



SENSORE A VIBRAZIONE PER  
TENDE DA SOLE

I

MISTRAL VIBRATION WIND SENSOR  
FOR AWNINGS

GB

VIBRATIONS-WINDWÄCHTER ZU  
MARKISEN

D

CAPTEUR À VIBRATION POUR STORES

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CENTRAL DE VIENTO POR VIBRACIÓN  
DEL TOLDO

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A520012

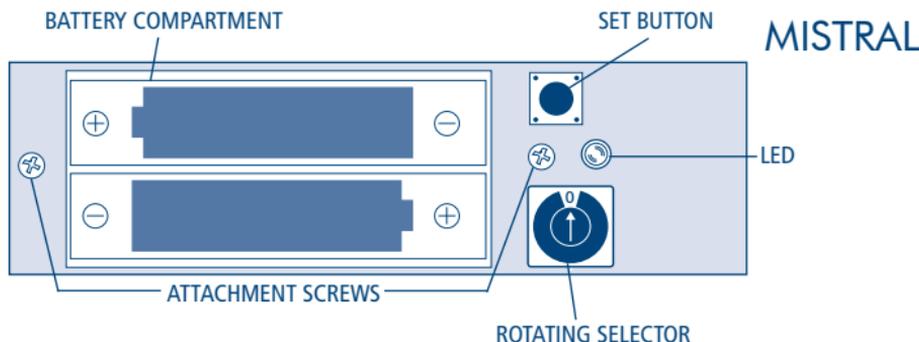
MISTRAL



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## PRODUCT FEATURES

The Mistral vibration wind sensor detects wind caused stresses on the structure of arm awnings, which then become vibrations of the terminal bar. The added "Static Load" function, which may be enabled by the user, also provides detection of any excessive weight from water or snow that pushes the terminal bar downwards. The sensor indicates an alarm status, by radio, to the motor (or the radio receiver), which then closes the awning.



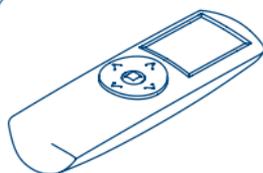
## FUNCTION DIAGRAM

COMPATIBILITY	 CLOSING BY WIND ALARM	 STATIC LOAD	AUTOMATIC REOPENING
BLUE WAVE RX	√	√	√
A510020 TDS GOLD	√	√	
A510036 RX MINI	√	√	
A510038 TDS Compact	√	√	

## GUARANTEE

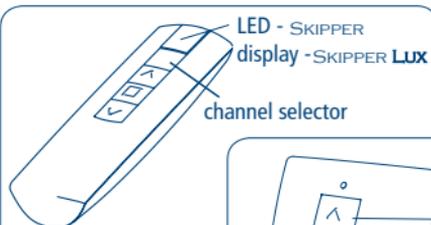
This product is guaranteed for 24 months from the date of manufacture indicated inside. If, during that period, the equipment does not work properly due to a defective component, it will be repaired or replaced at the discretion of the manufacturer. The warranty does not cover the integrity of the plastic container. The warranty will be honoured at the manufacturer's facilities. The product fulfills the essential requirements of Safety, Electromagnetic Compatibility and use of the spectrum allocated to Radiocommunication of the Directive 1999/05/EC.

# COMPATIBLE REMOTE CONTROLS

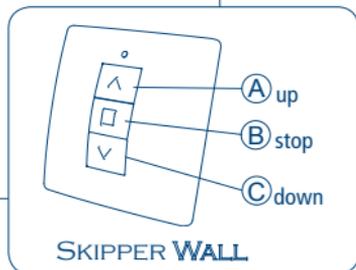


**SKIPPER SENSO**  
**SKIPPER LCD**

\* check the specific instruction book



**SKIPPER SKIPPER PLUS**



**SKIPPER WALL**

ENGLISH

## KEY TO SYMBOLS



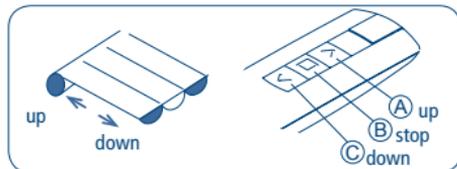
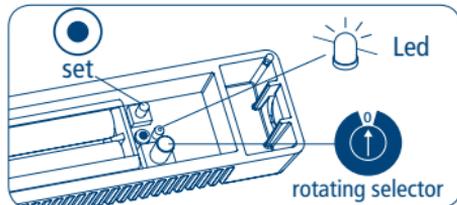
- short motor rotation in one direction



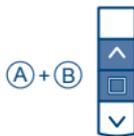
- long motor rotation in other direction



- double short rotation



Press button A



Press buttons A and B at the same time

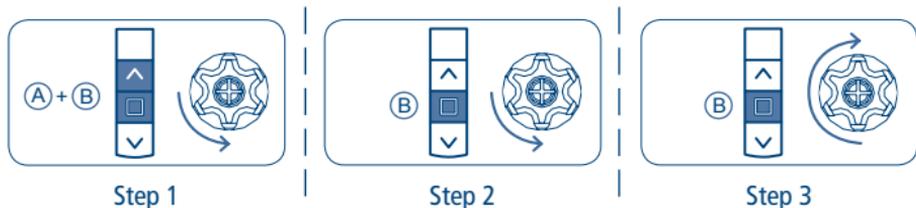
## TECHNICAL FEATURES

- Battery powered: LR03 (AAA)
- Dimensions: 140x38x26 mm
- Weight: 100 g
- Degree of protection: IP44
- Carrier frequency: 433.92 MHz
- Irradiated RF power (ERP): 2 mW
- Operating range in open space: max. 10 m
- Vibration threshold adjustment range: 1-9 m/s<sup>2</sup>
- "Static Load" slope angle learning range: 2-20 degrees

## COMMAND SEQUENCES EXAMPLE

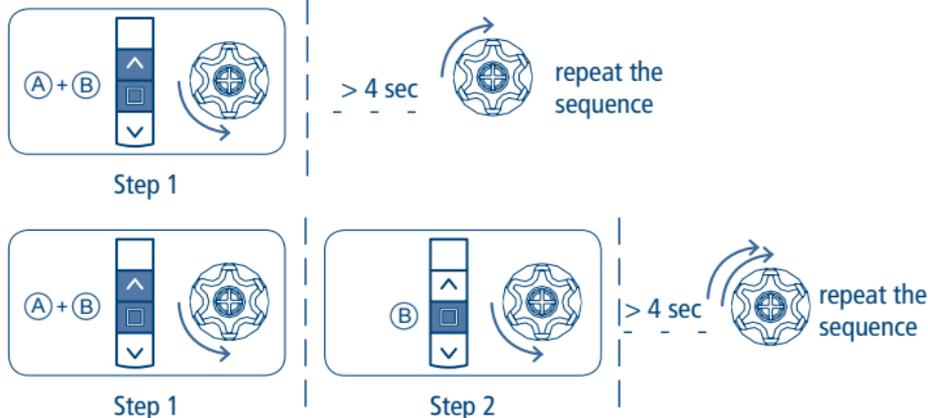
Most of the command sequences have three distinct steps, at the end of which the motor indicates if the step has been concluded positively or not, by turning in different ways. This section is provided to demonstrate the motor indications. The buttons must be pressed as shown in the sequence, without taking more than 4 seconds between one step and the next. If more than 4 seconds are taken, the command is not accepted and the sequence must be repeated.

Command sequence example:



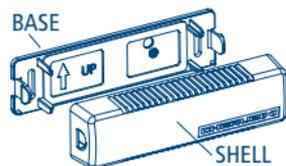
As we can see from the example, when the sequence ends positively, the motor returns to its starting position in one long rotation. In fact, two short rotations in the same direction correspond to one long rotation in the opposite direction. The motor returns to the starting position even when the sequence is not completed; in this case by performing one or two short rotations.

Example of a wrong sequence:

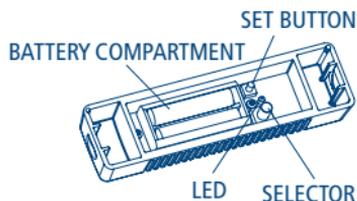


## INSTALLATION

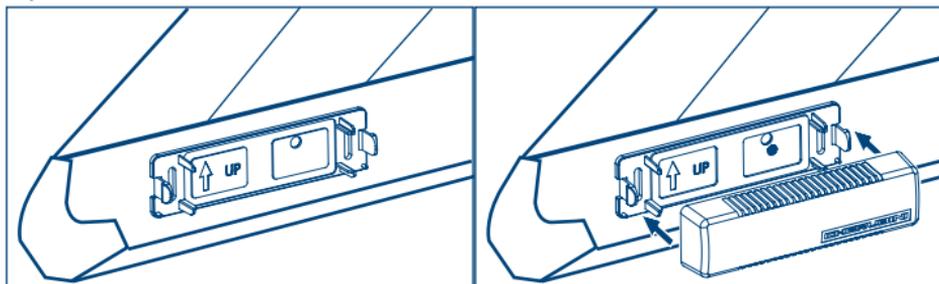
The sensor is housed in a plastic container made up of two parts: a base attached to the terminal bar and a snap-on shell.



The shell contains the sensor processor board, the battery compartment and the programming commands.

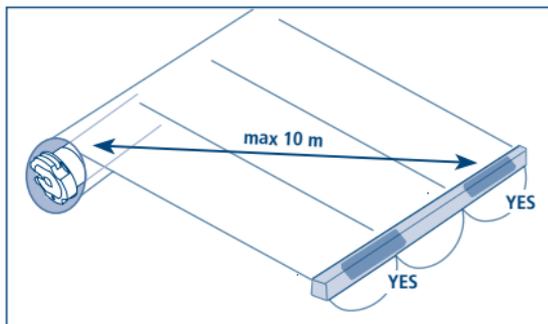


The base is attached to the terminal bar with M4 screws (not included) or the double-sided adhesive already found on the back. Inside of the base, there is an arrow that enables the identification of the proper direction for assembly of the sensor: put arrow upwards.



Best position inside the bar.

The sensor must be assembled parallel with the terminal bar. Install the MISTRAL nearest possible to the motor or receiver, in covered site on the terminal bar, but by highest distance 10 m.



Make sure that there is enough space and MISTRAL does not get damaged by closing the awning!

## SETTING THE MISTRAL SENSOR

To associate the sensor to a motor, a remote control must be already memorised on the motor. The setting sequence is the following:

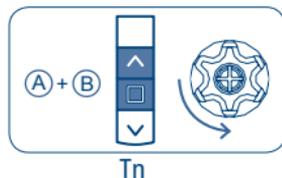
**At this point, do not assemble the sensor shell on the base.**

- Insert the batteries provided;
- Open the awning completely (button C);
- Rotate the selector to the 0 position;

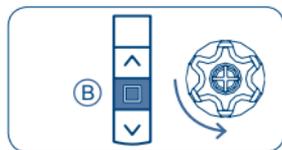
Tn: already programmed remote control



- Press the buttons on the remote control in this sequence: A+B and B, and then the SET button for 2 seconds on the Mistral sensor; until the motor performs the confirmation movement (around 2 second).



Tn

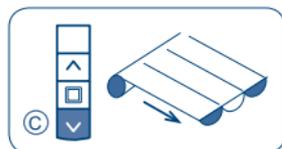


Tn



2 sec

Note: to check proper memorisation, press the SET button briefly again: the awning should move about half way through its path. When the check is completed, open the awning once again.



## VIBRATION THRESHOLD

The vibration detection threshold is set by choosing one of the positions on the rotating selector, from 1 (light vibrations) to 9 (strong vibrations). The proper threshold setting for each type of awning must be determined, through trial and error. Start out by setting a middle value (e.g. 5) and then activate the sensor. After activation it will be possible to perform tests to find the best threshold.

## "STATIC LOAD" FUNCTION

This function enables the detection of an increase in the awning inclination caused by an accumulation of water or snow. The activation/deactivation of this function and the load angle setting are performed during the activation of the sensor as explained below.

## SENSOR ACTIVATION

### Before assembling the shell on the base:

- Rotate the selector to a middle value from 1 to 9 (e.g. 5).
- Activate the sensor by pressing the SET button for at least 4 seconds until the LED flashes twice quickly.



SELECTOR



4 sec

### "STATIC LOAD" FUNCTION ACTIVATION/DEACTIVATION

You have 10 seconds to check and change the function status as required.



LED OFF = function not active



LED ON = function active

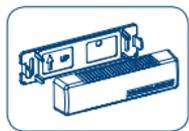
To change the function status, press the SET button briefly.

To change the previously memorised angle of inclination, the function must be deactivated and then reactivated as follows: LED ON - OFF - ON.



### ► PROCEDURE WITHOUT ACTIVATION "STATIC LOAD" FUNCTION (LED OFF)

- Snap the shell onto the base.
- Stand by for 10 seconds until the sensor detects the rest position and the motor makes its confirmation movements\*.



10 sec.

.....

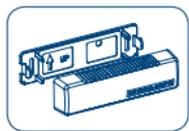


**\*Note:** for Wave RX motors manufactured before 01/2013 and TDS Gold control units manufactured before 04/2013 the procedure ends **without** confirmation movements.

Within three minutes proceed with the SENSOR TEST OPERATION.

### ► PROCEDURE WITH ACTIVATION "STATIC LOAD" FUNCTION (LED ON)

- Snap the shell onto the base.
- Stand by for 10 seconds until the sensor detects the rest position and the motor makes its confirmation movements\*.



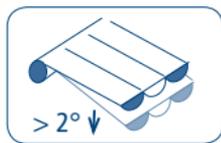
10 sec.

.....



**\*Note:** for Wave RX motors manufactured before 01/2013 and TDS Gold control units manufactured before 04/2013 the procedure ends **without** confirmation movements.

- After the motor makes its confirmation movements, the sensor will wait in stand-by to memorise the inclination angle.
- Within one minute manually incline the awning down to its limit for at least 2 seconds and then bring it back to its rest position.
- If the position was memorised properly, the motor will make its confirmation movements.



The angle of the shift must be greater than 2 degrees as compared to the rest position.

Within three minutes proceed with the SENSOR TEST OPERATION.

## SENSOR TEST OPERATION

When the sensor has detected its rest position and then memorised the angle of inclination for the "static load" function (if enabled), it will run in test mode for the first three minutes of operation: in case of alarm the awning will close but without application of the eight-minute period when reopening is disabled, which is what occurs in normal operational mode.

Therefore, during these three minutes, it is possible to:

- Check for proper radio communication between the sensor and the motor/receiver;
- Check the vibration threshold set;
- Check the "Static Load" alarm threshold;

Note: during the test phase, to check if the alarm thresholds have been set properly according to your expectations, the same vibration amplitude (or angle of inclination for the "Static Load" function) must be applied and held for at least five seconds.

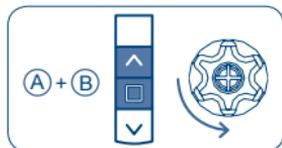
**To change the thresholds set, the shell must be unsnapped, the rotating selector set back to 0 and the activation procedure must be performed again.**

**ATTENTION!!! To avoid any hazardous situations, before unsnapping the shell, see the proper procedure in the section: "DISABLE THE SENSOR".**

## DELETING THE SENSOR

To delete the Mistral sensor from the motor, an already programmed remote control must be used. The deleting sequence is the following:

Tn: already programmed remote control



Tn



Tn  
17



2 sec

## DISABLE THE SENSOR

To deactivate the MISTRAL proceed as following:

- Open the awning completely and wait for at least ten seconds after the terminal bar has stopped moving before beginning to unsnap the sensor.
- Press both snap hooks sideways at the same time while pulling the shell downward, until it comes away from its base. Use no tools for this procedure (screwdrivers, or similar items).
- As soon as the shell has been unsnapped, rotate the selector to the 0 position: the LED will then flash three times slowly (0.5 seconds ON - 0.5 seconds OFF), to confirm the fact that the sensor has been deactivated and cannot trip an alarm.



SELECTOR



To enable the sensor once again, follow the activation procedure as indicated on page 16.

## MAINTENANCE

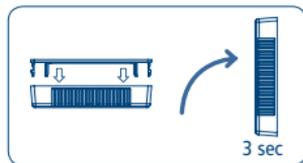
To make any changes to the alarm trip thresholds, to change the batteries or to perform any other programming operation, the shell must be unsnapped from its base. To perform this procedure, without the sensor tripping an alarm that will close the awning, creating a potentially hazardous situation for persons in the vicinity, it's necessary to disable the MISTRAL (check paragraph DISABLE THE SENSOR).

## CHANGING BATTERIES

When the batteries are almost drained, the LED will flash regularly every two seconds. Change the batteries.

**When changing the batteries, it's possible to use the Automatic Deactivation of the sensor:**

- Unsnap the shell from the base
- Rotate the shell and keep it vertical for around 3 seconds
- The sensor will automatically deactivate



When the new batteries are placed, the sensor will reactivate automatically: just snap again the shell on the base.

Under normal use conditions, the batteries should last over two years. In any event, it is suggested that the batteries be changed at the beginning of each new season.

**Note:** whether disabling or enabling the sensor again or when replacing the batteries, the sensor maintains the angle of inclination and "Static Load" function memorised. After having activated the sensor, if the "Static Load" function is enabled, the LED will remain on. If you wish to keep that function active, do not press the programming button and snap the shell back onto the base.

## WHAT TO DO IF...

Symptom	Cause	Remedy
The awning closes even without any wind blowing.	Low batteries.	Open the sensor shell and deactivate it: if the LED flashes, the batteries are almost drained. If the LED is OFF and it does not come back on, the batteries are dead. Change the batteries.
	Problems with radio communications.	Check that the sensor is not too far from the motor or the radio receiver. Change the position of the sensor.
	Sensor deactivated.	The sensor is not active. Perform the activation procedure again.
The awning motor does not make its activation confirmation movements, when the shell is snapped onto the base.	The sensor was not able to detect a stable position.	Check the sensor attachment. Check that the terminal bar is not vibrating.
	The sensor detected a stable position before being snapped into place.	Repeat the activation procedure, taking care to attach the sensor within ten seconds of the confirmation flash.
	<b>*Note:</b> for Wave RX motors manufactured before 01/2013 and TDS Gold control units manufactured before 04/2013 the procedure ends <b>without</b> confirmation movements.	
The awning motor does not make its confirmation movements for the "Static Load" angle memorisation.	The sensor was not able to detect an angle of inclination.	Repeat the learning procedure. Check that the angle of inclination is between 2 and 20 degrees.
	<b>*Note:</b> for Wave RX motors manufactured before 01/2013 and TDS Gold control units manufactured before 04/2013 the procedure ends <b>without</b> confirmation movements.	



SISTEMI DI MANOVRA PER LA PROTEZIONE SOLARE  
MOTION SYSTEMS FOR SOLAR PROTECTION  
ANTRIEBSSYSTEME FÜR DEN SONNENSCHUTZ  
MOTEURS ET ACCESSOIRES POUR STORES ET FERMETURES  
SISTEMAS DE ACCIONAMIENTO PARA PROTECCIÓN SOLAR

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