

# HELIOS KAIROS

Control unit for awnings  
with management of wireless sensors



Compatible from firmware version HELKA03

 **ALLMATIC**<sup>®</sup>

MADE IN ITALY

CE

## ITALIANO

**Leggere attentamente il seguente manuale di istruzioni prima di procedere con l'installazione.**  
**Conservare con cura il presente manuale dopo l'installazione per una futura consultazione.**

- L'apparecchio non è destinato a essere usato da persone (bambini compresi) le cui capacità fisiche, sensoriali o mentali siano ridotte, oppure con mancanza di esperienza o di conoscenza, a meno che esse abbiano potuto beneficiare, attraverso l'intermediazione di una persona responsabile della loro sicurezza, di una sorveglianza o di istruzioni riguardanti l'uso dell'apparecchio.
- I bambini devono essere sorvegliati per sincerarsi che non giochino con l'apparecchio.
- Se il cavo di alimentazione è danneggiato, deve essere sostituito dal costruttore o dal suo servizio assistenza tecnica o comunque da una persona con qualifica simile, in modo da prevenire ogni rischio.
- Il presente manuale di istruzioni è destinato solamente a personale tecnico qualificato nel campo delle installazioni di automazioni.
- Nessuna delle informazioni contenute all'interno del manuale può essere interessante o utile per l'utilizzatore finale.
- Qualsiasi operazione di manutenzione o di programmazione deve essere eseguita esclusivamente da personale qualificato.
- L'installatore deve provvedere all'installazione di un dispositivo (es. interruttore magnetotermico) che assicuri il sezionamento onnipolare del sistema dalla rete di alimentazione.

## ENGLISH

**Please read this instruction manual very carefully before installing and programming your control unit.**  
**After the installation keep this instruction in a safe place for any further consultation.**

- The device must not be used by people (children included), whose physical, sensory and mental capacities are reduced, or without experience or knowledge, unless they could benefit through the intermediation of a person responsible for their safety, of a surveillance or of instructions related to the use of the device.
- Children must be kept under surveillance to make sure that they do not play with the device.
- If the power supply's cable is damaged, it must be replaced by the manufacturer or by his assistance service or in any case by a person with similar status in order to prevent any risk.
- This instruction manual is only for qualified technicians, who specialize in installations and automations.
- The contents of this instruction manual do not concern the final user.
- Every programming and/or every maintenance service should be done only by qualified technicians.
- The installer must provide the installation of a device (es. magnetothermal switch) that ensures the omnipolar sectioning of the equipment from the power supply.

## FRANÇAIS

**Avant de procéder avec l'installation et la programmation, lire attentivement la notice.**  
**Conserver avec soin cette notice après l'installation, pour toute éventuelle consultation future.**

- L'appareil n'est pas destiné à l'utilisation de la part de personnes (enfants compris) qui ont des capacités physiques, sensorielles ou mentales réduites, ou bien sans expérience ou connaissance, à moins qu'ils n'aient bénéficié, grâce à une personne responsable de leur sécurité, d'une surveillance ou d'une formation relative à l'utilisation de l'appareil.
- Les enfants doivent être surveillés pour s'assurer qu'ils ne jouent pas avec l'appareil.
- Si le câble d'alimentation est endommagé, il doit être remplacé par le constructeur ou par son service d'assistance technique ou de toute façon par une personne avec une compétence similaire, de manière à prévenir tout risque.
- Ce manuel d'instructions est destiné à des techniciens qualifiés dans le domaine des automatismes.
- Aucune des informations contenues dans ce livret pourra être utile pour le particulier.
- Toutes les opérations de maintenance ou de programmation doivent être faites à travers de techniciens qualifiés.
- L'installateur doit pourvoir à l'installation d'un dispositif (ex. interrupteur magnéto thermique) qui assure le sectionnement omnipolaire du système du réseau d'alimentation.

## ESPAÑOL

**Antes de proceder a la instalación y programación es aconsejable leer bien las instrucciones.**  
**Conservar el presente manual luego de la instalación para una posible y eventual consulta.**

- El aparato no está destinado a ser usado por personas (incluidos niños) con la capacidad física, sensoriales o mentales reducidas, o bien con falta de experiencia o de conocimientos, a menos que ellos hayan podido beneficiarse, a través de la intermediación de una persona responsable de su seguridad, de su control o de una instrucción relacionada al uso del aparato.
- Los niños deben ser controlados para verificar que no jueguen con el aparato.
- Si el cable de alimentación está dañado, debe ser cambiado por el fabricante o por el servicio de asistencia técnica o de cualquier manera por una persona con calificación similar, de modo de prevenir o evitar algún riesgo.
- Dicho manual está destinado exclusivamente a técnicos calificados en las instalaciones de automatismos.
- Ninguna de las informaciones contenidas en dicho manual puede ser de utilidad para el usuario final.
- Cualquier operación de mantenimiento y programación tendrá que ser hecha por técnicos calificados en las instalaciones de automatismos.
- El instalador debe proveer la instalación de un dispositivo (ej. interruptor magnetotérmico) que asegure el seccionamiento onnipolar del aparato de la red de alimentación.

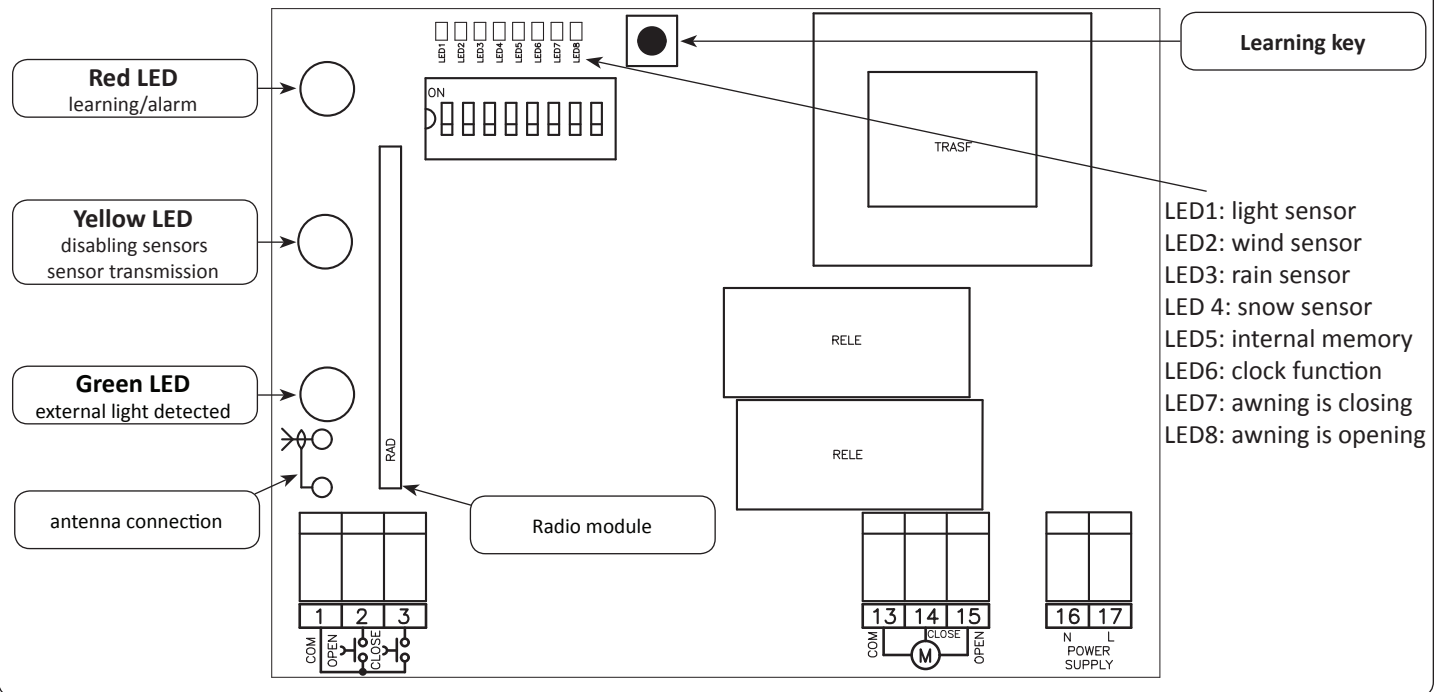
# 1 INTRODUCTION

HELIOS KAIROS control units are universal devices suitable to handle the activation and the control of awnings in a simple and complete way, designed to meet any sort of requirements.

This product 230V motors in alternating current up to 500 W (max) power supply and is provided with electric limit switches. HELIOS KAIROS control unit uses the innovative rolling code decoding system: this choice makes it safe, easily expandable and its installation is quick and intuitive. The logic of the HELIOS KAIROS offers the possibility to manage the KAIROS wireless climatic sensors (light, wind, rain and temperature), KAIROS DUO (light and wind), KAIROS PERGOLA (wind, rain and temperature) and AXEM (wind and inclination), all with broadcast radio frequency 433.92MHz.

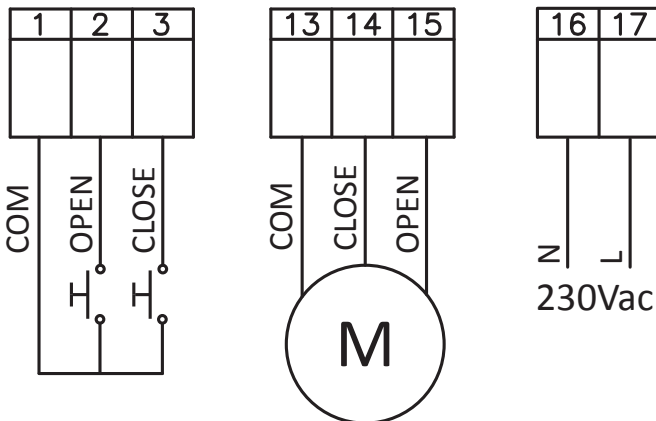
These lets HELIOS KAIROS to open and / or close the awning fully automatically, depending on weather conditions.

# 2 CONFIGURATION



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# 3 ELECTRICAL CONNECTIONS AND DIP SWITCH



| DIP | Function            | DIP OFF            | DIP ON          |
|-----|---------------------|--------------------|-----------------|
| 1   | Automatic reopening | Disabled           | Enable          |
| 2   | Cabled inputs       | Dead man           | Impulsive       |
| 3   | Rain disabling      | Cannot be disabled | Can be disabled |
| 4   | Transmitters keys   | Direct             | Reverse         |
| 5   | Light sensor        | Disabled           | Enable          |
| 6   | Wind sensor         | Disabled           | Enable          |
| 7   | Rain sensor         | Disabled           | Enable          |
| 8   | Snow sensor         | Disabled           | Enable          |

## 4 LEARNING

### 4.1 Learning transmitter through the learning key of the control unit

HELIOS KAIROS control unit can be operated by all remotes B.RO 2/4WN, WALL 433 MHz and the CLARUS series.



1. Press and release the learning key on the card; the red LED lights up.
2. Press “a” or “a1” of the transmitter. The control unit also automatically memorize the key “b” or “b1” and the “c” keys to the series CLARUS (“a” or “a1” like button “open”, “b” or “b1” how “close” button and “c” as a “stop” button). The control unit signals the memorization of the channel with two flashings if the channel was not memorized, with one if the channel was already learned.
3. Once memorized the channel, the control unit goes back to normal modality of functioning.

If no signal is transmitted by 20 seconds, the control unit automatically exits from the learning mode.

Warning: keys functions are only valid with the DIP4 OFF (see 6.2.4)

### 4.2 Learning subsequent transmitters with a transmitter already learned



Warning: Do not use this procedure if you have multiple units in operation, since the store opening would affect all devices where the channel is stored. In this case, disconnect the power supply of the control units which shall not be involved.

1. Opening of memory: to open the memory from the transmitter, refer to the instructions enclosed to the transmitter. Once you open the control unit memory, it indicates this by turning on the red LED.
2. Press “a” or “a1” of the transmitter. The control unit also automatically memorize the key “b” or “b1” and the “c” key to the series CLARUS (“a” or “a1” like button “open”, “b” or “b1” how “close” button and “c” as a “stop” button). The control unit signals the memorization of the channel with two flashings if the channel was not memorized, with one if the channel was already learned.
3. Once memorized the channel, the control unit goes back to normal modality of functioning. If no signal is transmitted by 20 seconds, the control unit automatically exits from the learning mode.

Warning: keys functions are only valid with the DIP4 OFF (see 6.2.4)

### 4.3 Parameter reset to factory defaults

This deletes all parameters (position automatic opening, alarms) without erasing all transmitters.

To restore the parameters to the factory default is sufficient to do the following:

1. Close the awning.
2. Press and hold for almost 7 seconds the learning key until the red LED alarm / learning flashes rapidly.
3. Release the button.

The red LED stops blinking. The restoration has been performed.

### 4.4 Resetting the memory and reset to factory settings

At any time it's possible to reset the factory settings by resetting the card. This also leads to the cancellation of all the remote controls, sensors and automatic opening position.

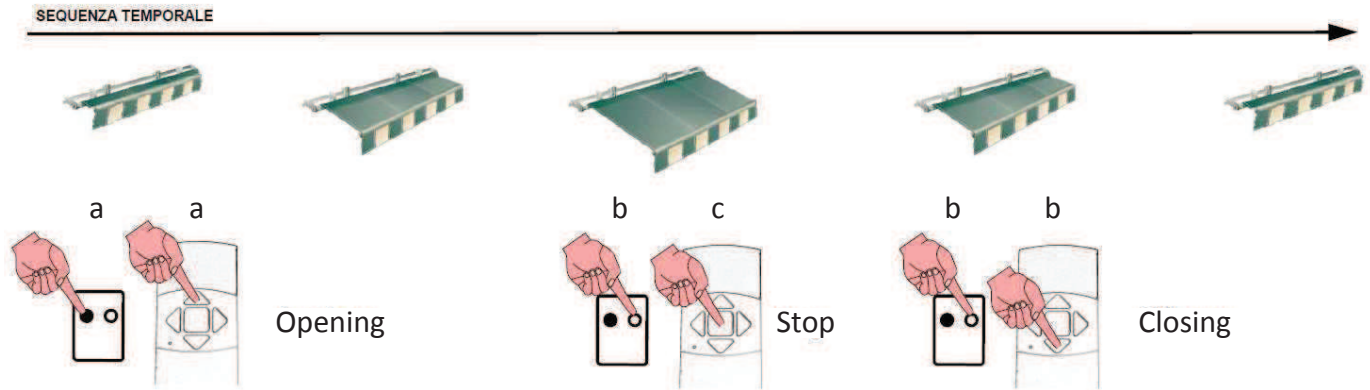
To reset the board is sufficient to do the following:

1. Remove power to the control unit.
2. Press and hold the learning key while the control unit is powered up. The three LEDs red, green and yellow lights flash once and after that they stay on.
3. Hold down the key until the red LED turns off.
4. Release the key.

After this operation every remote control and any wireless sensor must be programmed again.

## 5 USING A TRANSMITTER

By closed awning, pressing the key "a" of opening, the awning will roll down. To stop the rolling down press the reverse key "b" or the "c" STOP (only for series CLARUS). A subsequent pression of "b" will reverse the rolling motion.



Warning: keys functions are only valid with the DIP4 OFF (see 6.2.4)

## 6.1 Control unit behaviour

HELIOS KAIROS control unit drives motors with internal limit switches with an admitted opening time of 7 minutes.

In case in which the awning is stopped for the intervention of a limit switch, the control unit remains on the state of opening awning until the reaching of the 7 minutes. In this interval of time 2 "CLOSE" commands will be necessary to bring the awning on closing (because it will be necessary to pass for the STOP state).

At the same way, in case in which the awning would be opened and the control unit would find itself in the state of "STOP", an order of closing would draw back the awning for a time determined by the intervention of the limit switches of the motor. Despite the awning has been totally closed, the control unit will continue on the closing state until the reaching of the 7 minutes. For this reason in this interval of time 2 "OPEN" commands will be necessary to bring the awning on opening (because it will be necessary to pass for the STOP state). In conclusion, it is necessary to keep in mind that the condition of open/close awning for the control unit do not always correspond to the real condition of the open/close awning.

NOTA: in case that the control unit is on the closing position and, through the manual override, the awning is brought to the opening position, an intervention of the sensors (wind, light, rain, snow) will not make close the awning as, the control unit is still under the closing position.

## 6.2 Control unit behaviour with light sensor enabled

The control HELIOS KAIROS, with the use of the light sensor, becomes fully automatic and opens and closes depending on the light threshold set on sensor. The light sensor has priority over user commands (transmitters and cabled inputs).

The sensor status light is visible through the green LED of the control unit:

- Off status: light below the set threshold (awning closed).
- Blinking: light above the set threshold (open awning).

The state of the control unit is visible through the yellow LED of the control unit:

- 1 flash per second: temporary exclusion of the sensors (see 8.2).
- 1 blink every 2 seconds: winter mode (see 8.3).
- Flashing quickly: learning of automatic opening position (see 8.1).

## 6.3 Control unit behaviour during alarm (wind, rain, snow, disconnection)

The presence of an alarm will immediately close the awning and block the operation of the transmitters and cabled inputs for 7 minutes after the finishing of the alarm. A slow flashing red LED indicates to the user the alarm condition.

The detection of the snow (snow alarm) occurs in different ways depending on the type of sensor:

- Sensor powered from the mains (KAIROS): presence of rain and temperature below 4°C (sensor with heater).
- Sensor powered by photovoltaic panel (KAIROS SA): only temperature lower than 2°C regardless of the presence of rain (sensor not equipped with heater).
- AXEM sensor: inclination of the awning more than 2° compared to the memorized position.

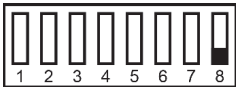
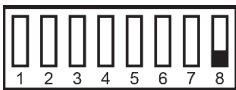
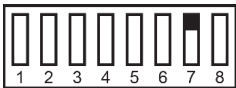
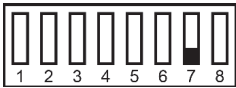
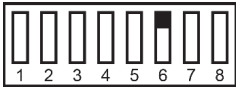
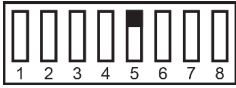
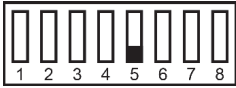
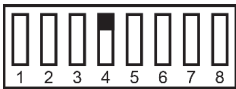
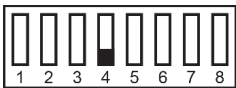
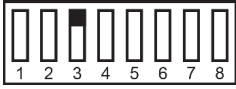
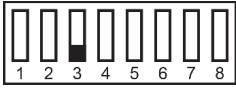
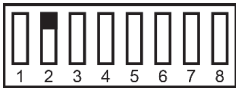
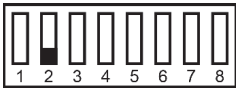
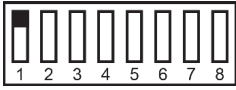
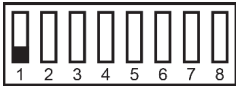
A rapid flashing of the red LED indicates a disconnection alarm of the sensors, the awning can be activated only by disabling all sensors (DIP 5, 6, 7, 8 OFF); in this case, however, the awning will not be closed by the presence of wind, rain or snow alarm.

## 6.4 Control unit behaviour after power failure

The control unit after a power failure, returns to automatic operation, starting as from the position of the awning before the blackout, data, setting, transmitters and sensors will remain memorized.

## 6.5 Selection of functions

The selection of functions are set through 8 DIP SWITCH.



### 6.5.1 Automatic reopening after an alarm

- OFF after a closure consequently an alarm, the awning remains closed until new input from the user (transmitters or cabled inputs).
- ON after a closure consequently an alarm, the awning will open in the position it was before the starting of the alarm.

**NB:** The light sensor has priority over this settings, if the DIP switch 1 is OFF but the light sensor is over the set threshold, the awning will reopen after the alarm.

### 6.5.2 Cabled inputs

- OFF dead man working; you need to keep the pressure on the key to move the awning.
- ON impulsive; just a short push is necessary in order to open or close completely the awning.

**NB:** Do not use this with fixed keys otherwise, the clock function will be activated see chapter 8.4.

### 6.5.3 Temporary exclusion of the rain sensors

- OFF the rain sensor is never disabled through the procedure for disabling sensors see section 8.2.
- ON the rain sensor can be disabled for two hours through the procedure for disabling sensors see section 8.2.

### 6.5.4 Reversing transmitters keys

- OFF direct mode, the “a” key of a transmitter opens the awning, the “b” key closes it; see chapter 5.
- ON reverse mode, “b” key of a transmitter opens the awning, the “a” key closes it.

**NB:** reverse mode has no effect on cabled inputs.

### 6.5.5 Enabling of the light sensor

- OFF light sensor completely disabled.
- ON light sensor enabled.

**NB:** By enabling the light sensor enables all automatic movements of opening and closing.

### 6.5.6 Enabling of the wind sensor

- OFF wind sensor completely disabled.
- ON wind sensor enabled.

**NB:** Disabling the wind sensor the awning will not be closed automatically in case of wind. ⚠

### 6.5.7 Enabling of the rain sensor

- OFF rain sensor completely disabled.
- ON rain sensor enabled.

**NB:** Disabling the rain sensor the awning will not be closed automatically in case of rain. ⚠

### 6.5.8 Enabling of the snow sensor

- OFF snow sensor completely disabled.
- ON snow sensor enabled.

**NB:** Disabling the snow sensor the awning will not be closed automatically in case of snow. ⚠

## 7 CLIMATIC SENSOR

### **7.1 Learning a climatic sensor**

1. Press and release the learning key on the control unit, the red LED lights up.
2. Press and release the key on the sensor, the control unit signals the correct memorization with two flashes of the red LED.

Once memorized the sensor, you can test the transmission by pressing the key on the sensor. The control unit shows the reception of the broadcast with a rapid flashing of the yellow LED.

### **7.2 Checking the motor direction during in alarm**

This procedure is necessary to verify correct wiring of the motor, so that the awning will be closed in case of alarm.

1. Temporarily disable the operation of the light sensor DIP 5 OFF.
2. With a transmitter or cabled inputs move the awning at about halfway and stop it.
3. On the KAIROS sensor, adjust the trimmer to minimum wind (TEST) and rotate the blades of the sensor at a constant speed for few seconds. On the used AXEM sensor, shake the awning until the intervention of the sensor.
4. The control unit will show the alarm with the blinking of the red LED and will reclose the awning.

If the awning moves in opening remove power to the control unit and swap the motor cables 14-15 and make again the test above. If the awning moves in closing, wait until it is completely closed, press and hold the learning key until the red LED start blinking faster, release the button.

Set the desired speed of wind on the sensor with the trimmer and re-able the light sensors DIP 5 ON.

### **7.3 Deleting a climatic sensor**

1. Press and release the learning key on the card, the red LED lights up.
2. Press and release the key on the sensor, the control unit shows the deletion with four long flashes of the red LED.

### **7.4 Behaviour of the AXEM sensor**

The alarms of the AXEM sensor are disabled for all the working time of the control unit and for more:

- 10 seconds, for the wind alarms;
- 15 minutes, for the tilt alarms.

To delete the waiting time and enable the sensor immediately, press the learning button on the Axem device.

ENG

Compatible from firmware version HELKA03

## 8 ADVANCED SETTINGS

### **8.1 Setting the partial open position (only with light sensor enabled)**

You can set a desired position for automatic opening due to the light sensor, this procedure can only be done if the light sensor is present and enabled (DIP 5 ON):

1. Close the awning.
2. Upon reaching the closed position, press and hold the learning key on the control unit until the red LED flashes rapidly, release the key.
3. Press and hold the open key of a transmitter or (only with DIP 2 ON) a cabled input until the yellow LED flashes quickly, the awning begins to open, release the button.
4. To set the position it's sufficient to stop the awning (with a stop or a close input).



## 8.2 Temporary exclusion of the rain and light sensors

This mode is used to temporarily disable the light and rain sensors (the rain sensor can be temporarily disabled only if DIP switch 3 ON):

1. Move the awning to the desired position.
2. With the awning still in motion press and hold for 5 seconds the stop key (CLARUS) or the key of opposite movement with B.RO 2/4WN WALL or cabled inputs.
3. The control unit shows the disabling of the sensors with 1 flash per second of the yellow LED.

The rain sensor, if the DIP 3 ON is disabled for 2 hours, if DIP switch 3 OFF is never disabled.

The light sensor is disabled for a full cycle of light (night-day, day-night). To exit the disabling sensors, it's sufficient to provide an open or close command and the control unit will return to automatic mode.

## 8.3 Winter mode

This mode allows you to inhibit all the automatic movements of the control unit, which is useful during the winter:

1. Awning must not be in movement, it can be stopped at any position.
2. Press and hold the close button for 5 seconds.
3. The yellow LED indicates the entry of the winter mode with a blink every 2 seconds.
4. Once the awning has reached the closure, it inhibit any automatism.

To exit the winter mode, it's sufficient to provide an opening command and the control unit will return to the automatic mode.

Note: the function can be used only if a light sensor is already memorized and it is enabled.

## 8.4 "Clock" function

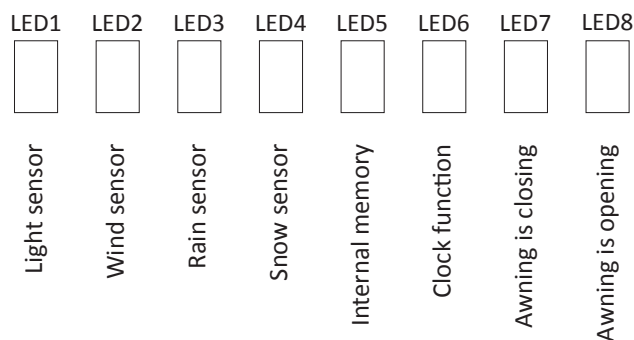
The clock function cannot be used with dead man modality (DIP 2 OFF) and with the light sensor enabled (DIP 5 ON).

This mode allows you to open and close the awning at specific times using a timer, which maintains closed the wired contact "open" for more than 4 minutes. The awning will remain open until the contact is closed.

An alarm will close the awning and once the alarm stops, the awning is getting opened, regardless of the position of the DIP 1.

## 8.5 LED indicator

The control unit is equipped with 8 LEDs for indicating the status of the sensors, and handling operations.



LED1 ON: light above the set threshold

LED2 ON: wind speed above the set threshold

LED3 ON: rain detected

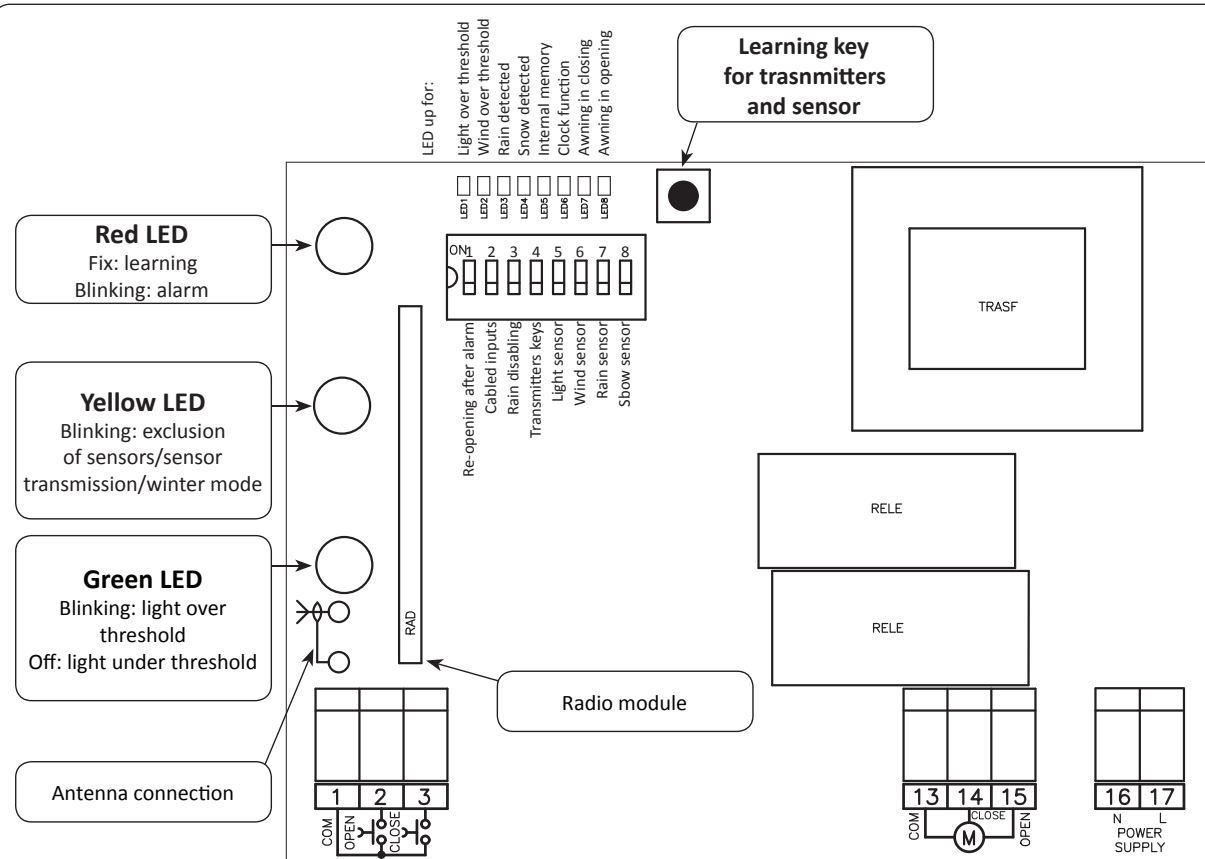
LED 4 ON: snow detected (see 6.3)

LED5 ON: the control unit is using the internal memory

LED6 ON: clock function

LED7 ON: awning is closing

LED8 ON: awning is opening



| DIP | Function            | DIP OFF            | DIP ON          |
|-----|---------------------|--------------------|-----------------|
| 1   | Automatic reopening | Disabled           | Enable          |
| 2   | Cabled inputs       | Dead man           | Impulsive       |
| 3   | Rain disabling      | Cannot be disabled | Can be disabled |
| 4   | Transmitters keys   | Direct             | Reverse         |
| 5   | Light sensor        | Disabled           | Enable          |
| 6   | Wind sensor         | Disabled           | Enable          |
| 7   | Rain sensor         | Disabled           | Enable          |
| 8   | Snow sensor         | Disabled           | Enable          |

**Temporary exclusion of the rain and light sensors**

1. Move the awning to the desired position.
2. With the awning still in motion press and hold for 5 seconds the stop key (CLARUS) or the key of opposite movement with B.RO 2/4WN WALL or cabled inputs.
3. The control unit shows the disabling of the sensors with 1 flash per second of the yellow LED. The rain sensor will disabled only if DIP 3 ON.

**Winter mode**

Inhibits all the automatic movements.

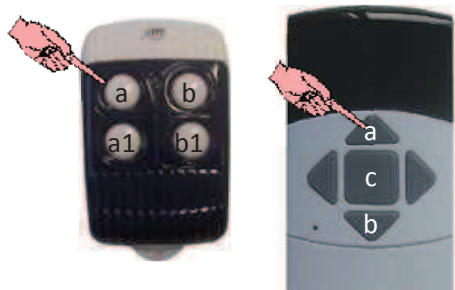
1. Awning must be stopped in any position.
2. Press and hold the close button for 5 seconds.
3. The yellow LED indicates the entry of the winter mode with a blink every 2 seconds.
4. Once the awning has reached the closure, it inhibit any automatism.

To exit the winter mode, it's sufficient to provide an opening command.

Note: the function can be used only if a light sensor is already memorized and it is enabled.

**Learning a transmitter**

1. Press and release the learning key on the card; the red LED lights up.
2. Press "a" or "a1" of the transmitter. The control unit also automatically memorize the key "b" or "b1" and the "c" keys. The control unit signals the memorization of the channel with two flashings of the LED.



**Learning a climatic sensor**

1. Press and release the learning key on the control unit, the red LED lights up.
2. Press and release the key on the sensor, the control unit signals the correct memorization with two flashes of the red LED.

## 9 TROUBLESHOOTING

| Problem                                       | Possible causes  | Solutions  |
|---|--|--|
| When power up the control unit no LED come up | <ul style="list-style-type: none"> <li>Missing power supply</li> <li>Plug is not connected</li> <li>Power failure</li> </ul>   | <ul style="list-style-type: none"> <li>Wait until it comes back</li> <li>Insert the plug</li> <li>Check the connections, see paragraph 3</li> </ul>  |
| Transmitters keys doesn't work                | <ul style="list-style-type: none"> <li>Transmitter isn't learnt on the control unit</li> <li>Transmitter isn't compatible with the control unit</li> <li>Low battery on the transmitter</li> <li>Radio module not present or broken</li> </ul> | <ul style="list-style-type: none"> <li>Follow the procedure on paragraph 4.1</li> <li>Check if transmitter is a B.RO o CLARUS series</li> <li>Change the battery</li> <li>Insert the radio module or change it</li> </ul>  |
| Red LED continues blinking                    | <ul style="list-style-type: none"> <li>One or more sensors in allarm</li> <li>Broken or low power on sensor</li> <li>Sensor disconnection</li> </ul>   | <ul style="list-style-type: none"> <li>Check the 8 LEDs to understand which sensor is in alarm</li> <li>Need a technical intervention</li> <li>In case of disconnection (fast blinking of red LED) and need to move the awning, set to OFF DIPs 5,6,7,8</li> </ul> |

## 10 REMOVING A TRANSMITTER

### 10.1 Removing a transmitters from the control unit



#### REMOVING transmitter series B.ro:

Press the hidden key "e" on the transmitter; the red LED turns on. This operation is equivalent to press the learning key, but without access to the control unit.

Press at the same time for some seconds the hidden key and "a" key of the radio transmitter to erase ("e" + "a"). The control unit signals the happened erasing with 4 long blinks. After that the control unit goes back to the normal modality of functioning.

#### REMOVING transmitter series CLARUS

To delete one channel or the whole transmitter it is necessary to access to the internal menu of the transmitter.

To do this refer to the instructions of the transmitter in use.



Warning: Do not use this procedure if you have multiple units in operation, since the store opening would affect all the devices where the channel is stored. In this case, disconnect the power supply of the control units which shall not be involved

## GUARANTEE

In compliance with legislation, the manufacturer's guarantee is valid from the date stamped on the product and is restricted to the repair or free replacement of the parts accepted by the manufacturer as being defective due to poor quality materials or manufacturing defects. The guarantee does not cover damage or defects caused by external agents, faulty maintenance, overloading, natural wear and tear, choice of incorrect product, assembly errors, or any other cause not imputable to the manufacturer. Products that have been misused will not be guaranteed or repaired. Printed specifications are only indicative. The manufacturer does not accept any responsibility for range reductions or malfunctions caused by environmental interference. The manufacturer's responsibility for damage caused to persons resulting from accidents of any nature caused by our defective products, are only those responsibilities that come under Italian law.



*MADE IN ITALY*

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