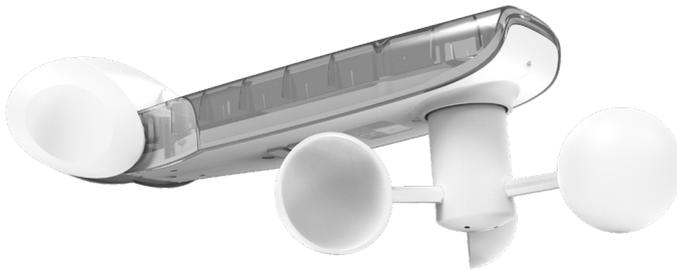# AUTOMATE®

Programming Manual

Sun & Wind Sensor
(Solar Powered and 240V AC Version)

AUTOMATE® | Sun & Wind sensor is a device for measuring wind speed and light intensity. The information is transmitted to ARC outdoor motorized shades that will move to their top or bottom limits.

Key Features
- Measure wind speed with an anemometer
- Measure light intensity with a Lux meter
- LCD display
- ARC compatibility
- USB-C Charging Port*
- Solar Charging Panel*
- Loss of communication Safeguard Technology
- AC Input**

*   Solar Powered version only
** 240V AC Powered version only

Contents

1. Safety Instructions

WARNING: Important safety instructions to be read before installation.
Incorrect installation can lead to serious injury and will void manufacturer's liability and warranty.

- Read and follow all installation and safety instructions.
- This manual is also available on the website.
- Do not submerge in water or expose to extreme temperatures.
- Use or modification outside the scope of this instruction manual will void warranty.
- Cleaning and user maintenance must not be performed by children without supervision.
- For use with motorized shading devices.
- For the solar powered version, do not use non-compliant chargers or attempt to connect the device to any other power source.
- Persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge should not be allowed to use this product.
- Installation and programming to be performed by a suitably qualified installer.
- Keep away from children.
- Frequently inspect for improper operation. Do not use if repair or adjustment is necessary.
- Keep clear when in operation.
- Rollease Acmeda declares this equipment is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.
- The solar powered version contains a non-user-serviceable lithium-ion battery. Do not attempt to open or dismantle the product.

- At the end of its life, dispose of the product in accordance with local regulations for electronic waste.
- For the solar powered version, the battery should be removed and recycled by an authorized service centre or recycling facility.
- Charging cables of the solar powered version are not intended to be permanently exposed to outdoor conditions (sunlight, rain, moisture).
- If any cables are exposed to direct sunlight, they must comply with requirements of IEC 60245-57.
- Disconnect and store the charger of the solar powered version indoors after charging.
- The sun and wind sensor function is designed to help reduce the risk of damage by automatically responding to certain environmental conditions. However, it is not a failsafe system and cannot account for all weather events, site conditions, or installation variables.
- The system may not operate as intended in extreme, rapidly changing, or unforeseen conditions. Users should not rely solely on the sun and wind sensor to protect the shade, surrounding property, or people from harm.
- Regular monitoring, and manual intervention where necessary are required to ensure safe operation. Failure to do so may result in damage to the shade or property, or risk of injury.

⚠ **IMPORTANT**

Each motor can only be paired with one sensor at a time. It is not possible to connect multiple sensors to a single motor, including any combination of, but not limited to:

- Sun & Wind Sensor + Motion Sensor
- Internal Sun Sensor + Motion Sensor
- Two Sun & Wind Sensors
- Two Motion Sensors
- Two Internal Sun Sensors

If a new sensor is paired with a motor, it will override the previously paired sensor. Multiple motors can be paired to one sensor. E.g., one Sun Sensor and three motors.

2. Compliance Statement

This device complies with Part 15 of the FCC Rules / Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

To satisfy FCC / IC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations closer than this distance are not recommended.

Les antennes installées doivent être situées de facon à ce que la population ne puisse y être exposée à une distance de moin de 20 cm. Installer les antennes de facon à ce que le personnel ne puisse approcher à 20 cm ou moins de la position centrale de l' antenne.

La FCC des éltats-unis stipule que cet appareil doit être en tout temps éloigné d'au moins 20 cm des personnes pendant son functionnement.

Do not dispose of in general waste. Please recycle batteries and damaged electrical products appropriately.
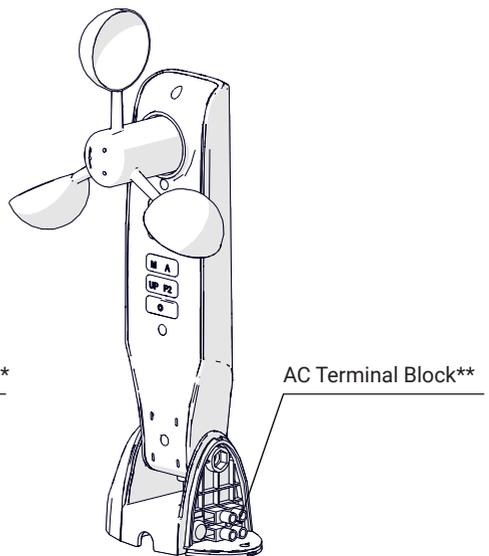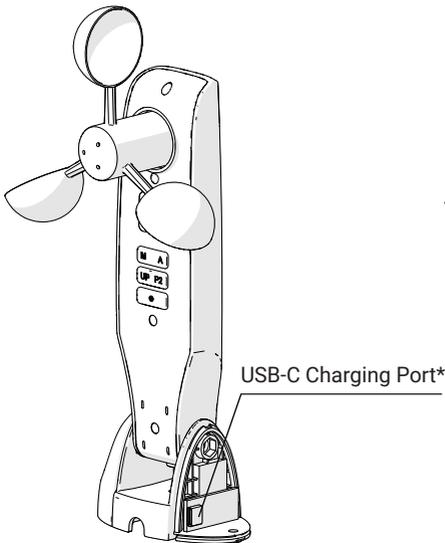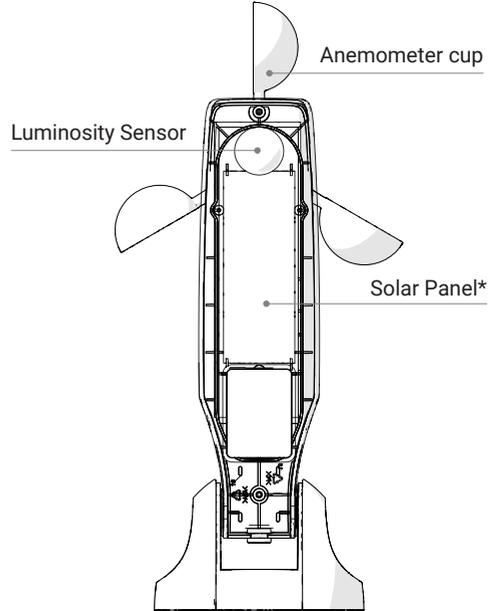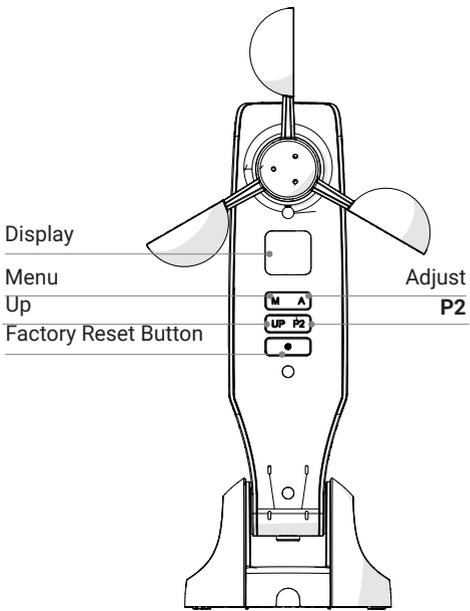
CAN ICES-3(B)/NMB-3(B)

RECOGNIZED COMPONENT

ETL LISTED

Intertek 5005833

3.   Overview

3.1   Components

Display

Menu

Up

Factory Reset Button

Adjust

P2

Anemometer cup

Luminosity Sensor

Solar Panel*

USB-C Charging Port*

AC Terminal Block**

*   *Solar Powered version only*

**   *240V AC Powered version only*

3.2 LCD Display

Light

Wind

Loop

Value

433MHz RF Signal*

Wind Speed Unit

Battery*

Light Unit

klux   km/h
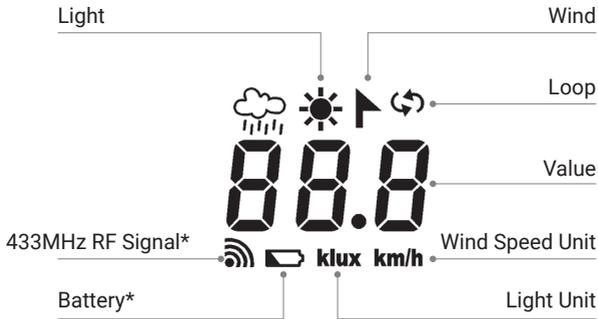
1. The LCD screen lighting stays active for 30 seconds. If there is no operation, the sensor automatically switches its screen off for energy saving, but the program will keep running for normal detection and command transmissions. When the screen is off, pressing any (non-reset) button triggers the screen to be on again for another minute.

2. Sun icon: indicates the light intensity detection mode.

3. Flag icon: indicates the wind speed detection mode.

4. Battery icon*: The voltage of the internal battery is checked by its inner program once every day. The appearance of this battery icon indicates that its voltage is below 2.7V. It is recommended that the sensor is placed in direct sunlight or plug in a USB-C cable to charge the sensor for minimum of 6 hours.

5. RF signal icon*: displayed when transmitting a signal.

3.3 Safeguard Technology

Once the sensor is paired to an Automate external motor, the sensor will check in with the motor every 30mins.

If the motor does not receive the signal at the checkpoint, the motor will close as a protective measure.

Once the Safeguard feature has been triggered, motor will only move in small increments. This is different from the timeout function after the wind or light function has triggered, which will not allow you to control the shade until the time has elapsed.

This is different from the timeout function after the wind or light function has triggered, which will not allow you to control the shade until the time has elapsed.

*This is a sign that there is a fault in the sensor or that the internal battery has gone flat. If this happens, you will need to place the sensor in direct sunlight or plug in a USB-C cable to charge the sensor for minimum of 6 hours.

3.4 Waking the device

If the screen is off, press any button once to wake the device before performing any actions described in this manual. The screen must be active for the device to register further inputs.

M   A

UP   P2
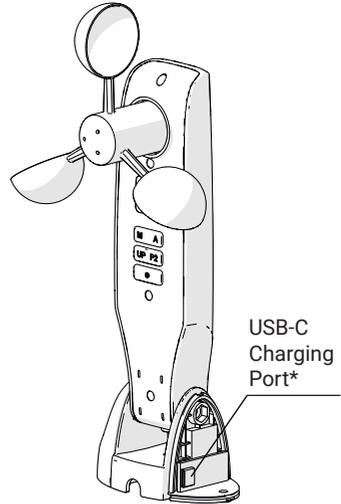
◉

*   *Solar Powered version only*

3.   Overview (Continued)

3.5   Charging the Wind & Sun Sensor (Solar Powered version only)

⚠️ **Note: It is recommended to charge the sensor before going to site.**

1. Connect a USB-C cable to a suitable charger. Charging may take several hours.

2. To check the battery status, press any button to wake the display if the screen is off.

3. Disconnect the USB-C cable from the sensor and refer to the table below for the battery status.

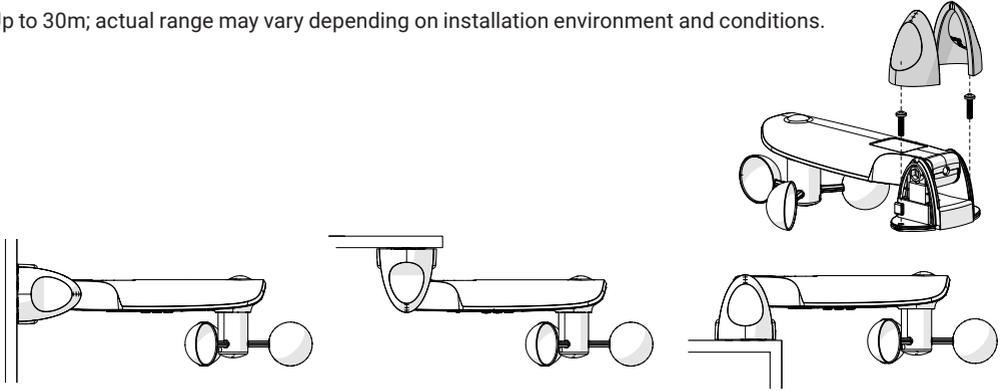| Icon	Status
Static 🔋	<20% Battery
(No Icon)	Charged
Flashing 🔋🔋🔋	Charging

USB-C
Charging
Port*

*   *Solar Powered version only*

4. Installation

Transmission Distance:

Up to 30m; actual range may vary depending on installation environment and conditions.

4.1 Solar Powered Sun & Wind Sensor

1. Find an appropriate location with direct sunlight and in a location that will see the same wind conditions the paired device will see.
2. Remove the base covers.
3. The solar panel must be face up and in direct sunlight.
4. Fix the sensor to a suitable surface.
5. Re-attach the base covers.
6. Ensure the three rotating cups are in an approximately horizontal position.

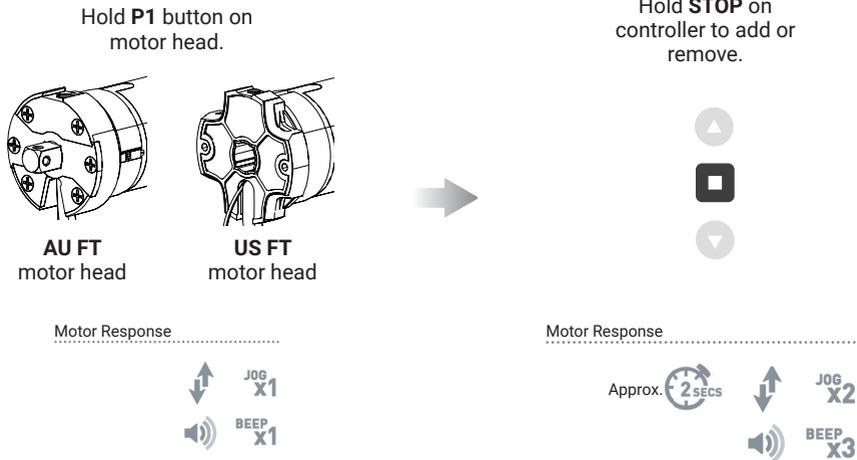## 4.2 240V Powered Sun & Wind Sensor

⚠️ **IMPORTANT**
Installation by licensed electrician only.

1. Find an appropriate location with direct sunlight and in a location that will see the same wind conditions the paired device will see.
2. Cut off the mains power supply.
3. Remove the base covers.
4. Complete wiring into the provided terminal block.
5. Ensure that the luminosity sensor orientation face up and in direct sunlight.
6. Fix the sensor to a suitable surface.
7. Re-attach the base covers.
8. Ensure the three rotating cups are in an approximately horizontal position.
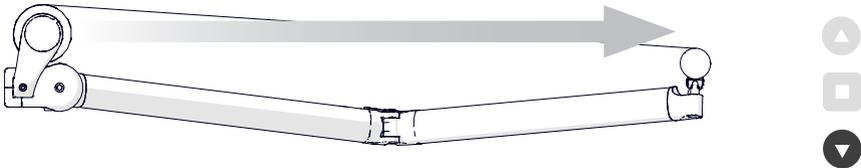
5.   Setup

## 5.1   Pair the Motor to a Remote (if required)

Hold **P1** button on
motor head.

Hold **STOP** on
controller to add or
remove.

AU FT
motor head

US FT
motor head

Motor Response

JOG x1

BEEP x1

Motor Response

Approx. 2 SECS

JOG x2

BEEP x3

⚠️ **Note:**
 • **Complete setup using motor programming instructions.**
 • **The sensor will only work if the motor is configured with the upper and bottom limits.**

5.2   Check Motor Direction

Confirm that motor direction is setup as below so any paired sensors will activate correctly.

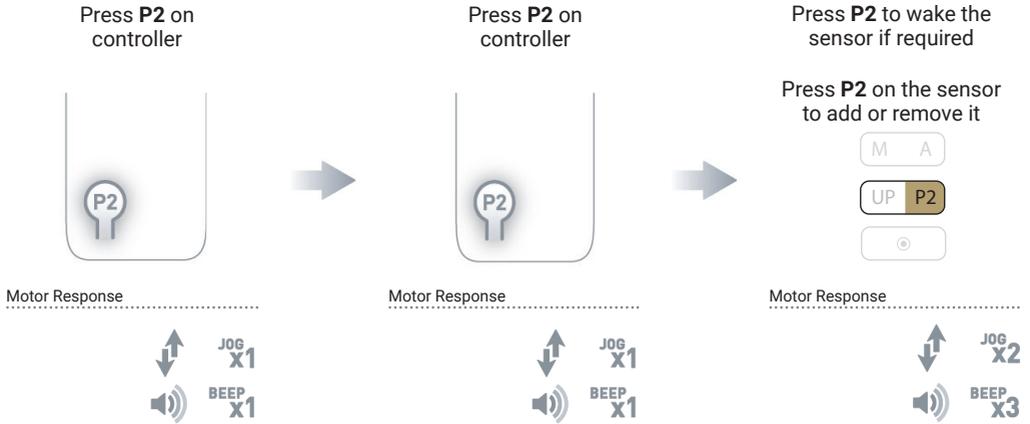**DOWN** on the remote OPENS the Awning (awning moves in an outward/downward direction).

E.g.

And **UP** on the remote CLOSES the Awning (awning moves in an inward/upward direction).

E.g.
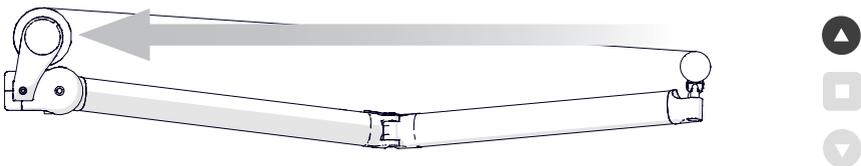
⚠️ **Note: Follow motor programming instructions to reverse motor direction if necessary.**

5. Setup (Continued)

5.3 Pair or Unpair the Sensor to a Motor using a Pre-Paired Remote

Press **P2** on controller

Press **P2** on controller

Press **P2** to wake the sensor if required

Press **P2** on the sensor to add or remove it

| M | A |
| UP | P2 |
| ⊙ |

Motor Response

Motor Response

Motor Response

JOG X1
BEEP X1

JOG X1
BEEP X1

JOG X2
BEEP X3

Note:

- If the pair is successfully done, the motor can be triggered to move upward by pressing the UP button on the sensor.

- Ensure the wind and light sensor functionality on the motor is enabled prior to pairing the wind and sun sensor.

- The pair relationship is kept even if the motor power is reset or the sensor is reset to its default setting.

5.4   Setup Wind Speed Control
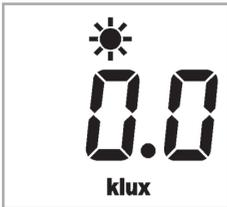
Press & Hold **M** button for 2 seconds until screen flashes	Cycle though settings until you have the Wind icon(▶) by pressing **M**	Adjust the pre-set threshold by pressing **UP** to increase value or **A** to decrease value

Approx. **2 SECS**

M	A
UP	P2
◉	

☀
0.0
klux

↻

M	A
UP	P2
◉	

▶
0.0
km/h

M	A
UP	P2
◉	

▶
5.9
km/h

Approx. **10 SECS** Wait 10 seconds to set the threshold

⚠ **Note:**

- The wind speed control function can be disabled by setting its threshold to ZERO. Other threshold values enable this function.

- It is recommended to set the default wind speed threshold to 25 km/h for optimal performance in most scenarios.

- The wind sensor has priority and will override the sun sensor functionality if both are enabled.

- It is recommended to keep the sun sensor disabled (set to 0) to prevent potential conflicts with the wind sensor operation.
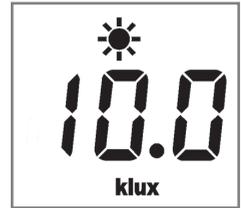
5.5   Setup Light Control

Press & Hold **M** button for 2 seconds until screen flashes

Cycle though settings until you have the Sun icon(☀) by pressing **M**

Adjust the pre-set threshold by pressing **UP** to increase value or **A** to decrease value

Approx. **2 SECS**

| M | A |
| UP | P2 |
| ⊙ |

0.0
km/h

| M | A |
| UP | P2 |
| ⊙ |

0.0
klux

| M | A |
| UP | P2 |
| ⊙ |

☀
10.0
klux

Approx. **10 SECS** Wait 10 seconds to set the threshold
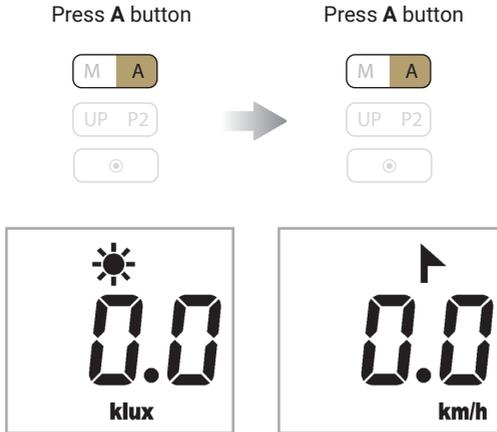
⚠ **Note: The light intensity function can be disabled by setting its threshold to ZERO. Other threshold values enable this function.**

| Condition	klux (approximate)
Direct Sunlight	100
Daylight	10
Overcast	1

6.   Additional Functions

6.1   Display Measured Wind Speed & Light Intensity

In sleep mode (blank screen), pressing the Adjust button (A) can loop through light intensity or wind speed. When the loop icon, ↻, is present, the system will automatically display them in a cycle (5 seconds). The sequence is light > wind > loop (light).

Press **A** button   Press **A** button

| M | A |
| UP | P2 |
| ◉ |

| M | A |
| UP | P2 |
| ◉ |

☀
0.0
klux

▶
0.0
km/h

6.2   Display the Preset Threshold Value

Press the MENU button (M) repeatedly to display the pre-set threshold values in a cycle, the corresponding icon, ☀ ▶, flashes to indicate that the pre-setting value is displayed. Pressing the MENU button (M) again returns to the normal mode. The sequence is: display the light intensity threshold value > display the wind speed threshold value > return to normal mode.
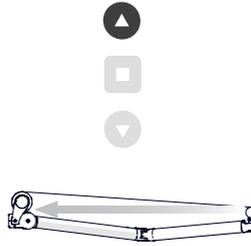
Press **M** button   Press **M** button

| M | A |
| UP | P2 |
| ◉ |

| M | A |
| UP | P2 |
| ◉ |

☀
10.0
klux

▶
5.9
km/h
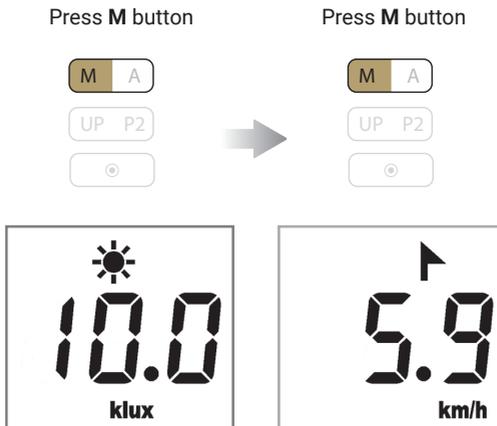
6.3   Wind Sensor Function

Wind speed continuously exceeds the threshold value of wind speed for longer than 3 seconds

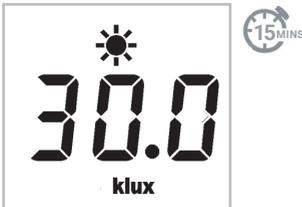The sensor command is executed to control the motor "**UP**" action

To prevent the motorized shades from frequently opening and closing under a gust, the motor does not operate for next 8 minutes
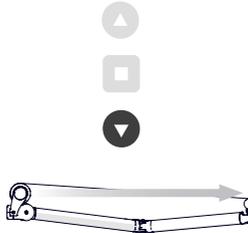
6.4   Light Sensor Function

When the environmental light intensity is higher than the threshold for 15 minutes

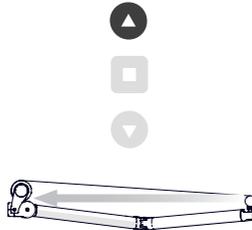The sensor command is executed to control the motor "**DOWN**" action

After this period, the sensor temporarily disables its light detection for the next 15 minutes

When the environmental light intensity is lower than the threshold for 15 minutes

The sensor command is executed to control the motor "**UP**" action

After this period, the sensor temporarily disables its light detection for the next 15 minutes

⚠ **Note:**

- **Wind sensor trigger overrides light sensor, and moves motor up to top limit, despite motor having moved down due to strong light.**

- **It is recommended to keep the sun sensor disabled (set to 0) to prevent potential conflicts with the wind sensor operation.**

6.5   Activate/Deactivate Sun & Wind Sensor Functionality on the Motor

⚠ **Note: Functionality activated by default.**

Press **P2** on controller	Press **UP** on controller	Press **STOP** on controller

Motor Response

🔊 BEEP x1

↕ JOG x1

Motor Response

🔊 BEEP x1

↕ JOG x1

Motor Response (Activated)

↕ JOG x2

🔊→ EXT. BEEP x1

Motor Response (Deactivated)

🔊 BEEP x1

↕ JOG x1

Problem	Cause	Remedy
Motor is not responding	*Sensor battery is discharged	Recharge battery with a USB cable
	Radio interference/Shielding	Ensure transmitter is positioned away from metal objects and that the motor aerial/receiver is kept straight and away from metal
	Receiver distance is too far from transmitter	Move transmitter to a closer position
	Power failure	Check the connection from power supply to motor
	Incorrect wiring	Check if wiring is connected correctly
	Pairing error	Press **UP** button on sensor to verify pairing
	The motor's function of detecting wind/light is off	Turn on the function
Motor extends then constantly retracts unexpectedly	Wind or light threshold is too low	Increase the threshold to reduce sensitivity
	Extend motorized shade is casting shadow onto sensor	Check & reposition sensor if necessary
Motor does not react to wind or light setting	Wind sensitivity is too high or too low	Adjust sensitivity
	Time interval of strong wind is less than 8 minutes	The wind triggering time length must be over 8 minutes
	Time interval of light is less than 15 minutes	The light triggering time length must be over 15 minutes
Screen not turning on	*Internal Battery Flat	Place sensor in direct sunlight or plug in the USB-C connection to charge sensor for minimum of 6 hours.
Motor is only moving in small increments (after motor setup has been completed)	Safeguard feature	Communication between motor and sensor has been lost. Check sensor power source.
Motor retracted and not operating (not getting stepping mode function)	Wind Sensor has been triggered	Once the Wind sensor has been triggered there is an 8min lockout as a protective measure.
Safeguard feature is not triggering	Safeguard feature may be disabled from Motor	Please ensure Safeguard feature is enabled on the motor.

*   *Solar Powered version only*