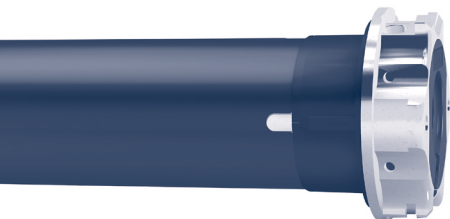


CHERUBINI



WAVE LOCK RX



TUBULAR MOTOR WITH ELECTRONIC LIMIT SWITCH, SPECIFIC
FOR PERGOLA-AWNINGS WITH AUTOMATIC COUPLING

EN



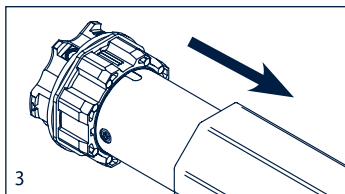
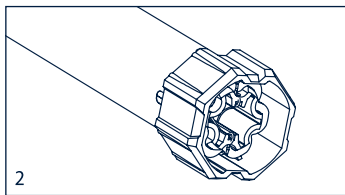
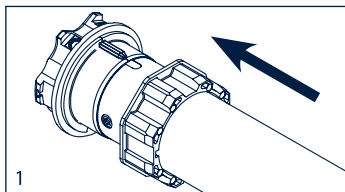
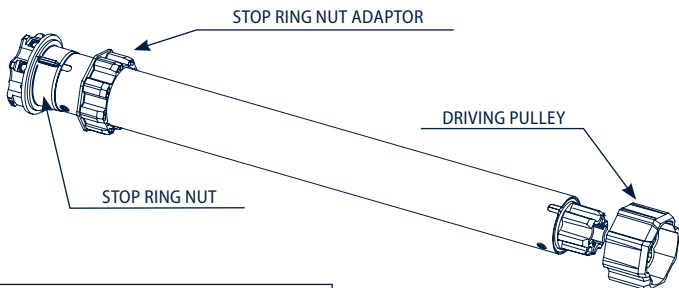
INSTRUCTIONS

TRANSLATION OF THE ORIGINAL INSTRUCTIONS

Table of contents

How to prepare the motor	4
Electrical connections	5
Compatible remote controls	6
Key to symbols	6
Command sequences example	7
Function open/close programming	8
Setting the first remote control	10
Automatic disabling of the first remote control setting function	10
Adjustment of the limit switches	10
Setting the closing limit switch	10
Setting the opening limit switch	11
Deleting the limit switch positions	12
Deleting the closing limit switch	12
Deleting the opening limit switch	12
Total deleting of the limit switches	12
Setting of the standard middle position	13
Deleting the standard middle position	13
Adjustment of the coupling force	14
Super-sensitivity threshold setting - only for motors up to 25 Nm -	14
Deactivation of the coupling function	15
Activation of the coupling function	15
Using the motor without the coupling/uncoupling device	15
Setting of additional remote controls	16
Remote control memory clearing	16
Full memory clearing	17
Special functions	18
Additional middle position	18
Setting the additional middle position	18
Changing the additional middle position	19
Deleting the additional middle position	19
Setting the middle position with coupling	20
Middle position command with coupling	21
Deletion of middle position with coupling	21
Short-term setting of a remote control	21
Setting the A530058 pocket remote control	22
Electric wiring to motor command for UP-DOWN mode (2 independent UP-DOWN buttons)	23
Command management from white wire	24
Super-sensitivity obstacle detection management during downwards movement - only for motors up to 25 Nm -	25
EU Declaration of conformity	25

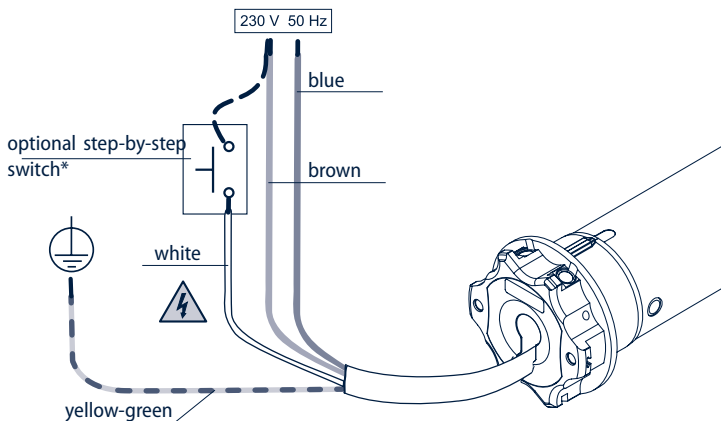
HOW TO PREPARE THE MOTOR



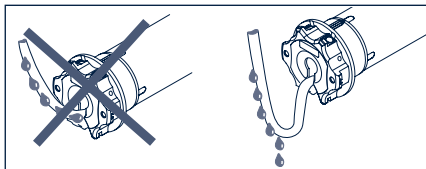
NB: If you use tubes with a round form, the driving pulley must be fixed to the tube, and the installation is to be paid by the person who installs the system.

ELECTRICAL CONNECTIONS

- In order to prevent dangerous situations or malfunctioning, the electrical command elements wired to the motor must be sized according to the motor's electrical features.
- Means for disconnection must be incorporated in the fixed wiring in accordance with the national installation standards.
- For outdoor use, provide the appliance with a supply cable with designation H05RN-F containing at least 2% of carbon.
- If not used, the white wire must be insulated. It is dangerous to touch the white wire when the motor is powered.

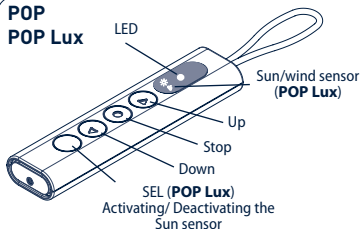


* Installing this button is optional; the connection can be made either to the phase (brown wire) or to the neutral (blue wire). The button makes it possible to control the motor in step-by-step mode (up, stop, down, stop, ...).

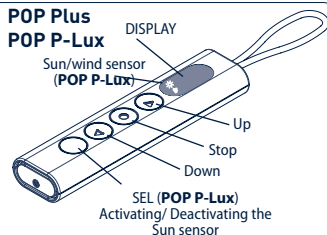


COMPATIBLE REMOTE CONTROLS

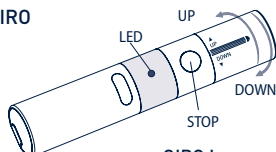
POP POP Lux



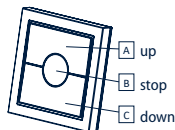
POP Plus POP P-Lux



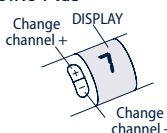
GIRO



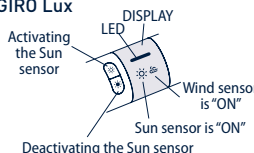
GIRO Wall



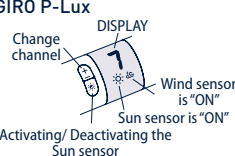
GIRO Plus



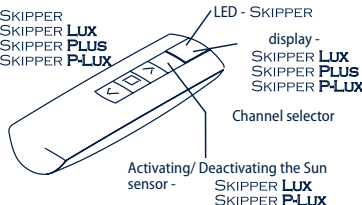
GIRO Lux



GIRO P-Lux



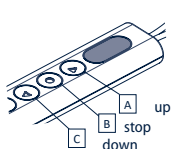
SKIPPER Lux Plus P-Lux



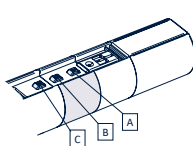
SKIPPER LCD SENSO



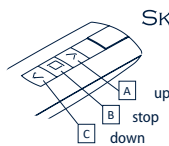
KEY TO SYMBOLS



POP



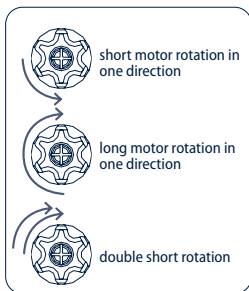
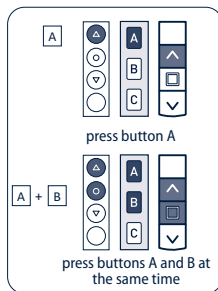
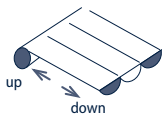
GIRO



SKIPPER



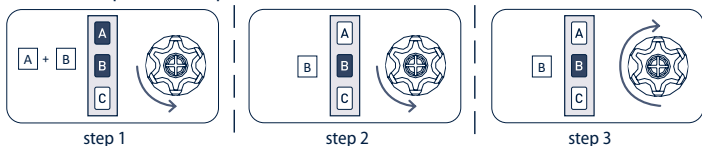
KEY TO SYMBOLS



COMMAND SEQUENCES EXAMPLE

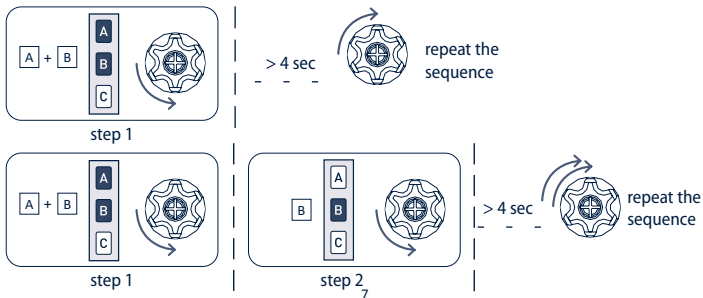
Most of the command sequences have three distinct steps, at the end of which the motor indicates if the step has been concluded positively or not, by turning in different ways. The buttons must be pressed as shown in the sequence, without taking more than 4 seconds between one step and the next. If more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



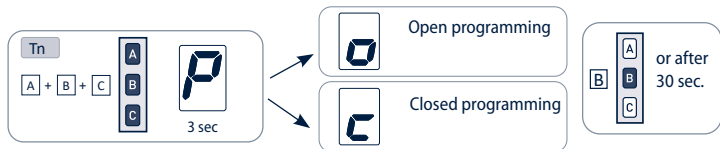
FUNCTION OPEN/CLOSE PROGRAMMING

REMOTE CONTROL SKIPPER PLUS - SKIPPER LUX - SKIPPER P-LUX

REMOTE CONTROL POP PLUS - POP LUX - POP P-LUX

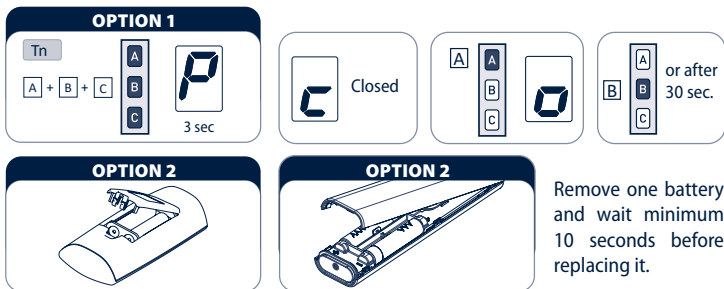
To prevent accidental changes to the programming of the motor during the daily use of the remote control, the possibility of programming is disabled automatically 8 hours after sending the last sequence (A+B or B+C).

CHECKING THE STATUS OF THE FUNCTION



To change the status of the function, see the sequences **ENABLE/DISABLE PROGRAMMING**.

ENABLE PROGRAMMING



Proceed with programming as per instruction booklet.

DISABLE PROGRAMMING

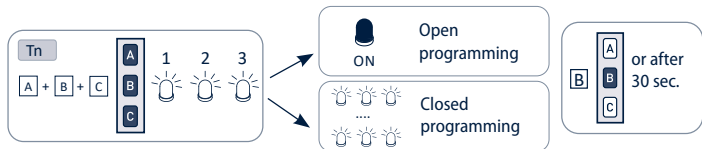


FUNCTION OPEN/CLOSE PROGRAMMING

REMOTE CONTROL SKIPPER - SERIES GIRO - REMOTE CONTROL POP

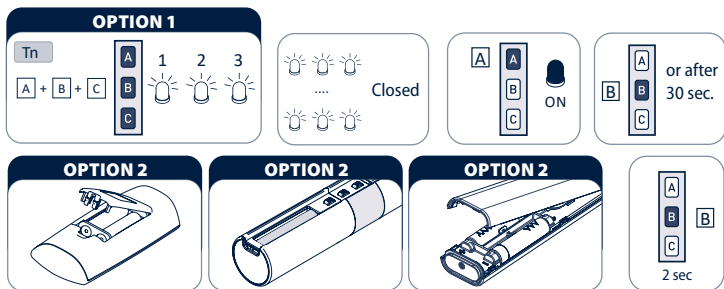
To prevent accidental changes to the programming of the motor during the daily use of the remote control, the possibility of programming is disabled automatically 8 hours after sending the last sequence (A+B or B+C).

CHECKING THE STATUS OF THE FUNCTION



To change the status of the function, see the sequences **ENABLE/DISABLE PROGRAMMING**.

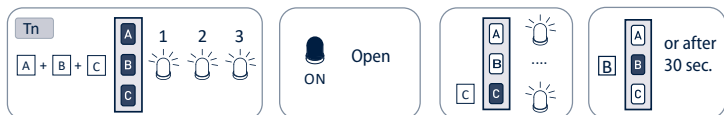
ENABLE PROGRAMMING



Remove one battery and wait minimum 10 seconds before replacing it.

Proceed with programming as per instruction booklet.

DISABLE PROGRAMMING

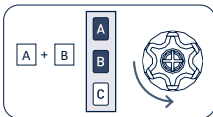


SETTING THE FIRST REMOTE CONTROL

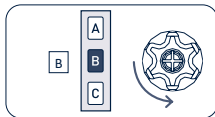
This operation can only be performed when the motor is new, or after a total delete of the memory.

During this step, power up only one motor at a time!

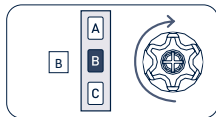
T1: First remote control to be set



T1



T1



T1 (2 sec)

AUTOMATIC DISABLING OF THE FIRST REMOTE CONTROL SETTING FUNCTION

Every time you connect the power supply to the motor, you have 3 hours to store the first remote control. After this time, the ability to store the remote control is disabled. To reset the timer of the function you have to disconnect and reconnect the power supply to the motor.

ADJUSTMENT OF THE LIMIT SWITCHES

These tubular motors have an electronic limit switch system with an encoder. This system ensures great reliability and precision in keeping the positions. Limit switch regulation is performed simply with the remote control. During setting, the motor moves only as long as the up or down button is pressed, stopping when the button is released. At the end of setting, press either the up or down button briefly to move the motor.

SETTING THE CLOSING LIMIT SWITCH

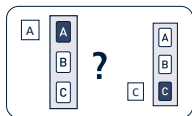
After setting the remote control, it's necessary to set first the closing position! For cassette-awnings, hold the button pressed until the motor stops automatically on the closing position. For open awnings, hold the button pressed and drive until the necessary closing position.

NOTE:

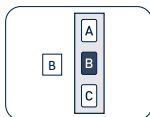
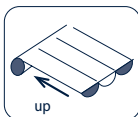
- If the awning is completely closed, you have firstly to open it by around 20 cm.
- Because the correct rotation direction will be identified only after the closing position is set, to close the awning, during setting the closing position, it's sometimes necessary to use the "down" button.

To set the closing position, hold pressed button B (stop) for around 2 sec until the motor performs a short "down" movement.

Tn: Already programmed remote control



Tn

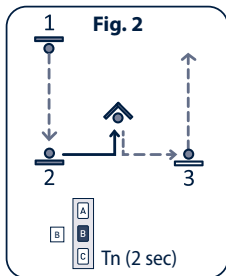
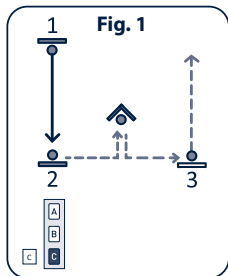


Tn (2 sec)

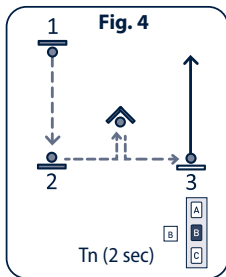
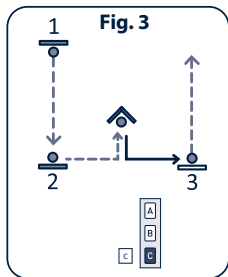


SETTING THE OPENING LIMIT SWITCH

- Put the awning at its "lowest coupling limit" position (fig. 1);
- Press button B (stop) for about 2 seconds, until the motor lifts the fabric into its coupling position (fig. 2);
- Press button C (down) to put the fabric on position "lowest uncoupling limit" (fig. 3);
- Press the B button (stop) for about 2 seconds, until the motor lifts the fabric and ends the uncoupling movement (fig. 4);
- From now on, to move the motor just press either the up or down button briefly.



- 1 Awning closed
- 2 Lowest coupling limit
- Coupling
- 3 Lowest uncoupling limit

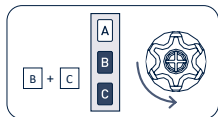


DELETING THE LIMIT SWITCH POSITIONS

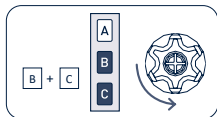
DELETING THE CLOSING LIMIT SWITCH

To delete only the closing limit switch, perform the following steps and proceed with "SETTING THE CLOSING LIMIT SWITCH".

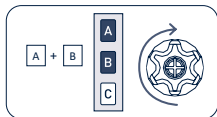
Tn: Already programmed remote control



Tn



Tn

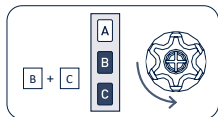


Tn (2 sec)

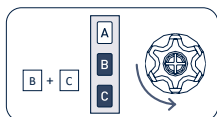
DELETING THE OPENING LIMIT SWITCH

To delete only the opening limit switch positions and the relevant coupling and uncoupling positions, use the procedure below:

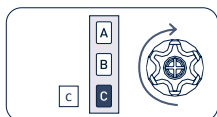
- Put the awning to its half-way point;
- Perform the command sequence:



Tn



Tn



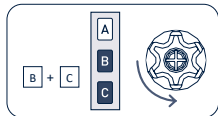
Tn (2 sec)

- Perform the "SETTING THE OPENING LIMIT SWITCH".

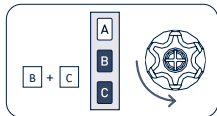
TOTAL DELETING OF THE LIMIT SWITCHES

To delete all limit switches and coupling and uncoupling positions, use the procedure below:

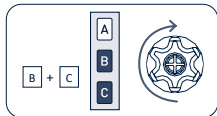
- Put the awning to its half-way point;
- Perform the command sequence:



Tn



Tn



Tn (4 sec)

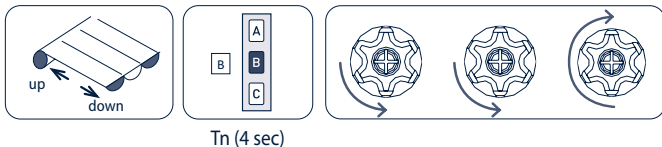
- Now, new limit switch positions may be set (see page 10).

SETTING OF THE STANDARD MIDDLE POSITION

This function allows to drive the awning to a favourite middle position. When this middle position is memorized, just press the STOP button for 2 seconds and automatically the motor will move the awning to this position.

To memorize the middle position, move the awning to the desired position and then hold the STOP button down (for about 4 seconds) until the motor gives confirmation.

Tn: Already programmed remote control

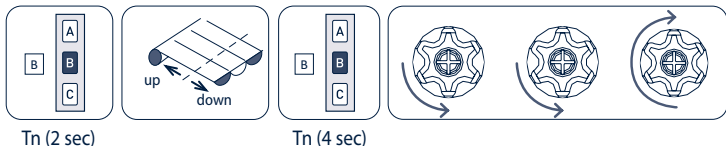


DELETING THE STANDARD MIDDLE POSITION

If you want to delete the middle position, it can be done as described below. To change this position, it's also necessary to delete first the memorised middle position.

Before deleting the middle position, the awning must go to the middle position by pressing the STOP button for 2 seconds, then press the STOP button again (for about 4 seconds) until the motor performs the confirmation movement.

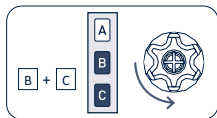
Tn: Already programmed remote control



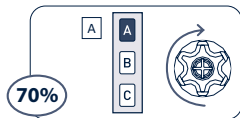
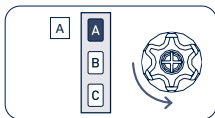
ADJUSTMENT OF THE COUPLING FORCE

During coupling the motor stops automatically on torque, as soon as the fabric is in tension charge. The level of the coupling force may be selected by the remote control on three levels and may be chosen using following procedure:

- Put the awning to its half-way point;
- Perform one of the following command sequences:



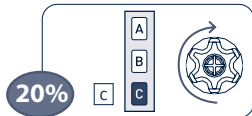
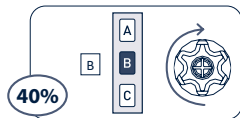
Tn



- Command the descent and then check that the new settings are acceptable.

Thanks to the possibility to set the torque of coupling force, this system works with any type of application.

The Wave Lock RX motor is set in the factory with a coupling force of 20% of the nominal torque (e.g., 20% of 50 Nm = 10 Nm). Using the remote control this level can be switched to 40% or 70% depending on the results that you wish to achieve.



2 sec

SUPER-SENSITIVITY THRESHOLD SETTING - ONLY FOR MOTORS UP TO 25 NM -

Once the super-sensitivity function on obstacle detection downward is activated (see page 25), the coupling force adjusting sequences are used to set the super-sensitivity threshold.

Ex:

20% = lowest threshold = maximum downward sensitivity

40% = medium threshold = medium downward sensitivity

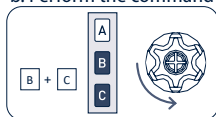
70% = highest threshold = minimum downward sensitivity

To re-adjust the coupling force, it is always mandatory to deactivate the super-sensitivity function (see page 25).

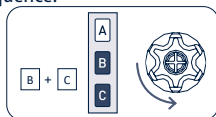
DEACTIVATION OF THE COUPLING FUNCTION

To deactivate this function:

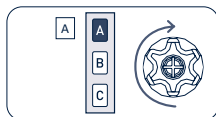
- Put the awning to its half-way point;
- Perform the command sequence:



Tn



Tn



Tn (2 sec)

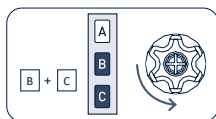
- The automatic coupling and uncoupling movements are now deactivated. By pressing the down key, the awning will stop in the "lowest coupling limit" position.

The coupling and uncoupling positions are not deleted. They may be reactivated at any time, without having to set the positions again.

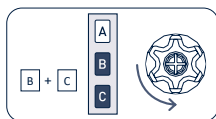
ACTIVATION OF THE COUPLING FUNCTION

To activate the function:

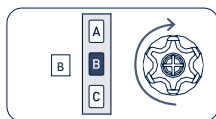
- Put the awning to its half-way point;
- Perform the command sequence:



Tn



Tn



Tn (2 sec)

USING THE MOTOR WITHOUT THE COUPLING/UNCOUPLING DEVICE

The motor may be used on an awning without using the coupling/uncoupling device even if available. In this case, the coupling and uncoupling positions should both be set to avoid coupling. After setting the limit switches, the automatic coupling and uncoupling function must be deactivated.

If the limit switches are already set, follow this procedure:

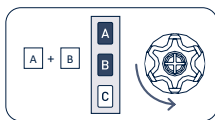
- Put the awning to its half-way point;
- Delete and set again the lower limit switch on a different position to avoid the coupling. For this purpose the "lowest coupling limit" position and the "lowest uncoupling limit" position may be programmed in approximately the same position.
- Deactivate the coupling function.

SETTING OF ADDITIONAL REMOTE CONTROLS

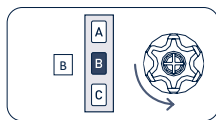
Up to 15 remote controls can be set, including the light/wind sensor.

Tn: Already programmed remote control

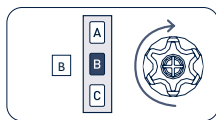
Tx: Additional remote control



Tn



Tn

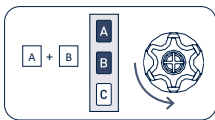


Tx (2 sec)

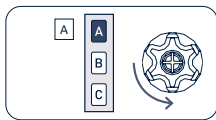
REMOTE CONTROL MEMORY CLEARING

It is possible to delete each stored remote control individually. When the last one is deleted the motor returns to its initial condition. The same applies to the single channels of a multichannel remote control: just select the channel to cancel before performing the sequence.

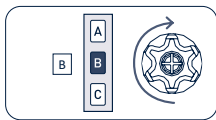
Tn: Remote control to be cleared



Tn



Tn



Tn (2 sec)

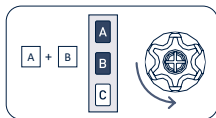
FULL MEMORY CLEARING

This full memory clearing does not delete the setting of the limit switch.

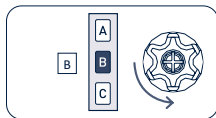
The full memory clearing can be performed in two ways:

1) WITH THE REMOTE CONTROL

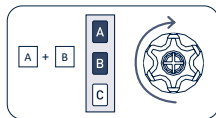
Tn: Already programmed remote control



Tn



Tn



Tn (4 sec)

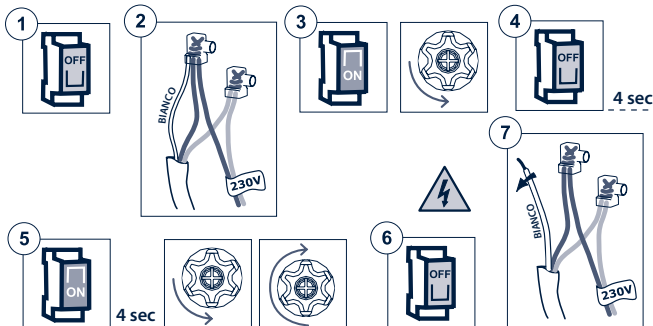
2) WITH THE WHITE WIRE

Do this operation only in case of emergency, if all remote controls are no longer operating. To delete the memory we have to access the white wire of the motor.

The sequence of this operation is the following:

1. Disconnect the power supply from the motor, via the main switch for example.
2. Connect the white motor wire to the brown wire (phase) or to the blue wire (neutral).
3. Connect the power supply to the motor, which rotates briefly in one direction.
4. Disconnect the power supply from the motor for at least 4 seconds.
5. Connect the power supply to the motor which performs one brief rotation in one direction after around 4 seconds and then a longer one in the opposite direction.
6. Disconnect the power supply from the motor.
7. Separate the white wire from the brown/blue wire. Insulate the white wire, in an appropriate way, before reconnecting the power supply.

At this point it is possible to proceed with the setting of the first remote control.



SPECIAL FUNCTIONS

ADDITIONAL MIDDLE POSITION

The additional middle position is useful to open the awning automatically through the WindTec Lux sensor and to bring it to a middle position when the light of the environment exceeds the threshold set. This additional middle position can be used only in combination with the light automatism of the WindTec Lux sensor.

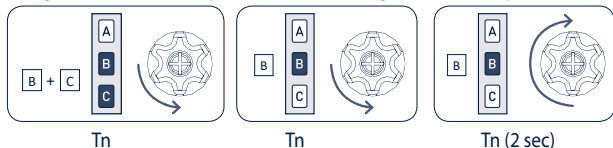
The awning cannot be brought to this position with the remote control.

However, there is the possibility to program the current middle position using the B button (2 sec) command (see page 13).

If the additional middle position is not memorized, the light automatism of the WindTec Lux sensor (when enabled) opens the awning completely. When the WindTec Lux (Set button) sensor is tested, the movements of the motor do not take the additional middle position into consideration: the awning always stops in the half-way position and opens completely if the light exceeds the threshold value.

SETTING THE ADDITIONAL MIDDLE POSITION

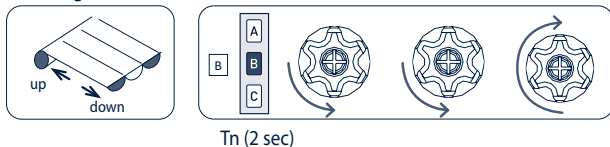
After setting the limit switches, perform the following command sequence:



Starting from this moment, the motor moves in the “Dead Man” mode. This makes it possible to regulate the additional middle position in a precise way.

Perform the following operations:

- Bring the awning to the desired open position.
- Press the B button of the remote control for about 2 seconds, until the motor gives a confirmation signal.



Starting from this moment, when the WindTec Lux commands the opening of the awning through the light automatism (if this is enabled), the awning will be brought to the additional middle position.

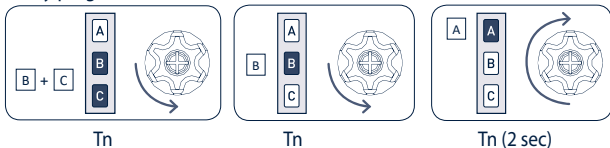
CHANGING THE ADDITIONAL MIDDLE POSITION

To change the additional middle position repeat the procedure described in the previous section.

DELETING THE ADDITIONAL MIDDLE POSITION

Carry out the following command sequence in order to cancel the additional middle position:

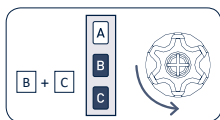
Tn: Already programmed remote control



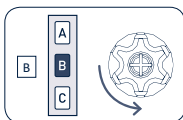
SETTING THE MIDDLE POSITION WITH COUPLING

After setting the limit switches, perform the following command sequence:

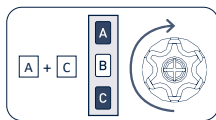
Tn: Already programmed remote control



Tn



Tn

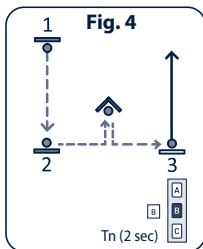
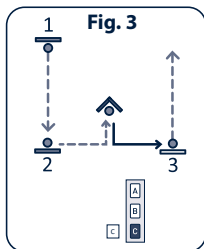
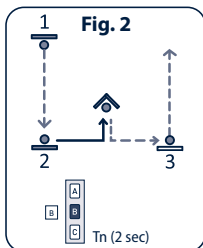
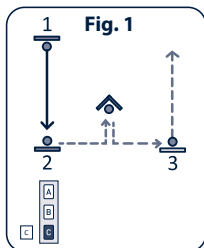


Tn (2 sec)

From this moment onwards the motor moves in "Dead Man" mode.

Close up the awning until it reaches its closed position (in box awnings, you will have to keep the button pressed until the motor stops automatically at the limit stop). Proceed with the sequence below:

- Put the awning at its "lowest coupling limit" position (fig. 1);
- Press button B (stop) for about 2 seconds, until the motor lifts the fabric into its coupling position (fig. 2);
- Press button C (down) to put the fabric on position "lowest uncoupling limit" (fig. 3);
- Press the B button (stop) for about 2 seconds, until the motor lifts the fabric and ends the uncoupling movement (fig. 4);
- From now on, to move the motor just press either the up or down button briefly.



- 1 Awning closed
- 2 Lowest coupling limit
- Coupling
- 3 Lowest uncoupling limit

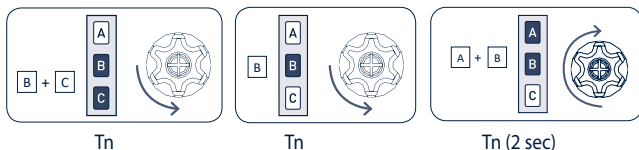
MIDDLE POSITION COMMAND WITH COUPLING

This optional function enables the awning to open to a middle position with coupling. Once the middle position with coupling has been memorised, to bring the awning into this position simply press button B (stop) for 2 seconds. When the middle position with coupling is memorised, it will replace the standard middle position (page 13). To memorise the standard intermediate position (see page 13), first delete the middle position with coupling.

DELETION OF MIDDLE POSITION WITH COUPLING

To delete the middle position with coupling, run the command sequence:

Tn: Already programmed remote control



SHORT-TERM SETTING OF A REMOTE CONTROL

This function makes it possible to store a remote control temporarily, for example, with the purpose of setting the limit switches during assembly in the factory. A later final saving of the remote control will be possible using the appropriate command sequence (see: "SETTING THE FIRST REMOTE CONTROL").

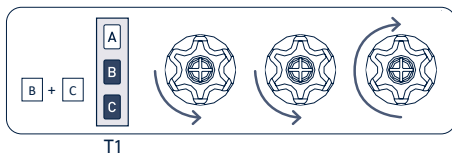
The operations described below can be carried out only when the motor has just come out of the factory or after a full memory clearing (see: "FULL MEMORY CLEARING"). The motor makes the following operations possible only within the time limits described in order to make sure that the short-term setting is used only in the installation or factory setting phase and not during daily use.

Power up the motor, make sure that no other motors having an empty memory are powered up in the same operating range.

Within 30 seconds after start, press the B and C buttons simultaneously until the motor gives a confirmation signal.

The remote control will remain stored for 5 minutes, while the motor is powered up. After 5 minutes or when the motor has its power cut off, the remote control will be cancelled.

T1: First remote control to be set



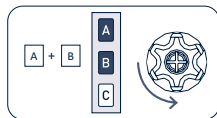
SETTING THE A530058 POCKET REMOTE CONTROL

NB: The pocket remote control can only be used as a secondary remote control. So the programming can proceed only after previous programming of a traditional Cherubini remote control (Skipper, GIRO or POP - remote control with 3 buttons UP-DOWN-STOP).

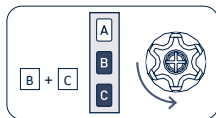
HOW TO PROCEED TO SET THE BUTTON ON THE POCKET REMOTE CONTROL

Tn: Already programmed remote control

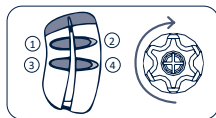
Tx: Pocket remote control to be set



Tn



Tn



Tx (2 sec)

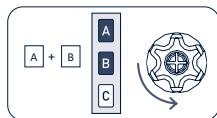
In the last step of the sequence, press the required button on the pocket remote control for 2 seconds. The remote control can now operate the motor in step-by-step mode (UP-STOP-DOWN-STOP). To assign the other buttons, repeat the sequence described above. Each button can be assigned to one Wave Lock RX motor.

DELETING ONE BUTTON ON THE POCKET REMOTE CONTROL

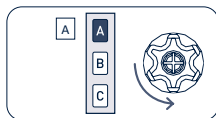
The buttons saved may be deleted individually according to the following sequence:

Tn: Already programmed remote control

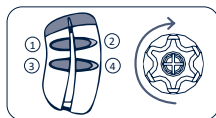
Tx: Pocket remote control with button to be deleted



Tn



Tn



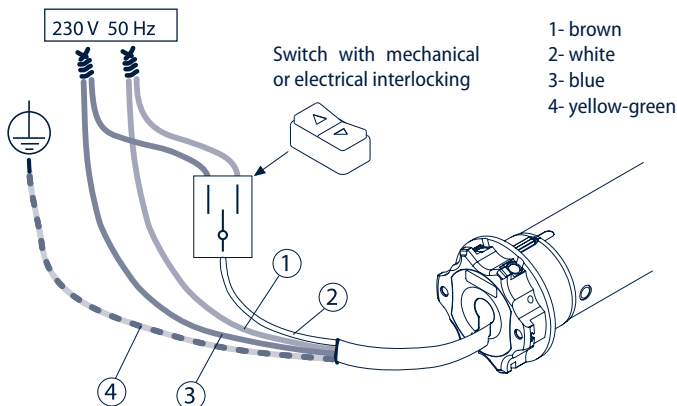
Tx (2 sec)

To confirm the operation the motor will do a short shunt and the button, which has to be pressed for minimal 2 second, will be deleted.

ELECTRIC WIRING TO MOTOR COMMAND FOR UP-DOWN MODE (2 independent UP-DOWN buttons)

To connect the switch, use only kind of switches with mechanical or electrical interlock, to prevent to press both buttons at same time.

The motor automatically recognizes the switch-type (with 1 or 2 buttons) and sets the proper operational mode.



WIRED PROGRAMMING

Using the switch as described on this page it's possible to set the motor through the white wire (wire programming). To find out this procedure, require the instruction pamphlet from your dealer.

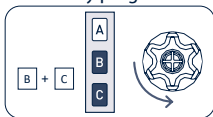
COMMAND MANAGEMENT FROM WHITE WIRE

UP-STOP-DOWN-STOP / UP-DOWN / UP-DOWN "Dead Man"

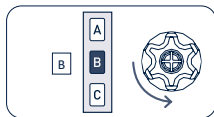
NB: The motors leave the factory set for use with a single button switch (UP-STOP-DOWN-STOP operation). The control mode setting can be changed at any time by performing the sequence shown below.

PROCEDURE TO CHANGE THE CONTROL MODE

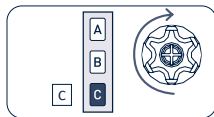
Tn: Already programmed remote control



Tn



Tn



Tn (2 sec)

The possible settings are 3 and are available in the following order:

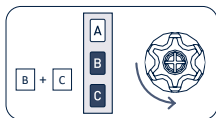
- UP-STOP-DOWN-STOP (factory setting)
- UP-DOWN (for 2 independent buttons)
- UP-DOWN "DEAD MAN" (for 2 independent buttons)

To switch from one setting to the following, perform the sequence as many times as necessary

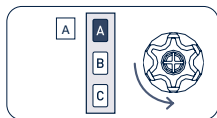
SUPER-SENSITIVITY OBSTACLE DETECTION MANAGEMENT DURING DOWNWARDS MOVEMENT - ONLY FOR MOTORS UP TO 25 NM -

Where required, for example for vertical awnings with a tensioner weight attached, it is possible to activate/deactivate a high level of obstacle detection sensitivity during downwards movement.

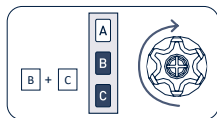
ACTIVATING THE SUPER-SENSITIVITY FUNCTION



Tn

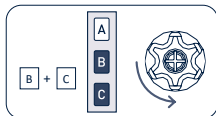


Tn

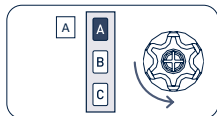


Tn (2 sec)

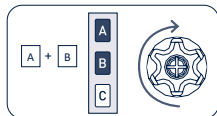
DEACTIVATING THE SUPER-SENSITIVITY FUNCTION



Tn



Tn



Tn (2 sec)

NB: If the super-sensitivity function on obstacle detection downward is activated, it is possible to set a sensitivity threshold through the sequences illustrated in the section "ADJUSTMENT OF THE COUPLING FORCE" (see page 14).



EU DECLARATION OF CONFORMITY

CHERUBINI S.p.A. declares that the product is in conformity with the relevant Union harmonisation legislation:

Directive 2014/53/EU, Directive 2011/65/EU.

The full text of the EU declaration of conformity is available upon request at the following website: www.cherubini-group.com.





**CHERUBINI S.p.A.**

Via Adige 55
25081 Bedizzole (BS) - Italy
Tel. +39 030 6872.039
info@cherubini.it | www.cherubini.it

CHERUBINI Iberia S.L.

Avda. Unión Europea 11-H
Apdo. 283 - P. I. El Castillo
03630 Sax Alicante - Spain
Tel. +34 (0) 966 967 504
info@cherubini.es | www.cherubini.es

CHERUBINI France SAS

ZI Du Mas Barbet
165 Impasse Ampère
30600 Vauvert - France
Tél. +33 (0) 466 77 88 58
info@cherubini.fr | www.cherubini.fr

CHERUBINI Deutschland GmbH

Rotter Viehtrift 4A - 53842 Troisdorf - Deutschland
Tel. +49 (0) 224 126 699 74 | Fax +49 (0) 224 126 699 73
info@cherubini-group.de | www.cherubini-group.de