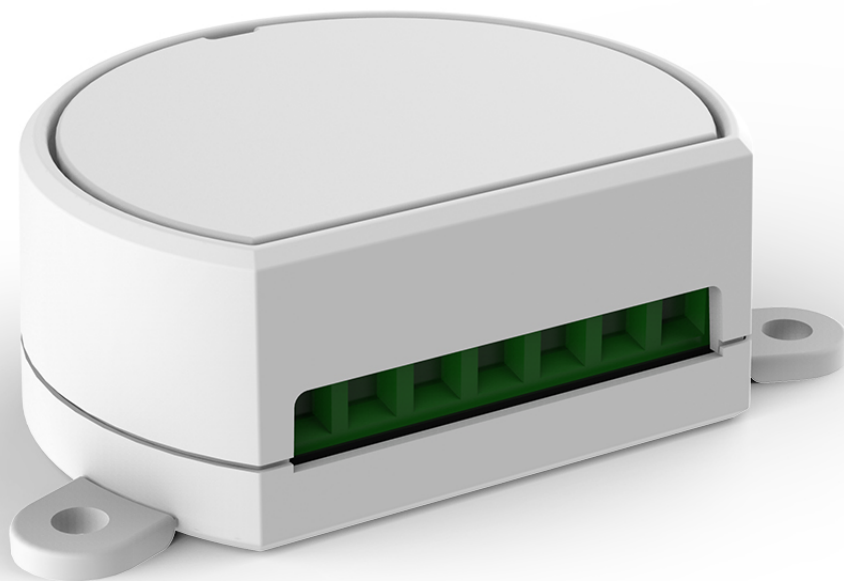


MCU-L2

Control unit for 1 or 2 devices. 110/240 VAC power supply, integrated RX 433.92 MHZ ISM, 2 wired inputs settable with button or switch. Pulse, On/Off, timer

NEXTA
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WARNINGS

- Installation must be carried out only by qualified technicians in compliance with the electrical and safety standards in force.
- All connections must be made with the power turned off.
- Use suitable cables.
- Do not cut through the aerial (figure 1.1b)
- A suitably sized disconnection device must be set up on the electric power line that supplies the product.
- Disposal of waste materials must fully respect local standards.

1 PRODUCT FEATURES

1.1 TECHNICAL DATA

Power supply	Mains 120-240 VAC
Outputs	2 contacts: 230 V max 500 W, 110 V max 250 W for output
Number of programmable transmitters	100
Radio frequency	433.920MHz ISM
Protection rating	IP20
Operating temperature	-20 +55 °C
Dimensions	52x43x21 mm

Fig.1.1a

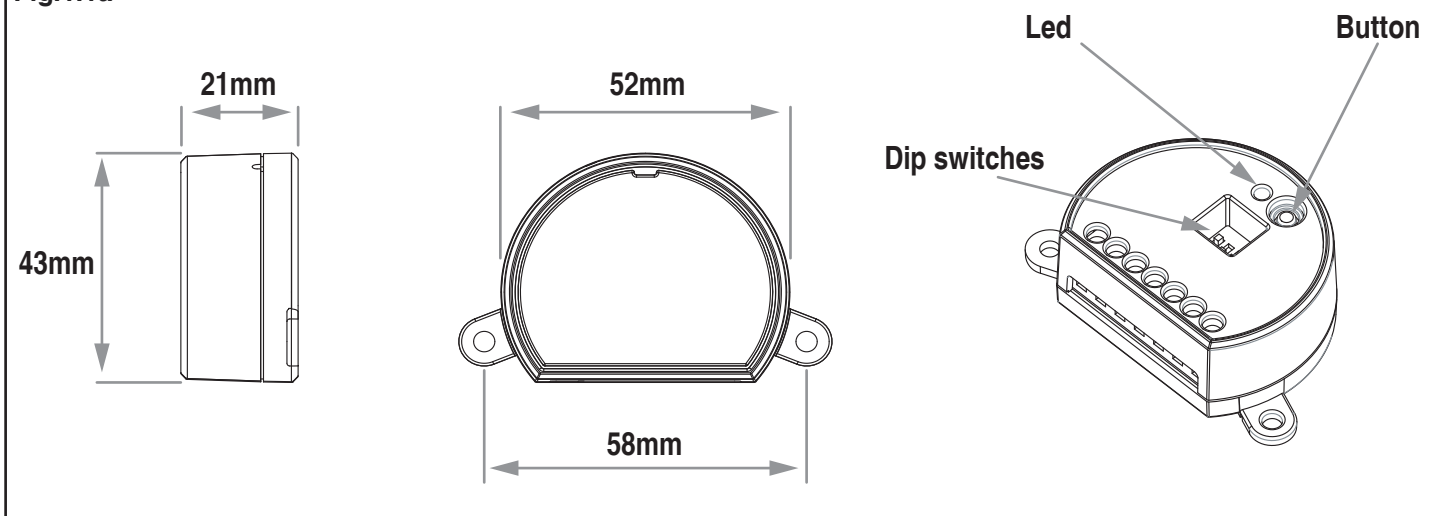


Fig.1.1b

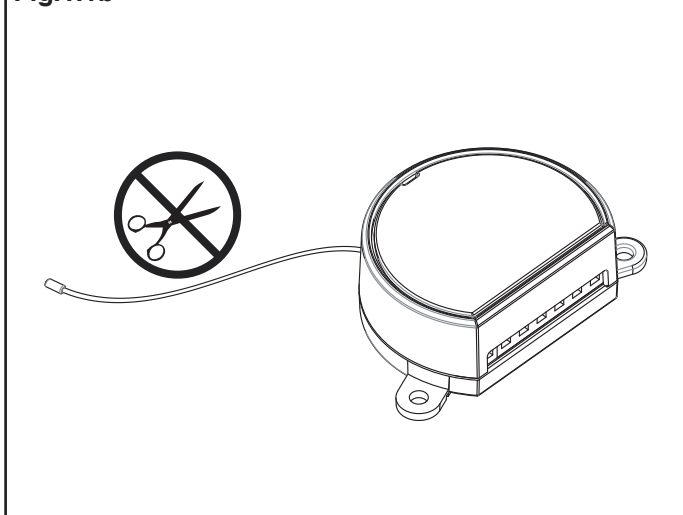
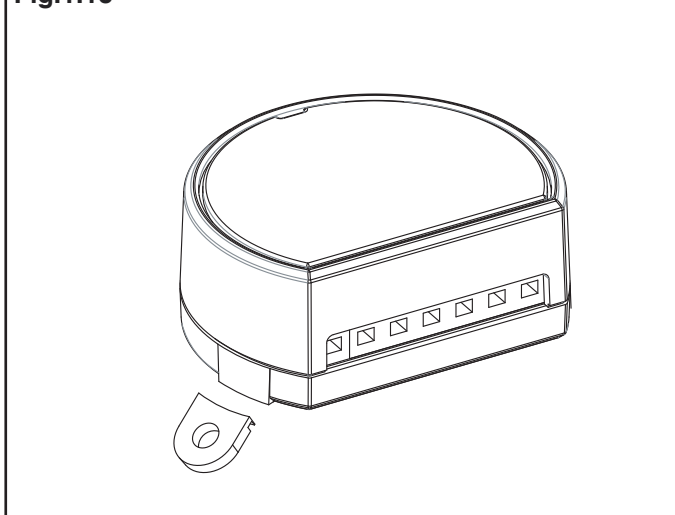


Fig.1.1c



1.2 DESCRIPTION

MCU-L2 is a miniaturised electronic control unit for managing two devices via radio and wire, with either a button or switch.

It is flexible and can be used in different applications thanks to the fact that the load can be controlled in monostable, bistable or timer (from 1 second to 60 hours) mode.

The ISM (industrial, scientific and medical) radio frequency band guarantees a long range, even through walls and ceilings.

Fig.1.2a

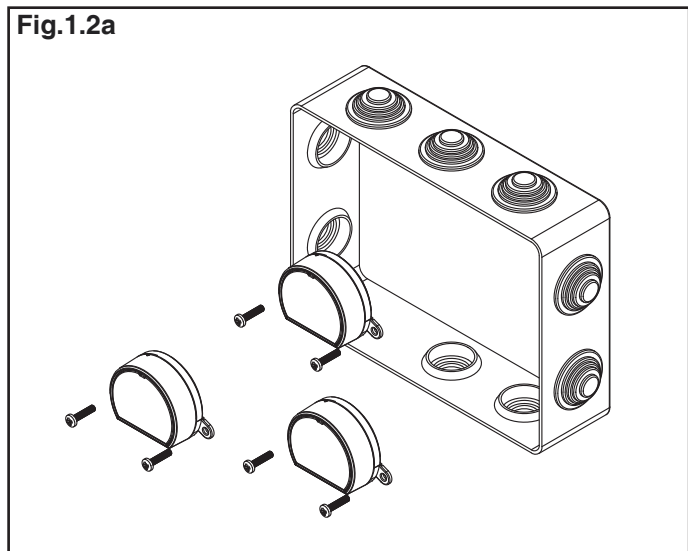


Fig.1.2b

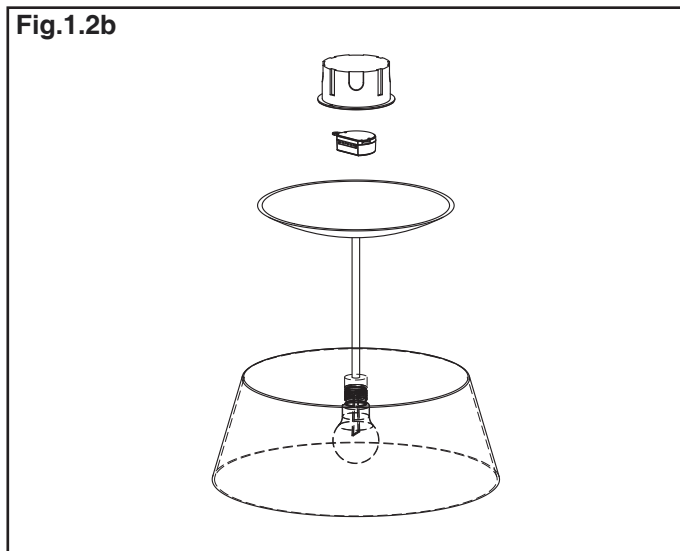


Fig.1.2c

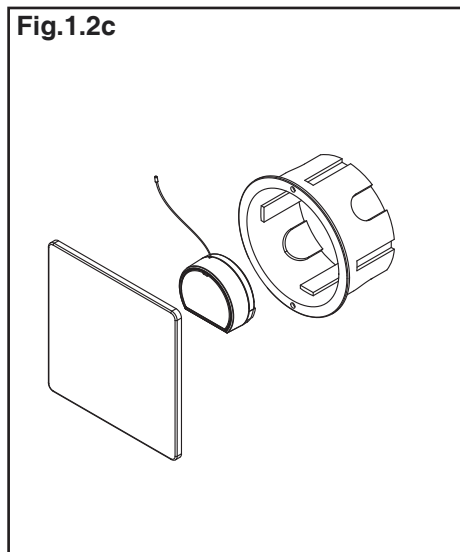


Fig.1.2d

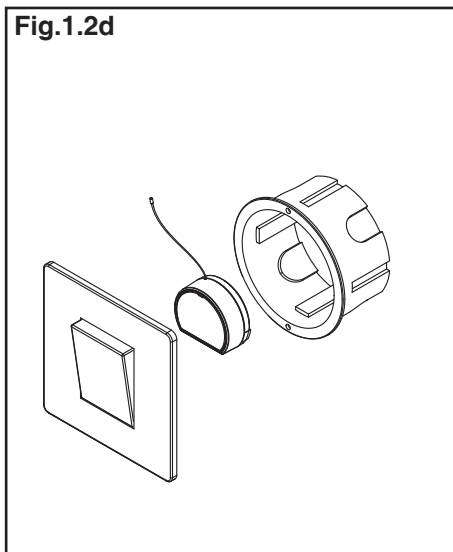


Fig.1.2e

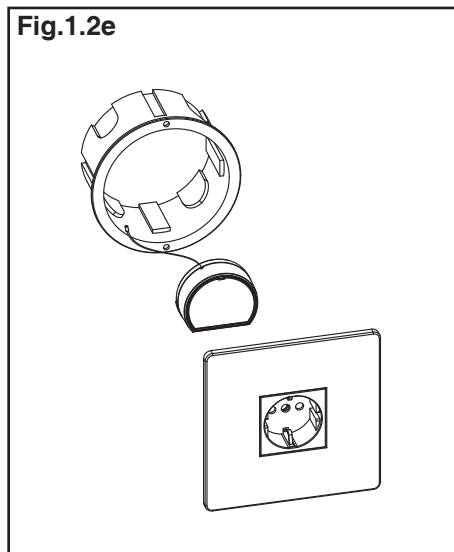
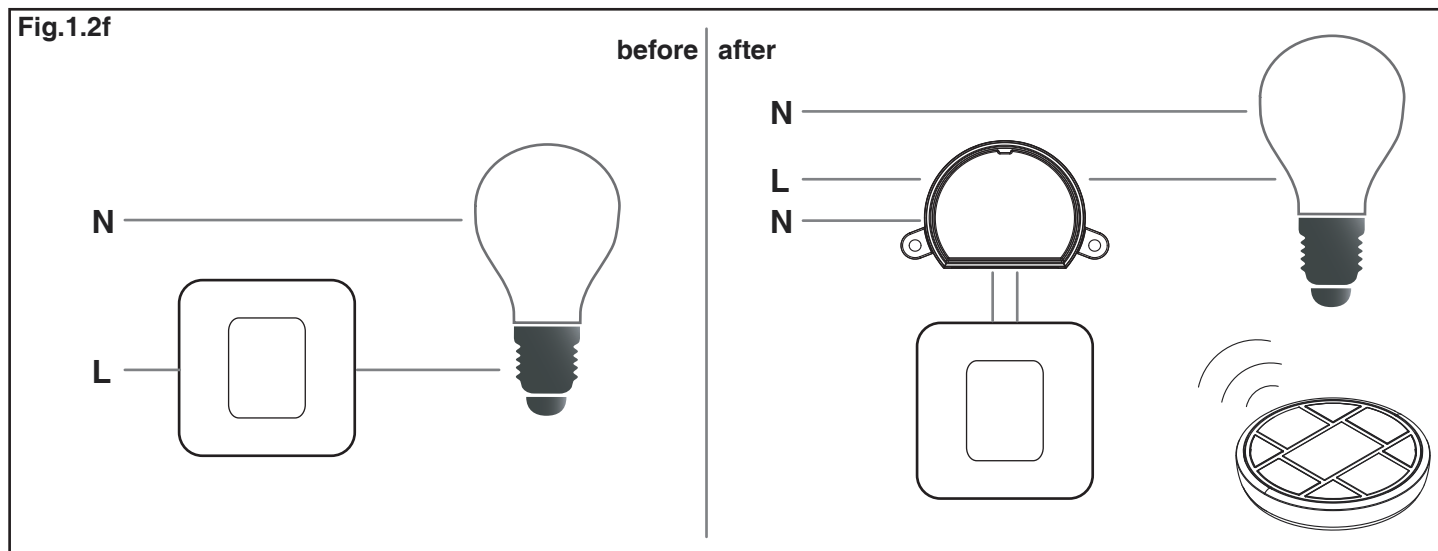


Fig.1.2f



2 ELECTRICAL CONNECTIONS

This control unit comes set up for different types of connection that allow greater flexibility regarding the behaviour of the outputs and the types of inputs to adapt to various system configurations.

BEHAVIOUR OF OUTPUTS

Depending on the type of load that you want to control, connections can be made that let you

- control 2 loads powered by grid voltage (230 V max 500 W, 110 V max 250 W per output); paragraph 2.1.
- have two potential-free output contacts; paragraph 2.2.

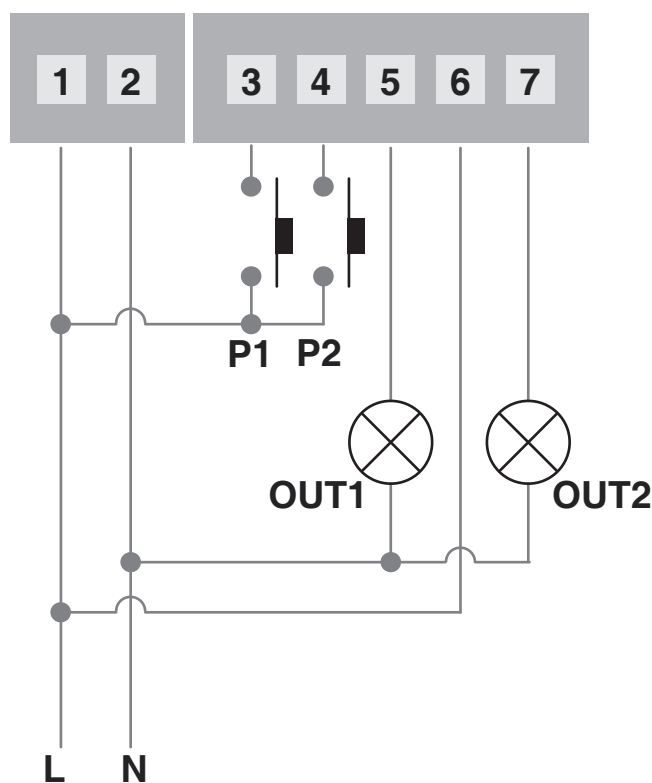
INPUT TYPE

Thanks to the programming described in paragraphs 4.4 and 4.5, you can select whether the wired command is given by a button or a switch.

2.1 CONNECTIONS FOR LOADS POWERED BY THE GRID (230 V MAX 500 W, 110 V MAX 250 W PER OUTPUT)

The following connection lets you control the loads, powered by grid voltage, via radio and/or wire.

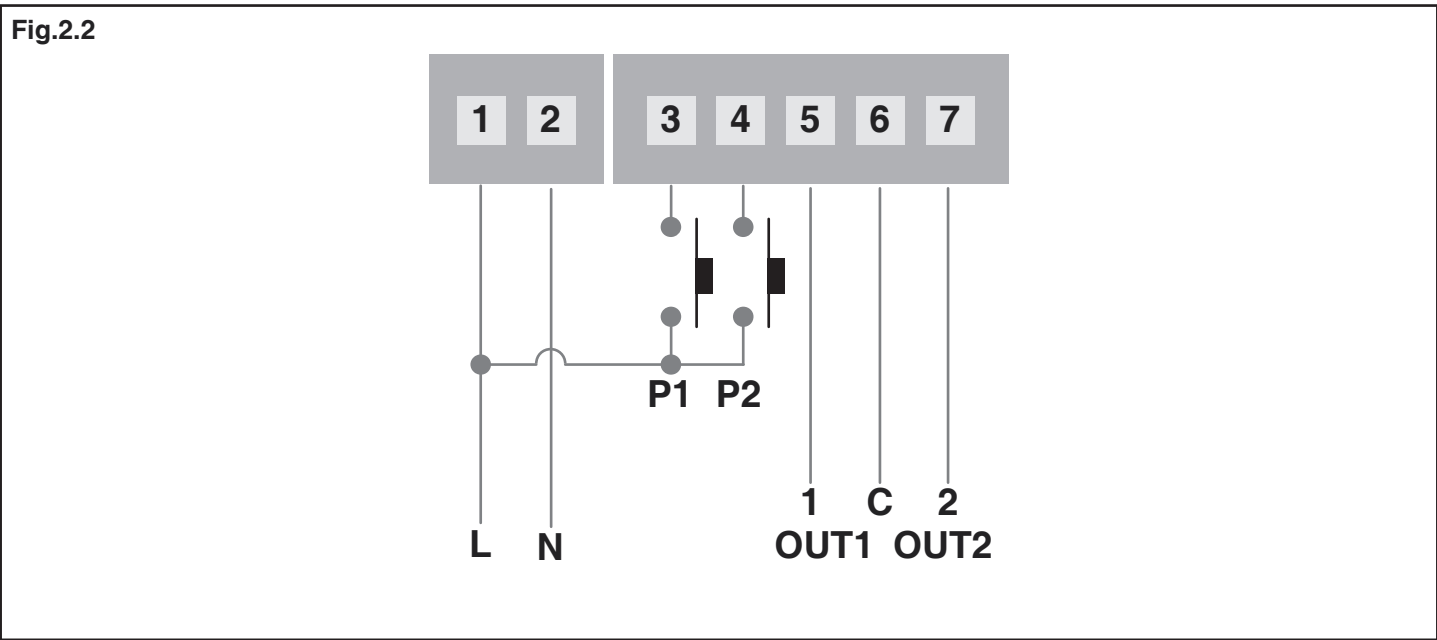
Fig.2.1



WARNING: Multiple loads can be connected to the same output by using parallel cabling. Multiple buttons can be connected to the same input by using parallel cabling.

2.2 CONNECTION BETWEEN TWO CLEAN OUTPUT CONTACTS

The following connection lets you control two potential-free contacts by radio and/or wire.



WARNING: Multiple buttons can be connected to the same input by using parallel cabling.

3 USE OF THE CONTROL UNIT

3.1 USE VIA RADIO

To control the loads via radio you must have compatible transmitters and therefore must carry out the association procedure, see paragraph 5.

The ways the transmitter is controlled depend on the setting of the outputs (see paragraph 4.1) and the model of transmitter used.

If the transmitter is of a generic type, its operation depends on the way it is programmed (see paragraph 5, table 5.3b). If the transmitter is multifunctional, refer to the transmitter manual, to the paragraph entitled "commands sent by the transmitter", bearing in mind that:

Output set as monostable (see paragraph 4.1) = monostable device

Output set as bistable (see paragraph 4.1) = on/off device Output

Output set as timer (see paragraph 4.1) = timer device

3.2 USE VIA WIRE

The device is set up to accept commands via wire from the button (or switches; see paragraphs 4.4, 4.5) in terminals 3 and 4. Should you want to control the load only via radio, it is not necessary to connect these devices for the control unit to work properly.

The behaviour of the inputs depends on the setting of the outputs (see paragraph 4.1). The following table shows the behaviours of the various keys:





	MONOSTABLE RELAY	BISTABLE RELAY	TIMER RELAY	DEACTIVATED RELAY
INPUT P1	CLOSE AND REOPEN CONTACT 1	CHANGE CONTACT 1 STATUS (CLOSED, OPEN...)	CLOSE CONTACT 1 FOR THE TIME SET (SEE PARAGRAPH 4.2)	NO ACTION
INPUT P2	CLOSE AND REOPEN CONTACT 2	CHANGE CONTACT 2 STATUS (CLOSED, OPEN...)	CLOSE CONTACT 2 FOR THE TIME SET (SEE PARAGRAPH 4.3)	NO ACTION

4 CONTROL UNIT SETTINGS





4.1 SETTING "OUT1" AND "OUT2" OUTPUTS

This process is used to configure the behaviour of the OUT1 (table 4.1a) and OUT2 (table 4.1b) output contacts.

Tab. 4.1a

CONFIGURATION OF OUTPUT 1	
DIP 1 - 2	MODE
ON - ON 	Monostable (pulse)
ON - OFF 	Bistable (On/Off)
OFF - ON 	Timer (see para. 4.3)
OFF - OFF 	Disabled

Tab. 4.1b

CONFIGURATION OF OUTPUT 2	
DIP 3 - 4	MODE
ON - ON 	Monostable (pulse)
ON - OFF 	Bistable (On/Off)
OFF - ON 	Timer (see para. 4.3)
OFF - OFF 	Disabled

4.2 SETTING "OUT1" TIMING

Default: 3 minutes





This process is used to set the time for which the "OUT1" contact stays closed if it is set on a timer.



PROCEDURE:

- 1- Position DIPs 1 and 2 to OFF-ON.
- 2- Position DIPs 3 and 4 according to the unit of measurement desired for the count (see table 4.2 at the side)
- 3- Press the button on the receiver for a short time. The LED comes on and stays on.
- 4- Press the button on the receiver for a short time
- 5- The LED on the receiver starts to flash (max. 60 flashes): each flash corresponds to a unit of time
- 6- Press the button for a short time while it is flashing to end the count

Tab. 4.2

DIP 3 - 4	UNIT OF TIME
ON - ON 	1 second
ON - OFF 	30 seconds
OFF - ON 	15 minutes
OFF - OFF 	1 hour

EXAMPLE: I want to time OUT1 to 90s, I set Dips 1 and 2 to OFF and ON, Dips 3 and 4 to ON and OFF and I count three flashes.

WARNING: after programming, reposition the dip switches to the desired operation of the contact (see paragraph 4.1)

4.3 SETTING "OUT2" TIMING

Default: 3 minutes

This process is used to set the time for which the "OUT2" contact stays closed if it is set on a timer.



PROCEDURE:

- 1- Position DIPs 1 and 2 to ON-OFF
- 2- Position DIPs 3 and 4 according to the unit of measurement desired for the count (see table 4.3 at the side)
- 3- Press the button on the receiver for a short time. The LED comes on and stays on.
- 4- Press the button on the receiver for a short time
- 5- The LED on the receiver starts to flash (max. 60 flashes): each flash corresponds to a unit of time
- 6- Press the button for a short time while it is flashing to end the count

Tab. 4.3

DIP 3 -4	UNIT OF TIME
ON - ON	1 second
ON - OFF	30 seconds
OFF - ON	15 minutes
OFF - OFF	1 hour

EXAMPLE: I want to time OUT2 to 90s, I set Dips 1 and 2 to On and Off, Dips 3 and 4 to On and Off and I count three flashes.

WARNING: after programming, reposition the dip switches to the desired operation of the contacts (see paragraph 4.1)

4.4 SETTING TYPE OF INPUTS VIA WIRE "P1"

Default: Button

This procedure lets you choose the type of wired devices to command load 1 (connected on terminal 3, input P1). The devices can be set as buttons or switches.

WARNING: if multiple buttons are used, these are connected in parallel, while if multiple switches are used, they are connected in series.



PROCEDURE:

- 1- Position DIPs 1, 2, 3 and 4 to OFF-OFF-ON-ON.
 - 2- Press the button on the receiver for a short time. The LED comes on and stays on
 - 3- Press the button on the receiver for a short time, count the number of flashes emitted by the LED:
3 flashes = control with buttons
6 flashes = control with switches
- WARNING:** to change the setting, repeat the procedure from point 1; the control unit will alternate between 3 and 6 flashes.

WARNING: after programming, reposition the dip switches to the desired operation of the contacts (see paragraph 4.1)

4.5 SETTING TYPE OF INPUTS VIA WIRE "P2"

Default: Button

This procedure lets you choose the type of wired devices to command load 2 (connected on terminal 4, input P2). The devices can be set as buttons or switches.

WARNING: if multiple buttons are used, these are connected in parallel, while if multiple switches are used, they are connected in series.



PROCEDURE:

1- Position DIPs 1, 2, 3 and 4 to ON-ON-OFF-ON

2- Press the button on the receiver for a short time. The LED comes on and stays on

3- Press the button on the receiver for a short time, count the number of flashes emitted by the LED:

3 flashes = control with buttons

6 flashes = control with switches

WARNING: to change the setting, repeat the procedure from point 1; the control unit will alternate between 3 and 6 flashes.

WARNING: after programming, reposition the dip switches to the desired operation of the contacts (see paragraph 4.1)

5 - RADIO PROGRAMMING

5.1 RADIO PROGRAMMING MULTIFUNCTIONAL TRANSMITTERS ASSOCIATED WITH LOAD 1

This procedure lets you programme only compatible multifunctional transmitters; see table 5.1.
The transmitter's command modes depend on the model used and the setting of the outputs (see paragraph 4.1).
Refer to the transmitter manual, to the paragraph entitled "commands sent by the transmitter", bearing in mind that:
Output set as monostable = monostable device.
Output set as bistable = on/off device.
Output set as timer = timer device.



- PROCEDURE:**
- 1- Position DIPs 1, 2, 3 and 4 to ON-ON-ON-ON.
 - 2- Press the button on the receiver for a short time. The LED comes on and stays on.
 - 3- Make a transmission with the remote control to be saved (see transmitter manual, the paragraph entitled "transmitter programming"). The LED on the receiver flashes 3 times to signal that it has been received.
 - 4- The control unit listens for 30 seconds (to immediately exit the procedure press the button on the receiver).

Tab. 5.1

COMPATIBLE TRANSMITTERS
<i>HB70-8L, HB70-8LP</i>
<i>HB70-20D, HB70-8LP,</i>
<i>HB80-30D, HB80-2L</i>
<i>HB80-4L, HB80-30RGBW</i>
<i>HB90-12</i>

WARNING: after programming, reposition the dip switches to the desired operation of the contact (see paragraph 4.1)

5.2 RADIO PROGRAMMING MULTIFUNCTIONAL TRANSMITTERS ASSOCIATED WITH LOAD 2

This procedure lets you programme only compatible multifunctional transmitters; see table 5.2. The transmitter's command modes depend on the model used and the setting of the outputs (see paragraph 4.1). Refer to the transmitter manual, to the paragraph entitled "commands sent by the transmitter", bearing in mind that:
Output set as monostable = monostable device.
Output set as bistable = on/off device.
Output set as timer = timer device.



- PROCEDURE:**
- 1- Position DIPs 1, 2, 3 and 4 to OFF-OFF-OFF-OFF.
 - 2- Press the button on the receiver for a short time. The LED comes on and stays on.
 - 3- Make a transmission with the remote control to be saved (see transmitter manual, the paragraph entitled "transmitter programming"). The LED on the receiver flashes 3 times to signal that it has been received.
 - 4- The control unit listens for 30 seconds (to immediately exit the procedure press the button on the receiver).

Tab. 5.2

COMPATIBLE TRANSMITTERS
<i>HB70-8L, HB70-8LP</i>
<i>HB70-20D, HB70-8LP,</i>
<i>HB80-30D, HB80-2L</i>
<i>HB80-4L, HB80-30RGBW</i>
<i>HB90-12</i>

WARNING: after programming, reposition the dip switches to the desired operation of the contact (see paragraph 4.1)

5.3 RADIO PROGRAMMING OF GENERIC TRANSMITTERS

This process makes it possible to programme only compatible generic transmitters; see table 5.3a. The ways the transmitter is controlled depend on the function associated with the key (see table 5.3b) and the setting of the outputs (see paragraph 4.1 and table 5.3c).

Tab. 5.3a

COMPATIBLE TRANSMITTERS
MCU-TX4
HB-6G

PROCEDURE:

- 1- Position DIPs 1, 2, 3 and 4 according to the function you want to associate with the remote control key (see table 5.3b at the side).
- 2- Press the button on the receiver for a short time. The LED comes on and stays on.
- 3- Make a transmission with the remote control to be saved (see transmitter manual, the paragraph entitled "transmitter programming"). The LED on the receiver flashes 3 times to signal that it has been received.
- 4- The control unit listens for 30 seconds (to immediately exit the procedure press the button).

Tab. 5.3b

DIP1	DIP2	DIP3	DIP4	Function associated with the key
On	On	On	On	On/Off OUT1
Off	Off	Off	On	On OUT1
Off	Off	On	Off	Off OUT1
Off	Off	Off	Off	On/Off OUT2
On	On	On	Off	On OUT2
On	On	Off	Off	Off OUT2

WARNING: after programming, reposition the dip switches to the desired operation of the contact (see paragraph 4.1).

BEHAVIOUR OF OUTPUTS BASED ON THE FUNCTION ASSOCIATED WITH THE KEY

The column on the left shows the commands that can be programmed on the generic transmitter (see table 5.3b), and the top row the output setting (see paragraph 4.1).

Tab. 5.3c

FUNCTION OF KEY	OUTPUT SETTING		
	MONOSTABLE	BISTABLE	TIMER
ON / OFF	Pulse	Change of status of load	Close contact for the time set (see paragraph 4.2/4.3)
ON	Pulse	Close contact	Close contact for the time set (see paragraph 4.2/4.3)
OFF	Pulse	Open contact	Open contact

5.4 DELETION OF TRANSMITTERS

These procedures let you delete from the memory transmitters that have already been programmed.

DELETION OF SINGLE TRANSMITTER:

- 1- Hold the receiver button down for 8 seconds. The LED begins to flash.
- 2- Make a transmission with the transmitter that you want to delete. The LED flashes quickly and turns off.

DELETION OF ALL THE SAVED TRANSMITTERS:

- 1- Hold the receiver button down for 8 seconds. The LED begins to flash.
- 2- Press the button on the receiver for a short time. The LED starts flashing quickly and turns off.



MNLMCU-L2ENV1.1

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