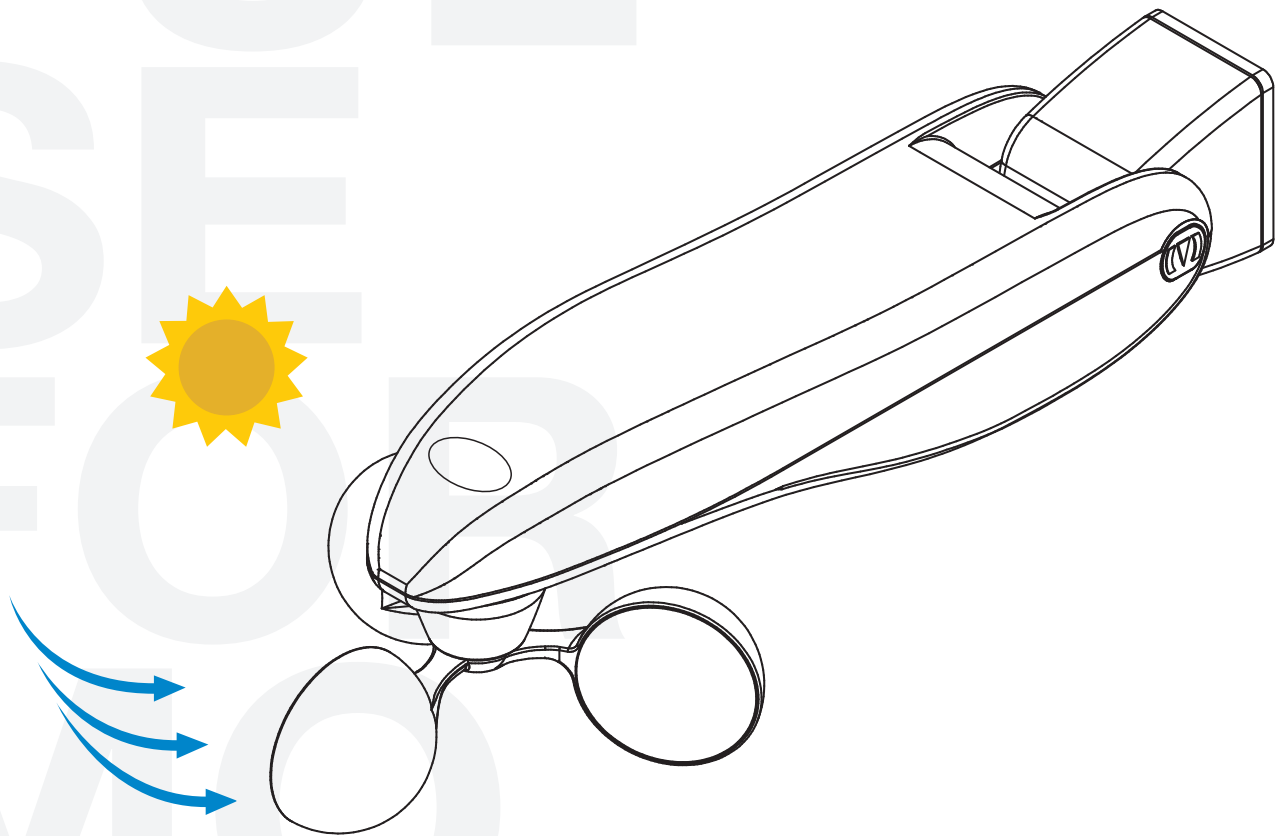


USER MANUAL:
Radio wind/sun sensor

VEGA
(90.421.115)



VEGA

Dear customer, thank you for purchasing a MASTER product. This guide contains information about the product use. Before the product installation and use, please read carefully this guide and keep it for future reference.

VEGA is a radio wind/sun sensor powered by main voltage and studied to command tubular motors with radio receiver (integrated or external), powered by main voltage and it is suitable to command awnings, roller shutters or similar.

VEGA permits to command the automatic upward movement of the blinds connected to the motor when the wind exceeds the set threshold and to command an automatic lowering when the intensity of sun exceeds the threshold set. These thresholds are set by the factory, but they can be adjusted according to the needs.

Warning



This sensor does not protect awning in case of strong and sudden gusts of wind.

In case of weather hazards of this type, make sure that the curtains remain closed!

Master S.p.A. declines all responsibility for damage incurred due to weather events not detected by the device.



Any other use beyond the field defined by Master S.p.A. is prohibited and involves, as well as the failure to comply with instructions provided in this guide, the cancellation of Master S.p.A. liability and warranty.

The installer, after the installation of the product, must teach the end user about the working way of the automation and provide him with the user manual.

Technical specifications

✓ Power supply:	120 or 230 Vac, 50/60 Hz
✓ Dimensions:	236 x 54 x 73 mm
✓ Weight:	200 gr
✓ Working temperature:	from -20 to +55 °C
✓ Wind threshold:	from 5 to 35 Km/h
✓ Sun threshold:	from 1 to 45 Klux
✓ Frequency:	433.42 Mhz
✓ Memorizable radio codes:	1
✓ Range (estimate):	100m outdoor, 20m indoor

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Notes on radio system

It is advisable **to avoid using radio systems in areas with strong interference** (for example, near police stations, airports, ports, hospital, etc.). A technical inspection is in any case advisable before installing any radio system in order to identify sources of interference.

Radio systems can be used where possible disturbances or malfunctioning of the transmitter or the receiver do not cause a risk factor, or if the risk factor is cancelled by suitable safety systems.

The presence of radio device operating on the same transmission frequency (**433,42 MHz**) can interfere with the radio receiver of the motor and so reduce the range of the system and limit the functionality of the installation.



Environmental conservation!!

MASTER uses packaging recyclable materials. Dispose materials on the proper containers, complying with the law in force in your locality. This product may have substances that are polluting for the environment and dangerous for the health. At the end of the product life cycle, carefully comply with the waste disposal rules. It is strictly forbidden to dispose the product on the domestic waste.



01.1 WARNINGS FOR SAFETY

- ✓ Incorrect installation can cause serious injuries.
- ✓ Keep these instructions for future maintenance work and disposal of the product.
- ✓ All the product installation, connection, programming and maintenance operations must be carried out only by a qualified and skilled technician, who must comply with laws, provisions, local regulations and the instructions given in this manual.
- ✓ The wiring must comply with current CEI standards. The final electrical system must be created only by the electrician.
- ✓ Some applications require hold-to-run operation and can exclude the use of radio controls or require particular safety devices.
- ✓ To prevent potentially dangerous situations, check the operating condition of the roller shutter/awning regularly.

01.2 WARNINGS FOR INSTALLATION

- ✓ Read the technical specifications on the paragraph "Technical specifications" to evaluate the operating limits of the product.
- ✓ Before installing the product, check the compatibility with the associated devices and accessories.
- ✓ Check that the package is intact and has not been damaged in transit.
- ✓ A heavy shock and the use of unsuitable tools can cause the damage of the external or internal parts of the product.
- ✓ Do not pierce or tamper with the product in any way. Do not modify or replace parts without the manufacturer's permission.
- ✓ Check that the place chosen for the installation of the product permits the same wind exposure of the blind to be automated.
- ✓ Check that the place chosen for the installation is made by solid material and can ensure a stable fixation.
- ✓ Check that the place chosen for the installation of the sensor is within the range of transmission-reception generated by the sensor and by the receiver of the blind to be commanded. Although the range in favorable conditions (open field) can be 100m, it is advisable to not exceed 20-30m. It is also advisable to check that there are no other radio devices working at the same frequency or with continuous transmission on the same area, such as alarms, radio headphones, etc...: these could further reduce the range.
- ✓ If there are several radio appliances in the same system, they must not be less than 1,5m apart.
- ✓ Do not install the product near metal surfaces.
- ✓ Do not install the product near heat sources (such as chimneys, etc....).
- ✓ Adjust the inclination of the device to have the blades positioned horizontally.
- ✓ The blades for the wind detections must be faced downward. The blades must be free to rotate without obstruction.
- ✓ Check that the device is placed in a protected position from accidental impact with other object (e.g. branches, etc.).
- ✓ The power cable must be positioned in such a way that it does not come into contact with moving parts.
- ✓ Do not use abrasive or solvent product for cleaning the device; do not clean using water or high-pressure cleaners.
- ✓ For your safety, do not work near the winding roller while the motor is powered.

01.3 WARNINGS FOR USE

- ✓ The product is not intended to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they are supervised or given instructions about the product way of use by a person responsible for their safety.
- ✓ Check the automation during the movement and keep people at a safe distance, until the movement ends.
- ✓ Do not allow children to play with the appliance or with the fixed control devices.
- ✓ Do not operate the blind when maintenance operations are being carried out (e.g. window cleaning, etc.). If the control device is automatic, disconnect the motor from the power line.

02. VEGA INSTALLATION IN 2 STEPS!!!

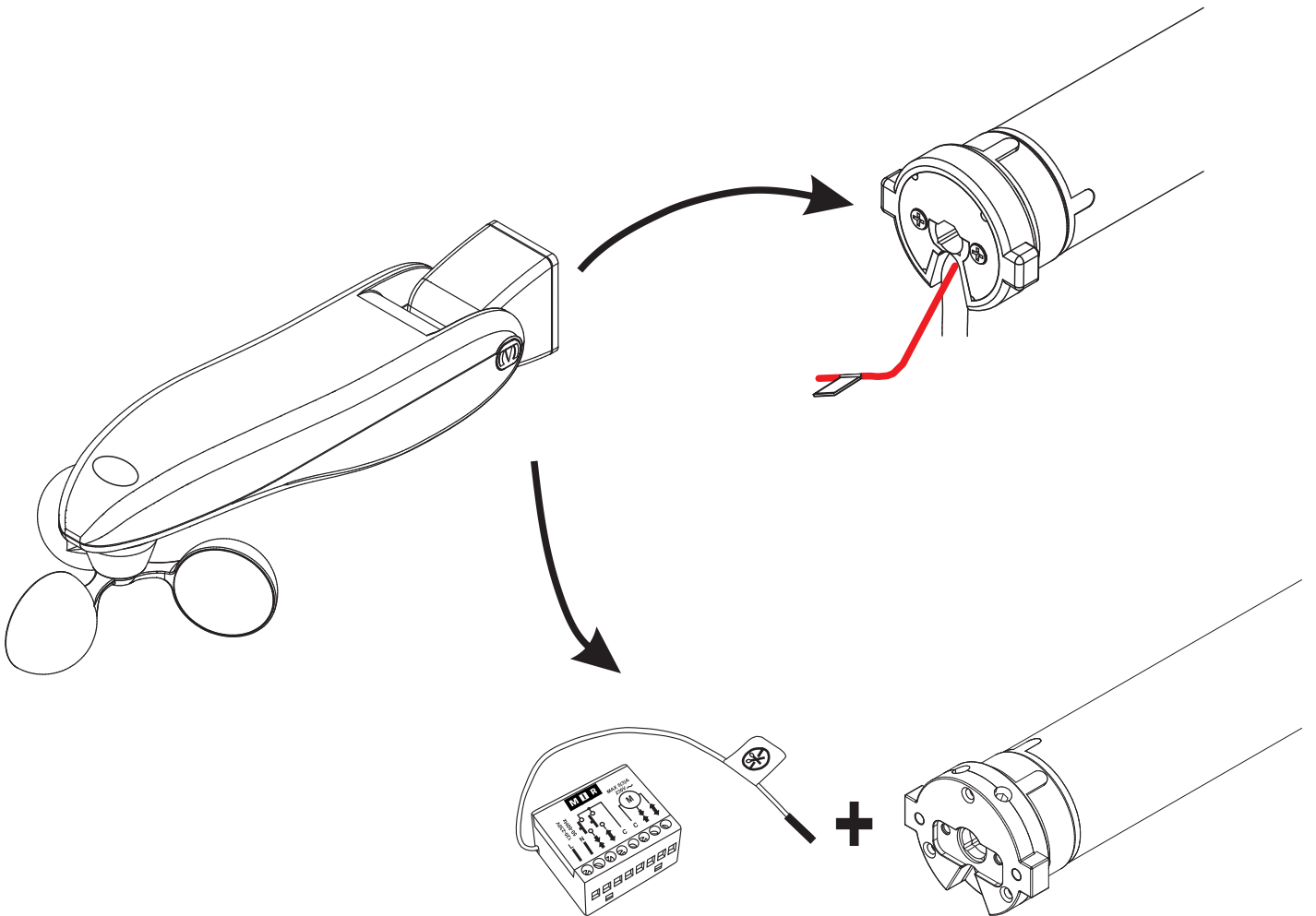
1 Ensure to have stored a transmitter on the receiver
(motor with integrated radio receiver or motor with external receiver)

2 Store VEGA on the receiver

- with the transmitter (see step 1) bring the motor/receiver to the intermediate position.
- press PROG on the transmitter for around 5 seconds to let the motor/receiver enter into the programming (the motor/receiver makes a signal)
- press P1 on VEGA and hold it until the motor/receiver confirmation movement.

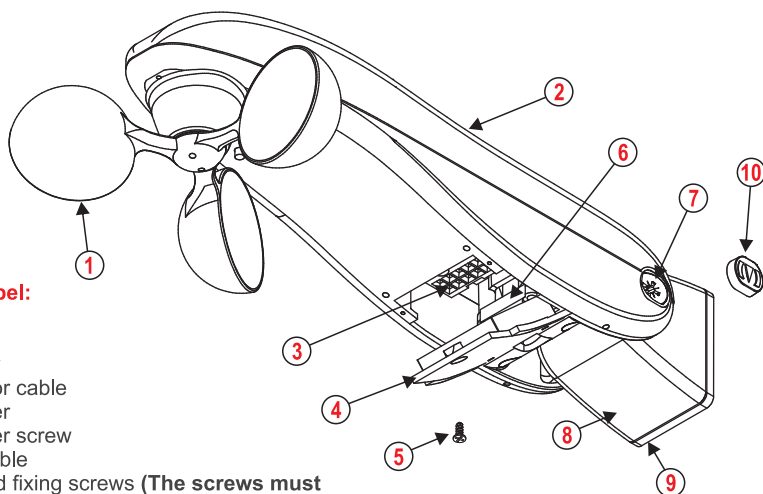
WARNING:

some motor/receiver can have a different procedure from the one described above. In this case follow the section "Memorization/cancellation of the radio device" on the user manual of the motor/receiver.



It is possible to use the transmitter to modify the parameters on the VEGA sensor: see paragraph 6 for the memorization procedure.

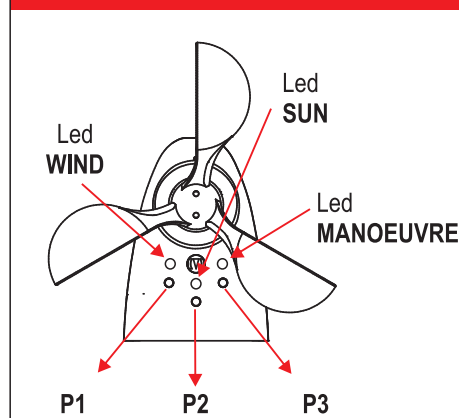
03. ASSEMBLY INSTRUCTIONS



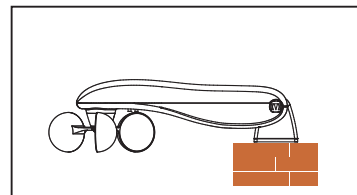
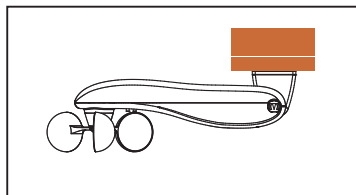
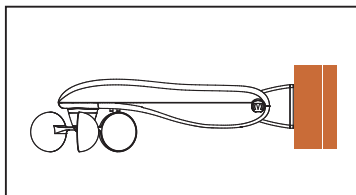
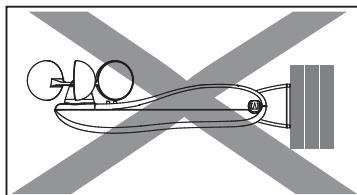
Components label:

- (1) Blades
- (2) Sensor body
- (3) Connector for cable
- (4) Closing cover
- (5) Closing cover screw
- (6) Retaining cable
- (7) Adjusting and fixing screws **(The screws must never be completely unscrewed)**
- (8) Wall fixing
- (9) Wall support
- (10) Screws cover

03.1 BUTTON AND LED DIAGRAM



03.2. FIXING SYSTEM



03.3. MOUNTING INSTRUCTIONS



WARNING: Adjusting and fixing screws (7) must never be completely unscrewed

A

Fix the wall support on the more suitable surface through the supplied plugs and screws.

B

Close the two screws that fix the wall support and sensor using suitable tools.

C

Insert the two screw covers on the provided places.

D

Unscrew the screw and open the closing cover placed under the sensor.

E

Insert the connector (with the wire) on the right way and on the provided place.

F

Plug up the cable through the provided retaining cable, using the two screws.

G

Close the cover.

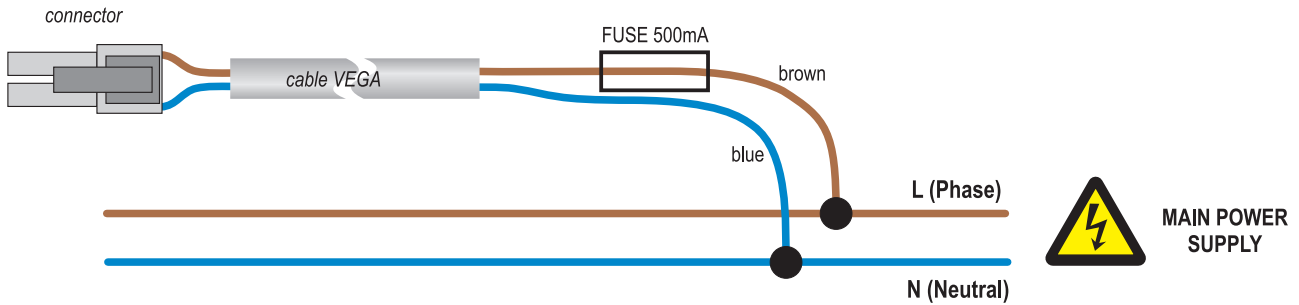
Notes:

- ✓ the product has been studied to be installed with the blades facing downward. Moreover, the body sensor must be adjusted horizontally (the use of a bubble level can simplify the operation); the wall bracket with tilting angle $\pm 90^\circ$ allows to mount the sensor even on no-vertical structures.
- ✓ the hole interaxis is 30 mm, compatible with the one of Mistral and Eclipse series.

04. ELECTRICAL CONNECTION



- ✓ Make connections with power supply disconnected.
- ✓ Check that the power supply does not depend from electrical circuits for lighting.
- ✓ Always connect the motor to the grounding system (yellow/green).
- ✓ The supply line must be equipped with a circuit breaker. The supply line must be fitted with a device with a voltage category III, i.e. the distance between the contacts must be of 3,5 mm at least.
- ✓ The product doesn't provide any protection against overloads or short circuits. Provide the supply line with an adequate protection to the load, for example a fuse of maximum value 500 mA.
- ✓ The section of the connecting cables must be proportionate to their length and to the absorption of the load, and in any case not less than 1,5 mm.
- ✓ **Once the electrical connections are finished, bring the motor/motors to the intermediate position and check that in the "wind alarm" condition the module commands the upward movement to the motor/motors (to exit form the "wind alarm", press any buttons P1, P2 or P3).**



05. MEMORIZATION/CANCELLATION OF VEGA IN A RECEIVER

The procedure to memorize or delete VEGA in a receiver depends on the receiver, but usually is the following:

- with the transmitter bring the motor/receiver to the intermediate position.
- press PROG on the transmitter for around 5 seconds to let the motor/receiver enter into the programming (the motor/receiver makes a signal)
- press P1 on VEGA and hold it until the motor/receiver confirmation movement.

WARNING: some motor/receiver can have a different procedure from the one described above. In this case follow the section "Memorization/cancellation of the radio device" on the user manual of the motor/receiver.

To check that the radio sensor is correctly stored on the receiving device, give an up or down command to the receiver: shortly pressing P1 on the radio sensor, the movement must stop.

06. MEMORIZATION OF THE TRANSMITTER FOR SENSOR CONTROL (OPTIONAL)

The wind and sun threshold modification can be done in two ways:

- 1) through buttons P1, P2 and P3
- 2) through a stored radio transmitter

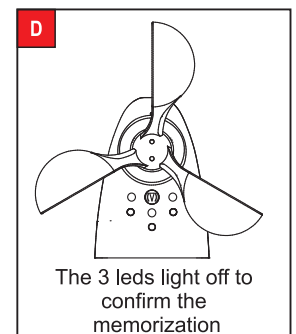
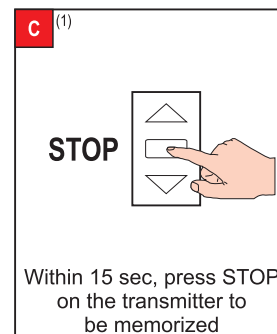
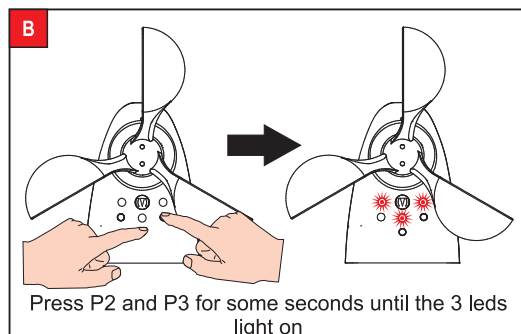
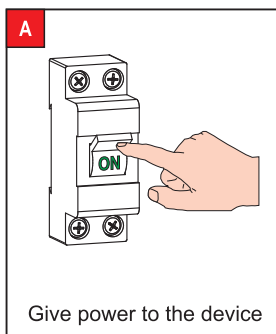
This second mode facilitates the operation (you are no longer forced to physically reach the sensor), but it is not mandatory. The following procedure shows how to memorize the "transmitter for sensor control":



WARNING



Use a channel reserved only for the control of the sensor.
Do not use channel already stored in other radio devices or radio motors.



Notes:

- ✓ (1): if the radio code to be memorized is not received within 15 sec, the module exits from the programming
- ✓ It is possible to memorize only one "transmitter for sensor control". The memorization of a second "transmitter for sensor control" will replace the "transmitter for sensor control" previously stored.

08. SUN SENSOR

The sun sensor can work in two different mode:

STANDARD MODE:

on this mode, the sensor commands a full opening / closing manoeuvre to the tuned receivers (radio devices or motors with integrated radio receiver). This setting is preferable if the tuned receivers to the sensor do not provide the "intermediate sun position" function (e.g. MIR). This is the factory setting.

ADVANCED MODE:

on this mode, the sensor can commands a full opening / closing manoeuvre or a partial opening / closing manoeuvre to the tuned receivers (radio devices or motors with integrated radio receiver). This setting is preferable if the tuned receivers to the sensor provide the "intermediate sun position" function (e.g. LEG/ATOM motors).

08.1 STANDARD MODE

This is the factory setting.

An automatic downward manoeuvre is performed if the intensity of the sun is above the set threshold for at least 2,5 minutes.

An automatic upward manoeuvre is performed when the intensity of the sun returns to less then the set threshold for at least 18 minutes.

Once performed an automatic downward manoeuvre for the presence of sun, the subsequent automatic operation performed by the sensor will be an upward manoeuvre for to the absence of sun and so on.

The user can operate the awning, but the manual control doesn't affects the operating logic of the sun sensor.

The sun threshold is variable from 1 to 45 Klux. The factory sets the threshold to 16 Klux.

08.1.1 VISUAL SIGNALS ASSOCIATED TO SUN SENSOR IN STANDARD MODE

LED Sun → OFF	: sun is below the sun threshold
LED Sun → GREEN	: sun is above the sun threshold
LED Sun → RED	: the function is inactive or system in wind alarm (sun function temporarily deactivated)

The manoeuvre LED provides information about the last automatic operation carried out by the module

LED Manoeuvre → OFF	: the automatic upward manoeuvre for absence of sun was performed
LED Manoeuvre → GREEN	: the automatic downward manoeuvre for presence of sun was performed
LED Manoeuvre → BLINKING	: is just exit from wind alarm and has not yet made any automatic operation concerning the sun

08.2 ADVANCED MODE

There are two thresholds: "sun threshold" and "intermediate sun threshold".

An automatic downward manoeuvre is performed if the intensity of the sun is above the set "sun threshold" for at least 2,5 minutes.

An automatic upward manoeuvre is performed when the intensity of the sun returns to less then the set "intermediate sun threshold" for at least 18 minutes.

If the intensity of the sun is between the two thresholds and is rising, after 2,5 minutes is performed a partial manoeuvre until reaching the "intermediate sun limit switch" stored in the receiver.

If the intensity of the sun is between the two thresholds and is decreasing, after 18 minutes is performed a partial manoeuvre until reaching the "intermediate sun limit switch" stored in the receiver.

The user can operate the awning, but the manual control doesn't affects the operating logic of the sun sensor.

The "sun threshold" and the "intermediate sun threshold" are variable from 1 to 45 Klux. The factory sets the "sun threshold" to 16 Klux and the "intermediate sun threshold" to 8 Klux.

NOTE:

The "intermediate sun threshold" must always have a value less than or equal to the "sun threshold". If this condition is not verified, the sensor automatically changes the "intermediate sun threshold" by assigning the same value of the "sun threshold".

08.2.1 VISUAL SIGNALS ASSOCIATED TO SUN SENSOR IN ADVANCED MODE

LED Sun → OFF	: sun is below the "intermediate sun threshold"
LED Sun → YELLOW	: sun is between the two threshold
LED Sun → GREEN	: sun is above the "sun threshold"
LED Sun → RED	: the function is inactive or system in wind alarm (sun function temporarily deactivated)

The manoeuvre LED provides information about the last automatic operation carried out by the module

LED Manoeuvre → OFF	: the automatic upward manoeuvre for absence of sun was performed
LED Manoeuvre → YELLOW	: the automatic partial opening/closing manoeuvre was performed because the intensity of the sun is between the two thresholds
LED Manoeuvre → GREEN	: the automatic downward manoeuvre for presence of sun was performed
LED Manoeuvre → BLINKING	: the sensor has just been turned ON or is just exit from wind alarm and has not yet made any automatic operation concerning the sun

08.3 SELECTION OF SUN SENSOR OPERATION MODE: STANDARD OR ADVANCED

A

Press and hold P1 and P2 until one LED lights ...

B

IF:

LED 1 lights up:
STANDARD logic

LED 2 lights up:
ADVANCED logic

C

If the setting is what you want, wait a few seconds and the LED turns off

D

TO CHANGE THE SETTING PRESS:

P1

for STANDARD LOGIC

P3

for ADVANCED LOGIC

Press P1 logic to select STANDARD logic, press P3 to select ADVANCED logic

08.4 SUN THRESHOLD ADJUSTING THROUGH THE BUTTONS ON THE DEVICE

A

Press P2 until LED 2 starts to flash, signalling the current sun threshold

EXAMPLES:

 1 flash + pause + 5 flashes ↓ 10 + 5 = 15 Klux	 3 flashes + pause + 1 long flash ↓ 30 + 0 = 30 Klux
--	---

B ⁽¹⁾

TO ADJUST THE SUN THRESHOLD:
Press P1 to set the tens and P3 to set the units

EXAMPLE:

1 X

↓
10

+

8 X

↓
8

=

18 Klux

C

1 flash
+
pause
+
 8 flashes
↓
10 + 8 = 18 Klux

The device signals the new value and exits from the programming

If the value is the desired one, wait 10 seconds: the device signals again the value and exits from the programming.

- Notes:**
- ✓ (1) : press the buttons within 10 seconds from the last flash of LED 2. The buttons must be shortly pressed, around 1 second between two pressures. Press the buttons the same number of time of the desired value: e.g. press 8 times P3 to set 8 Klux; press 2 times P1 and 8 times P3 to set 28 Klux.
 - ✓ If you try to set a wind threshold higher than 45 Klux, the device signals the error with the lighting of the 3 leds for 3 times.

08.5 SUN THRESHOLD ADJUSTING THROUGH THE TRANSMITTER FOR SENSOR CONTROL

A

Bring the motor in an intermediate position

B

The procedure varies according to the used transmitter. Proceed as described in the instruction manual of the transmitter, RECEIVER MENU - FUNCTION 2 «Sun threshold»

