR RADIO CONTROL DEVICES

CH1 = 1st channel (OPEN/CLOSE)

CH2 = 2nd channel

CH3 = 3rd channel (PEDESTRIAN)

- 1_ Press button CH1 briefly to associate a radio control device with the OPEN/CLOSE function;
- 2_ the (green) DL8 LED is ON to indicate the code learning mode has been activated (if no code is entered within 10 seconds the board exits the programming function);
- 3_ press the button of the relative radio control device;
- 4_ the (green) DL8 LED turns off to indicate saving is complete and then on again immediately waiting for other radio control devices (if this is not the case, try to re-transmit or wait 10 seconds and restart from point 1);
- 5_ to memorise codes to other radio control devices, press the key to be stored on other devices within 2-3 sec. After this time (DL8 LED turns off) must repeat the procedure from point 1 (up to a maximum of 86 transmitters);
- 6_ if you wish to save on the 2nd channel, repeat the procedure from point 1 using the CH2 key instead of CH1 (in this case the DL8 LED is yellow);
- 7_ to program transmitters into the third channel, repeat procedure from point 1 using CH1 and CH2 buttons at the same time (DL8 will turn on red);
- 8_ to exit the learning mode without memorising a code, press button CH1 or CH2 briefly.



If the maximum number of radio controls is reached (86), the LED DL8 will begin to flash rapidly for about 3 seconds but without performing memorisation.

REMOTE PROGRAMMING BY MEANS OF T-4RP and K-SLIM-RP (V 4.X)

With the new version of software V 4.X it is possible to carry out the remote self-learning of the new version of transmitters T-4RP and K-SLIM-RP (V 4.X), that is without pressing the receiver's programming buttons.

It will be sufficient to have an already programmed transmitter in the receiver in order to start the procedure of remote programming of the new transmitters. Follow the procedure written on the instructions of the transmitter T-4RP and K-SLIM-RP (V 4.X).

CANCELLING CODES FROM RADIO CONTROL DEVICES

- 1_ Keep button CH1 pressed for 3 seconds in order to cancel all the associated radio control devices;
- 2_ LED DL8 flashes slowly to indicate that the cancellation mode has been activated;
- 3_ press button CH1 again for 3 seconds;
- 4_ LED DL8 turns off for approx. 3 seconds and then remains steady to indicate that the code has been cancelled;
- 5_ repeat the procedure from point 1 using button CH2 to cancel all the associated radio control devices;
- 6_ repeat procedure from point 1 using CH1 and CH2 buttons at the same time to erase all transmitters programmed into the third channel;
- 7_ to exit the learning mode without memorising a code, press button CH1 or CH2 briefly.

RADIO MEMORY RESET:

- press without releasing keys CH1 and PROG till LEDs DL7 and DL8 start flashing quickly with a yellow light. At this point release the keys and press them again till the LEDs go off confirming the operation is complete (if they are not pressed the board reverts to normal operation after about 12 seconds).

HARD RESET (factory setting):

- press without releasing keys CH2 and PROG till LEDs DL7 and DL8 start flashing quickly with a red light. At this point release the keys and press them again till the LEDs go off (reset in progress), confirming the operation is complete (if they are not pressed the board reverts to normal operation after about 12 seconds); When the unit starts again saving will be required.

MALFUNCTIONS: POSSIBLE CAUSES AND SOLUTION

The automation does not start

- a- Check there is 230V AC power supply with the multimeter.
- b- Check, in the standard mode, that the NC contacts on the board are really normally closed (4 green LEDs on).
- c- Set dip-switch 6 (phototest) OFF.
- d- Increase the FR trimmer to the limit.
- e- Check that the fuses are intact with the multimeter.

The radio control has very little range

- a- Check that the ground and the aerial signal connections have not been inverted.
- b- Do not make joints to increase the length of the aerial wire.
- c- Do not install the aerial in a low position or behind walls or pillars.
- d- Check the state of the radio control batteries.

The gate opens the wrong way

Invert the motor connections on the terminal block (terminals 28 and 29 for M1; terminals 23 and 24 for M2).