



P-650ZIPPO

230 V electromechanical gate operator. Max. gate leaf 3 m.

P-650ZIPPOB

DC electromechanical gate operator. Max. gate leaf 3 m.



**Accessories for
ZIPPO series**
Page 126



Further accessories:
Transmitters page 238
Photocells page 243
Flashing lights
page 246

FEATURES:

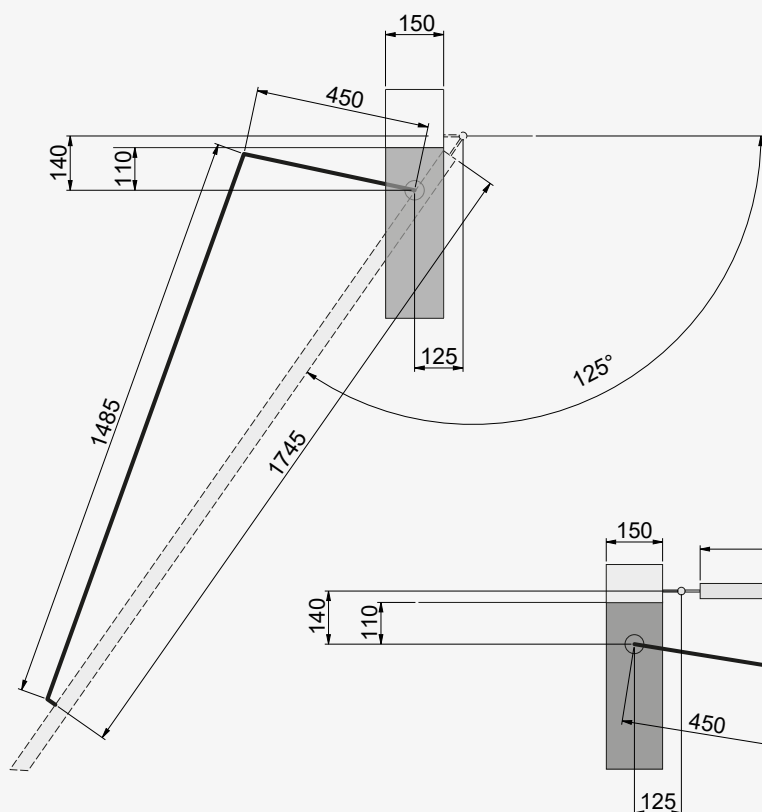
- residential/industrial use
- for gates leaves up to 3 m
- 12/230 V gate operator
- electromechanical motor
- easy and intuitive installation
- ideal for small sizes pillars

PROS 18 V:

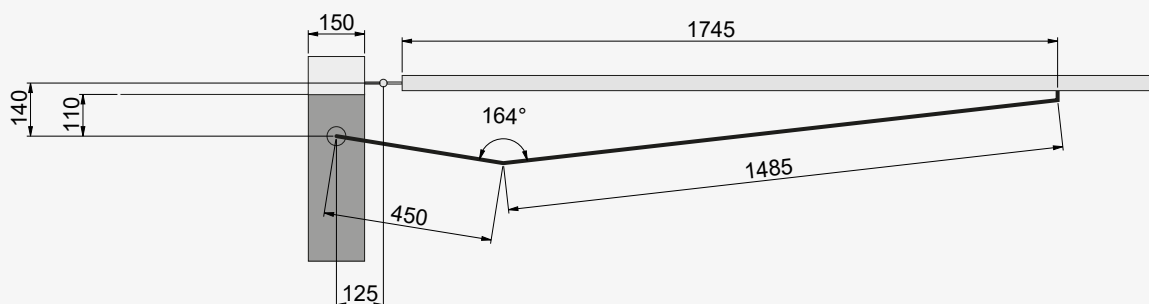
- optical encoder technology
- DC operator
- obstacle detection and crush prevention

PROS 230 V:

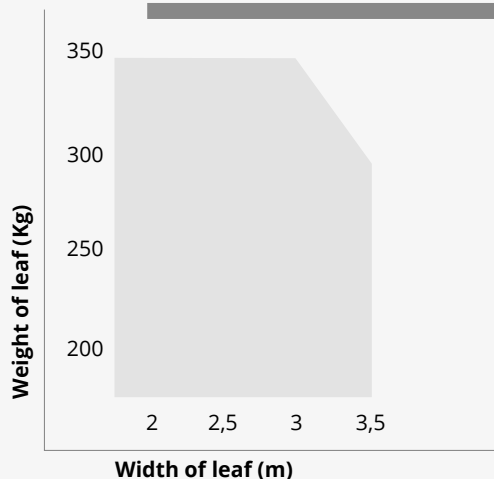
- built-in electrical limit switches
- high torque and power



TECHNICAL DRAWINGS



LIMIT TO USE



Technical features	ZIPPO	ZIPPOB
Power supply	230 V AC (50 - 60 Hz)	230 V AC (50 - 60 Hz)
Motor power supply	230 V AC	18 V DC
Absorption	1 A	1 A
Power rating	190 W	250 W
Opening time 90°	8-13 s	7-11 s
Duty cycle	50 %	100%
Operating temperature	-20° C ÷ +55° C	-20°C +55°C
Motor thermal protection	150° C	-
Degree of protection IP	IP 44	IP 44
Control unit to match	D770M	D749MA

ACCESSORIES

COMMON ACCESSORIES



P-700BAP
Gate stopper for heavy leaves



P-700BAP1
Gate stopper for light leaves



P-700BAP2
Gate stopper wall/floor mount



P-650ESV1 / P-650ESV2
Vertical electric lock recommended for leaves longer than 3 m (1=LEFT - 2=RIGHT)



P-300TCODE
Cable digital keyboard with backlit keys and BUS signal transmission complete with decoder



P-650ES1 / P-650ES2
Horizontal electric lock recommended for leaves longer than 3 m (1=LEFT - 2=RIGHT)



P-900TOWERF
Painted aluminum column for photocells with 1 hole h49 cm



P-250SM126
Memory card for 126 radio codes

P-250SM254
Memory card for 254 radio codes

P-250SM1022
Memory card for 1022 radio codes



P-900OPTIC
Set of infrared safety photocells, 12/24 V, surface mount, beam alignment adjustable up to 15°, up to 20 m range



P-900VLED
Low voltage 12-18-24 Volt white led flashing light



P-250T-CONNECT
Ethernet + Wi-Fi device - to enable through Tau Open 2.0 application, the use of the smartphone remotely, to open/close and check the status of the gate



P-250T-WIFI
Device for Wi-Fi connection 2,4 GHz to allow the smartphone to remotely control and program the control units via TauApp



P-900PIVOTL
Set of two adjustable photocells with temporary and fixed courtesy light



P-650CVS
Curved manual lock



P-750CUP
Control unit enclosure protective lid



P-750COL
Control unit mounting post

18/24 VOLT ACCESSORIES



P-750D749MA

Electronic control unit for one or two DC gate operators with encoder, complete with 433,92 MHz rolling code radio receiver, battery charger, transformer and enclosure



P-750D749MA-R

Electronic control unit for 1-2 DC fast operators with encoder, complete with 433,92 MHz rolling code radio receiver, battery charger, transformer and enclosure



K-200BATT

12 Volt Battery, 7,2 Ah



K-030KITKB20

Battery cables kit (20 pcs)



M-030000CC50

Multicore cable (2 x 2.5 sq.mm + 3 x 0.5 sq.mm)



Use only M-030000CC50 cable or equivalent

230 VOLT ACCESSORIES



P-750D770M

Electronic control unit for one or two 230 V gate operators with soft-stop and built-in 433,92 MHz rolling code radio receiver, complete with enclosure

Use and maintenance manuals



ZIPPOXL



ZIPPO



D749MA



D749MA-R



D770M



GUIDA ALL'INSTALLAZIONE

INSTALLATION GUIDE

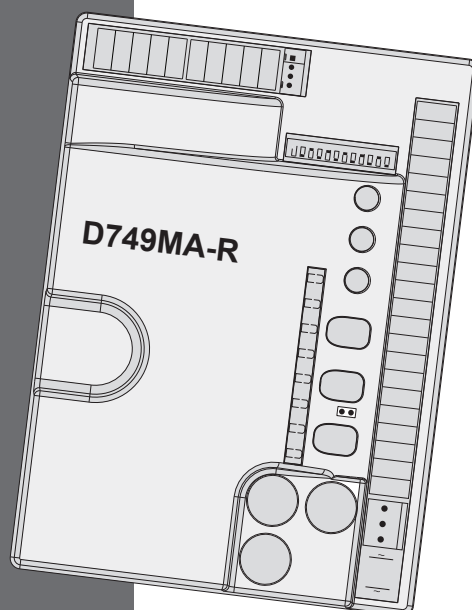
INSTALLATIONSANLEITUNG

NOTICE D'INSTALLATION

GUÍA PARA LA INSTALACIÓN

GUIA DE INSTALAÇÃO

D749MA-R



Ver. Firmware 8.xx

D-MNL0D749MA-R 05-06-2024 - Rev.20

IT - Istruzioni originali



MADE IN
ITALY



SCHEMA
CABLAGGIO
D749MA-R

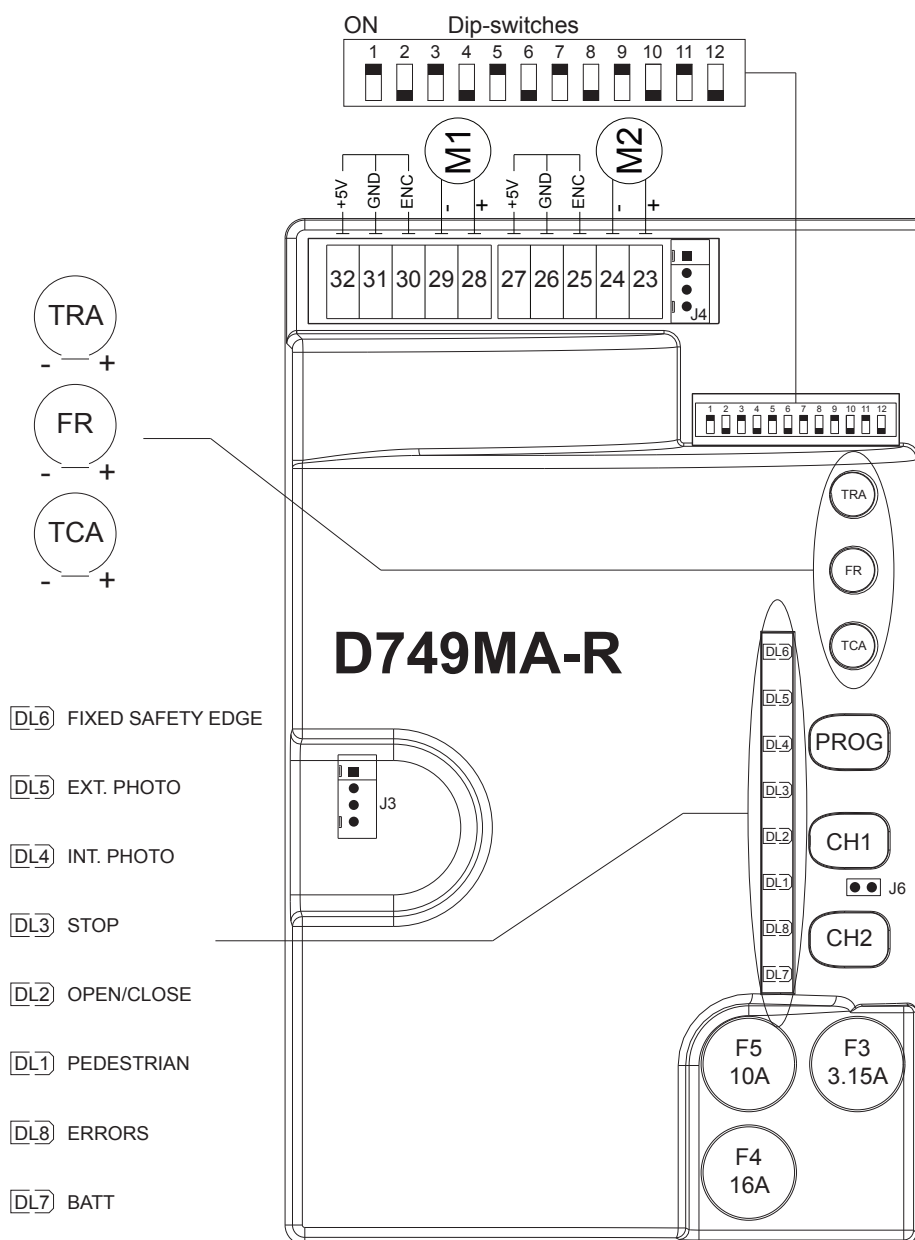
D749MA-R
WIRING
DIAGRAM

SCHALTPLAN
DER
D749MA-R

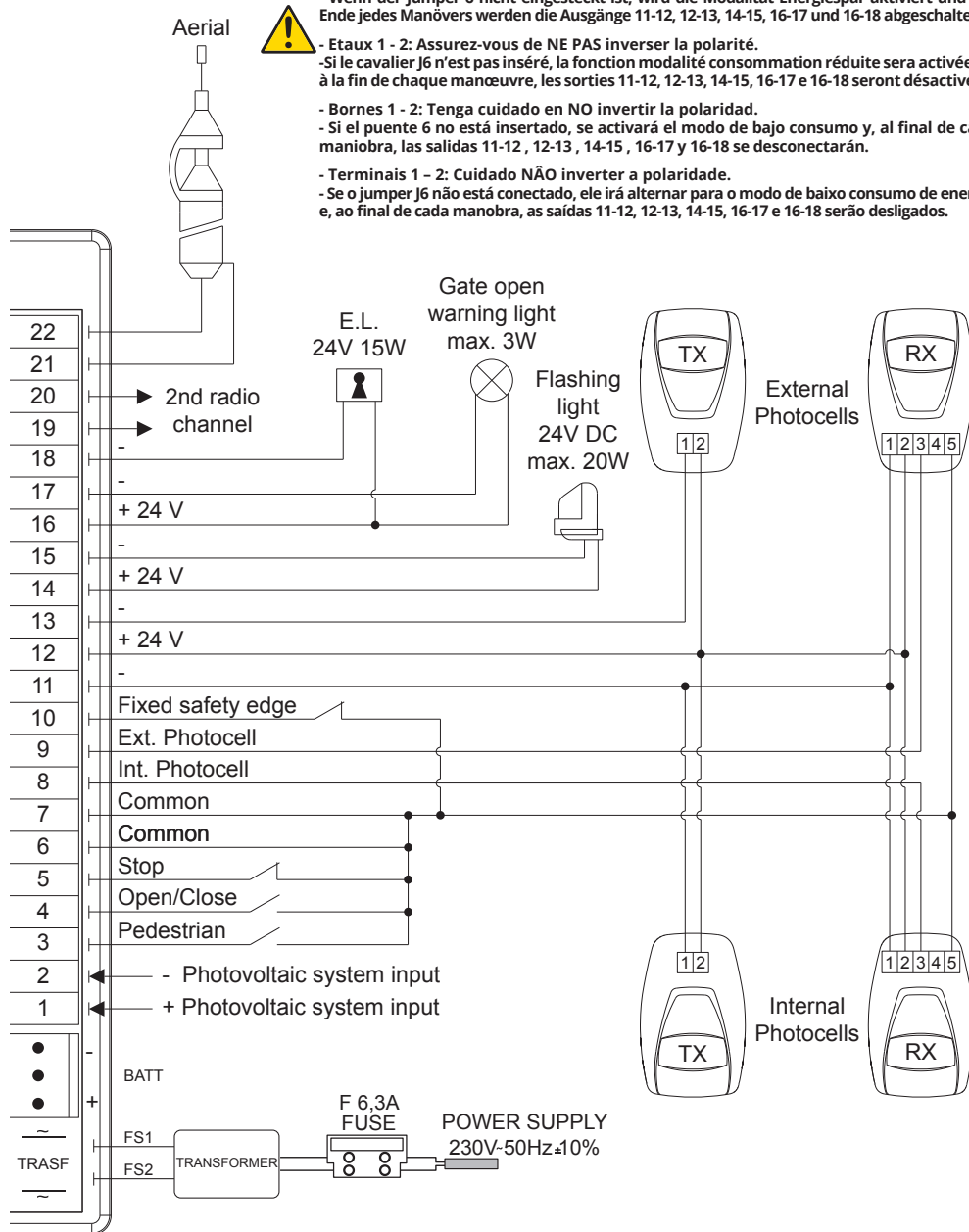
SCHÉMA
CÂBLAGE
D749MA-R

ESQUEMA DEL
CABLEADO
D749MA-R

ESQUEMA
DE LIGAÇÕES
D749MA-R



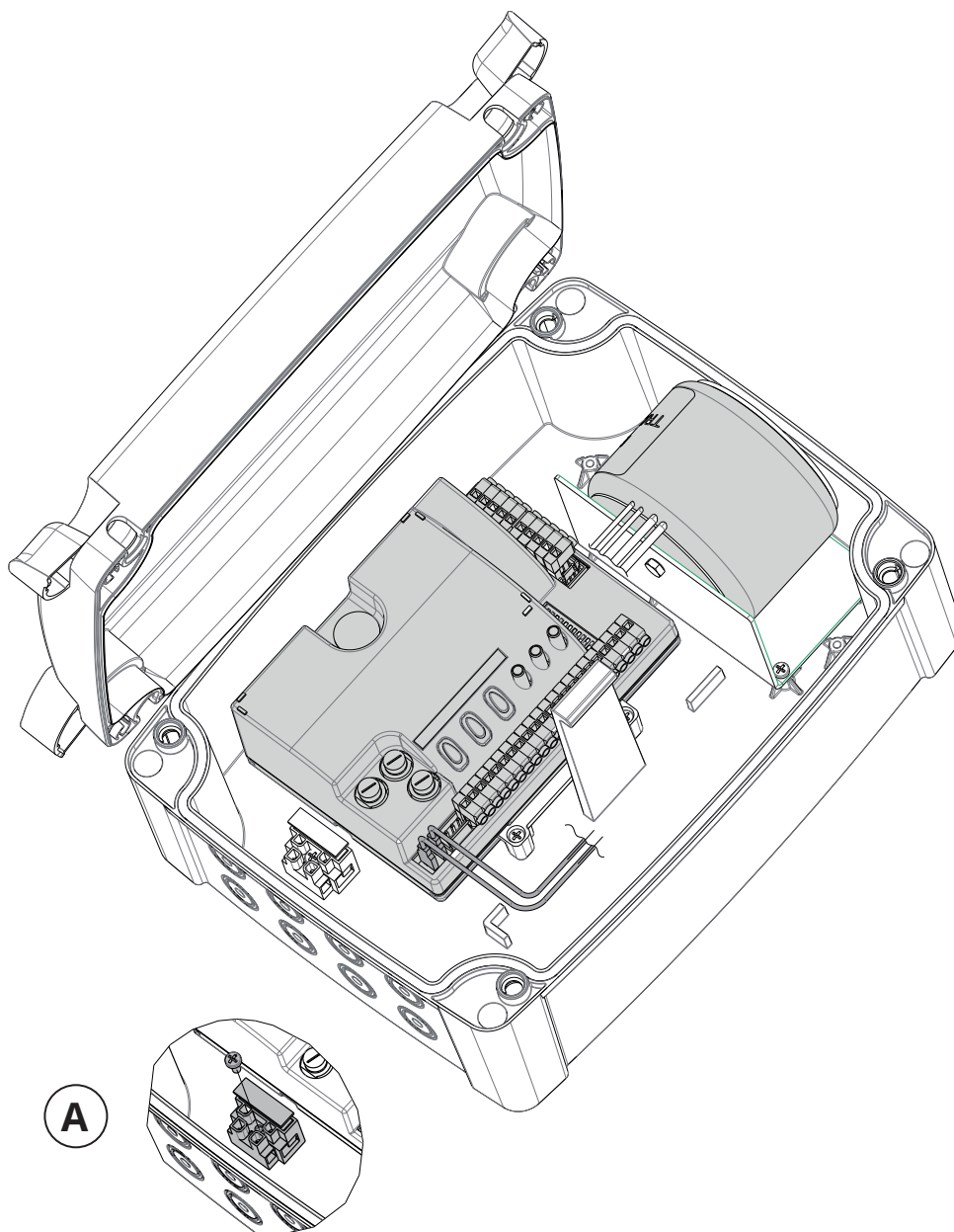
- Morsetti 1 - 2: Attenzione a NON invertire la polarità.
- Se il jumper 6 non è inserito, verrà attivata la modalità basso consumo e, al termine di ogni manovra, le uscite 11-12, 12-13, 14-15, 16-17 e 16-18 verranno spente.
- Terminals 1 - 2: Careful NOT to invert polarity.
- If Jumper 6 is not plugged in, energy saving mode will be activated and, at the end of each manouvre, outputs 11-12, 12-13, 14-15, 16-17 and 16-18 will be switched off.
- Klemmen 1 - 2: Achtung: Nicht verpolen.
- Wenn der Jumper 6 nicht eingesteckt ist, wird die Modalität Energiespar aktiviert und am Ende jedes Manövers werden die Ausgänge 11-12, 12-13, 14-15, 16-17 und 16-18 abgeschaltet.
- Eaux 1 - 2: Assurez-vous de NE PAS inverser la polarité.
- Si le cavalier J6 n'est pas inséré, la fonction modalité consommation réduite sera activée et, à la fin de chaque manœuvre, les sorties 11-12, 12-13, 14-15, 16-17 et 16-18 seront désactivées.
- Bornes 1 - 2: Tenga cuidado en NO invertir la polaridad.
- Si el puente 6 no está insertado, se activará el modo de bajo consumo y, al final de cada maniobra, las salidas 11-12, 12-13, 14-15, 16-17 y 16-18 se desconectarán.
- Terminais 1 - 2: Cuidado NÃO inverter a polaridade.
- Se o jumper J6 não está conectado, ele irá alternar para o modo de baixo consumo de energia e, ao final de cada manobra, as saídas 11-12, 12-13, 14-15, 16-17 e 16-18 serão desligados.



COME FISSARE LA
CENTRALE D749MA
SULLA SCATOLA

HOW TO FIX THE
D749MA CONTROL
UNIT ON THE BOX

WIE MAN DAS D749MA
STEUERGERÄT AN DER
BOX BEFESTIGT

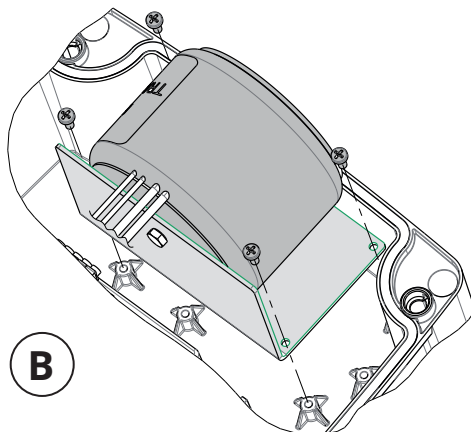


PORTAFUSIBILI

COMMENT FIXER
L'UNITÉ DE CONTRÔLE
D749MA À LA BOÎTE

CÓMO FIJAR LA UNIDAD
DE CONTROL D749MA A
LA CAJA

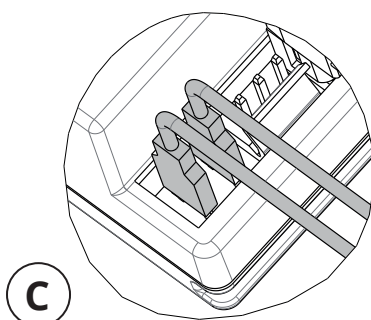
COMO FIXAR A UNIDADE
DE CONTROLE D749MA
NA CAIXA



TRASFORMATORE

A Portafusibili
Fuse holder
Sicherungshalter
Porte-fusible
Portafusibles
Fusível

B Trasformatore
Transformer
Transformator
Transformateur
Transformador
Transformador



COLLEGAMENTO FASTON
A CENTRALE

C Collegamento faston a centrale
Faston connection to control
unit
Faston-Verbindung zum Steu-
ergerät
Connexion Faston au panneau
de commande
Conexión Faston al panel de
control
Conexão Faston ao painel de
controle

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-R 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-R 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.

ATTENTION:

- **For correct operation, you have to use the TAU cable cod. M-030000CC50 for connecting the motors to the control unit or cables with a section of not less than 2.5 mm²**
- **Install the control unit near the motors, so that the motor cable length reaches 12 m max.;**
- **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;**
- **In case of long sections of cables (> 20 m) for N.O./N.C. controls (e.g. OPEN / CLOSE, STOP, PEDESTRIAN, etc.), in order to avoid gate malfunctions, it will be necessary to uncouple the various controls using RELAYS or using our 750T-RELE device.**

1. CONTROL PANEL FOR ONE-TWO 24V MOTORS WITH ENCODER

- LOGICS WITH MICROPROCESSOR
- STATUS OF INPUTS SIGNALLLED BY LEDs
- INCORPORATED FLASHING CIRCUIT

- ENCODER SENSOR FOR SELF-LEARNING OF TRAVEL
- 433.92 MHz 3 CHANNEL BUILT-IN RADIO RECEIVER (CH)
- BATTERY CHARGER BOARD (INTEGRATED)
- BATTERY CONNECTOR
- DIAGNOSTICS OF MALFUNCTIONS SIGNALLLED BY LED
- POSSIBILITY OF ENERGY SAVING OPERATION
- COMPATIBILITY WITH OUR APPS: TAUOPEN AND TAUAPP

2. INTRODUCTION

The D749MA-R 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.

3. TECHNICAL CHARACTERISTICS

Board power supply	230 V AC - 50 Hz
Max. absorption DC motor	5 A - 24 V DC
Fast acting fuse for protection of input power supply 13,5 V AC (F4 - 5x20)	F 16A
Fast acting fuse for battery charger protection (F5 - 5x20)	F 10A
Fast acting fuse for protection of auxiliary circuits 18 V DC (F3 - 5x20)	F 3.15A
Motor power supply circuits voltage	24V DC
Auxiliary device circuits supply voltage	24V DC
Logic circuits supply voltages	5V DC
Operating temperature	-20 °C ÷ +55 °C

4. CONNECTIONS TO TERMINAL BOARD

Terminals	Function	Description
FS1 - FS2	POWER SUPPLY	18V AC control unit power supply input – Fed by the toroidal transformer and protected by the fuses (F 6,3A) on the 230V AC power supply.
1 - 2	PHOTOVOLTAIC SYSTEM INPUT	external power input (ex. Photovoltaic system 12V DC). NB: In the latest versions of the control boards, the voltage change through jumper J7 is no longer necessary (make sure whether it is present on the control board or not). ATTENTION: POWERING THE CONTROL UNIT WITH AN EXTERNAL SOURCE, ALL THE OTHER 24V 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. Bridge the connectors if not used. (5= STOP - 6= COM)

7 - 8	INTERNAL PHOTOCELLS	PHOTOCELL OR SAFETY DEVICE input INSIDE the automation (Normally Closed contact). When these devices trigger during the opening phase, they temporarily stop the automation until the obstacle has been removed; during the closing phase they stop the automation and then totally open it again. Bridge the connectors if not used. (7= COM - 8= CLOSE)
7 - 9	EXTERNAL PHOTOCELLS	PHOTOCELL OR SAFETY DEVICE input OUTSIDE the automation (Normally Closed contact). Then these devices trigger during the closing phase, they stop the automation and then totally open it again. Bridge the connectors if not used. (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	SAFETY EDGE input (Resistive sensitive edge or with n.c. contact - see DIP SWITCH 12). During the opening phase, it temporarily stops the gate and makes it close again for about 20 cm, thus allowing to free the potential obstacle. During the closing phase, it stops the gate and makes it totally reopen at a limited speed. In this case, if programmed, the automatic closing will be inhibited. Jumper terminals if not used. (7 = COMMON - 10 = SENSITIVE EDGE) NOTE: if a resistive sensitive edge is connected, set dip-switch no. 12 to ON; If a fixed safety edge with NC contact is connected, set dip-switch no. 12 to OFF;
11 - 12 **	AUX	auxiliary circuits output 24V DC max. 15 W for photocells, receivers, etc... (11= NEGATIVE - 12= POSITIVE) If the jumper J6 is not plugged in, at the end of each maneuver this output (11 and 12) will be switched off (energy saving mode).
12 - 13 **	TX PHOTOCELLS	24V DC output for transmitter photocell - phototest - max. no. 1 photocell transmitters. (12= POSITIVE - 13= NEGATIVE)
14 - 15 **	FLASHING LIGHT (LED CABINET)	24V 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 24V 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	24V DC, 15 W output for electric lock. (16=POSITIVE - 18= NEGATIVE) For the connection of the device it is recommended to use cables with a cross section of 1.5 mm². We recommend the use of a relay to control the electric lock
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). WARNING: the default outlet is active monostable 2 sec. To switch it to active bistable or to modify the activation time it is necessary to use the TAUPROG hand-held programmer (see relative instructions).
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 24V DC (23= POSITIVE - 24= NEGATIVE) use 2.5 mm ² cables
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 24V DC (28= POSITIVE - 29= NEGATIVE) use 2.5 mm ² cables

30 - 31 - 32	ENCODER (M1)	encoder supply and input (30= WHITE signal - 31= BLUE negative - 32= BROWN positive)
J3	MEMORY CARD	Quick plug-in for MEMORY CARD connection for transmitters codes.
J4	AUX	Quick coupling for the connection of the T-WIFI and T-CONNECT devices

* The outlets can be configured using the TAUPROG or TAUAPP (T-WIFI) (see relative instructions). The standard configuration is shown in the table.

** If Jumper J6 is not plugged in, energy saving mode will be activated and, at the end of each manoeuvre, outputs 11-12, 12-13, 14-15, 16-17 and 16-18 will be switched off.

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.**

5. 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. FR. Automatic Closing Time adjustment: from about 1 to 120 seconds (see dip-switch no. 1); obstacle detection sensitivity adjustment.



Note: by rotating the TRIMMER FR. clockwise the sensitivity of the gearmotor 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 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 and auto-close time.
		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: leave OFF when photocells are not used.

7	OPENING RAM BLOW	On	the "opening ram blow" function is on. This permits the release of the electric lock (to be used only in the presence of an electric lock);
		Off	the "opening ram blow" function is off;
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-BR up to 200 Kg or leaf less than 3 m.; EASY-BR;
On	Off	Off	ARM-BR over 200 kg and leaf less than 3 m; EASY-BR;
Off	On	Off	not used
On	On	Off	R40-R
Off	Off	On	BIUNO-BT
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 dips # 9, 10 and 11 will be required. Before the new setup, however, it is necessary to proceed to a HARD RESET (see page 26) of the controller.

12	SENSITIVE EDGE	On	RESISTIVE SENSITIVE EDGE (terminal No. 10).
		Off	NC CONTACT SENSITIVE EDGE (terminal No. 10). Note: if not used, keep the DIP in the OFF position.

6. 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).

It is recommended to start the learning process with the gate at 0,5 m from closing mechanical stop. Press without releasing the PROG button till the DL8 LED starts flashing (yellow):

- the automation starts to open slowly looking for the opening limit gate stop;



If the automation closes instead of opening, stop the run of the gate (by cutting the photocells or closing the STOP contact), invert the polarity of the motor that closes, take the gate in the closed position (on the mechanical stop) and restart the procedure from the beginning.

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 gate stop is reached, the automation starts closing looking for the closing limit gate 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 AP/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.

7. D749MA-R 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 automation closes approx. 20 cm., if it is activated during a closing manoeuvre, the automation opens all the way.



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

8. DIAGNOSTICS LED

DL1 - Red	PEDESTRIAN button LED signal
DL2 - Red	OPEN/CLOSE button LED signal
DL3 - Green	STOP button LED signal
DL4 - Green	INTERNAL PHOTOCELLS LED signal
DL5 - Green	EXTERNAL PHOTOCELLS 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; <i>Check the main voltage;</i>
○ 1 flash every 4 seconds (yellow):	power supply through photovoltaic panel (terminals 1-2), battery charger disabled
○ 1 flash every 2 seconds (red):	low battery; <i>Charge the battery, replace the battery;</i>
○ fast flashing (red):	faulty battery; <i>Replace the battery;</i>

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 automation and that it slides smoothly;</i> <i>With an active automatic closing feature, after the intervention meant to detect the obstacle, the automatic closing is deactivated. A command pulse is required to carry out the closing;</i>
● 2 flashes (yellow):	obstacle for motor 2 <i>Make sure there are no obstacles across the path of the automation and that it slides smoothly;</i> <i>With an active automatic closing feature, after the intervention meant to detect the obstacle, the automatic closing is deactivated. A command pulse is required to carry out the closing;</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>
● 7 flashes (red):	Sensitive edge safety intervention <i>A command pulse is required to carry out the closure;</i>
● 8 flashes (red):	Eeprom external memory fault; <i>Replace the external memory module;</i>
● 8 flashes (yellow):	Eeprom data error (internal/external); <i>Perform procedure RADIO MEMORY RESET;</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;

● always on (red):	channel CH3 waiting to be saved;
○ fast flashing (red):	CH3 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;
○ flashing (red):	CH3 channel waiting to be cancelled;
● always on (red):	cancelling of channel CH3 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 laef 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.

9. RESTORING AUTOMATIC OPERATION

Should the automation 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.

10. 433.92 MHz BUILT-IN RADIO RECEIVER

The radio receiver can learn up to a maximum of 30 codes of rolling code (S2RP, S4RP, K-SLIM-RP, T-4RP) to be set freely on 3 channels.

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 CH1+CH2 = 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 (30), the LED DL8 will begin to flash rapidly for about 3 seconds but without performing memorisation.

REMOTE PROGRAMMING BY MEANS OF T-4RP / K-SLIM-RP / S-2RP / S-4RP (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 / K-SLIM-RP / S-2RP / S-4RP (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 / K-SLIM-RP / S-2RP / S-4RP (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.

MEMORY CAPACITY

The code memory capacity* can be expanded from 30 to 126, 254 or 1022 codes (transmitters) by replacing the memory cards as follows (plug them onto J3 connector, see wiring diagram):

126	codes	Art.	250SM126
254	codes	Art.	250SM254
1022	codes	Art.	250SM1022

* Control units are supplied with a standard built-in 30-code memory. The memory card for enhancing the code memory capacity must be ordered separately.

To allow the previously stored codes (max. 30) to be moved to the control unit, it is required to install a memory card, making sure that the control unit is at that time off and that the memory card is brand new and therefore completely empty.

When the control unit is restarted, the codes will automatically move to the memory card.

Moving the codes from the control unit to the memory card does not work if on the memory card used, radio control codes have already been stored and the memory card has been subsequently erased.

To insert new radio controls, the operation described above shall be repeated.



WARNING: Control unit must be turned OFF to insert / remove a memory card.

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.



In case of Hard Reset the memory of the radio receiver will not be erased: all existing transmitters remain programmed.

11. SET-UP FOR OPERATION WITH TAU APPS

In order to use the TauApp and TauOpen apps, it will be necessary to connect to input J4 of the D749MA-R control unit using the supplied cable, the respective T-WIFI and T-CONNECT devices. To activate the operation of the apps see the respective instructions.

12. 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 automation opens the wrong way

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

13. GUARANTEE: GENERAL CONDITIONS

TAU guarantees this product for a period of 24 months from the date of purchase (as proved by the sales document, receipt or invoice).

This guarantee covers the repair or replacement at TAU's expense (ex-works TAU: packing and transport at the customer's expense) of parts that TAU recognises as being faulty as regards workmanship or materials.

For visits to the customer's facilities, also during the guarantee period, a "Call-out fee" will be charged for travelling expenses and labour costs.

The guarantee does not cover the following cases:

- If the fault was caused by an installation that was not performed according to the instructions provided by the company inside the product pack.
- If original TAU spare parts were not used to install the product.
- If the damage was caused by an Act of God, tampering, overvoltage, incorrect power supply, improper repairs, incorrect installation, or other reasons that do not depend on TAU.
- If a specialised maintenance man does not carry out routine maintenance operations according to the instructions provided by the company inside the product pack.
- Wear of components.

The repair or replacement of pieces under guarantee does not extend the guarantee period. In case of industrial, professional or similar use, this warranty is valid for 12 months.

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

Declares under its sole responsibility, that the product: *electronic control unit* designed for automatic movement of: *Swing Gates*

for use in a: *Residential / Communities*

complete with: *Radioreceiver and battery charger board*

Model: *D749MA-R*

Type: *D749MA-R*

Serial number: *see silver label*

Commercial name: *Control panel for one-two 24V motors with encoder*

Has been produced for incorporation on an access point (*swing gate*) or 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:

- **2014/35/EU Low Voltage Directive**

- **2014/30/EU Electromagnetic Compatibility Directive**

and, where required, with the Directive: - **2014/53/EU 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 following standards and technical specifications are applied: EN 61000-6-2; EN 61000-6-3; EN 60335-1; ETSI EN 301 489-1 V1.9.2; ETSI EN 301 489-3 V1.6.1; EN 300 220-2 V2.4.1; EN 12453:2000; EN 12445:2000; EN 60335-2-103.

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

Sandrigo, 06/06/2017

Legal Representative


Loris Virgilio 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