M-PLUS2 CONTROL UNIT

INSTALLATION, USE AND MAINTENANCE INSTRUCTIONS

VIDEO youtube

CAUTION

Before installing the unit, read the instructions carefully and follow the directions given.
Failure to follow the directions given below could cause damage and serious accidents.
Keep the instructions even if they are always available on the manufacturer's website.

SAFETY WARNINGS

- Disconnect the voltage and check the absence of voltage before carrying out installation or maintenance operations.
- Assembly, programming, putting into operation and maintenance of the product must be carried out only by qualified technical personnel able to perform an assessment of the risks deriving from the installation and use of the product and to adopt adequate safety measures.
- Protect the product from rain, humidity and aggressive environmental conditions.
- If more than one control unit is used, to correctly operate the radio receiver we recommend that they be installed at a distance of at least 3 meters from each other.
- Instruct the end user on safe operation and use of the product, in consideration of the risks associated with its use.
- Do not allow children to play with the device and keep them away from the remote controls.

From now on the manufacturer declines all responsibility for damage to persons or things due to improper use of the product, failure to follow the instructions provided, incorrect installation and connection to an electrical system that does not comply with current regulations.

Any changes or additions to the product must be authorized by the manufacturer, under penalty of forfeiture of any form of guarantee and the invalidity of the EC declaration of conformity.

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1. PRODUCT DESCRIPTION

The M-PLUS control unit is a single-phase electronic control unit with a built-in radio receiver designed for the automation of rolling shutters.

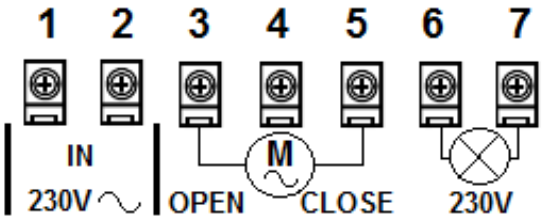
2. GENERAL TECHNICAL CHARACTERISTICS

Power supply:	230 VAC 50-60Hz 4.5W
Flashing output:	230 VAC 40 W
Motor output:	230 VAC 1400 W
Auxiliary Power supply output:	12 VAC 2.8VA
Button inputs:	12 VDC
Operating temperature:	from -20 to +55° C.
Radio receiver:	433.92 MHz
Radio codes that can be Programmed:	75 Open, 75 Close or 75 P/P
Code combinations:	72 million codes
Radio codes programming:	self-learning
Sensitivity:	greater than -100dbm
Reception range:	standard 50m (10m Dead Man)
Antenna:	incorporated
Box size	224x135x68mm
Box Material	ABS V-0 (IP 54).

3. ELECTRICAL CONNECTIONS DIAGRAM

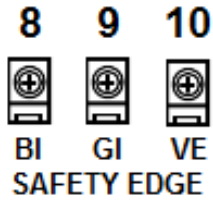
CON. 1

1 – Input **230 Vac LINE** (Phase).
2 – Input **230 Vac LINE** (Neutral).
3 - Output open **MOTOR** (OPEN)
4 - Output common **MOTOR** (M)
5 - Output close **MOTOR** (CLOSE)
6 - Output 230 **Vac FLASHING LIGHT** (Neutral).
7 - Output 230 **Vac FLASHING LIGHT**(Phase).



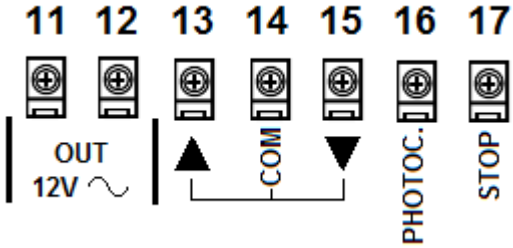
CON. 2

8 - BI (White) **SAFETY EDGE/LIGHT BARRIER** input (SAFETY EDGE)
9 - GI (Yellow) **SAFETY EDGE/LIGHT BARRIER** input (SAFETY EDGE)
10 - VE (Green) **SAFETY EDGE/LIGHT BARRIER** input (SAFETY EDGE)



CON. 3

11 - Service power output **12 VAC** 2.8VA
12 - Service power output **12 VAC** 2.8VA
13 - Input **LOW VOLTAGE BUTTON** Opens ↑ (N.O.)
14 - Input Common GND **LOW VOLTAGE BUTTON**
15 - Input **LOW VOLTAGE BUTTON** Closes ↓ (N.O.)
16 - Input **PHOTOCELL** - NC safety device (PHOTOC)
17 - Input **LOW VOLTAGE BUTTON (STOP)** (N.O.)

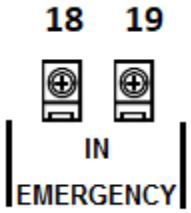


CON. 4

External **M-TOUCH PUSH-BUTTON PANEL** connection

CON. 5

18 - Input **EMERGENCY** (N.O.)
19 - Input **EMERGENCY** (N.O.)

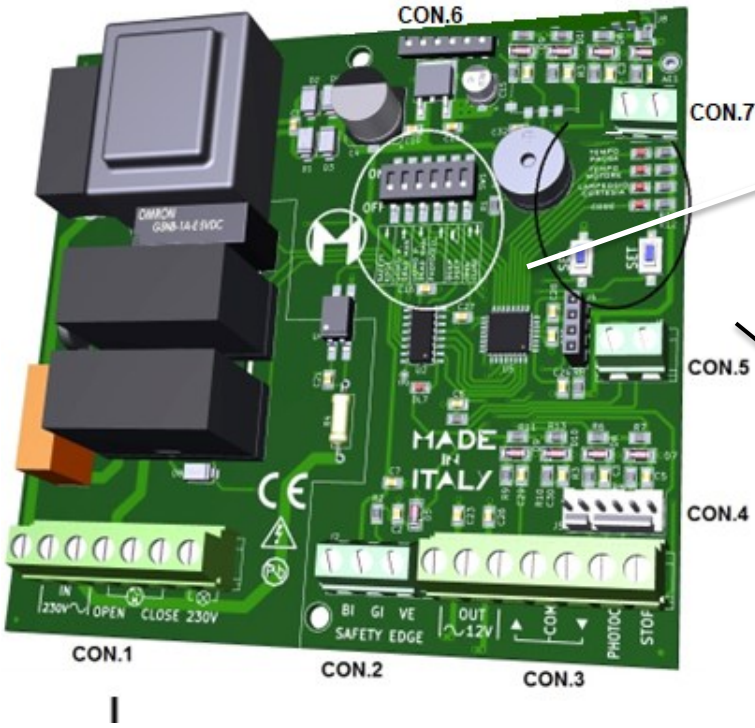


CON. 6
Connection **DISPLAY CYCLE COUNTER**

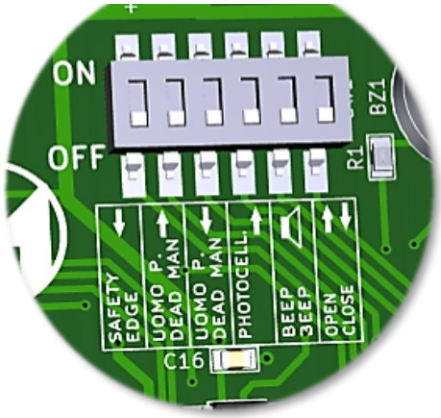
CON. 7
20 – Input **OMNIDIRECTIONAL ANTENNA RG58: EARTH**
21 – Input **OMNIDIRECTIONAL ANTENNA RG58: HOT POLE**

NOTES:
Since the control unit is not equipped with any sectioning device, with reference to the 230VAC power supply, always provide a suitable disconnecting switch in compliance with standard EN 12453.

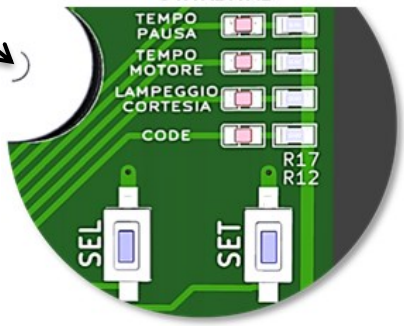
ELECTRICAL CONNECTIONS DIAGRAM



ADVANCED FEATURES



FUNZ. STANDARD



4. FUNCTIONAL CHARACTERISTICS

The control unit can function step-by-step or with Dead Man

STEP-BY-STEP OPERATION

The opening/closing command is given by **a simple impulse**.
The control unit is set on step-by-step operation which remains active if the DIP2 and DIP3 switches are set on OFF in the ADVANCED FUNCTIONS.
By programming a remote control as described on page 5 (L1 CODE), or using a low voltage button, the following operation is obtained:

- **REMOTE CONTROL with 1 programmed key**

The first impulse commands the opening until the motor time programmed with the MOTOR TIME function described on page 6 (L3 T.MOTOR) expires, or until the limit switch is reached.
The second impulse commands the closure.
If an impulse is sent before the motor time expires or the limit switch is reached, the control unit stops the movement.
A further impulse causes the movement to resume in the opposite direction.

- **REMOTE CONTROL with 2 programmed keys**

Each key is associated with a direction of the motor (OPEN or CLOSE).
When first pressed the motor starts to operate in the direction associated with the key pressed, until the programmed motor time expires or when the limit switch is reached.
If the same key is pressed again before the motor time expires or the limit switch is reached nothing happens.
If the key opposite to that previously pressed is pressed before the end of the programmed motor time or having reached the limit switch, the motor stops.
If pressed again this will cause the movement to resume in the direction of the key pressed.

- **LOW VOLTAGE BUTTON Opens Closes or Opens Stops Closes**

The low voltage button must be connected to inputs 13 (Opens), 14 (Common) and 15 (Closes).
An **OPEN CLOSE button** can be used, which functions like the two programmed keys of the remote control, or it is possible to use an **OPEN STOP CLOSE button** by turning the DIP6 in the ADVANCED FUNCTIONS to ON (6 OPEN CLOSE↑↓: UNIQUE KEY FUNCTIONS on page 9).
In this case, the movement can only be stopped using the STOP button.
The control unit is designed to incorporate the M-TOUCH push-button panel (page 10) with Open Stop Close operation.

- **AUTOMATIC CLOSURE:**

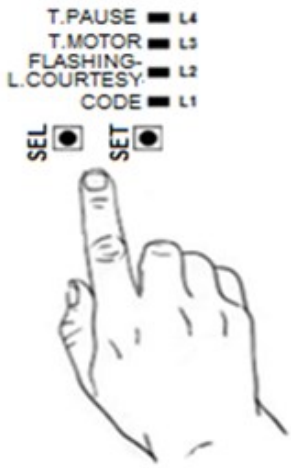
With the control unit it is possible to the start the automatic closure without sending additional commands.
Only by maintaining the **step-by-step operation** is it possible to program automatic closure with the PAUSE TIME function described on page 6 (L4 T. PAUSE).

DEAD MAN OPERATION

The opening/closing command is given by **keeping the button pressed** and not by a simple impulse.
It is activated under ADVANCED FUNCTIONS by moving the DIP2 switch (DEAD MAN IN OPENING) and/or the DIP3 switch (MAN IN CLOSING) to ON as described on page 8.

5. PROGRAMMING

STANDARD FUNCTIONS



Using the **SEL and SET keys** on the control unit it is possible to:
- **store remote controls**
- **select flashing light or fixed courtesy light**
- **define the engine working time**
- **activate automatic close**

SEL KEY

Allows the selection of the function to be programmed.
Press and hold the SEL key for 1sec.
Then press the SEL key several times to select the desired function (L1, L2, L3, L4) whose LED starts flashing**.**
The selection remains active for 10 seconds, after which the control unit returns to the initial state.
The flashing LED indicates the function that can be programmed using the **SET** key.

During programming, the control unit does not respond to commands from the remote control or from the keypad.

SET KEY

Allows the function chosen with the **SEL** key to be activated and programmed.

FUNCTION	LED	ON	OFF
REMOTE CONTROL	**L1 CODE**	Remote codes entered	No remote codes
LIGHT	**L2 FLASHING/COURTESY**	Fixed courtesy light	Flashing lights
WORK TIME	**L3 T. MOTOR**	Programmed time	Infinite time
AUTOMATIC CLOSURE	**L4 T. PAUSE**	Automatic closure	No Automatic Closure

L1 CODE: REMOTE CONTROL PROGRAMMING

Up to 75 remote controls, with different fixed or rolling code, can be memorized.

Programming a 2-button remote control
Press the SEL key and hold for 1sec, then with the SEL key select the LED **L1 CODE** which starts to flash slowly.
On the remote control press the first key to be Programmed as an opening key, an acoustic signal indicates that it has been Programmed and the L1 CODE starts flashing quickly.
Press the second key to be Programmed as a closing key, an acoustic signal indicates that the second key has been saved. The LED **L1 CODE remains steadily lit** indicating that a remote control code has been Programmed in memory. At this point it is possible to program another remote control by exiting and re-entering with the SEL key on the LED L1 which starts flashing again.

Programming a 1-button remote control
The procedure is the same as for the 2-button remote control but the same key is pressed twice, combining it with the opening and closing function.

Rolling Code Function
The rolling code function **can only be combined with KEY-IN rolling code remote controls** (page 12).
If the first Programmed remote control is a KEY-IN model, the control unit can only be combined with this remote control model.
If the first Programmed remote control is not a KEY-IN model, the control unit can be combined with any type of remote control, both with and without rolling code, but will only function with a fixed code.

Wireless Programming
A remote control can be programmed without interacting directly with the control unit.
Press and hold the first coded key of any previously programmed remote control **for 20 seconds**.
The control unit starts the motion and emits a beep at the end of the 20 seconds, indicating the beginning of the programming phase.
At this point, release the key of the previously programmed remote control and press the key or keys of the remote control you intend to memorize, following the same procedure indicated above.
The wireless programming of the remote control is only possible when the motor is turned off.

Cancellation of remote control codes
To cancel all the Programmed remote controls, move to the LED **L1 CODE** and while the LED is flashing **press the SET key for 10 seconds**. If there is a prolonged acoustic signal and the **L1 CODE** LED turns off this indicates that the memory is cleared.

Notes:
Up to a total of **75 remote controls** can be Programmed. In the event that all the remote controls have been memorized, repeating the programming operation the control unit emits 10 acoustic signals signaling that further Programming is not possible.

We recommend the use of original KEY-IN remote controls.

L2 L.FLASHING/COURTESY: FLASHING LIGHT OR FIXED COURTESY LIGHT

A lightbulb of max. 40W can be connected to the 230VAC inputs of the CON.1 terminal block in positions 6 (Neutral) and 7 (Phase).
The control unit is set on the flashing light function. To enable the fixed courtesy light, press **the SEL button twice** to move to the **L2 L.FLASHING / COURTESY** LED which will start to flash.
While the LED is flashing, **press the SET key** until LED L2 remains steadily lit accompanied by an acoustic signal indicating the switch to the Courtesy Light function.
Repeat the operation if you want to restore the previous configuration. In this case, LED L2 turns off, indicating that the flashing function is enabled.

Flashing Light Function: this function is activated whenever automation is in motion, for the duration of the motor time. If a Pause Time is Programmed, the flashing light will be active also during the Pause.

Fixed Courtesy light function: the courtesy light is activated every time an opening command is given. **The light remains on** and will be deactivated 10 seconds after the shutter has been completely closed.

L3 T.MOTOR: PROGRAMMING MOTOR WORKING TIME

The control unit is set with a motor working time of 30 sec.
If a different time is required (**max. 4 min**), proceed with programming (**with the shutter closed**) by pressing the **SEL key 3 times** to move to the **L3 T.MOTOR** LED which will start to flash.
While the LED is flashing, **keep the SET key pressed to start** the shutter opening movement.
When the desired point is reached, **release the SET key**. LED L3 remains steadily lit, accompanied by an acoustic signal indicating the operation was successful.
It is advisable to memorize a longer time than a few seconds after the shutter has reached the limit switch.
If an infinite motor working time is desired, disable the function by positioning the SEL key on the L3 LED and pressing the SET key for less than 1 second while the LED flashes. The LED will turn off indicating that no work time is present (the motor always remains powered).

L4 T.PAUSE: PROGRAMMING PAUSE TIME FOR AUTOMATIC CLOSING

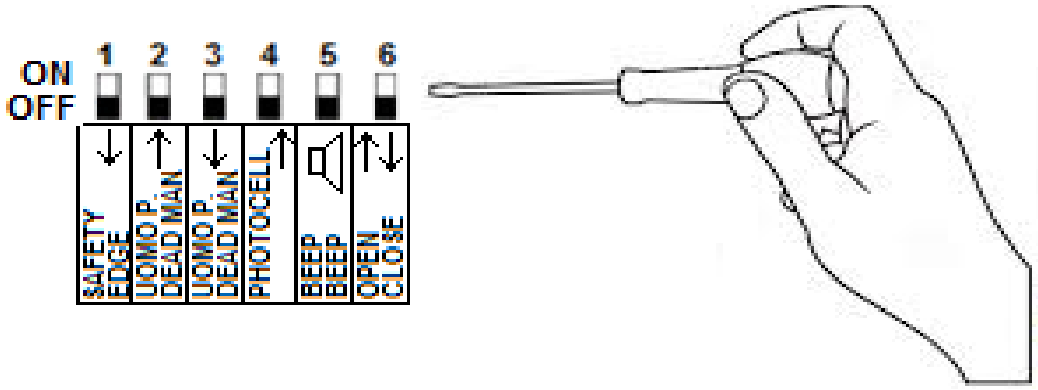
The control unit allows the shutter closure to be automatically activated by programming the pause time **(max. 4 min)** between the moment the opening terminates and when the automatic closing begins. To enable automatic closing, press **the SEL key 4 times** to move to the LED **L4 T. PAUSE** which starts to flash.
While the LED is flashing **keep the SET key pressed**, after one second an acoustic signal indicates the start of the time counting. When the desired time is reached, **release the SET key**. The LED L4 remains steadily lit accompanied by an acoustic signal indicating that the operation was successful.
If you wish to disable the automatic closing, move to the flashing LED L4 and, while the LED is flashing, press the SET key for less than 1 second. The LED L4 turns off indicating that the function is not active and the shutter must be closed with a command.

Notes:
If the automatic closure is activated, it is highly recommended that the safety devices be used (PHOTOCELL and SAFETY EDG).
When the programmed pause time expires, automatic closing starts **only if the photocell is free**. In the presence of an obstacle, the control unit holds the pause until the photocell is free.
When the photocell is free, after 5 seconds the closing begins.
If the DEAD MAN function is activated (DIP2 and/or DIP3 ON) in the ADVANCED FUNCTIONS, the automatic closing is automatically deactivated.

RESET OF ALL FUNCTIONS:

To restore the initial factory configuration, press **the SEL and SET keys simultaneously for 10 sec**.
All the LEDs light up simultaneously and an acoustic signal is emitted (long beep). The LEDs turn off and all the settings are canceled, including the memorized codes but excluding the L3 T.MOTOR LED which remains lit as per initial configuration.

6. ADVANCED FUNCTIONS



The following functions are all set in **disabled** mode with the dip switches in **OFF** position.

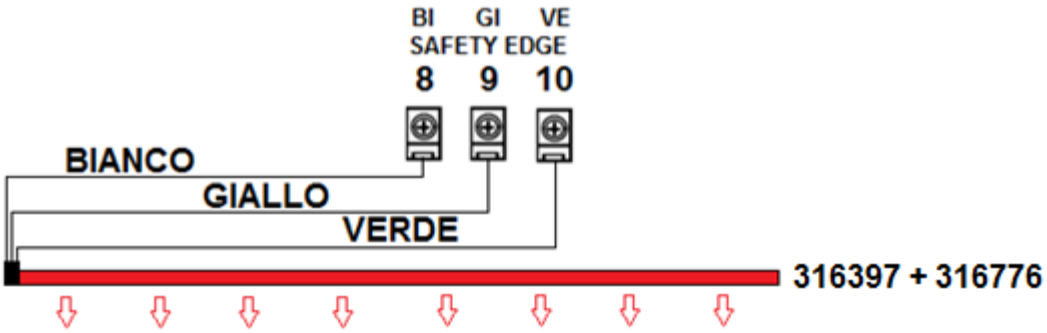
DIP SWITCH	FUNCTION	ON	OFF
1 SAFETY EDGE ↓	Safety edge / Light barrier in Closure	DIP 1 ON	DIP 1 OFF
2 DEAD MAN ↑	Dead man at Opening	DIP 2 ON	DIP 2 OFF
3 DEAD MAN ↓	Dead man at Closure	DIP 3 ON	DIP 3 OFF
4 PHOTOCELL. ↑	Photocell at Opening	DIP 4 ON	DIP 4 OFF
5 BEEP BEEP	Acoustic signal	DIP 5 ON	DIP 5 OFF
6 OPEN CLOSE ↑↓	OPEN (Open ↑) CLOSE (Close ↓)	DIP 6 ON	DIP 6 OFF

1 SAFETY EDGE ↓: SAFETY EDGE / LIGHT BARRIER in CLOSURE

The control unit allows the supply and connection of a safety edge or a light barrier model WITT LIGI07.
The **safety edge**, mounted on the lower edge of the shutter and connected to the control unit with the CON.2 inputs, is activated by setting the **Dip1 to ON.**
The **light barrier**, mounted on the sides of the shutter and connected to the control unit with the CON.2 inputs, is activated by setting the **Dip1 to ON.**

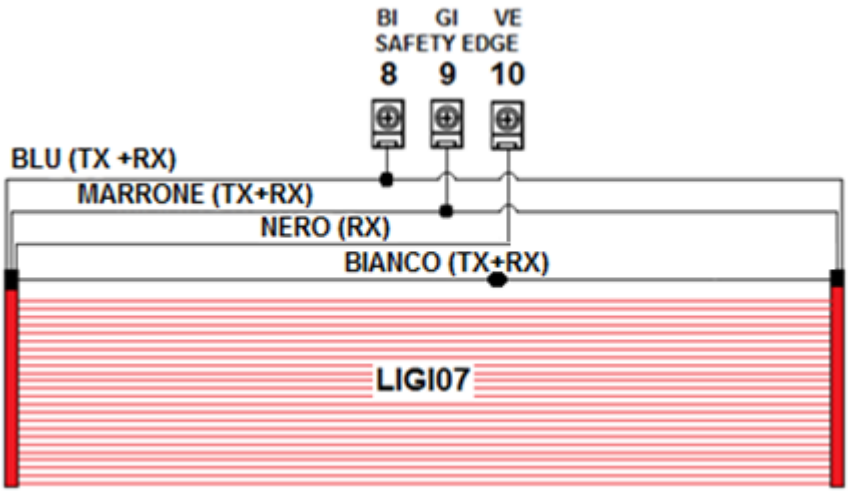
Safety edge connection

8 - BI (White)
9 - GI (Yellow)
10 - VE (Green)



Safety edge connection

8 - BI (BLU - BLUE)
9 - GI (MARRONE-BROWN)
10 - VE (NERO-BLACK)
(BIANCO-WHITE)



The safety edge (TOUCH) and the light barrier (NO TOUCH) intervene in closing when they encounter an obstacle: the control unit reverses the movement of the shutter by starting to open it. If the dead man on opening (Dip2 is ON) described on page 8 is active, the control unit does not reverse but stops moving.

2 DEAD MAN ↑: DEAD MAN AT OPENING

Positioning the **Dip2 to ON**, the opening command is given by keeping the key of the remote control or of the low voltage push-button panel pressed for the entire duration of the movement.
If a safety edge (DIP1 is ON) or photocell is activated at closure and/or at opening (DIP4 is ON), in the presence of an obstacle in closing the control unit does not reverse but stops the movement of the shutter.

3 DEAD MAN ↓: DEAD MAN AT CLOSURE:

Positioning the **Dip3 to ON** the closing command is given by keeping the key of the remote control or of the low voltage push-button panel pressed for the entire duration of the movement.
WARNING: if the DEAD MAN function is activated (DIP2 and/or DIP3 is ON), the automatic closing is automatically deactivated

4 PHOTOCELL ↑: PHOTOCELL AT OPENING

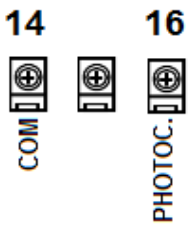
The control unit allows the supply and connection of one or two fixed photocells (connected in series), mounted on the sides of the shutter and connected to the control unit with inputs **14 - 16 in CON.3**

The photocell always intervenes in closing: when it encounters an obstacle, the control unit reverses the movement of the shutter (or stops it if Dip2 is ON) until the opening cycle is completed.
The photocell also intervenes in opening if Dip4 is ON: when it encounters an obstacle, the control unit:
- **in the opening phase** it stops the movement of the shutter.
- **in the closing phase**, it reverses movement for 5 seconds; if within 5 seconds the obstacles are removed from the photocell, the movement continues, otherwise it stops. If Dip2 is ON (dead man in opening), the control unit stops the movement.

Notes:
In the presence of grille shutters it is recommended to activate the photocell during opening.

Photocell Connection (16 PHOTOC)

Note: if not used, this input (**14-16**) must be bridged



ACTIVATION OF SAFETY DEVICES ACCORDING TO THE FUNCTION SET

PHOTOCELL and SAFETY EDGE	PHASE / MOVEMENT	STEP BY STEP (basic setting) DIP2 OFF - DIP3 OFF	DEAD MAN ON OPENING - UP↑ DIP2 ON - DIP3 OFF	DEAD MAN ON CLOSING - DOWN↓ DIP2 OFF - DIP3 ON	DEAD MAN UP↑-DOWN↓ DIP2 ON - DIP3 ON
ACTIVE PHOTOCELL ON CLOSING (DIP4 OFF)	UP ↑	DOES NOT INTERVENE	DOES NOT INTERVENE	DOES NOT INTERVENE	DOES NOT INTERVENE
	DOWN↓	REVERSES MOVEMENT	STOPS MOVEMENT	REVERSES MOVEMENT	STOPS MOVEMENT
ACTIVE PHOTOCELL OPENING-CLOSING (DIP4 ON)	UP ↑	STOPS MOVEMENT	STOPS MOVEMENT	STOPS MOVEMENT	STOPS MOVEMENT
	DOWN↓	REVERSES MOVEMENT FOR 5 SECONDS (*)	STOPS MOVEMENT	REVERSES MOVEMENT FOR 5 SECONDS (*)	STOPS MOVEMENT
ACTIVE SAFETY EDGE / LIGHT BARRIER (DIP1 =ON)	UP ↑	DOES NOT INTERVENE	DOES NOT INTERVENE	DOES NOT INTERVENE	DOES NOT INTERVENE
	DOWN↓	REVERSES MOVEMENT	STOPS MOVEMENT	REVERSES MOVEMENT	STOPS MOVEMENT

(*) if obstacles are removed and the photocell is freed within 5 seconds the motion continues, otherwise it stops

5 BEEP BEEP: ACOUSTIC SIGNAL

Acoustic safety signal (2 beeps)

Activated with **Dip5 ON**: **before starting the opening or closing operation**, the control unit emits **2 acoustic signals (beeps)** to indicate that the motor is about to start.
If a flashing light is connected, the control unit also emits two flashes.

Acoustic warning signal (1 beep)

This function is always active.
In the CLOSED (or OPEN) SHUTTER condition, if the close (or open) key is pressed, the control unit emits an acoustic signal to warn that the shutter cannot start because already completely closed (or open).
If the PHOTOCELL is engaged in closing (or in opening with photocell active in opening, DIP4 is ON), when the closing (opening) button is pressed, the control unit emits an acoustic signal to warn that the shutter cannot start due to an obstacle.

6 OPEN CLOSE ↑↓: UNIQUE FUNCTION OF OPEN (Open) and CLOSE (Close) KEYS

By positioning the **Dip6** on **ON** the control unit assigns the unique function of the **Open, Stop, Close keys**

- of the **low voltage push-button panel** connectable to inputs 13-14-15, or
- of the **M-TOUCH push-button panel** which is connected to the CON.4 and mounted in the center of the control unit cover (as indicated on page 10).

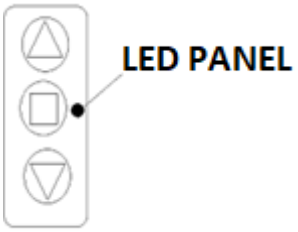
Pressing the Open or Close key starts the motor running in the direction that corresponds to the button pressed until the motor time expires or the limit switch is reached.
If the same key pressed previously is pressed again before the motor time expires or the limit switch is reached, nothing happens.
If the key opposite to that previously pressed is pressed a second time, before the end of the motor time or reaching the limit switch, the motor immediately reverses the direction.
The stop button causes the movement to stop, whatever the maneuver that is in progress.

6. EMERGENCY FUNCTION

The entrance to CON.5 (A1 and A2) is reserved for signaling the **breaking of the compensation spring.**
When the spring breaks the input signal changes from N.O. to N.C. and the control unit activates the DEAD MAN operation (both during opening and closing).
Furthermore, every time an impulse is sent with the remote control or the button, the control unit emits a continuous sound of 5 sec and simultaneously activates the lamp in fixed light mode and no longer intermittently. Also the red LED positioned on the control unit cover near the M-TOUCH pushbutton panel lights up with a steady light.

7. M-TOUCH PUSHBUTTON PANEL

- Power: 5VDC
- Keys output voltage: 5VDC
- Operating temperature: from -20 to +55 °C
- Controls : Open/Stop/Close
- Fixed light LED: Break of balancing spring



Connection of the M-TOUCH push-button panel

Disconnect power to the M-PLUS control unit.
Fasten the push-button panel to the cover of the control unit box by gluing the side of the push-button panel fitted with double-sided tape as shown in figure 1.
Insert the connection cable of the push-button panel in the **CON.4** connector to the mandatory position of the control unit as shown in figure 1.

The push-button panel is provided with a LED indicator. It is visible on both side of the circuit.

If you want to see from outside, on the box door, the signal **of the compensation spring breaking** and **number of cycles**, it is necessary to make a small hole (3mm) on the box door as indicated on the inside part of it.

Otherwise, the Led light will only be visible opening the box door.

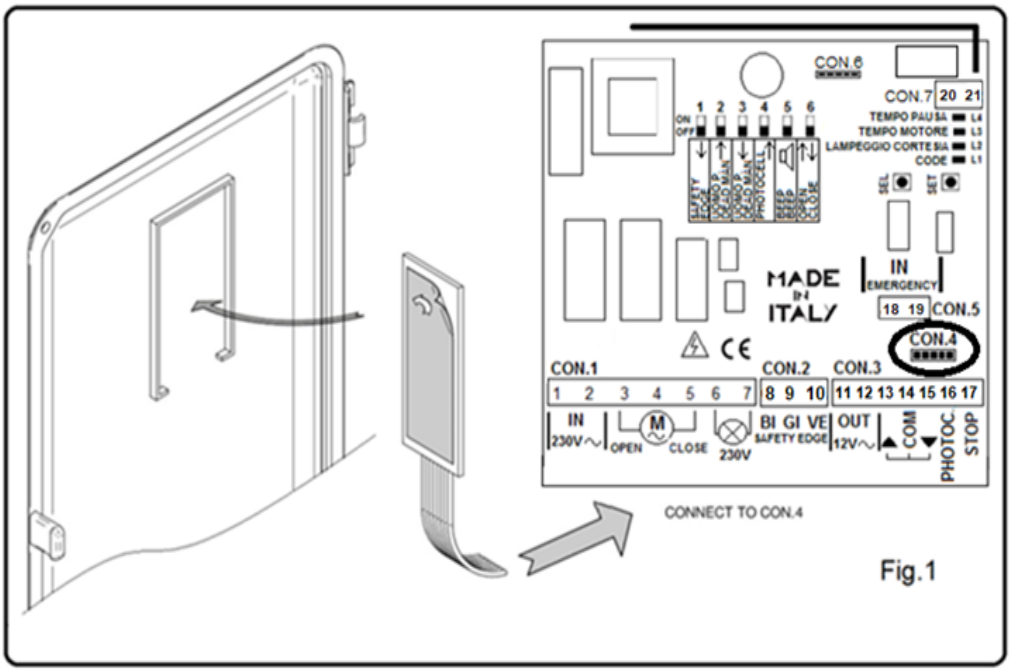


Fig.1

LED BUTTON PANEL	Turned on fixed	Compensation spring breaking

This light signal will only occur if the EMERGENCY FUNCTION is activated.

LED BUTTON PANEL	LED light blinking	Number of cycles

The control unit records the number of cycles made from the shutter.
After the thousand cycles:
_**1.000** cycles – the LED does **1** blink - pause - **1** blink… sequentially up to 2000 cycles;
_**2.000** cycles – the LED does **2** blinks - pause - **2** blinks… sequentially up to 3000 cycles;
_**3.000** cycles – the LED does **3** blinks - pause - **3** blinks… sequentially up to 4000 cycles;
_**4.000** cycles – the LED does **4** blinks - pause - **4** blinks… sequentially up to 5000 cycles;
and so on.

Declaration of Conformity
The manufacturer declares that the product M-TOUCH Pushbutton Panel complies with the specifications of the EMC Directive 2004/108/EC and LVD Directive 2014/35/EU.

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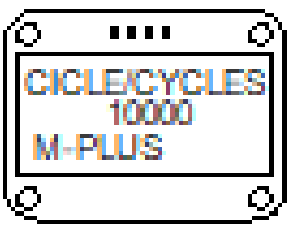
Administrator

CE

8. DISPLAY CYCLE COUNTER

The display shows cycles (cycle = up + down) made from the shutter.
The control unit records the numbers of cycles made.
The numbers of cycles cannot be zeroed or cancelled. It is possible to see them only using the display.
The display can be connected into CON.6 only in absence of electrical power.
The display can be disconnected from CON.6 only in absence of electrical power.
The display can be permanently installed on the control unit or as needed and then removed.



DISPLAY CYCLE COUNTER Connection

Disconnect power to the M-PLUS2 control unit to insert or to disconnect the **DISPLAY CYCLE COUNTER** into the control unit plug **CON.6** as shown in figure 2.

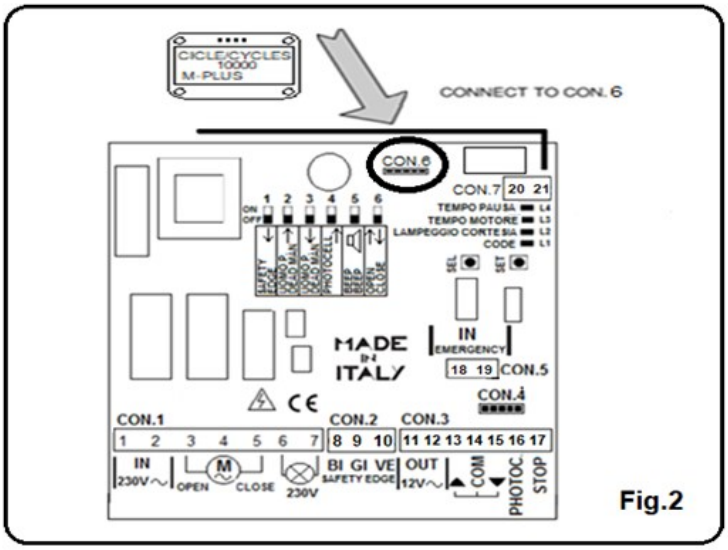


Fig.2

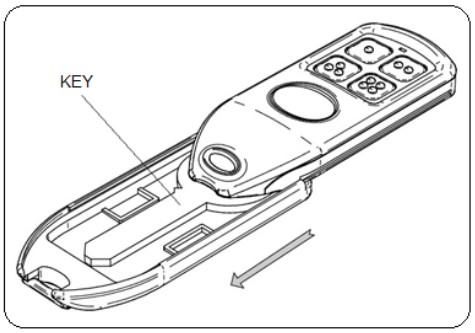
9. OMNIDIRECTIONAL ANTENNA RG58

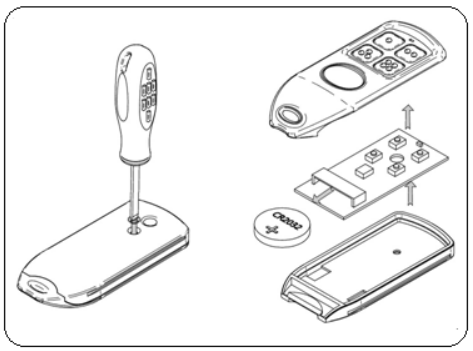
ANTENNA Connection
It is suggested to use the Omnidirectional Antenna RG58 in case of poor reception or in case of advanced functions Dead Man at Opening (Dip 2 ON) and Dead Man at Closure (Dip 3 ON)

CON.7
20 - **EARTH** input
21 - **HOT POLE** input

10. KEY- IN REMOTE CONTROL

- Transmission channels: 4
- Working frequency: 433.92MHz;
- Coding: 66 bit rolling code
- Lithium battery power supply: 3Vdc (CR 2032)
- Effective remote power: <10Mw;
- Consumption: <20mA
- Operating temperature: -20÷60°C
- Dimensions: 75x32x8,7mm





Warning: The batteries must be disposed of in the appropriate bins according to the regulations in force.

Declaration of Conformity
The manufacturer declared that the product KEY-IN Remote Control complies with the following regulations:
European Directive RED 2014/53/UE
Harmonized regulations: EN 301 489-3: v2.1.1. (2019-03) ; EN 300 220-2: v3.2.1 (2018-06)

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11. EUROPEAN REFERENCE STANDARDS AND DECLARATION OF CONFORMITY:

Machine Directive 2006/42/EC
UNI EN 12453:2017 Industrial, commercial and garage doors and gates - Safety in use of motorized doors - Requirements and test methods
UNI EN 12978: 2009 - Protective devices for motorized doors and gates
CEI EN 60335-1: 2012-01 Safety of household and similar electrical appliances - Part 1: General rules
CEI EN 61000-6-2: 2016-05 Electromagnetic compatibility (CEM) Part 6-2
Generic standard - Immunity to interference in an industrial environment
CEI EN 61000-6-3: 2011-09 Electromagnetic compatibility (CEM) Part 6-3
Generic standard - Interference emission in residential, commercial and industrial environments, as well as for small businesses.

An integral part of this manual are:

Incorporation statement
Pursuant to the Machinery Directive 2006/42/EC for a partly completed machinery Annex II Part B

Declaration of conformity
The manufacturer hereby declares that the product M-PLUS CONTROL UNIT is compliant with the following Directives: RED 2014/53/EU, EMC 2014/30/EU, LVD 2014/35/EU, ROHS3 2015/863/CE

The M-PLUS CONTROL UNIT is designed exclusively for the control of motors used to automate rolling shutters, in order to allow the installer to meet the regulatory obligations, in particular the following regulations:

Applied standards:
UNI EN 12453:2017
UNI EN 12978: 2009-10
CEI EN 60335-1: 2012-01
CEI EN 61000-6-2: 2016-05
CEI EN 61000-6-3: 2011-09

The technical file is deposited at the manufacturer's technical office and can be shown to the authorities in charge upon motivated request.

Pursuant to EC Directive 2006/42/EC partly completed machinery is intended exclusively for assembly or implementation in other machines (or other partly completed machinery/incomplete systems), in order to build a complete machine under this Directive.

The start-up of this product is prohibited until it is ensured that the machine/complete system inside of which it is installed complies with the requirements of the aforementioned Directives.
The safety of the final installation and the compliance with all regulations is under the responsibility of those who carry out the assembly or implementation in other machines in order to build a complete machine.

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