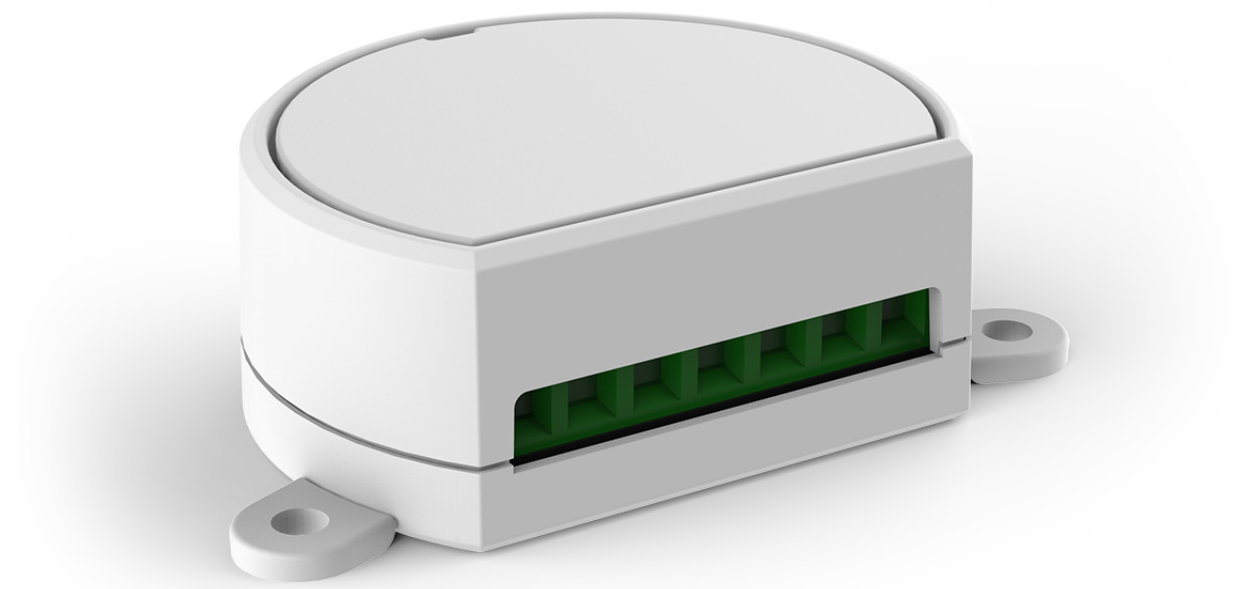
MCU-L2

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



INDEX

WARNINGS

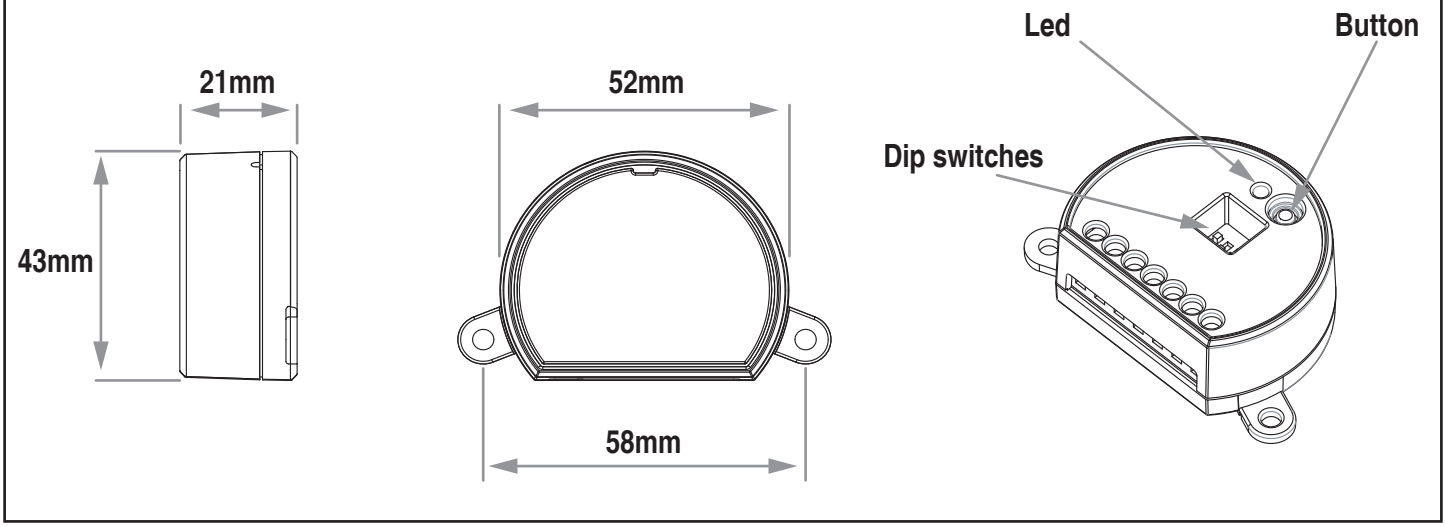
- Installation must be carried out only by qualified technicians in compliance with the electrical and safety standards in force.
- All connections must be made with the power turned off.
- Use suitable cables.
- Do not cut through the aerial (picture 1.1b)
- A suitably sized disconnection device must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

1 PRODUCT FEATURES

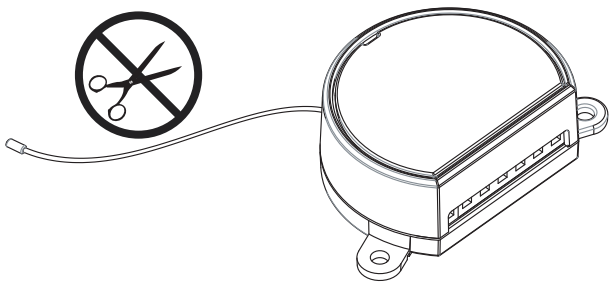
1.1 TECHNICAL DATA

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

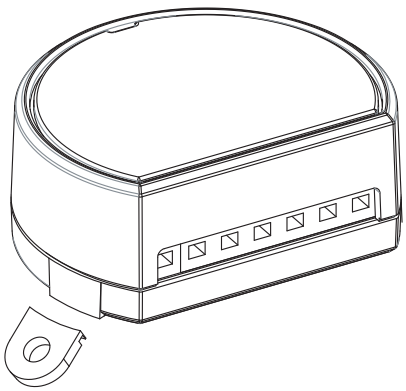
Pic.1.1a



Pic.1.1b



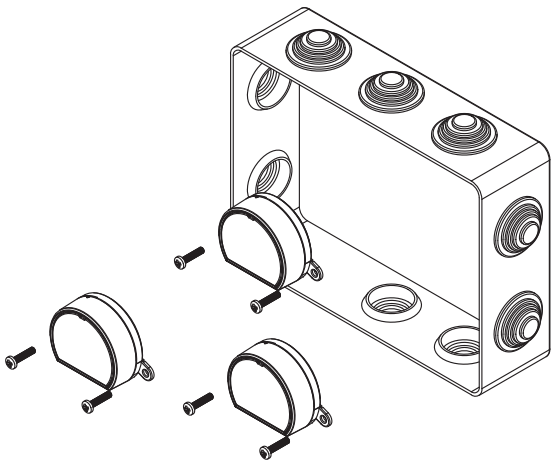
Pic.1.1c



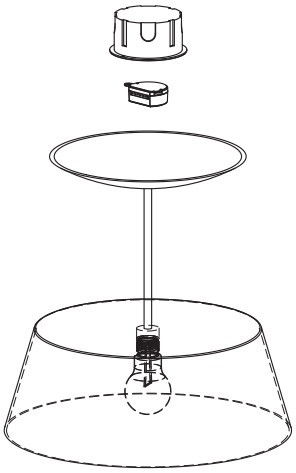
1.2 DESCRIPTION

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.

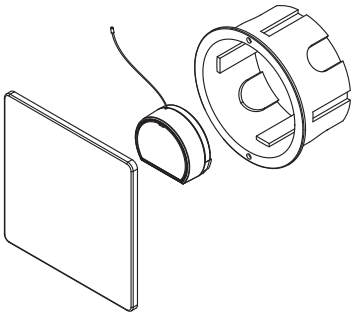
Pic.1.2a



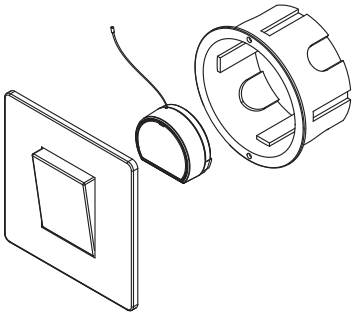
Pic.1.2b



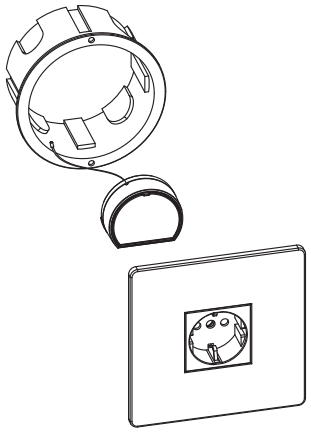
Pic.1.2c



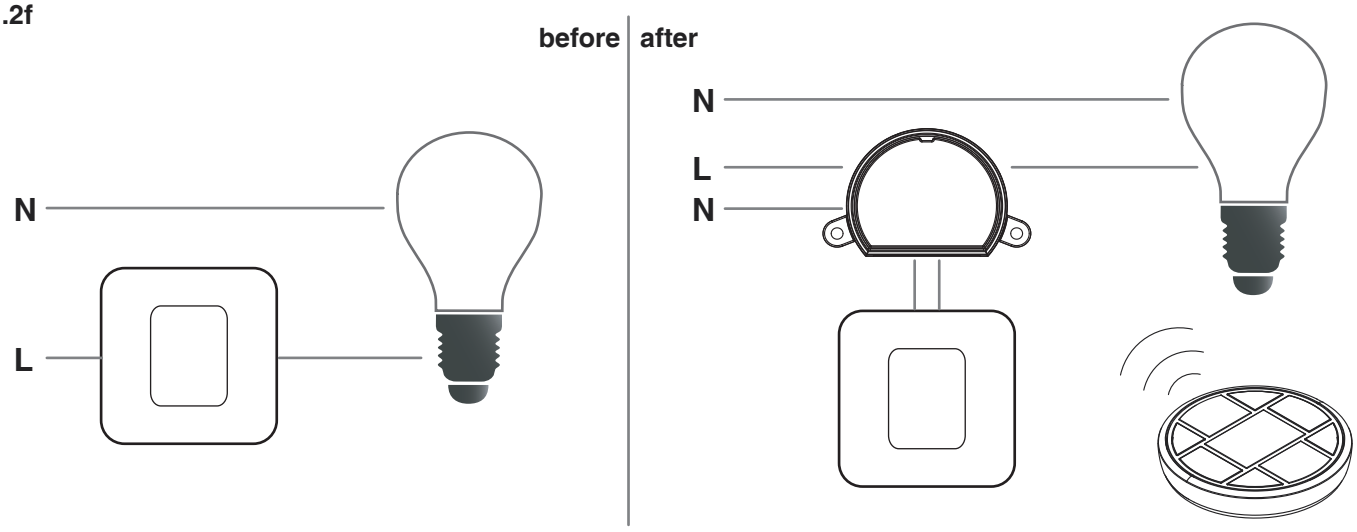
Pic.1.2d



Pic.1.2e



Pic.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.

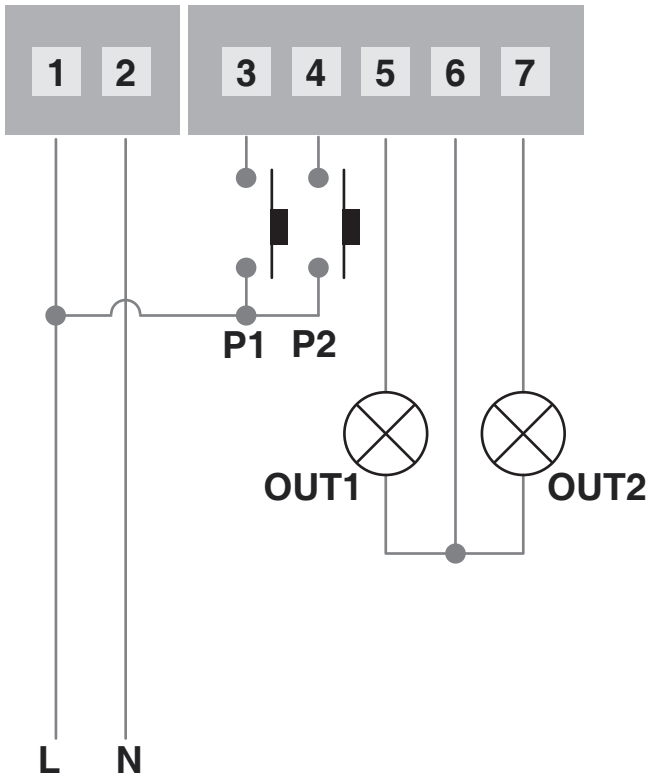
INPUT TYPE

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



ATTENZIONE: Si possono collegare più carichi alla stessa uscita cablandoli in parallelo.
Si possono collegare più pulsanti allo stesso ingresso cablandoli in parallelo.

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).
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:

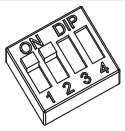
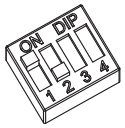
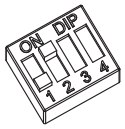
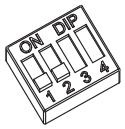
	MONOSTABLE RELAY	BISTABLE RELAY	TIMER RELAY	DEACTIVATED RELAY
INPUT P1	close and reopen contact 1	change contact 1 status (closed, open...)	close contact 1 for the time set (see paragraph 4.2)	no action
INPUT P2	close and reopen contact 2	change contact 2 status (closed, open...)	close contact 2 for the time set (see paragraph 4.3)	no action

4 CONTROL UNIT SETTINGS

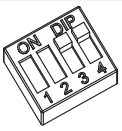
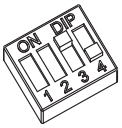
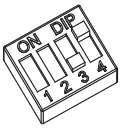
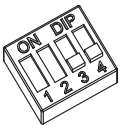
4.1 SETTING "OUT1" AND "OUT2" OUTPUTS

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. 4.2)
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

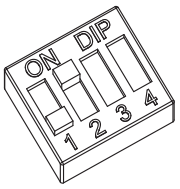
4.2 SETTING "OUT1" TIMING

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:

STEP 1
Position DIPs 1 and 2
to OFF-ON



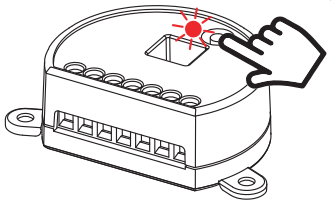
**DIP 1 and 2 =
OFF ON**

STEP 2
Position DIPs 3 and 4 according to the unit of measurement desired for the count, see table at the side

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

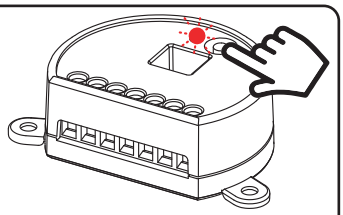
STEP 3
Press the button on the receiver for a short time.

The LED comes on and stays on.



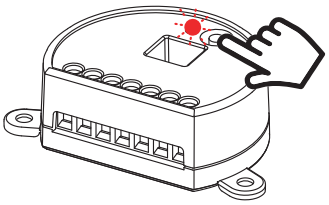
**SHORT
PRESSURE**

STEP 4
Press the button on the receiver for a short time.
The LED on the receiver starts to flash (max. 60 flashes): each flash corresponds to a unit of time



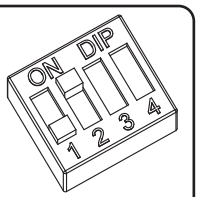
**SHORT
PRESSURE**

STEP 5
Press the button for a short time during the flash that corresponds to the function desired to end the count



**SHORT PRESSURE
DURING THE FLASH**

STEP 6
To set output 1 as timed position DIPs 1 and 2 to OFF-ON and DIPs 3 and 4 to the desired operation of the contact 2 (see paragraph 4.1)



**DIP 1 and 2 =
OFF ON**

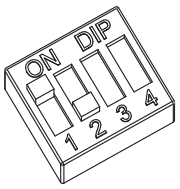
4.3 SETTING "OUT2" TIMING

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:

STEP 1
Position DIPs 1 and 2
to ON-OFF



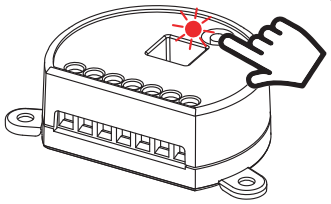
**DIP 1 and 2 =
ON OFF**

STEP 2
Position DIPs 3 and 4 according to the unit of measurement desired for the count, see table at the side

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

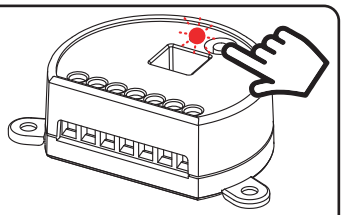
STEP 3
Press the button on the receiver for a short time.

The LED comes on and stays on.



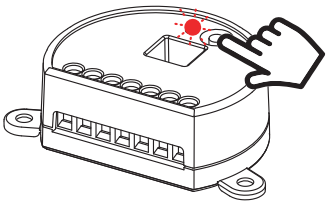
**SHORT
PRESSURE**

STEP 4
Press the button on the receiver for a short time.
The LED on the receiver starts to flash (max. 60 flashes): each flash corresponds to a unit of time



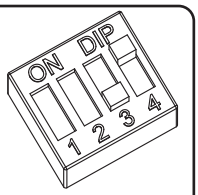
**SHORT
PRESSURE**

STEP 5
Press the button for a short time during the flash that corresponds to the function desired to end the count



**SHORT PRESSURE
DURING THE FLASH**

STEP 6
To set output 2 as timed position DIPs 3 and 4 to OFF-ON and DIPs 1 and 2 to the desired operation of the contact 2 (see paragraph 4.1)



**DIP 3 and 4 =
OFF ON**

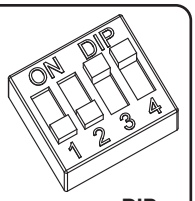
4.4 SETTING TYPE OF INPUTS VIA WIRE "P1"

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.

PROCEDURE:

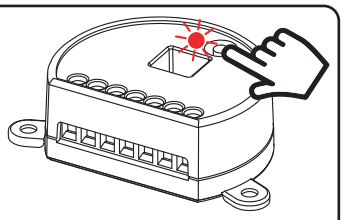
STEP 1
Position DIPs 1, 2, 3 and 4 to OFF-OFF-ON-ON



DIP =
OFF OFF ON ON

STEP 2
Press the button on the receiver for a short time.

The LED comes on and stays on.

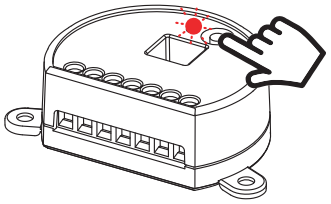


SHORT PRESSURE

STEP 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

NUMBER OF FLASH	TYPE OF INPUT
3	button
6	switch



SHORT PRESSURE

STEP 4
To change the setting, repeat the procedure from point 1;
the control unit will alternate between 3 and 6 flashes.

STEP 5
After programming, reposition the dip switches to the desired operation of the contacts (see paragraph 4.1)

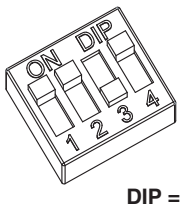
4.5 SETTING TYPE OF INPUTS VIA WIRE “P2”

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.

PROCEDURE:

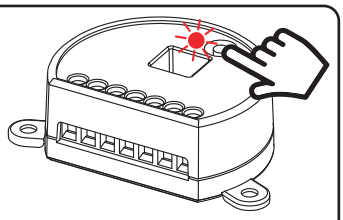
STEP 1
Position DIPs 1, 2, 3 and 4 to
ON-ON-OFF-ON



DIP =
ON ON OFF ON

STEP 2
Press the button on the
receiver for a short time.

The LED comes on
and stays on.

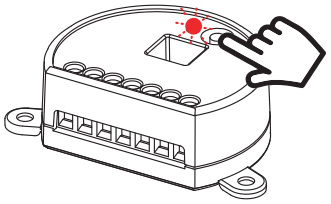


SHORT
PRESSURE

STEP 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

NUMBER OF FLASH	TYPE OF INPUT
3	button
6	switch



SHORT
PRESSURE

STEP 4
To change the setting, repeat the
procedure from point 1;
the control unit will alternate
between 3 and 6 flashes.

STEP 5
After programming, reposition the dip switches
to the desired operation of the contacts
(see paragraph 4.1)

RADIO PROGRAMMING

This procedure lets you programme compatible multifunctional or generic transmitters.

WHICH REMOTE CONTROL DO YOU WANT TO ASSOCIATE WITH THE CONTROL UNIT?

MULTIFUNCTIONAL TRANSMITTERS

CODES:

HB70-SLCT, HB70-SPCT,
HB80-1C, HB80-1DIM, HB80-2L, HB80-30D, HB80-30RGBW, HB80-4C, HB80-4DIM, HB80-4L,
HB90-6LT,
ROUND-1SP,
SENSA-M, SENSA-P, SENSA-R35M, SENSA-R35P, SENSA-R35T, SENSA-T,
TOUCH-1, TOUCH-1CCT, TOUCH-1DIM, TOUCH-1SP, TOUCH-1L , TOUCH-1RGBW, TOUCH-3C, TOUCH-4DIM, TOUCH-CFU

With multifunctional transmitters the transmitter control modes depend on the model used.
Refer to the transmitter manual, to the paragraph entitled "commands sent by the transmitter",
bearing in mind that:
Output set as monostable (DIP 1=ON and DIP2=ON)= monostable device
Output set as bistable (DIP 1=ON and DIP 2= OFF)= on/off device.
Output set as timer (DIP 1=ON and DIP 2= ON)= timer device.

GENERIC TRANSMITTERS (WIRELESS BUS)

CODES:

HB80-6G,
MCU-TX4,
TOUCH-1G, TOUCH-2G, TOUCH-4G, TOUCH-LOCK4, TOUCH-TX2,
ROUND-1G

With generic transmitters, the transmitter's control modes depend on the function associated with the key during the association procedure.

The available function for the key are:

TABLE 5.1A
KEY FUNCTIONS OF THE GENERIC TRANSMITTER FOR LOAD 1

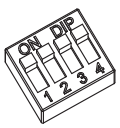
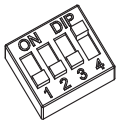
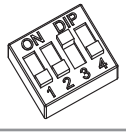
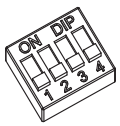
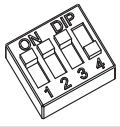
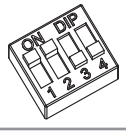
POSITION OF DIP IN "STEP 1C" OF THE PROCEDURE	KEY FUNCTION
 DIP : ON ON ON ON	ON/OFF OUT1
 DIP : OFF OFF OFF ON	ON OUT1
 DIP : OFF OFF ON OFF	OFF OUT1

TABLE 5.1B
KEY FUNCTIONS OF THE GENERIC TRANSMITTER FOR LOAD 2

POSITION OF DIP IN "STEP 1D" OF THE PROCEDURE	KEY FUNCTION
 DIP : OFF OFF OFF OFF	ON/OFF OUT2
 DIP : ON ON ON OFF	ON OUT2
 DIP : ON ON OFF OFF	OFF OUT2

PROCEDURE

WHICH TRANSMITTER DO YOU WANT TO PROGRAMME?

MULTIFUNCTION TRANSMITTER
(see models and codes on previous page)

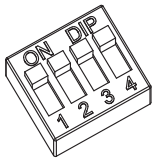
GENERIC TRANSMITTER
(see models and codes on previous page)

WHICH OUTPUT DO YOU WANT TO CONTROL?

OUT1 (terminals 5 and 6)

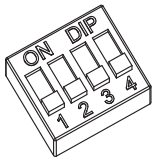
OUT2 (terminals 6 and 7)

STEP 1a
Position DIPs 1, 2, 3 and 4 to ON-ON-ON-ON



DIP = ON ON ON ON

STEP 1b
Position DIPs 1, 2, 3 and 4 to in OFF-OFF-OFF-OFF



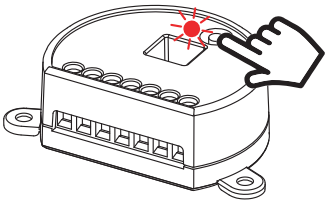
DIP = OFF OFF OFF OFF

STEP 1c
Positions DIPs 1, 2, 3 and 4 according to the function you want to associate with the remote control key.
See table 5.1A on the previous page.

STEP 1d
Positions DIPs 1, 2, 3 and 4 according to the function you want to associate with the remote control key.
See table 5.1B on the previous page.

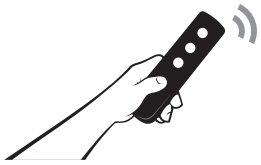
STEP 2
Press the button on the receiver for a short time.

The LED comes on and stays on.

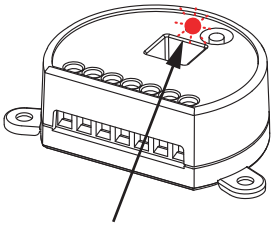


STEP 3
Make a transmission with the transmitter to be saved (see transmitter manual, paragraph entitled "transmitter programming").

The LED on the receiver flashes 3 times to signal that it has been received.

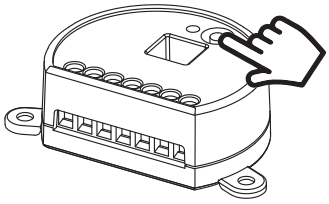


MAKE A TRANSMISSION WITH THE TRANSMITTER



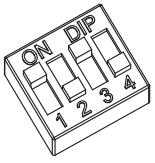
THE LED FLASHES 3 TIMES

STEP 4
The control unit listens for 30 seconds in case you want to add other transmitters.
To immediately exit the procedure give a short pressure on the button on the receiver.
The LED turns off



STEP 5
After programming, reposition the dip switches to the desired operation of the contacts.
(see paragraph 4.1)

Default:
DIP1= On, DIP2= Off
DIP3= On, DIP4= Off
(bistabile function, On/Off device)



FURTHER DETAILS

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 5.1), and the top row the output setting (see paragraph 4.1).

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

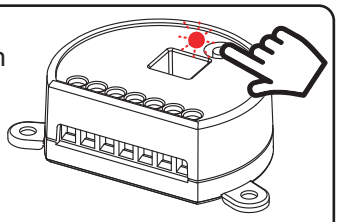
6 - DELETION OF TRANSMITTERS

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

6.1 DELETION OF SINGLE TRANSMITTER:

STEP 1
Hold the receiver button down for 8 seconds.

The LED begins to flash

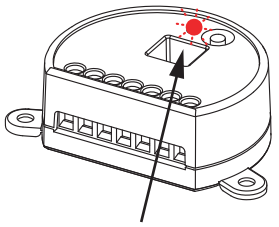


LONG PRESSURE (8 SECONDS)

STEP 2
Make a transmission with the transmitter that you want to delete.

The LED flashes quickly and turns off.

MAKE A TRANSMISSION WITH THE TRANSMITTER

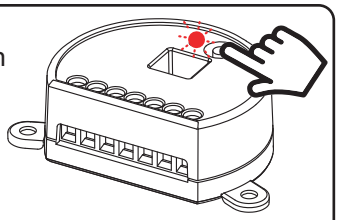


LED FLASHES QUICKLY

6.2 DELETION OF ALL THE SAVED TRANSMITTERS

STEP 1
Hold the receiver button down for 8 seconds.

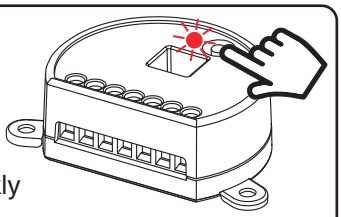
The LED begins to flash.



LONG PRESSURE (8 SECONDS)

STEP 2
Press the button on the receiver for a short time.

The LED starts flashing quickly and turns off



SHORT PRESSURE

CE

MNLMCU-L2ENV1.1

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