Sonesse® 30 RS485

Installation instructions

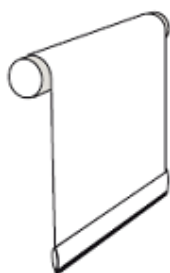floridaautomatedshade.com

HOME MOTION BY somfy®

SOMFY hereby declares that this product complies with the essential requirements and other relevant provisions of Directive 1999/5/EC. A Declaration of Conformity is available at the web address www.somfy.com/CE. Suitable for use in EU, CH and NO

SAFETY

• This Somfy product must be installed by a professional motorization and home automation installer, for whom these instructions are intended.
• Before installation, check that this product is compatible with the associated equipment and accessories.
• These instructions describe how to install, commission and use this product.
• Moreover, the installer must comply with current standards and legislation in the country in which the product is being installed, and inform his customers of the operating and maintenance conditions for the product.
• Any use outside the sphere of application specified by Somfy is not approved. Such use, or any failure to comply with the instructions given herein will invalidate the warranty, and Somfy refuses to accept liability.

COMPATIBLE BLINDS

Roller blinds

COMPATIBLE CONTROL

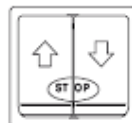RS485 controllers   Dry contact controllers

Setting Tool   Centralis IB   Wall Switch

GENERAL SAFETY INSTRUCTION

The safety instructions that must be observed, besides the usual rules, are explained in these instructions and in the attached «Safety Instructions» document.

Never immerse the motor in liquid!

Avoid impacts!

Never drill holes in the motor!

Do not drop it!

INSTALLATION

⚠️ **Remove Network ID labels before installing the crown.**

Motor preparation

1) Fit the crown (a) and drive wheel (b) to the motor.

2) Measure the length (L) between the middle of the drive wheel and the head end.
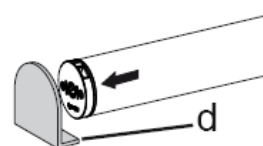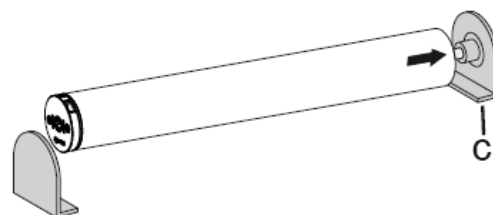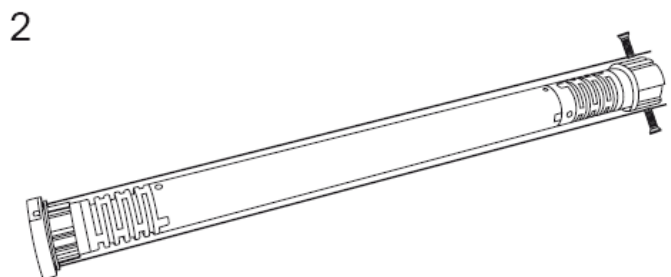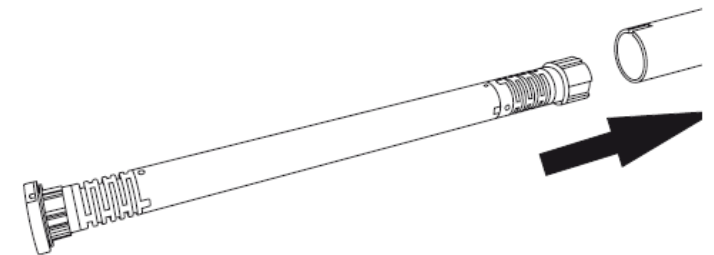
Tube preparation

Cut the tube to the required length. Deburr the tube and remove the debris.

Motor/tube assembly

1) Slide the motor into the tube.

2) Fix the tube to the motor with self-tapping screws or steel pop rivets depending on the dimension (L).

Mounting the motorized tube on the brackets

If necessary, screw the bracket interface on the motor head.
Mount the motorized tube on the end bracket (C).
Mount the motorized tube on the motor bracket (D).

1

a   b

2

L

1

2

c

d

Wiring

1) Connect the power cable to the motor **(2-wire JST cable).**

$+$ _____

$-$ _____

2) Connect the RS485 cable to the motor (3-wire JST cable).

3) If you want to use the Dry contact features of the motor, connect the Dry contact cable to the motor (4-wire JST cable).

⚠️ **Do not apply any voltage to Dry Contact connector.**

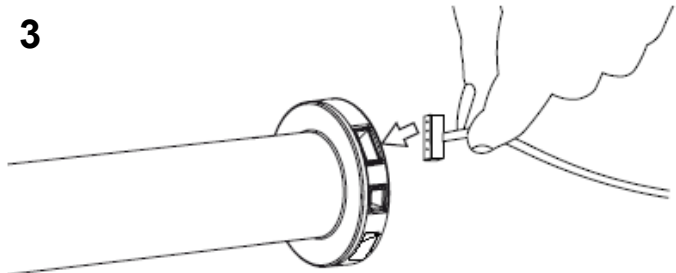**1**

2

3

RS485

RS485 communication standard

All signals on the physical link between devices should comply with EIA/TIA-485-A standard.

Recommended network cable: Shielded, two twisted-pair type 22 – 24 AWG (120Ω).

Communication mode: half-duplex.

Time between two messages: minimum 100 ms.

Each character is coded as follow :

Character coding		
Baud Rate	4800	+/-1%
Start bit	Logical Level 0	
Data bits	8	Less significant bit transmitted first
Parity	Odd	
Stop bit	Logical Level 1	

RS485 control wiring

Pin 1 (red) = (+)

Pin 2 (green) = Ground

Pin 3 (black) = (-)

Message format

Byte Number	Name	Value	Description
1	MSG	See Message Table	Refer to 'MSG' column in the table below for a list of available messages.
2	LEN		Refer to 'LEN' column to have the correct value depending on message.
3	Reserved	02h/20h	Always 02h when message is sent to Sonesse 30 motor. Always 20h when message is received from Sonesse 30 motor.
4 - 6	SRC@(*)(**)	Node dependant (refer to product label)	NodeID of the transmitter (SouRCe address)
7 - 9	DEST@(**)		NodeID of the receiver (DESTination address)
...	DATA	See Message Table	Information on DATA fields can be found below: - Lenght of DATA part (in byte count) - Type of DATA fields - Available values for all DATA fields
Byte n-1	CHECKSUM	Byte 1 + ... + Byte (n-2)	CHECKSUM is one's complement of sum of byte 1 to byte (n-2). If CHECKSUM is not correct, message is ignored.
Byte n			

(*) When the host is not a Somfy product, its source address shall be included in the following range: FF FF 00 <= SCR@ <= FF FF EE

(**) Address value are LSBF(Last Significant Byte First)

Message table

Command Type	Command Description	Message Name
Setting	Set motor limits	SET_MOTOR_LIMITS
	Set motor rotation direction	SET_MOTOR_DIRECTION
	Set motor speed for rolling applications	SET_MOTOR_ROLLING_SPEED
	Set Intermediate Positions (up to 16)	SET_MOTOR_IP
	Enable/Disable dry contact inputs	SET_DCT_LOCK
	Recall factory settings	SET_FACTORY_DEFAULT

MSG	LEN	DATA Length	DATA Type	DATA Values
11h	15	4	1-byte	00h = Delete (clear Up and Down limits) 01h = Set limit at current position 02h = Set limit at the specified position from up limit (in pulses) 04h = Adjust limit using Jog (in 10ms increments) 05h = Adjust limit using Jog (in pulses)
			1-byte	00h = Down limit / Downward movement 01h = Up limit / Upward movement
			2-byte	(LSBF) Value depends on selection of 1st parameter Indicates desired position in pulses, or amount of jog in pulses or 10ms increments
12h	12	1	1-byte	00h = Standard rotation (default) 01h = Reversed rotation
13h	14	3	1-byte	Up speed Value must be between 6 and 28 RPM
			1-byte	Down speed Value = Up speed, other values ignored
			1-byte	Slow speed Value must be between 6 and 28 RPM
15h	15	4	1-byte	00h = Delete 01h = Set IP at current position 02h = Set IP at the specified position from up limit (in pulses) 03h = Set IP at the specified position (in %)
			1-byte	00h = All IPs 1 to 16 = IP number
			2-byte	(LSBF) Value depends on selection of 1st parameter Indicates desired position in pulses or %
17h	14	3	1-byte	00h = Unlock (enable dry contact input) 01h = Lock (disable dry contact input)
			1-byte	00h = All DCT inputs 01h = DCT input number
			1-byte	Priority level (0 to 255)
1Fh	12	1	1-byte	00h = Restore all settings to factory default 01h = Clear all group addresses 11h = Delete all limits (and IPs) 12h = Restore default rotation polarity 13h = Restore default rolling speed settings 15h = Delete all IPs 17h = Clear all locks

Command Type	Command Description	Message Name
Control	Move in momentary mode	CTRL_MOVE
	Stop movement	CTRL_STOP
	Move to absolute position (UP/DOWN/IP)	CTRL_MOVETO
	Move relative to current position (Jog/Next IP)	CTRL_MOVEOF
	Feedback	CTRL_WINK
Status request	Read motor position	GET_MOTOR_POSITION
	Read motor status	GET_MOTOR_STATUS
	Read motor limits	GET_MOTOR_LIMITS
	Read motor rotation direction	GET_MOTOR_DIRECTION
	Read motor speed for rolling applications	GET_MOTOR_ROLLING_SPEED
	Read Intermediate Positions	GET_MOTOR_IP
	Read DCT status (Enabled / Disabled)	GET_DCT_LOCK
	Read factory default status	GET_FACTORY_DEFAULT

MSG	LEN	DATA Length	DATA Type	DATA Values
01h	14	3	1-byte	00h = Move in down direction 01h = Move in up direction 02h = Cancel adjustments
			1-byte	Jog duration (in 10ms increments) Value must be between 0Ah and FFh
			1-byte	00h = Use up speed 01h = Use down speed (same as up speed) 02h = Use slow speed
02h	12	1	1-byte	n/a (value ignored)
03h	15	4	1-byte	00h = Down limit 01h = Up limit 02h = IP 03h = Position from up limit (in pulses) 04h = Position (in%)
			2-byte	(LSBF) Value depends on selection of 1st parameter Indicates IP index, or position in pulses or %
			1-byte	n/a (value ignored)
04h	15	4	1-byte	00h = Next IP down 01h = Next IP up 02h = Jog down (in pulses) 03h = Jog up (in pulses) 04h = Jog down (in 10ms increments) 05h = Jog up (in 10ms increments)
			2-byte	(LSBF) Value depends on selection of 1st parameter Indicates amount of jog in pulses or 10ms increments
			1-byte	n/a (value ignored)
05h	11	0		n/a
0Ch	11	0		n/a
0Eh	11	0		n/a
21h	11	0		n/a
22h	11	0		n/a
23h	11	0		n/a
25h	12	1	1-byte	1 to 16 = IP number
27h	12	1	1-byte	Always = 01h
2Fh	12	1	1-byte	00h = All settings 01h = Group addresses 11h = Limits 12h = Rotation polarity 13h = Rolling speed 15h = IPs 17h = Locks

Command Type	Command Description	Message Name
Status report	Send motor position	POST_MOTOR_POSITION
	Send motor status	POST_MOTOR_STATUS
	Send motor limits	POST_MOTOR_LIMITS
	Send motor rotation direction	POST_MOTOR_DIRECTION
	Send motor speed for rolling applications	POST_MOTOR_ROLLING_SPEED
	Send Intermediate Positions	POST_MOTOR_IP
	Send DCT status (Enabled / Disabled)	POST_DCT_LOCK
	Send factory default status	POST_FACTORY_DEFAULT

MSG	LEN	DATA Length	DATA Type	DATA Values
0Dh	16	5	2-byte	(LSBF) Position from up limit (in pulses)
			1-byte	Partial position from up limit (in %, down limit = 100%)
			1-byte	n/a (always = FFh)
			1-byte	IP number 1 to 16, if at IP 255, if not at IP
0Fh	15	4	1-byte	State of the motor: 00h = Stopped 01h = Running 02h = Blocked 03h = Locked
			1-byte	Direction of last motion: 00h = Down 01h = Up
			1-byte	Source of last action: 00h = Internal 01h = Network message 02h = DCT inputs
			1-byte	Cause of last action: 00h = Target reached 01h =Explicit command 02h = Wink 10h = Limits not set 11h = IP not set 12h = Polarity not checked 13h = In configuration mode 20h = Obstacle detection 21h = Over-current protection 22h = Thermal protection 30h =
31h	15	4	2-byte	(LSBF) Up limit (always = 0)
			2-byte	(LSBF) Down limit (in pulses)
32h	12	1	1-byte	00h = Standard rotation direction 01h = Reversed rotation direction
33h	14	3	1-byte	Up speed, 6 to 28 (RPM)
			1-byte	Down speed, always = Up speed, 6 to 28 (RPM)
			1-byte	Slow speed, 6 to 28 (RPM)
35h	15	4	1-byte	IP number, 1 to 16
			2-byte	(LSBF) IP position from up limit (in pulses)
			1-byte	Partial IP position from up limit (in %, down limit = 100%)
37h	16	5	1-byte	00h = Unlocked (enabled) 01h = Locked (disabled)
			3-byte	(LSBF) always = FFFFFFh
			1-byte	Priority level (0 to 255)
3Fh	13	2	1-byte	00h = All settings 01h = Group addresses 11h = Limits 12h = Rotation polarity 13h = Rolling speed 15h = IPs 17h = Locks
			1-byte	00h = Different from default value(s) 01h = Default value(s)

Dry contact

Dry contact control wiring

Setting Tool

1 UP (White/Blue)
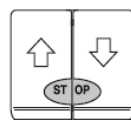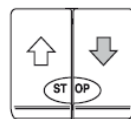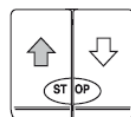2 STOP (Blue)
3 DOWN (White/Orange)
4 GND (Orange)

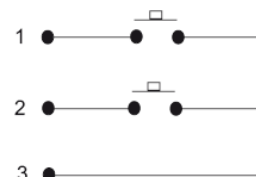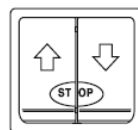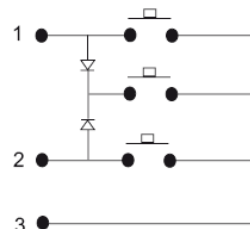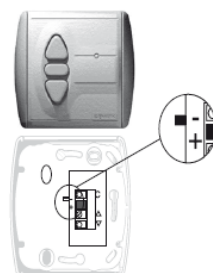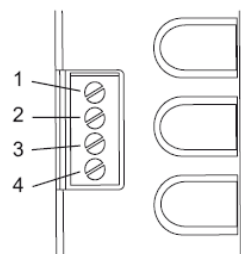Centralis IB

1 UP or DOWN (White/Blue or White/Orange)
2 UP or DOWN (White/Blue or White/Orange)
3 GND (Orange)

Wall Switch

1 UP or DOWN (White/Blue or White/Orange)
2 UP or DOWN (White/Blue or White/Orange)
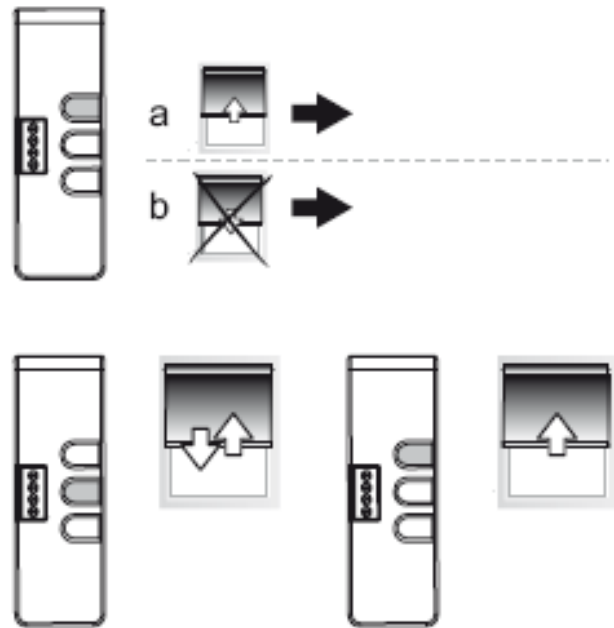3 GND (Orange)

Correspondence

COMMISSIONING

Checking the direction of rotation

Press the setting tool UP button:
a) If the shade is raised, the direction of rotation is correct. Move to the section entitled «Adjusting the end limits».
b) If the shade is lowered, the direction of rotation is incorrect. Move to the next step.
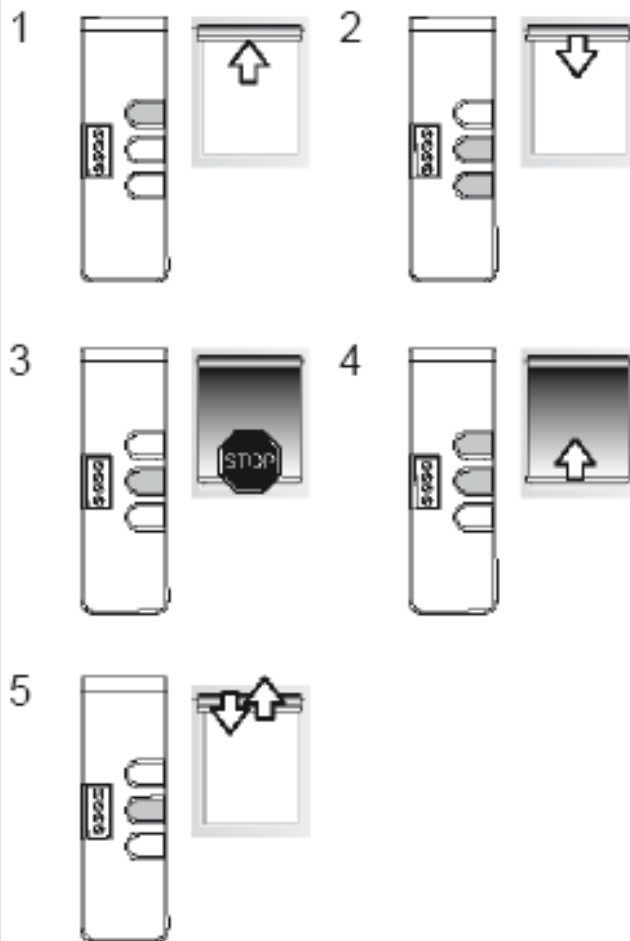Press the setting tool STOP button until the shade jogs: the direction of rotation has been modified.
Press the setting tool UP button to check the direction of rotation.

Adjusting the end limits

The limits can be set in any sequence.

1) Press and hold the UP button to move the shade to the desired up position.

2) Press simultaneously the STOP and DOWN buttons and release them once the shade begins to move.
The up limit is memorized.

3) Press the STOP button when it reaches the desired down position.
If necessary adjust the down position, using the UP or DOWN buttons.

4) Press simultaneously the STOP and UP buttons and release them when the shade begins to move.
The down limit is memorized.
The shade moves up and will stop at its upper limit.

5) To confirm the end limits press and hold the STOP button until the shade jogs.
The end limits are recorded.

13

USE

MY position

1) Recording MY position
To set the MY position, move the shade to the desired position with the UP and DOWN buttons then press the STOP button until the shade jogs once.

2) Changing the MY position
To change the MY position go to the new desired MY position with the UP and DOWN buttons then press the STOP button until the shade jogs once.

3) Delete the MY position
To delete the MY position, move to this position and press the STOP button until the shade jogs once.

1

2

3

With the setting tool, it is possible to cancel and exit the speed or limit adjustment mode by simultaneously pressing the UP, STOP, and DOWN buttons. These modes will also be cancelled with inactivity of 2 minutes.

Adjusting the roller speed

1) Press and hold the STOP button until the shade jogs twice.
The shade moves up and down automatically in 10 second cycles.

2) While the shade is moving, briefly press the UP button to increase the speed or DOWN button to decrease the speed.
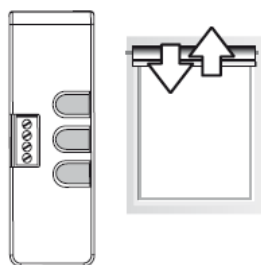
3) To confirm the new speed, press and hold the STOP button until the shade jogs.
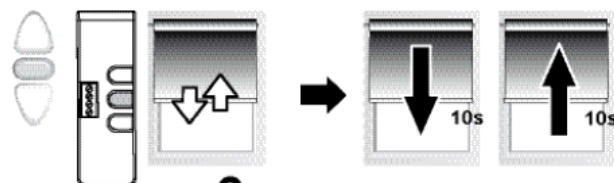
UP, DOWN and MY

1) To move the shade from a limit to the other limit, press briefly the UP or DOWN button.
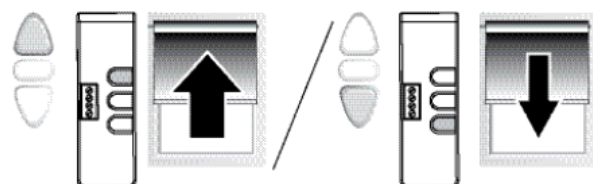
2) To stop the shade, press the STOP button.

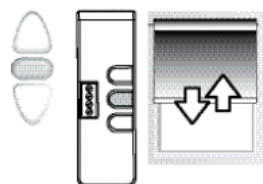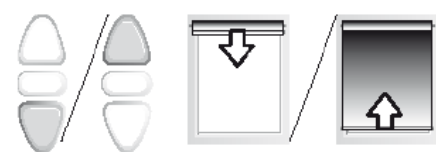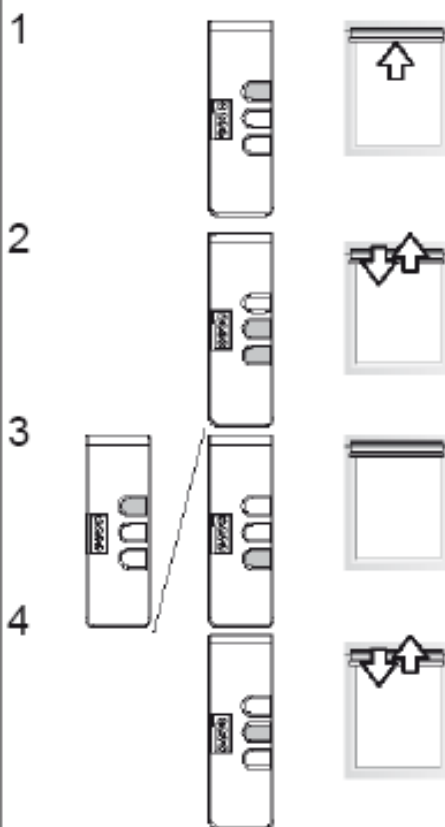3) To move the shade to the MY position, press briefly the STOP button.
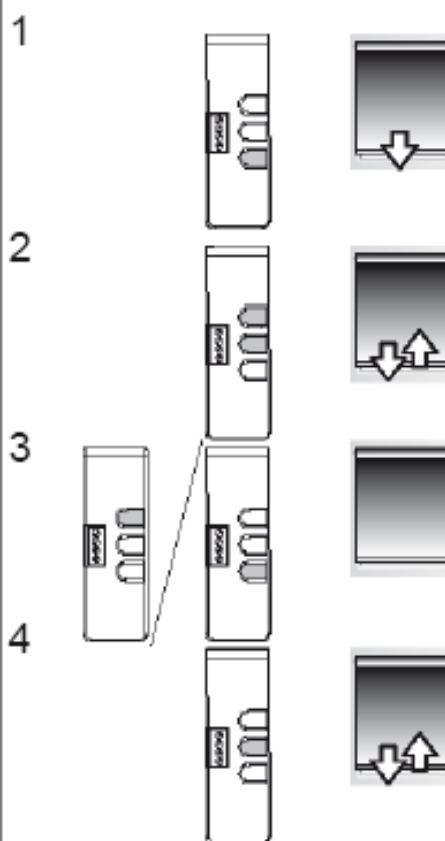
End limit re-adjustement

UP LIMIT

1) Press the UP button, to move the shade to the limit to be readjusted.

2) Press and hold the DOWN and STOP buttons simultaneously until the shade jogs.

3) Press and hold the UP or DOWN button to move the shade to the new desired position.

4) To confirm the new limit press and hold the STOP button until the shade jogs.

DOWN LIMIT

1) Press the DOWN button, to move the shade to the limit to be readjusted.

2) Press and hold the STOP and UP buttons simultaneously until the shade jogs.

3) Press and hold the UP or DOWN button to move the shade to the new desired position.

4) To confirm the new limit press and hold the STOP button until the shade jogs.

Modifying the direction of rotation

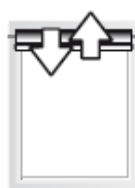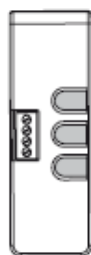To reverse the rotation direction, press and hold all the three buttons simultaneously until the shade jogs twice.

x2

Erasing the memory of the motor.

Press and hold all the three buttons simultaneously until the shade jogs 3 times.
All the settings are erased.

x3

Technical data

Voltage	24V
Operating temperature	0°C / 60°C
Protection rating	IP30
Torque	2 Nm
Adjustable speed	6 → 28 rpm
Speed (by default)	28 rpm

Troubleshooting

The motor doesn't work:
Verify:
• The wiring of the motor.
• The power supply specifications.
• The compatibility of the control
• The heat generated (wait 5 minutes for the cooling of the motor).

The equipment stops too soon:
Verifiy:
• The operation of end-limits during the rotation of the motor.
• The crown is properly fitted to the tube.
• The end-limits of the motor are properly adjusted.
• Verify that the shade is within the recommended weight limit

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