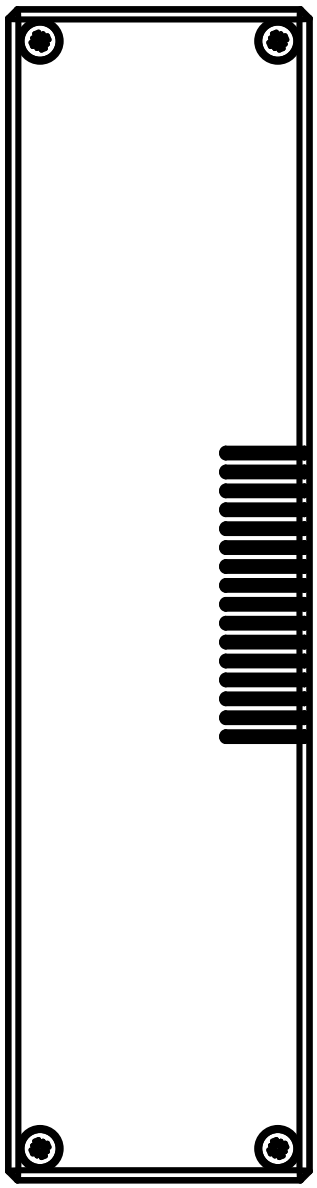
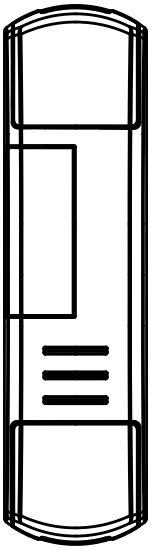
TOP-ML/One
SCREEN-ML/One



Screen-ML400/One



Top-ML400/One

Electronic control unit for the automation of one 230Vac motor with built-in limit switch and 1, 2 or 3 led line in costant voltage tension (number of led output settable).
Motor and control unit power supply: 230Vac
Led power supply: 12 or 24Vdc
Motor output: 230 Vac max 1000 W
Led output: 5A for output (3out), max 10A in total
433.92 MHz receiver for radio transmitters.
WiFi connection for OneSmart App.
Top-ML/One: control unit in IP20 casing
Screen-ML/One: control unit in outdoor plastic box IP56

INDEX

1 - PRODUCT FEATURES
- 1.1 - TECHNICAL DATA — Page 3
- 1.2 - SENSOR MANAGEMENT — Page 3

2 - MOTOR AND SENSORS ELECTRICAL CONNECTIONS — Page 4

3 - LED OUTPUT ELECTRICAL CONNECTIONS
- 3.1 - CONNECTING ONE LINE OF SINGLE-COLOUR STRIP LIGHTS — Page 5
- 3.2 - CONNECTING TWO LINES OF SINGLE-COLOUR STRIP LIGHTS — Page 6
- 3.3 - CONNECTING THREE LINES OF SINGLE-COLOUR STRIP LIGHTS — Page 7
- 3.4 - PROCEDURE FOR SETTING NUMBER OF LED OUTPUT — Page 8

4 - SETTING UP CONTROL UNIT — Page 9

5 - MANAGEMENT WITH REMOTE CONTROL
- 5.1 - RADIO PROGRAMMING — Page 10
- 5.2 - DELETION OF REMOTE CONTROL — Page 11

6- ADVANCED PROGRAMS
- 6.1 - CONFIGURATION OF MANOEUVRE TIMES — Page 12
- 6.2 - CONFIGURATION OF THE FUNCTIONALITIES OF THE SENSORS — Page 13
- 6.3 - CONFIGURATION OF THE FUNCTIONALITIES OF THE SENSORS — Page 14
- 6.4 - SETTING THE DEVICES CONNECTED TO THE WIRED INPUTS — Page 15
- 6.5 - RESET OF THE CONTROL UNIT — Page 16

7 - INSIGHTS INTO SENSOR MANAGEMENT
- 7.1 - SIGNALLING OF ALARMS — Page 17

8 - CONTROL WITH APP ONE SMART
- 8.1 - APP CONNECTION — Page 18

9 - INSIGHTS - WIFI CONNECTION
- 9.1 - ISSUES WHEN CONNECTING THE CONTROL UNIT WITH WIFI — Page 19

1 - PRODUCT FEATURES

1.1 TECHNICAL DATA

Control unit power supply (Input)	230 Vac
Led power supply	12 or 24Vdc
Motor Output	230Vac max 1000W
Led output	5A for output, max 10A in total
Number of programmable transmitters	30
Receiver frequency RF	433.920MHz
Operating temperature	-10° +55°
Dimensions (Top-ML)	174 X 46 h 35 mm
Dimensions (Screen-ML)	310 x 80 h 70mm

1.2 SENSOR MANAGEMENT

The control unit is designed to manage weather sensors to be connected by wire, which if they intervene can automatically move the motor.
Compatible sensors are:

WIND:
ALARM: the control unit detects a wind speed higher than the one set, for 10 seconds. Then the control unit turns fully opens the motor (settable function) and disables the reception of remote or wired commands until the alarm is over.
ALARM NOT PRESENT/END OF ALARM: the control unit detects a wind speed lower than the one set, for 60 seconds.

RAIN
ALARM: the sensor detects water: then the control unit close the motor (settable function) and disables the reception of remote or wired commands until the alarm is over.
ALARM NOT PRESENT/END OF ALARM: the sensitive part of the rain sensor is dry.

SUN
ALARM: the sensor receives direct light for a period of more than 10 minutes: then the control unit close the motor (settable function) and disables the reception of remote or wired commands until the alarm is over.
ALARM NOT PRESENT/END OF ALARM: the sensor is in the shade or a command is received

ATTENTION:
If more than one sensor is used, there is the possibility that two alarms may intervene which could require confLicting interventions.
In these situations, the control panel applies a priority according to this order:
- wind sensor
- rain sensor
- sun sensor

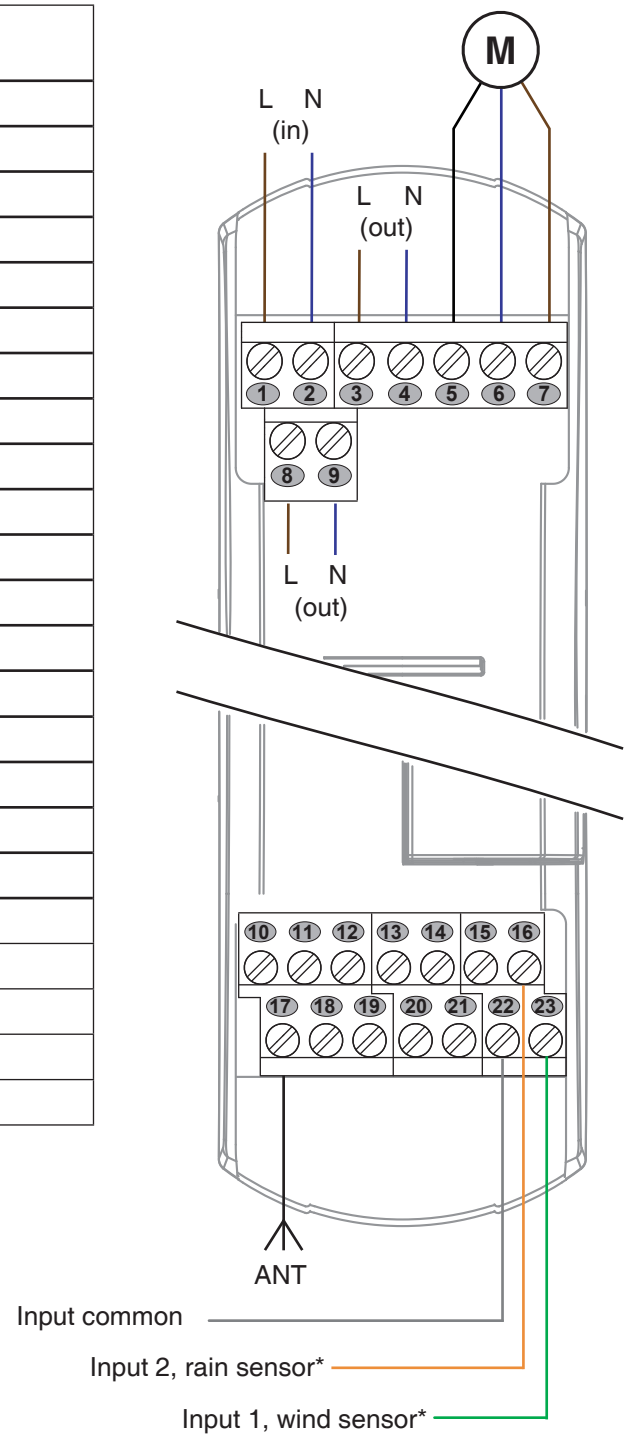
Example:
The wind alarm goes off and the motor must open, but the sun is present and the motor should also close.
The control unit gives priority to the wind sensor and then opens. If the wind alarm is over, the sun is still present, the motor will close.

2 - MOTOR AND SENSORS ELECTRICAL CONNECTIONS

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
- 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.
- Do not exceed the load limits shown and use protected power supply units of the correct size for the load.

TERMINAL NUMBER	DESCRIPTION
1	230V phase power supply
2	230V neutral power supply
3	230V phase (for accessories power supply)
4	230V neutral (for accessories power supply)
5	Motor ouput, close (L)
6	Motor output, common (N)
7	Motor ouput, open (L)
8	230V phase (for accessories power supply)
9	230V neutral (for accessories power supply)
10	+ output led
11	+ output led
12*	OUT led 1 (-)
13*	OUT led 2 (-)
14*	OUT led 3 (-)
15	Not used
16*	Input 2: default= rain sensor
17	433,92MHz antenna signal
18	Not used
19	Not used
20	Led power supply + (12 or 24Vdc)
21	Led power supply -
22	Input common
23*	Input 1: default= vento



*** NOTE:**

- The operation of the inputs can be set, see paragraph 6.4
- See paragraph 3 for connecting the LEDs and setting the number of outputs

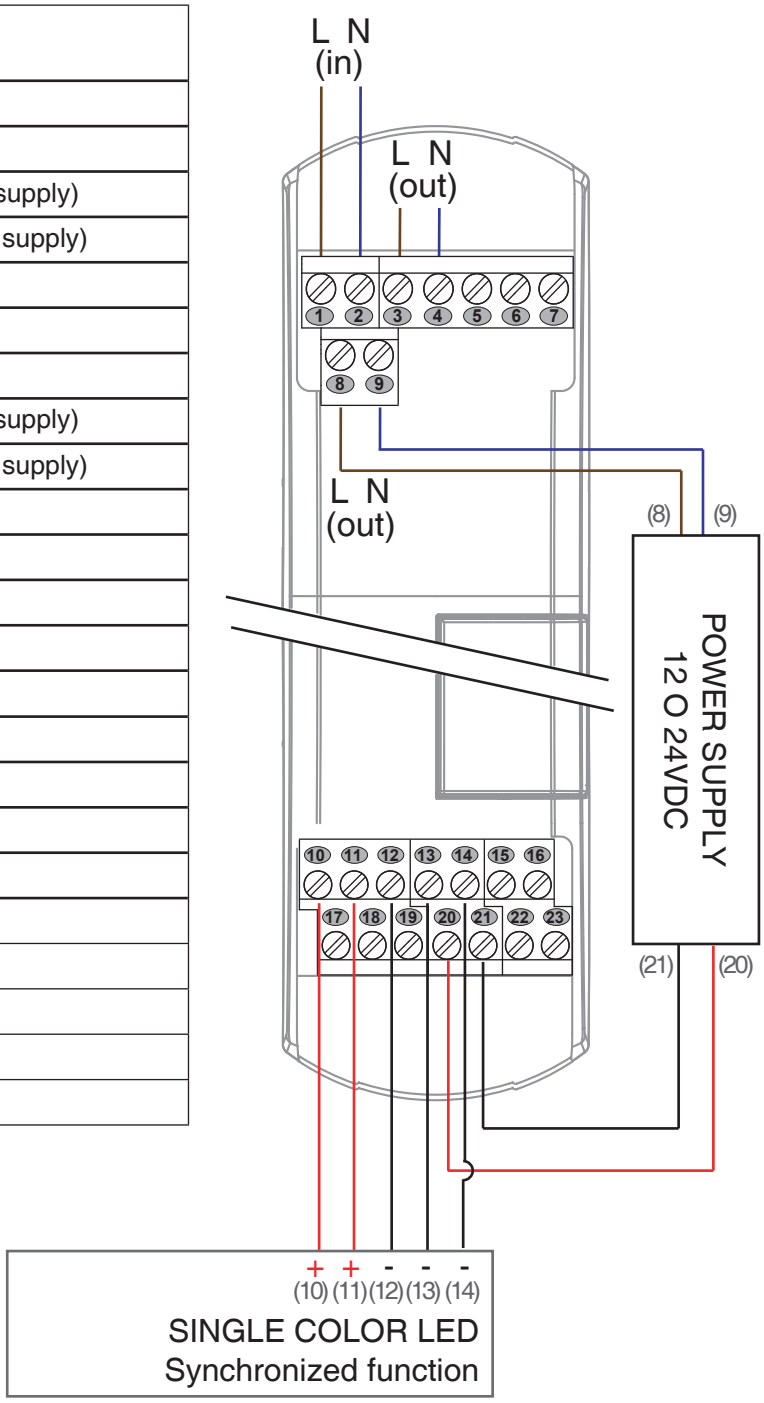
3 - LED OUTPUT ELECTRICAL CONNECTIONS

This control unit can manage 1, 2 or 3 lines of single-colour LED strip lights.
By default, operation is set to one li strip lights. If a different strip type is used, follow the paragraph 2.4 procedure.

3.1 CONNECTING ONE LINE OF SINGLE-COLOUR STRIP LIGHTS

With the default settings the control unit is set to control the three LED lines with synchronized operation.

TERMINAL NUMBER	DESCRIPTION
1	230V phase power supply
2	230V neutral power supply
3	230V phase (for accessories power supply)
4	230V neutral (for accessories power supply)
5	Motor ouput, close (L)
6	Motor output, common (N)
7	Motor ouput, open (L)
8	230V phase (for accessories power supply)
9	230V neutral (for accessories power supply)
10	+ output led
11	+ output led
12*	OUT led 1 (-)
13*	OUT led 2 (-)
14*	OUT led 3 (-)
15	Not used
16*	Input 2: default= rain sensor
17	433,92MHz antenna signal
18	Not used
19	Not used
20	Led power supply + (12 or 24Vdc)
21	Led power supply -
22	Input common
23*	Input 1: default= vento



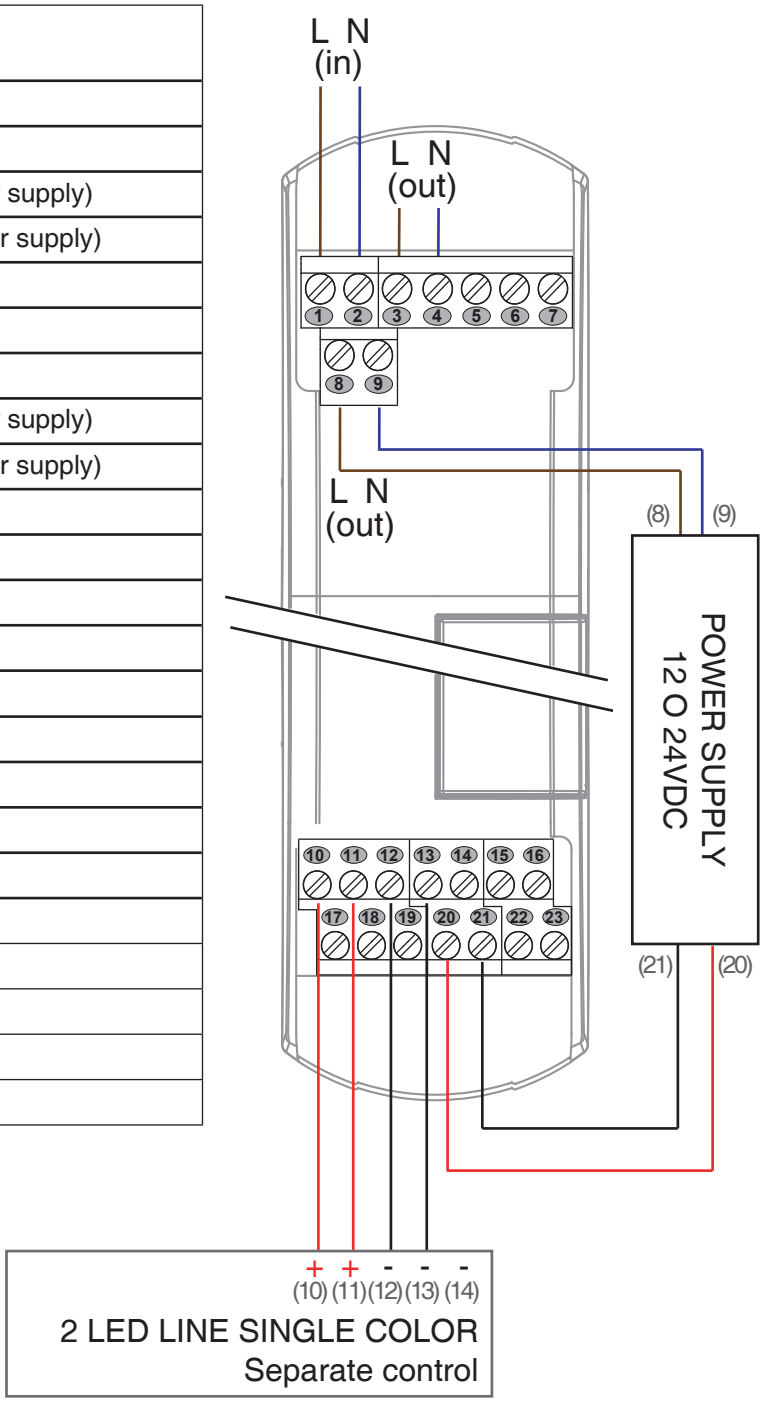
WARNING:

- Connect up to 5A per output and max total 10A
- The outputs are synchronized
- The operation of the inputs can be set, see paragraph 6.4

3.2 CONNECTING TWO LINES OF SINGLE-COLOUR STRIP LIGHTS

With the default settings the control unit is set to control the three LED lines with synchronized operation.
Change the setting, follow the procedure in paragraph 3.4.

TERMINAL NUMBER	DESCRIPTION
1	230V phase power supply
2	230V neutral power supply
3	230V phase (for accessories power supply)
4	230V neutral (for accessories power supply)
5	Motor ouput, close (L)
6	Motor output, common (N)
7	Motor ouput, open (L)
8	230V phase (for accessories power supply)
9	230V neutral (for accessories power supply)
10	+ output led
11	+ output led
12*	OUT led 1 (-)
13*	OUT led 2 (-)
14*	Not used in this configuration
15	Not used
16*	Input 2: default= rain sensor
17	433,92MHz antenna signal
18	Not used
19	Not used
20	Led power supply + (12 or 24Vdc)
21	Led power supply -
22	Input common
23*	Input 1: default= vento



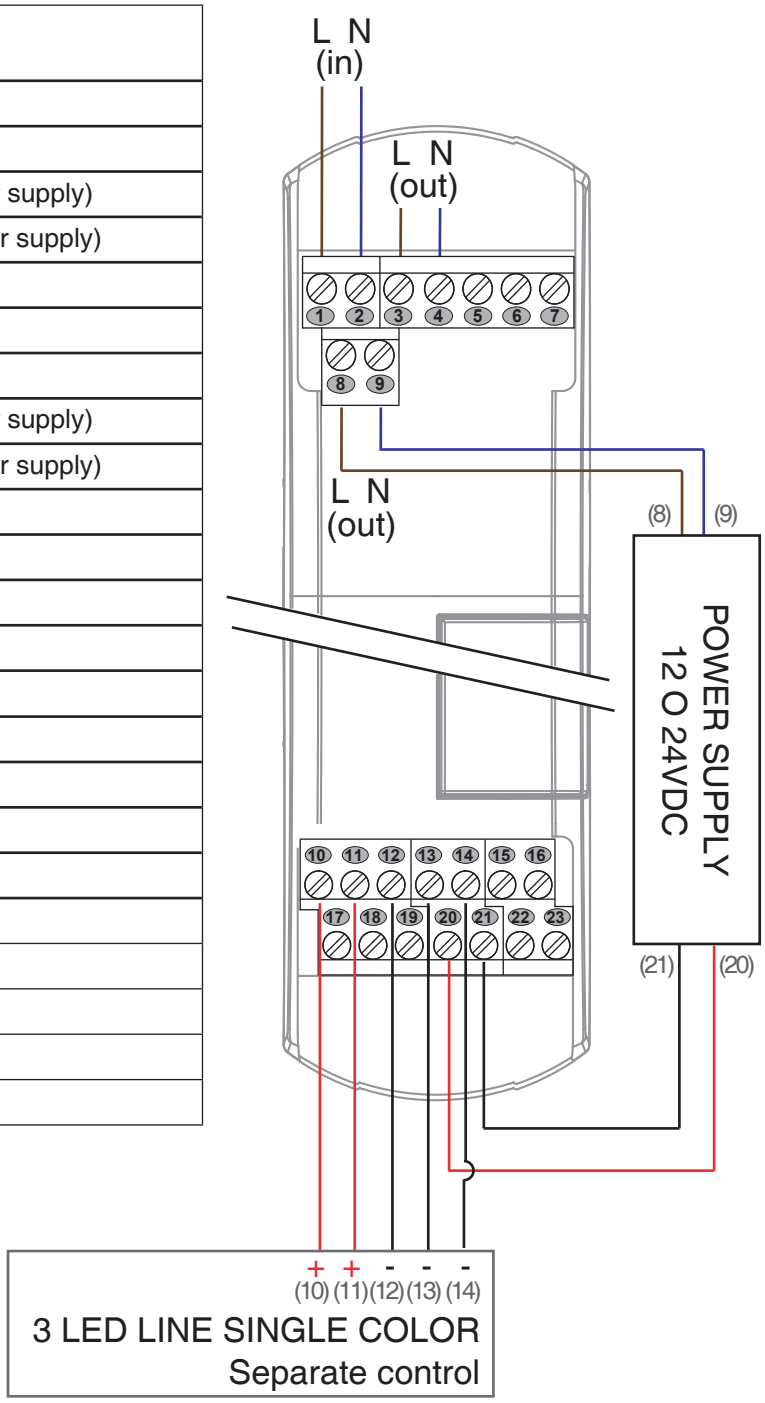
WARNING:

- Connect up to 5A per output and max total 10A
- The outputs are separate
- The operation of the inputs can be set, see paragraph 6.4

3.3 CONNECTING THREE LINES OF SINGLE-COLOUR STRIP LIGHTS

With the default settings the control unit is set to control the three LED lines with synchronized operation.
Change the setting, follow the procedure in paragraph 3.4.

TERMINAL NUMBER	DESCRIPTION
1	230V phase power supply
2	230V neutral power supply
3	230V phase (for accessories power supply)
4	230V neutral (for accessories power supply)
5	Motor ouput, close (L)
6	Motor output, common (N)
7	Motor ouput, open (L)
8	230V phase (for accessories power supply)
9	230V neutral (for accessories power supply)
10	+ output led
11	+ output led
12*	OUT led 1 (-)
13*	OUT led 2 (-)
14*	OUT led 3 (-)
15	Not used
16*	Input 2: default= rain sensor
17	433,92MHz antenna signal
18	Not used
19	Not used
20	Led power supply + (12 or 24Vdc)
21	Led power supply -
22	Input common
23*	Input 1: default= vento



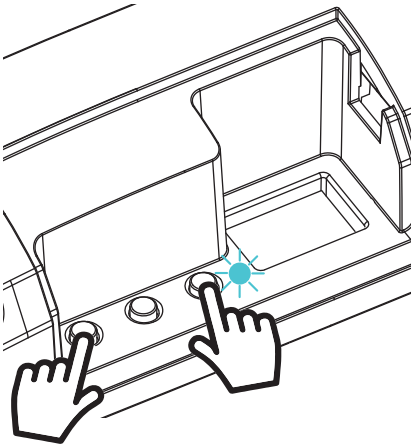
WARNING:

- Connect up to 5A per output and max total 10A
- The outputs are separate
- The operation of the inputs can be set, see paragraph 6.4

3.4 - PROCEDURE FOR SETTING NUMBER OF LED OUTPUT

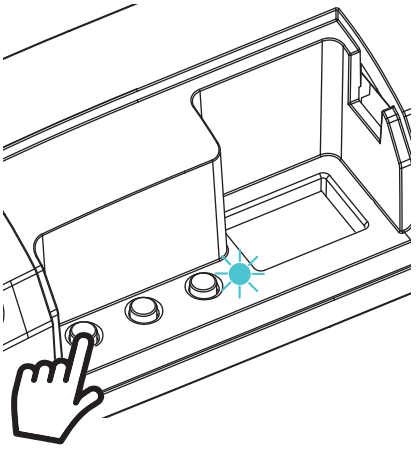
PROCEDURE

STEP 1
Press and hold buttons 1 and 3 simultaneously (approximately 2 seconds) until the LED becomes sky blu.



ACTION: Long press of buttons 1 and 3 **LED:** sky blu

STEP 2
Make a short press of button 1 on the receiver and count the number of LED Flashes.

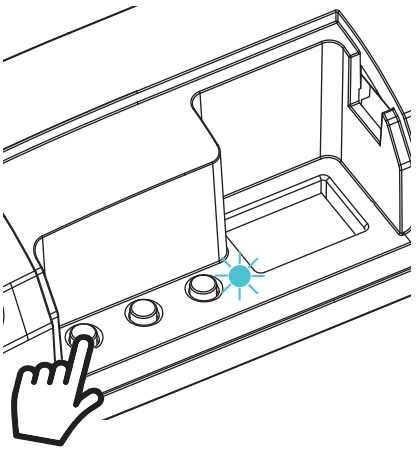


ACTION: Short press button 1
LED: Count the nuber of Flashes

NUMBER OF FLASHES	NUMBER OF LINES MANAGED SEPARATELY	DESCRIPTION
1	1	4 single-colour LED strip lights in synchronised mode.
2	2	2 lines of single-colour LED
3	3	3 lines of single-colour LED

STEP 3
Press the button P1 during the during the Flash that corresponds to the function desired to end the count.

The yellow LED on the board blinks a number of times corresponding to the set function



ACTION: Short press button 1
LED: yellow blinking

WARNING: if no setting is confirmed during step 3, the control unit mantains the load type previously set.

4 - SETTING UP CONTROL UNIT

To make the control panel work correctly:
- Make the connections as shown in the diagram on the previous page, if there are sensors, check that the default operation is correct or, alternatively, modify them, see paragraph 6.2, 6.3 and 6.4.
- If you want to control the system via radio control, associate the radio transmitter with the desired output (s), see paragraph 5.
- If you want to control the system via wired commands, set the inputs as buttons, see paragraph 6.4

For a more precise control of the system it is advisable to also set the motor times, see paragraph 6.1

5 - MANAGEMENT WITH REMOTE CONTROL

This procedure lets you programme/delete compatible multifunctional or generic (Wireless bus) transmitters.

Multifunctional transmitters:
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: this is a dimmer and motor device.

Generic (wireless bus) transmitters:
With generic transmitters, the functions associated with the key are those of motor step / step control and On / Off-Dimmer of the light.

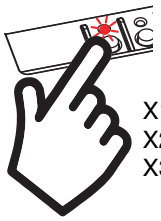
5.1 - RADIO PROGRAMMING

This procedure lets you programme compatible multifunctional or generic transmitters.
Depending on the number of lines of LED strip lights set with the procedure in paragraph 3.4, the remote control can be programmed for the active outputs.

PROCEDURE

MOTOR AND 1 LINE OF LEDS (See paragraph 3.4)

STEP 1b
Press key 1 as many times as the output number on which you want to program the transmitter

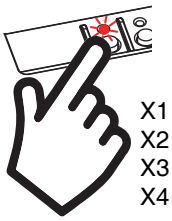


X1 OUT1 (RED)
X2 OUT2 (GREEN)
X3 LED OFF

No. of presses	LED colour	Output paired with TX
1	Red	MOTOR
2	Green	OUT1-2-3
3	Off	/

MOTOR AND 2 LINES OF LEDS (See paragraph 3.4)

STEP 1c
Press key 1 as many times as the output number on which you want to program the transmitter

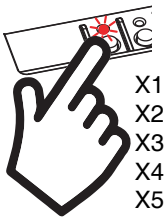


X1 OUT1 (RED)
X2 OUT2 (GREEN)
X3 OUT3 (BLUE)
X4 LED OFF

No. of presses	LED colour	Output paired with TX
1	Red	MOTOR
2	Green	OUT1
3	Blue	OUT2
4	Off	/

MOTOR AND 3 LINES OF LEDS (See paragraph 3.4)

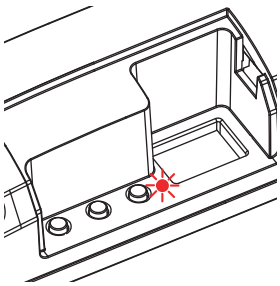
STEP 1d
Press key 1 as many times as the output number on which you want to program the transmitter



X1 OUT1 (RED)
X2 OUT2 (GREEN)
X3 OUT3 (BLUE)
X4 OUT4 (YELLOW)
X5 LED OFF

No. of presses	LED colour	Output paired with TX
1	Red	MOTOR
2	Green	OUT1
3	Blue	OUT2
4	Yellow	OUT3
5	Off	/

STEP 2
Within 10 seconds make a transmission with the transmitter to be saved.
See transmitter manual, the paragraph entitled “transmitter programming” for specify information.
The led makes 3 Flashes and turns off.



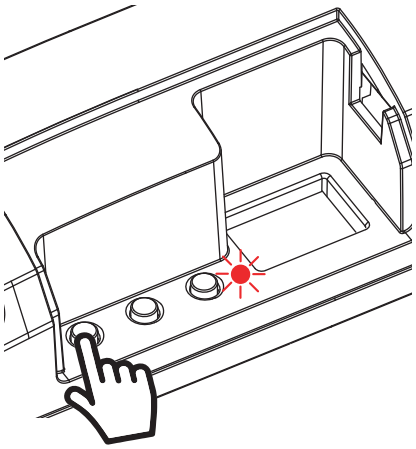
ACTION: Make a transmission with the transmitter **LED:** Flashes 3 times

5.2 - DELETION OF REMOTE CONTROL

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

STEP 1

Hold the receiver button 1 down (about 5 seconds.) until the LED begins to Flash

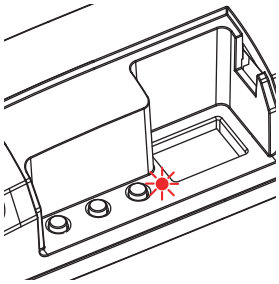


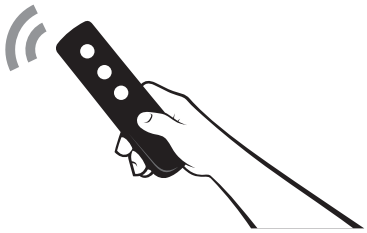
ACTION: Hold tbutton 1 down **LED:** Flashes red

DELETION OF SINGLE TRANSMITTER

PASSO 2a

Within 10 seconds make a transmission with the transmitter that you want to delete.
The LED flashes quickly and turns off.



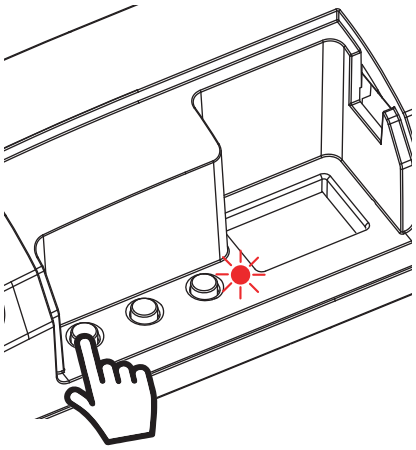


ACTION: Make a transmission with the transmitter
LED: Flashing quickly and turns off

DELETION OF ALL TRANSMITTER SAVED

PASSO 2B

Within 10 seconds press the button 1 on the receiver for a short time to confirm the delection of all transmitters.
The LED starts flashing quickly and turns off.



ACTION: Short press of button 1
LED: Flashing quickly and turns off

6 - ADVANCED PROGRAMS

6.1 - CONFIGURATION OF MANEUVER TIMES

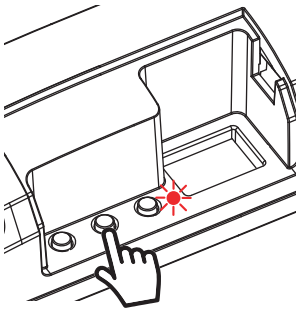
Default: 60 seconds

This procedure is used to set the opening and closing manoeuvre time (maximum time that can be set 180 seconds).

NOTE: Before carrying out this procedure check that the direction of operation is correct in relation to the transmitter keys or wired command.

STEP 1

Make a long press of button 2.
The led turns on red.

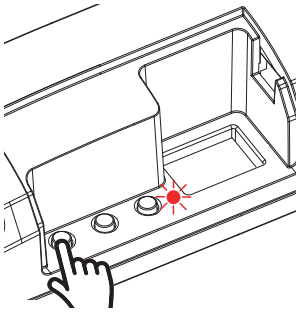


ACTION: long press button 2 **LED:** turns on red

STEP 2

Press the button 2 on the receiver for a short time and count the number of Flashes emitted by the LED (max 180 Flashes): each Flash represents a second of manoeuvre time.

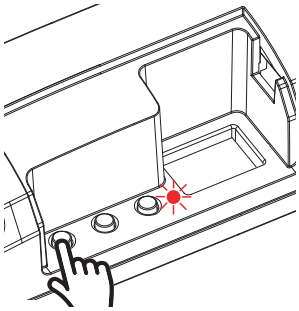
Attention: the control unit Flashes one time every 1 second, example: 120 seconds = 120 Flashes = 2 minutes of manoeuvre



ACTION: Short pressure button 1 **LED:** Flash

STEP 3

To end the count press the button 2 for a short time during the Flash that corresponds to the function desired



ACTION: Short pressure button 1 **LED:** Turns off

6.2 CONFIGURATION OF THE FUNCTIONALITIES OF THE SENSORS

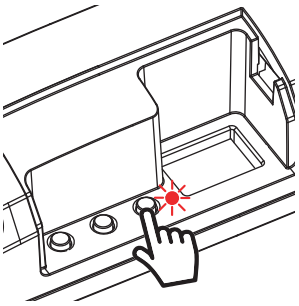
Default:
wind = opens when a wind speed exceeds 10km / h is detected
rain = closes when rain is detected
sun = closes when sun is detected

This procedure is used to set the actions of the motor upon intervention of the sensor alarms

STEP 1
Make a long press of button 3.
The led change colour cyclically red and green.

Release the button corresponding to the sensor you want to set

LED colour	Output paired with TX
Red	Wind sensor
Green	Rain sensor
Blue	Sun sensor



ACTION: long presso button 3 **LED:** changes color cyclically

WIND SENSOR

STEP 2A
OPEN WHEN IT INTERVENES
= Press button 1, the LED starts Flashing to set the wind speed above which to intervene

CLOSE WHEN IT INTERVENES
= Press button 2, the LED starts Flashing to set the wind speed above which to intervene

DEACTIVATE = Press button 3

N° FLASH	DESCRIPTION
1	Intervention 5km/h
2	Intervention 10km/h
3	Intervention 15km/h
4	Intervention 20km/h
5	Intervention 25km/h
6	Intervention 30km/h
7	Intervention 35km/h
8	Intervention 40km/h
9	Intervention 45km/h

STEP 3A
Make a short press during the Flashing corresponding to the desired intervention threshold.

RAIN SENSOR

STEP 2B
OPEN WHEN IT INTERVENES
= Press button 1, the LED starts Flashing to set the wind speed above which to intervene

CLOSE WHEN IT INTERVENES
= Press button 2, the LED starts Flashing to set the wind speed above which to intervene

DEACTIVATE = Press button 3

SUN SENSOR

STEP 2C
OPEN WHEN IT INTERVENES
= Press button 1, the LED starts Flashing to set the wind speed above which to intervene

CLOSE WHEN IT INTERVENES
= Press button 2, the LED starts Flashing to set the wind speed above which to intervene

DEACTIVATE = Press button 3

ATTENTION
To perform a sensor operation test see paragraph 5.3

6.3 CONFIGURATION OF THE FUNCTIONALITIES OF THE SENSORS

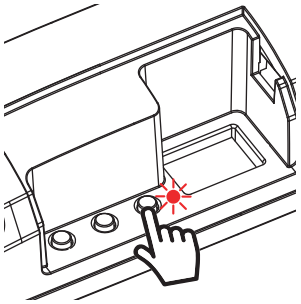
With this procedure the sensors are tested.

ATTENTION: to carry out the test the sensor must be active, see paragraph 5.2

STEP 1
Make a long press of button 3.
The led change color cyclically red and green.

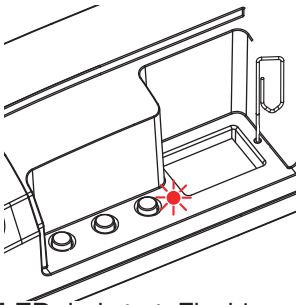
Release the button corresponding to the sensor you want to set

LED colour	Output paired with TX
red	Wind sensor
green	Rain sensor
blu	Sun sensor



ACTION: long presso button 3 **LED:** changes color cyclically

STEP 2
Make a short press of hidden button.
The led start Flashing.



ACTION: short press hidden button **LED:** led start Flashing

WIND SENSOR

STEP 3A
To carry out the test turn the wind sensor (wind gauge) blades by hand: the control unit will make a brief opening movement followed by a brief closing movement. When the test is completed the control unit turn off the led and will beep 4 times.

In any case, the control unit exits the procedure after 60 seconds or when a key is pressed.

RAIN SENSOR

STEP 3B
To carry out the test wet the sensitive part of the rain sensor: the control unit will make a brief opening movement followed by a brief closing movement. When the test is completed the control unit turn off the led and will beep 4 times.

In any case, the control unit exits the procedure after 60 seconds or when a key is pressed.

SUN SENSOR

STEP 3C
To carry out the test illuminate the sensitive part of the sensor or expose it to the sun: the control unit will make a brief opening movement followed by a brief closing movement. When the test is completed the control unit turn off the led and will beep 4 times.

In any case, the control unit exits the procedure after 60 seconds or when a key is pressed.

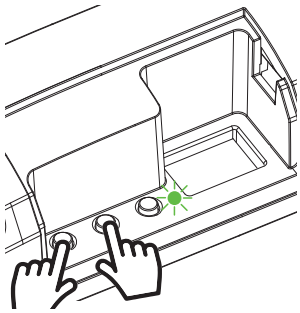
ATTENTION
After entering the test, this mode is exited:
- if the corresponding sensor does not intervene within 60 seconds
- Pressing a button in the control unit
- if the corresponding sensor activates, to exit the test the alarm must be deactivated (wind = vanes stopped, rain = sensor dry, sun = sensor in the shade)

6.4 SETTING THE DEVICES CONNECTED TO THE WIRED INPUTS

Default:
Input1= Wind sensor
Input2= Rain sensor
Input3= Sun sensor
This procedure changes the type of device connected to the wired inputs. The device can be a sensor or a button dedicated to controlling the movement of the motors or control the lights.

ATTENTION:
- By wire, the light can be controlled in a synchronized way
- The same type of sensor cannot be set only on one input. Example: I cannot set the wind sensor on input 1 and on input 2.

STEP 1
Make a long press of keys 1 and 2.
The led lights up green.



ACTION: long press button 1 and 2 **LED:** turn on green

INPUT 1

STEP 3A
Make a short press of button 1, the LED starts Flashing

INPUT 1

STEP 4A
To end the count press the button 1 for a short time during the Flash that corresponds to the function desired

FLASH	FUNCTION
1	Wind sensor
2	Rain sensor
3	Sun sensor
4	Motor: Step by step button
5	Motor: Open button
6	Motor: Close button
7	Motor: Open button (Dead man)
8	Motor: Close button (Dead man)
9	Motor: Open/Close button (Dead man)
10	Lights: On/Off (short press) and dimmer (long press) button

INPUT 2

STEP 3B
Make a short press of button 2, the LED starts Flashing

INPUT 2

STEP 4B
To end the count press the button 2 for a short time during the Flash that corresponds to the function desired

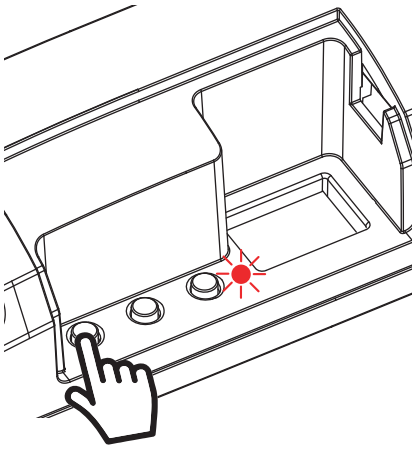
FLASH	FUNCTION
1	Wind sensor
2	Rain sensor
3	Sun sensor
4	Motor: Step by step button
5	Motor: Open button
6	Motor: Close button
7	Motor: Open button (Dead man)
8	Motor: Close button (Dead man)
9	Motor: Open/Close button (Dead man)
10	Lights: On/Off (short press) and dimmer (long press) button

6.5 - RESET OF THE CONTROL UNIT

This procedure let you take the control unit back to factory settings.

STEP1

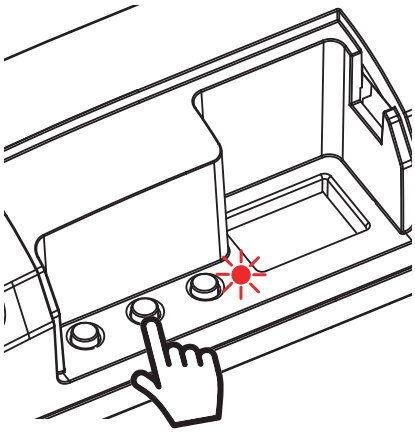
Hold the receiver button 1 down (about 5 seconds.) until the LED begins to Flash



ACTION: Long press of button 1 **LED:** The led Flash quicly

STEP2

Within 10 seconds, make a short press of button 2.
The LED 1 Flashes quickly and turns off.



ACTION: Short press of button 2 **LED:** The led Flash quicly and turns off

7 - INSIGHTS

7.1 - SIGNALING OF ALARMS

The control unit, through the LED and the buzzer on the board, is able to signal any alarms of the active weather sensors.
When the control unit receives a command for the movement of the motor but this is inhibited due to an alarm, a “BEEP” will be emitted from the buzzer and the LED on the board will give the following signal:

Flashes blue for 5 sec = wind alarm intervention
Flashes green for 5 sec = rain alarm intervention

ATTENTION: the sensors can be disabled (and therefore bring the control unit out of the alarm state) with a compatible transmitter.

8 - CONTROL WITH APP ONE SMART

These procedures allow you to manage the light from your device (example: mobile phone) through the application and to control the system remotely.

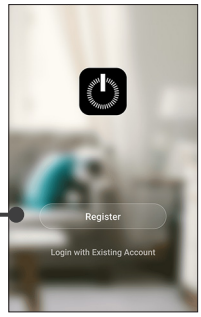
8.1 - APP CONNECTION

This procedure connects the control unit to the application. It shall be repeated for each control unit on the installation.
ATTENTION: an internet-based 2,4GHz Wi-Fi (no 5GHz) network is required for this operation.

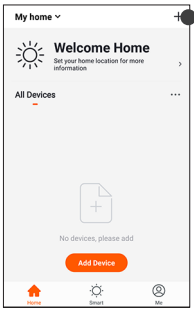
1. Download the App OneSmart on the phone

OneSmart

2. After starting the application, you will need to create an account. Complete the procedure.

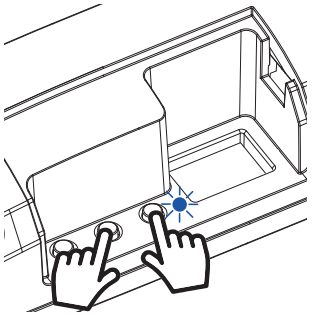


3. Press the "Add Devices" icon

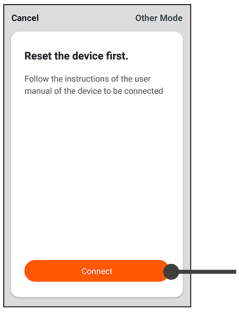


4. Select the category "Smart Devices"

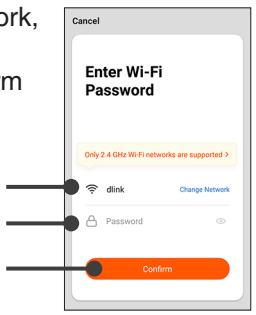
5. Press buttons 1 and 2 at the same time until the blue led is turned on, then release the button. After a few seconds the LED Flashes and the motor makes a short opening / closing



6. Press "Connect" on the App



7. On the application, select the wi-fi network, insert the network password and confirm



8. The device will be now automatically configured. The blue led on the control unit indicates the progress of the setting:
Series of one Flash = the power station is ready for setup,
Series of two Flashes = power station is trying to connect to the WiFi network,
Series of 4 Flashes = the power station connected correctly.
The LED will die after two minutes.

FOR WIFI CONNECTION ISSUES CHECK OUT PG. 19

9 - INSIGHTS

9.1 – ISSUES WHEN CONNECTING THE CONTROL UNIT WITH WIFI

If you're having problems connecting the control unit to the router, we suggest to:

FIRST CHECKS:
- check if the network used to connect the control unit is running at 2.4GHz (not 5GHz)
- the smartphone you use must be connected to the same WiFi on which you want to connect the device
- please check if the entered password is correct

STEPS TO DO:
- close the app and try again to connect the device
- if possible try with another smartphone to check if it works

If the problem is not fix, there may be some settings in your router that make the network incompatible with the device. To check and change these settings it's necessary to access the router settings.

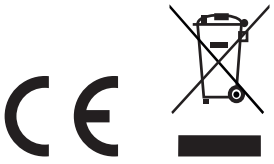
As soon as you access the router settings (it depends on the model of router you have) try to check and set these parameters:

WIFI FREQUENCY BAND
some routers generate a network that is set automatically at a frequency of 2.4GHz or 5GHz, depending on the device you are connecting with. When you are trying to connect the device through your OneSmart account, your smartphone may be connected automatically at the frequency band of 5GHz, failing the connection with your device.
It's therefore necessary to access the router settings and set the 2.4GHz as the main network frequency to use.
Otherwise it's possible to create two different WiFi networks, one for the 2.4GHz and one for the 5GHz band, and during the pairing phase make sure your smartphone is connected to the 2.4GHz network.

WIFI SECURITY SETTINGS
some routers could have default security settings not compatible with the device.

Please find out which security protocol type your Wi-Fi router is and change it to:

WI-FI SECURITY:
SECURITY TYPE: WPA2
ENCRYPTION TYPE: AES



Nexta Tech
company brand of Team srl
via G.Oberdan 90, 33074
Fontanafredda (PN) - Italy
Ph. +39 0434 998682
Email: info@nexta-tech.com
Web: www.nexta-tech.com

V1.0