

E SMART SI 332 DC  
E SMART SI 620 DC  
E SMART SI 1012 DC

E SMART MI 332 DC  
E SMART MI 632 DC  
E SMART MI 1020 DC



## Tubular Motor

EN - Instructions and warnings for installation and use

## GENERAL WARNINGS: SAFETY - INSTALLATION - USE (original instructions in Italian)

**ATTENTION** Important safety instructions. Follow all instructions as improper installation may cause serious damage  
**ATTENTION** Important safety instructions. It is important for you to comply with these instructions for your own and other people's safety. Keep these instructions

- Before commencing the installation, check the "Technical characteristics" (in this manual), in particular whether this product is suitable for automating your guided part. If it is not suitable, DO NOT continue with the installation
- The product cannot be used before it has been commissioned as specified in the chapter on "Testing and commissioning"

**ATTENTION** According to the most recent European legislation, the implementation of an automation system must comply with the harmonised standards provided by the Machinery Directive in force, which enables declaration of the presumed conformity of the automation. Taking this into account, all operations regarding connection to the electricity grid, as well as product testing, commissioning and maintenance, must be performed exclusively by a qualified and skilled technician!

- Before proceeding with the installation of the product, check that all the materials are in good working order and suited to the intended applications
- This product is not intended to be used by persons (including children) whose physical, sensory or mental capacities are reduced, or who lack the necessary experience or skill
- Children must not play with the appliance
- Do not allow children to play with the fixed control devices of the product. Keep the remote controls away from children

**ATTENTION** In order to avoid any danger from inadvertent resetting of the thermal cut-off device, this appliance must not be powered through an external switching device, such as a timer, or connected to a supply that is regularly powered or switched off by the circuit

- Provide a disconnection device (not supplied) in the plant's power supply grid, with a contact opening distance permitting complete disconnection under the conditions dictated by overvoltage category III
- Handle the product with care during installation, taking care to avoid crushing, denting or dropping it, or allowing contact with liquids of any kind. Keep the product away from sources of heat and naked flames. Failure to observe the above can damage the product, and increase the risk of danger or malfunction. Should this happen, stop installation immediately and contact Customer Service
- The manufacturer assumes no liability for damage to property, items or persons resulting from non-compliance with the assembly instructions. In such cases the warranty for material defects is excluded
- The weighted sound pressure level of the emission A is lower than 70 dB(A)
- Cleaning and maintenance to be carried out by the user must not be carried out by unsupervised children
- Before working on the system (maintenance, cleaning), always disconnect the product from the mains power supply
- Check the system periodically, in particular all cables, springs and supports to detect possible imbalances, signs of wear or damage. Do not use, if repairs or adjustments are necessary, since installation failure or an incorrectly balanced automation may cause injury
- The packing materials of the product must be disposed of in compliance with local regulations
- There must be at least 0.4 m between the driven parts and any fixed elements
- The wording on the tubular motors can be covered after assembly
- Motor with **fixed** power cable: the power cable **cannot be replaced**. If the cable is damaged, the appliance must be scrapped
- Motor with **removable** power cable and dedicated connector: if the power cable is damaged, it **must be replaced** by the manufacturer or by the latter's technical assistance service, or by a similarly qualified person, in order to prevent any type of risk
- Be careful with moving shutters and keep away from them until they have lowered fully
- Be careful when activating the manual release device, as a raised shutter may rapidly drop in case of weak or broken springs
- Do not activate the awning when maintenance activities – such as window cleaning – are being carried out nearby
- Disconnect the awning from the power supply when maintenance activities such as window cleaning are being carried out nearby. Warning for 'shades with automatic control'

### INSTALLATION WARNINGS

- Prior to installing the drive motor, remove any unnecessary cables and disable any appliance not required for motorised operation
- Install the manoeuvring assembly for manual release at a height below 1.8 m  
NOTE: if removable, the manoeuvring assembly must be kept close to the door
- Make sure that the control devices are kept far from moving parts but nonetheless in a visible position.  
The manoeuvring assembly of a switch kept manually closed must be located in a position visible from the guided part but far from moving parts. It must be installed at a minimum height of 1.5 m
- The fixed control devices must be installed in a visible position
- For drive motors that allow for accessing unprotected moving parts once they have been installed, such parts must be installed 2.5 m above the floor or other surface from which they can be accessed

# 1 PRODUCT DESCRIPTION AND INTENDED USE

This product is a tubular motor for automating indoors roll-up awnings, or indoors sunscreens, or similar roll-up equipment (fig. 2). **Do not use it for any other purpose! The manufacturer declines all liability for damage resulting from improper use of the product or any other use than that specified in this manual.**

The product has the following functional characteristics:

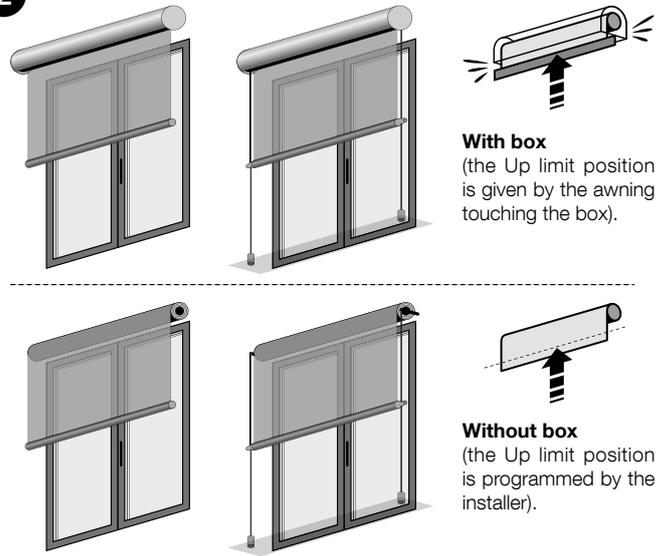
- it is powered via a 24 V power supply connected to the mains (see the motor rating plate);
  - it is equipped with three separate connection cables: one power cable, one command cable and one smart-bus data cable;
  - it installs inside the winding roller; the part of the motor that protrudes from the roller (electronic head) mounts to the ceiling or wall with brackets (not included);
  - it has a built-in control unit with encoder technology that electronically controls the movement and precision of the limit switches;
  - it can be programmed using the DMBM module, BUS T4 and a dedicated programmer (TTP, etc.), or from a smartphone with "NFC" technology. These accessories are not included; In particular programming with the DMBM module permits a high level of customisation. For example, programming "awning movement speed" using a TTP programmer, you can only choose one of five values, while programming the same parameter with the DMBM module allows you to set any value between "vmin" and "vmax";
  - it can be commanded from a cabled wall-mounted push button panel or from the DMBM module (fig. 3). These accessories are not included;
  - it can move the awning up or down; stop it at the upper limit switch, the lower limit switch or various intermediate positions. Controlling the motor with the DMBM module allows you to use advanced commands such as moving to a particular position at a particular speed.
- EXAMPLE 1: 30% @ 21 rpm** – the awning moves to 30% of its travel between the down limit switch at 0% and the up limit switch at 100%, at a speed of 21 rpm.
- EXAMPLE 2: 100% @ 32 rpm** – the awning moves to 100% of its travel between the down limit switch at 0% and the up limit switch at 100% (therefore to the up limit switch) at a speed of 32 rpm.
- awnings of different weights are moved at the same speed;
  - the up and down speeds are the same provided the settings are equal;
  - it allows you to adjust the movement's duration;
  - it allows you to set acceleration and deceleration at the start/end of the movement respectively;
  - it features a security system that detects the presence of an obstacle along the awning travel, immediately blocking the movement in progress and performing a brief inversion of movement. The same system is automatically activated at the end of the Up movement (only if the upper limit switch "0" consists of a box or other mechanical stop), to mitigate the impact of the awning against the housing and loosen the tension exerted by the motor on the canvas, when the awning is stationary at the upper limit switch "0";
  - it enables you to set the functional logic of a button panel's buttons;
  - it enables you to precisely adjust the limit switches with the buttons on the motor head;
  - it has an integral led that indicates system status and any malfunctions;
  - it is equipped with a thermal protection system which, in the case of overheating caused by overuse of the automated mechanism (beyond the indicated limits, see the Technical Specifications chapter), automatically cuts off the electricity supply, restoring it as soon as the temperature returns to normal;
  - it is available in a variety of versions, each with a specific motor torque (see the motor nameplate ratings).

# 2 INSTALLATION OF THE MOTOR AND THE ACCESSORIES

## 2.1 - Preliminary checks before installation and limitations on use

- Check the condition of the product right after unpacking it.
- Make sure that the torque, the rotation speed and time of operation of this motor are suitable for automating your awning. In particular, **do not install the motor if its torque is greater than that needed to move your awning.** To choose the right motor to the technical features of your awning refer to the the "Guide to Selection" section, in the "Nice Screen" catalogue, – also available on [www.niceforyou.com](http://www.niceforyou.com).
- Check the diameter of the winding roller. This must be chosen according to the motor torque, as follows:
  - For motors of size "S" (Ø = 35 mm) the minimum inside diameter of the winding roller must be 40 mm;
  - For motors of size "M" (Ø = 45 mm) the minimum inside diameter of the winding roller must be 52 mm;
- Additional limitations on use are listed in chapters 1 and 2 and in the technical characteristics on the nameplate.

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**With box**  
(the Up limit position is given by the awning touching the box).

**Without box**  
(the Up limit position is programmed by the installer).

## 2.2 - Assembling and installing the tubular motor

**Caution! – Read the safety warnings before proceeding. Incorrect installation could cause severe physical injury.**

To assemble and install the motor, refer to fig. 4 (the accessories shown in fig. 4 are not included in the package). To select the limit switch gear wheel (fig. 4-a), drive wheel (fig. 4-b), motor bracket (fig. 4-f), or to select supplementary cables (of different lengths), refer to the "Nice Screen" catalogue, which is also available on [www.niceforyou.com](http://www.niceforyou.com).

## 2.3 - Installation of accessories

After installing the motor, install the accessories, if required. In order to identify those that are compatible and choose the models desired, see the "Nice Screen" catalogue, which is also available on [www.niceforyou.com](http://www.niceforyou.com). Fig. 3 shows the type of accessories that are compatible and their connection to the motor (all of these are options and not included in the package)

# 3 ELECTRICAL CONNECTIONS AND FIRST POWER UP

The motor is equipped with **three separate cables**: one power cable, one command cable and one Nice smart-bus data cable. Each cable has a connector for connection to the motor (fig. 4-h); the connectors are removable and allow the replacement of cables (fig. 4-i). **CAUTION! - The smaller cables must be handled carefully** because they contain very thin wires that could be damaged.

### CABLE "A" is the POWER cable (fig. 3)

Wire	Colour	Connection	
A1	Red	Positive	OFF 
A2	Black	Negative	

### CABLE "B" is the CONTROL cable (fig. 3)

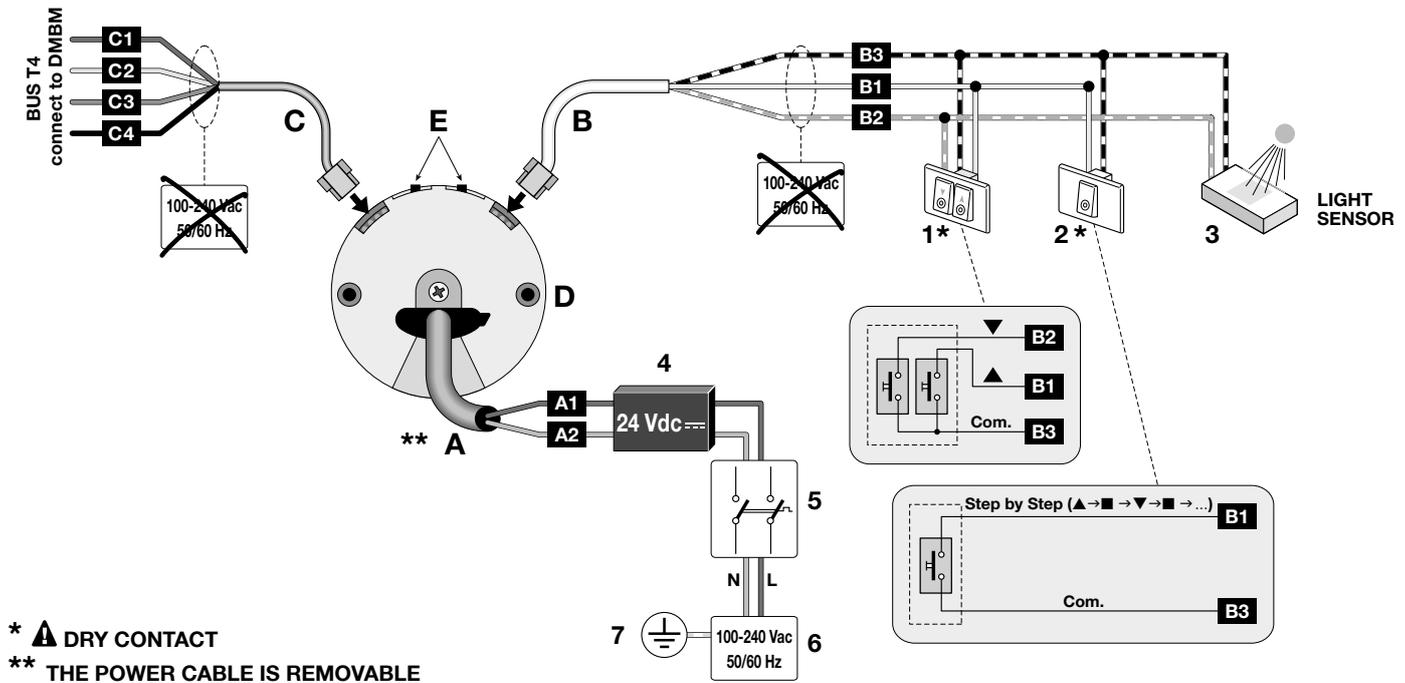
Wire	Colour	Connection	
B1	White	Voltage free contact for the Up command	OFF 
B2	White-orange	Voltage free contact for the Down command / TTBus	
B3	White-black	Common	

### CABLE "C" for connecting the SMART-BUS (fig. 3)

Wire	Colour	Connection	
C1	Red	24 V	OFF 
C2	Yellow	d+	
C3	Blue	d-	
C4	Black	Gnd	

**CAUTION! – DO NOT connect any wire belonging to cables "A", "B" and "C" to the power supply.**

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\* **▲ DRY CONTACT**  
 \*\* **THE POWER CABLE IS REMOVABLE**

LEGEND			
<b>A</b>	Power cable	<b>D</b>	Electronic motor head
	<b>A1 = Red wire</b>	<b>E</b>	Limit switch adjustment buttons
	<b>Black wire</b>	<b>1</b>	Double button
<b>B</b>	Command cable	<b>2</b>	Single button ("Open" or "Step-by-Step" command)
	<b>B1 = White wire</b>	<b>3</b>	Climate sensor (wired)
	<b>B2 = White-orange wire</b>	<b>4</b>	24 V power supply
	<b>B3 = White-black wire</b>	<b>5</b>	Motor mains power disconnector.
<b>C</b>	Smart-Bus cable	<b>6</b>	Connection to the mains
	<b>C1 = Red wire</b>	<b>7</b>	Earth connection
	<b>C2 = Yellow wire</b>		
	<b>C3 = Blue wire</b>		
	<b>C4 = Black wire</b>		

### 3.1 - Connecting the motor to the mains power supply

The motor must be powered using a 24 V power supply, connected to the mains. Use **cable "A"** (wires A1 and A2 – see **Fig. 3**) for this connection, making sure to observe the warnings in full.

#### WARNINGS

- Choose a 24 V power supply (see the motor rating plate) from the "Nice Screen" product catalogue (the catalogue is also available online at [www.niceforyou.com](http://www.niceforyou.com)).
- The power supply must be chosen considering the number of motors that may need to be connected in parallel and the power delivered by each of these (see the motor labels).

### 3.2 - Connecting accessories and sensors

**Only cabled accessories and climate sensors can be connected to the motor.** For such connections use **cable "B"**, referring to **fig. 3** and the following instructions.

- You can connect only one compatible accessory at a time to the **white** and **white-black** cables.
- You can connect only one compatible accessory at a time to the **white-orange** and **white-black** cables.
- Up to 5 tubular motors can be connected to one accessory, respecting the polarity of the signals (connect the **white-black** cables of all motors together as well as the **white-orange** cables of all motors).

#### 3.2.1 - Connecting push button panels

You can connect either 1 or 2 button panels.

**Caution!** - The maximum length of the cables used to connect a wall-mounted panel or a relay is 100 m.

- **Model with 1 button** excites an input: the command is either Open or Step-by-step; the command is memorised with procedure A.7. The panel must be connected to the **white** and **white-black** wires.
- **Model with 2 buttons** excites two inputs: one for the Up command, and one for the Down command; it is also possible to program the operating logic using procedure A.5. The **Open** and **Close** inputs are constrained to reach other, in other words they must be used with the same pushbutton panel (**fig. 3**).

### 3.3 - Connecting the motor to the DMBM module

To connect the motor to the DMBM module, use **cable "C"** and refer to **fig. 3**.

## 4 PROGRAMMING AND ADJUSTMENTS

### 4.1 - Groups of programming and adjustment procedures

There are 4 groups of programming and adjustment procedures:

<b>Group A</b> – using the <u>DMBM module over the T4 BUS.</u>	Procedures only possible using the DMBM module over the Nice T4 Bus.
<b>Group B</b> – using the <u>buttons on the motor head.</u>	Manual adjustment of the limit switches, with precise, accurate results.
<b>Group C</b> – done with a <u>dedicated programmer.</u>	Programming with a programmer or other compatible accessory (for instance: TTP).
<b>Group D</b> – using a <u>smartphone.</u>	Programming with a smartphone with NFC (Near Field Communication). This technology is not yet available on this motor.

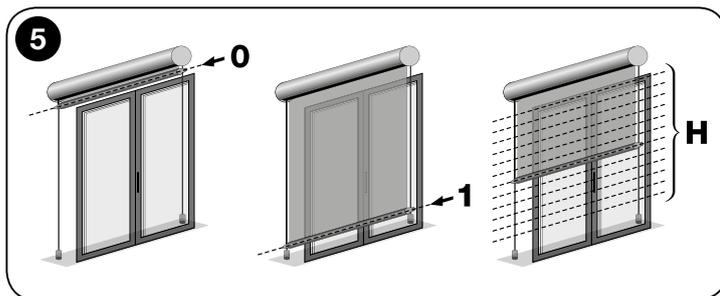
### 4.2 - Positions in which the awning stops automatically

The electronic system that controls the awning movement at all times can automatically stop the motor when the awning reaches a certain position (or "height") programmed by the installer. The positions are shown in **fig. 5** as follows:

- **position "0" = UP limit:** (awning completely retracted);
- **position "1" = DOWN limit:** (awning completely extended);
- **position "H" = INTERMEDIATE position:** (awning partially open)

### 4.3 - General warnings

- The limit switch must be adjusted after installing the motor in the awning and connecting it to the power supply.
- Comply strictly with the time limits indicated in the procedures: after releasing a key, you have 60 seconds to press the next key indicated in the procedure; otherwise, when the time is up, the motor will perform 6 movements to communicate cancellation of the procedure in progress.
- During **Group "B"** procedures, the motor performs a certain number of **brief movements**, as a "response" to the command sent by the installer. Count these movements regardless of their direction. The movements are indicated in the procedures with a number followed by the symbol  $\updownarrow$ .



## EU declaration of conformity

**Note:** This declaration corresponds to the official declaration held at the registered offices of Nice S.p.a., and in particular to the latest revision available at the time of printing of this manual. The text herein has been adapted for editorial purposes. A copy of the original declaration may be requested from Nice S.p.a. (TV) I.

Declaration number: **545/Era INN Smart-DC**

Revision: **2** Language: **EN**

**Name of manufacturer:** NICE S.p.A.

**Address:** Via Pezza Alta N°13,  
31046 Rustignè di Oderzo (TV) Italy

**Person authorised to compile the technical documentation:**  
NICE S.p.A.

**Type of product:** Tubular gearmotor for indoor vertical blinds and darkness blinds

**Model / Type:** E SMART SI 332 DC, E SMART SI 620 DC, E SMART SI 1012 DC, E SMART MI 332 DC, E SMART MI 632 DC, E SMART MI 1020 DC

**Accessories:** -

The undersigned, Roberto Griffa, in the role of Chief Executive officer, declares under his sole responsibility, that the product specified above conforms to the provisions of the following directives:

- DIRECTIVE 2014/35/EU (LVD):
  - EN 60335-1:2012+A11:2014
  - EN 60335-2-97:2006+A11:2008+A2:2010+A12:2015
  - EN 62233:2008
- DIRECTIVE 2014/30/EU (EMC):
  - EN 55014-1:2006+A1:2009+A2:2011
  - EN 55014-2:2015
  - EN 61000-3-2:2014
  - EN 61000-3-3:2013

Oderzo, 12/07/2017

Ing. **Roberto Griffa**  
(Chief Executive Officer)

## GENERAL WARNINGS RELATING TO THE PROCEDURES

- Refer to the DMBM module's own manual to perform any procedure from Group “A”. Only the “Notes and Warnings” for each procedure are given below.
- Before starting any programming, move the awning to an intermediate position, away from the Up and Down limit switches.
- When the Up and Down limit switches are not programmed, the awning can only be commanded in hold-to-run mode - i.e. you must hold the button down until the awning reaches the desired position. The movement stops when you release the button in any position.
- When the Up and Down limit switches have been programmed, the awning can be controlled by simply pressing and releasing the buttons. Doing so starts the movement, which is stopped automatically by the system when the awning reaches the programmed position.

### **A** A.1 - MANUAL programming of the UP (“0”) and DOWN (“1”) limit switches

#### NOTES AND WARNINGS

- **This procedure is obligatory only for awnings without a mechanical stop at the Up position.**
- The procedure memorises the new positions in place of the old ones (provided positions have already been programmed using [this same procedure](#)).
- After the limit positions have been programmed, the awning can be controlled by simply pressing the appropriate buttons on the control unit. The awning moves between the limit positions set with this procedures.

### **A** A.2 - SEMIAUTOMATIC programming of the UP (“0”) and DOWN (“1”) limit switches

#### NOTES AND WARNINGS

- **Use this procedure solely for awnings with mechanical Up “0” limit switch stop.**
- If limit switches have already been programmed and you wish to modify them using this procedure, bear in mind that this procedure memorises the new positions in place of the old ones (provided positions have already been programmed using [this same procedure](#)).
- After the limit positions have been programmed, the awning can be controlled by simply pressing the appropriate buttons on the control unit. The Up movement will be limited when the awning impacts against the mechanical lock (box) in the Upper limit switch “0”. With each impact, the height of this limit switch will be automatically updated by the “Automatic limit switch update” function (paragraph 5.8). Conversely, the Down movement will be limited by the Lower limit switch “1” (limit switch set by the installer at a desired point).

### **A** A.3 - Programming an INTERMEDIATE POSITION (position “H”)

#### NOTES AND WARNINGS

- This procedure memorises an intermediate position (position “H”) between the Up (“0”) and Down (“1”) limit switch positions. When the automation is being used, after giving the **intermediate position** command, the system will automatically stop the awning at the programmed “H” position.
- You can memorise up to 6 “H” positions wherever you wish, provided that these are between the two limit switch positions. These positions can only be programmed after the limit switch positions. Repeat this procedure for each position you wish to memorise.

### **A** A.4 - TOTAL or PARTIAL deletion of memory

You can use the DMBM module to delete positions, functions, values or the entire memory.

## A A.5 - Assigning a behaviour to a push button panel with 2 buttons

### NOTES AND WARNINGS

- Before starting, chose the behaviour from those listed in **Table A**: the choice must account for the mechanical operation of the buttons and the automation application.

**TABLE A – Types of behaviour for a 2 button panel (▲ and ▼)**

Type	Types of behaviour
<p><b>TYPE A – standard Nice operation for “ERA” series</b> (factory setting).</p> <p><b>Note</b> – This behaviour is best suited to panels <u>WITH</u> interlocked buttons.</p>	<ul style="list-style-type: none"> <li>• <b>To start a movement:</b> to <b>raise</b> the awning press <b>▲</b>; to <b>lower</b> it press <b>▼</b>.</li> <li>• <b>To stop the movement:</b> press <u>the opposite button</u> from that used to start the movement.</li> </ul>
<p><b>TYPE B – with Stop and immediate reverse commands.</b></p> <p><b>Note</b> – For this type of operation, use a panel <u>WITH-OUT</u> interlocked buttons.</p>	<ul style="list-style-type: none"> <li>• <b>To start a movement:</b> to <b>raise</b> the awning press <b>▲</b>; to <b>lower</b> it press <b>▼</b>.</li> <li>• <b>To stop the movement:</b> press <u>the two buttons together</u>.</li> <li>• <b>To reverse the movement:</b> press <u>the opposite button</u> from that used to start the movement.</li> </ul>
<p><b>TYPE C – with immediate reverse command.</b></p> <p><b>Note</b> – This behaviour is best suited to panels <u>WITH</u> interlocked buttons.</p>	<ul style="list-style-type: none"> <li>• <b>To start a movement:</b> to <b>raise</b> the awning press <b>▲</b>; to <b>lower</b> it press <b>▼</b>.</li> <li>• <b>To stop the movement:</b> press <u>the same button</u> used to start it.</li> <li>• <b>To reverse the movement:</b> press <u>the opposite button</u> from that used to start the movement.</li> </ul>
<p><b>TYPE D – for hold-to-run commands only.</b></p> <p><b>Note</b> – This behaviour is best suited to panels <u>WITH</u> interlocked buttons.</p>	<p>The panel works exclusively in hold-to-run mode:</p> <ul style="list-style-type: none"> <li>• <b>to start the Up movement:</b> hold down button <b>▲</b>; <b>to stop the movement:</b> release the button.</li> <li>• <b>to start the Down movement:</b> hold down button <b>▼</b>; <b>to stop the movement:</b> release the button.</li> </ul>
<p><b>TYPE E – logic the same as for “TYPE C” plus intermediate position command.</b></p> <p><b>Note</b> – For this type of operation, use a panel <u>WITH-OUT</u> interlocked buttons.</p>	<ul style="list-style-type: none"> <li>• <b>To start a movement:</b> to <b>raise</b> the awning press <b>▲</b>; to <b>lower</b> it press <b>▼</b>.</li> <li>• <b>To stop the movement:</b> press <u>the same button</u> used to start it.</li> <li>• <b>To reverse the movement:</b> press <u>the opposite button</u> from that used to start the movement.</li> <li>• <b>To move the awning to the intermediate position (*):</b> press <u>the two buttons together</u>.</li> </ul> <p>(*) – If no intermediate position has been programmed, the awning will move to the exact mid-point of its travel.</p>
<p><b>TYPE F – with Stop command in any situation.</b></p> <p><b>Note</b> – This behaviour is best suited to panels <u>WITH</u> interlocked buttons.</p>	<ul style="list-style-type: none"> <li>• <b>To start a movement:</b> to <b>raise</b> the awning press <b>▲</b>; to <b>lower</b> it press <b>▼</b>.</li> <li>• <b>To stop the movement:</b> press <u>any button</u>.</li> </ul>

## A A.6 - Adjusting the motor’s sensitivity to obstacles

### NOTES AND WARNINGS

- Use this procedure to activate, adjust or deactivate the safety system that: **a)** detects the presence of an obstacle along the travel of the awning; **b)** reduces the motor tension on the awning when it is stationary at the Upper limit switch “0” (only if there is a box or other mechanical stop at this limit switch).
- This procedure adjusts **the limit** of the traction force that the motor can exert on the awning in an attempt to release it, when it is stopped suddenly by an obstacle or friction. At the same time, if the Upper limit switch “0” is the box or other mechanical stop, the system uses the same value set with this procedure, to reduce the impact of the awning against the box and loosen the tension exerted by the motor on the canvas, when the awning is stationary at the Upper limit switch “0”.
- The following options are available:
  - **MINIMUM sensitivity** – this setting is only active when the awning is moving Up. The motor delivers a lot of force and will often be able to unjam the awning, even when the load is varying due to friction or small obstacles.
  - **ULTRA sensitivity** – this setting is active when the awning is moving Up or Down. **After programming it, you must run a full Up and Down cycle to activate the function.** During this movement, the motor maps the instantaneous load along its travel and automatically sets the maximum sensitivity available with the awning in question.
  - **ULTRA sensitivity with short reverse** – this setting works in the same way as “ULTRA sensitivity”. Furthermore, if an obstacle is detected during the Down movement, the motor will reverse to release the obstacle.
  - **ULTRA sensitivity with reverse** – this setting reverses direction and continues as far as Down limit switch “1” if an obstacle is encountered.
  - **sensitivity DISABLED** – this setting disables the safety system (factory setting).

## A A.7 - Assigning a command (“Open” or “Step-by-step”) to a single button panel

The panel must be connected to the White and White-black wires. Given that individual keys activate individual inputs, procedure A.7 must be carried out after connection in order to assign the desired command to each input, choosing between “Open” and “Step”.

## GENERAL INFORMATION ABOUT PROCEDURES “A.8”, “A.9”, “A.10”

The “Cruise speed” (procedure A.8), “Acceleration/deceleration of the movement” (procedure A.9) and “Movement duration” (procedure A.10) functions allow you to completely customise the movement of the awning, align multiple awnings of different sizes, with different diameter rollers (among other effects), or make the awning run more quietly.

- The “Movement duration (procedure A.10)” and “Cruise speed (procedure A.8)” functions are interdependent: **the last function to be set determines the awning’s actual cruise speed.**
- After setting the **movement time** (procedure A.10), the system automatically adjusts the **cruise speed** (while accounting for **the acceleration/deceleration** values) to ensure that the movement lasts exactly the set time.

If you then change the **acceleration/deceleration** settings (procedure A.9), or the **limit positions** (procedure A.1 / A.2), the movement duration **remains** unchanged and the system adjusts the **cruise speed** accordingly.

- When setting the **movement duration** (procedure A.10), if the resulting **cruise speed** is outside the allowed range (see the values given in “Technical specifications”), the motor reports the error by means of the "Configuration Tool" at the end of the procedures (A.1 / A.2 / A.9), and automatically restores the **cruise speed** to its nominal value.
- After you have set the **cruise speed with procedure A.10**, changing the **limit positions** (procedure A.1 / A.2) or **acceleration/deceleration** settings (procedure A.9) may set the **cruise speed** outside the allowed range (given in “Technical specifications”). If so, the motor will report the error by means of the "Configuration Tool" at the end of the procedures (A.1 / A.2 / A.9), and will automatically restore the nominal **cruise speed**.

### **A** A.8 - Adjusting the awning’s cruise speed

#### NOTES AND WARNINGS

- To determine whether the option chosen for the cruise speed of the awning is compatible with the characteristics of the your awning (weight, roller dimensions, torque), refer to “Technical characteristics”.
- The “nominal speed” setting is the factory setting.

### **A** A.9 - Adjusting the acceleration (at the start of the awning movement) and deceleration (towards the end of the movement)

#### NOTES AND WARNINGS

- “Acceleration/deceleration” is expressed in roller rotations. This is the number of rotations of the roller the system requires to accelerate from the start of the movement to the cruise speed. It also represents the number of rotations of the roller the system requires to decelerate from cruise speed to stopping at the limit switch.
- The “nominal acceleration/deceleration” setting is the factory setting.

### **A** A.10 - Adjusting the total duration of the movement

#### NOTES AND WARNINGS

- This adjustment can only be done if the limit switches (“0” and “1”) have already been programmed.
- The value set with this procedure, together with the “acceleration/deceleration” setting (procedure A.9) determines the cruise speed. To determine whether the resulting cruise speed is compatible with the awning (weight, roller dimensions, torque), refer to “Technical characteristics”.
- The factory setting is disabled.

### **A** A.11 - Adjusting the “sun” climate sensor threshold (sensors without on-board trimmer only)

#### NOTES AND WARNINGS

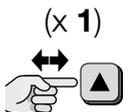
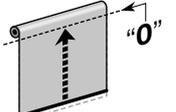
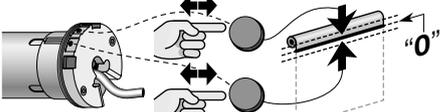
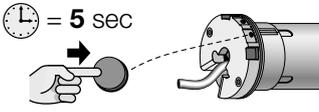
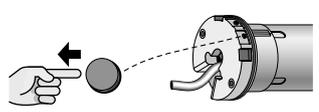
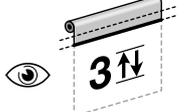
- If the sensor has an on-board trimmer, ignore this procedure and refer to the sensor’s instructions for adjusting the threshold directly on the trimmer.
- The product is factory set to a threshold of 15 Klux.

— GROUP “B” PROCEDURES —  
Procedures run with the motor head buttons

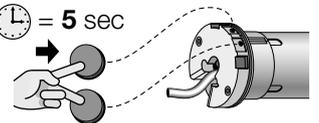
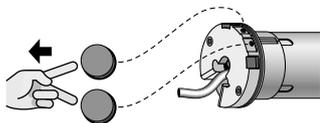
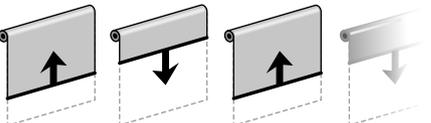
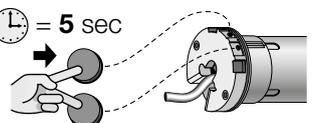
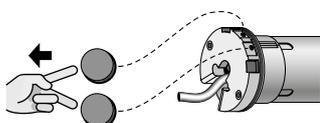
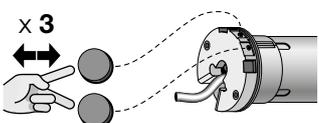
**B B.1 - Precise adjustment of the UP (“0”) and DOWN (“1”) limit switch positions**

**NOTES AND WARNINGS**

- This adjustment can be done at any time, on condition that the limit switch positions have already been programmed.
- The following procedure describes the setting of the Upper limit switch “0”. **To adjust the Lower limit switch “1”:** (in step 1) command a DOWN movement (rather than UP); (in step 2) adjust the height of limit switch “1” (instead of the height of limit switch “0”); (in step 3) as in the figure below.

<p><b>1</b></p> <p><b>Command an UP movement</b> →  (x 1)</p> <p>Press and release the key.</p>		<p><b>2</b></p> <p><b>Adjust the position of limit switch “0”.</b> → </p> <p>Wait for the movement to finish at position “0”.</p>		<p align="right">→ <b>3</b></p> <p></p> <p>Press the buttons until you reach the desired position. <b>Note</b> – Each step of the motor corresponds to a rotation of around 2°.</p>	
<p><b>3</b></p> <p> = 5 sec</p> <p>Hold down either of the two buttons;</p>		<p></p> <p>release it after <b>5 seconds</b>;</p>		<p align="right"><b>end</b></p> <p></p> <p>count 3 movements.</p>	

**B B.2 - Procedure for adding or deleting a command assignment (mapping)**

<p><b>1</b></p> <p> = 5 sec</p> <p><b>On the motor head:</b> hold down both buttons and</p>			<p></p> <p>release them after <b>5 seconds</b>;</p>			<p align="right">→ <b>2</b></p> <p> = 5 min. </p> <p>observe the <b>movements</b> for 5 minutes.</p>		
<p><b>2</b></p> <p> = 5 sec</p> <p><b>To exit:</b> hold down both buttons and</p>		<p></p> <p>release them after <b>5 seconds</b>.</p>		<p><b>3</b></p> <p><b>Note:</b> As you are completing the procedure, press and release the button <b>3 times</b> to delete the T4 BUS address.</p>		<p align="right"><b>end</b></p> <p> x 3</p>		

— GROUP “C” PROCEDURES —  
only available using a specific programmer (e.g.: TTP)

**C NOTES AND WARNINGS**

- To run the procedures in this group, you must use a compatible programmer (see the “Nice Screen” catalogue, also available on [www.niceforyou.com](http://www.niceforyou.com)).
- For the programming and adjustment procedures possible with a given programmer, see the programmer’s user manual and interface.

**D** NOTES AND WARNINGS

The programming with the “NFC” technology is not yet available on this motor. For more information contact the Nice Technical Assistance.

Using a smartphone equipped with NFC technology and a software application produced by Nice (to be installed on your smartphone), you can configure the motors before installing them, even without the need to supply power. You can also perform a hardware and software diagnostic of the motor, even if it is damaged.

**5** WARNINGS FOR NORMAL OPERATION OF THE AUTOMATION

**5.1 - Opening, closing and stopping the awning**

In general, the awning is operated by pressing the button corresponding to the desired movement: ▲ = open; ▼ = close; ■ = stop. In particular, if using a button panel, refer to the programming done by the installer with procedures A.5 and A.7.

**5.2 - Partially opening/closing the awning (height “H”)**

If the first intermediate awning position has been programmed (using procedure A.3), before you can command it from a wall-mounted push button panel, you need to set the functioning of the panel to **option “E”** during procedure A.5. If additional intermediate awning positions have been programmed, these can only be commanded using the DMBM module over the T4 BUS.

**5.3 - Enabling (or disabling) by the user of automatic commands sent by cabled climate sensors**

Commanding the motor using the DMBM module over the T4 BUS, you can enable or disable the motor’s reception of automatic commands from any climate sensors in the system (sent by T4 bus or TTBUS cable). Users can choose whether to **enable** (with the ☀ key) or **disable** (with the ☀ key) reception of automatic commands transmitted by climate sensors to the motor. In brief,

- if reception is enabled (button ☀) the motor will operate **automatically**;
- if reception is disabled (with button ☀) the motor will operate **manually**.

When reception is enabled, the user can send manual commands at any time: these override the automatic operation of the automated device. When reception is disabled, the automated device operates exclusively with the manual commands sent by the user.

— DEFINITIONS —

- **“Over-threshold” intensity of sun/wind** = a condition in which the atmospheric phenomenon stands at values that are above the value set as threshold.
- **“Under-threshold” Intensity of sun/wind** = a condition in which the atmospheric phenomenon stands at values ranging from zero to half of the value set as threshold.

TABLE B		climate condition...	
		over-threshold	under-threshold
With the motor in “AUTOMATIC” mode (enabled with button ☀) ...	... if the user sends the command “Sun-On” (with button ☀):	<ul style="list-style-type: none"> <li>• the awning makes 2 movements and remains in the above-threshold position.</li> <li>• the system restarts the timer.</li> </ul>	<ul style="list-style-type: none"> <li>• the awning makes 2 movements and remains in the under-threshold position.</li> <li>• the system restarts the timer.</li> </ul>
	... if the user sends the command “Sun-Off” (button ☀):	<ul style="list-style-type: none"> <li>• the awning makes 2 movements.</li> </ul>	<ul style="list-style-type: none"> <li>• the awning makes 2 movements.</li> </ul>
With the motor in “MANUAL” mode (enabled with button ☀) ...	... if the user sends the command “Sun-On” (with button ☀):	<ul style="list-style-type: none"> <li>• the awning moves to the above-threshold position.</li> <li>• the system restarts the timer.</li> </ul>	<ul style="list-style-type: none"> <li>• the awning moves to the under-threshold position.</li> <li>• the system restarts the timer.</li> </ul>
	... if the user sends the command “Sun-Off” (button ☀):	<ul style="list-style-type: none"> <li>• the awning makes 2 movements.</li> </ul>	<ul style="list-style-type: none"> <li>• the awning makes 2 movements.</li> </ul>

**5.3.1 - Behaviour of the motor in the presence of “Sun” sensor**

- When the intensity of the sunlight reaches the over-threshold, after 2 minutes from the beginning of this condition the motor autonomously performs a down movement.
- When the intensity of the sunlight reaches the under-threshold, after 15 minutes from the beginning of this condition the motor autonomously performs an up movement.

**Note** – Momentary drops in solar intensity, lasting less than 15 minutes, are not detected. The manual commands of the user always remain active and are added to those generated automatically by the system.

**5.4 - “Obstacle detection” function**

This function is a safety feature which trips automatically when the movement of the awning, up or down, is blocked by an obstacles (physical object, person). The motor immediately stops the movement in progress and performs a brief inversion of the motion (if programmed to do so, see procedure A.6).

**5.5 - Reoptimising the limit switch positions**

It is normal for limit switch positions to move by a few mm or cm over the days following installation. This may be due to the awning’s or frame’s material settling or bedding in; this often causes the awning to droop or go out of alignment with nearby awnings. In such cases, if the head of the motor is accessible, you can very easily re-optimize either or both of the limit switch positions with procedure B.1.

**5.6 - “Automatic limit switch update” function**

**Caution!** – This function is only available if the limit switches have been programmed with the Semiautomatic procedure (par. A.2). This function cannot be disabled.

In ordinary use, the function activates automatically during an Up movement, when the awning collides with the box or other mechanical stop (Up limit switch “0”). On each collision, the function measures the position of the Up limit switch and memorises the new value in place of the previous one. Over time, this compensates for deformations in the structure due to wear and thermal cycles, so that the awning always stops precisely at the Up limit position.

## 5.7 - Maximum continuous cycle (“thermal protection” function)

The motor is designed for residential use, in other words, for intermittent service. If used continuously for a long time, beyond its rating (see “Technical characteristics”), the system protects the motor against overheating by stopping any further movements until its temperature returns to within the rated limits.

## 5.8 - Diagnostics and alarm function

On the head of the motor there is a Led that signals the alarm status (with a **red light**) and the installation status (with a **green light**). If it needs to report both at once, the system always gives priority to alarms. For the meanings of the light signals, see **Table C**.

TABLE C – Motor head led signals	
GREEN LED	Meaning
0 flashes	= assigned address and 2 limit positions programmed.
1 flashes	= assigned address and 1 limit position programmed.
2 flashes	= assigned address and no limit positions programmed.
3 flashes	= network address not yet assigned (the limit switch status is not shown by the led).
RED LED	Meaning
0 flashes	= no error.
steady on	= serious error - 1 (motor damaged - contact technical service).
1 flash	= thermal protection function in progress.
2 flashes	= the last movement was automatically interrupted by The “Obstacle detection” function.
3 flashes	= load too high relative to motor nameplate rating.
4 flashes	= the voltage supplied to the motor is less than 24 V. The motor will still work, however the rated operating torque is not guaranteed.
5 flashes	= the voltage supplied to the motor is less than 24 V. The motor will still work, however the rated operating torque is not guaranteed.
6 flashes	= serious error - 4 (control circuit temperature too high).
7 flashes	= serious error - 5 (brake malfunction).
8 flashes	= serious error - 6 (brake malfunction).
9 flashes	= serious error - 7.
10 flashes	= serious error - 8.
11 flashes	= serious error - 9.

## 5.9 - Diagnostic and alarm function for the DMBM module over the T4 BUS

Refer to the instruction manual for the DMBM module, used over the T4 BUS.

## What to do if... (troubleshooting guide)

In general, to better identify the problem, refer to **Table B** (and **D**), section 5.8.

- ❑ **Powering an electrical phase, the motor does not move:**  
After excluding the possibility that thermal protection is active, in which case it is sufficient to wait for the motor to cool down, make sure the mains voltage corresponds to the values indicated in the “technical data” chapter of this manual by measuring the voltage between the “common” wire and the electrical phase wire supplied with current. If the problem is still present, disconnect the power cord from the motor (**fig. 4-i**) and connect it again.
- ❑ **When an Up command is sent, the motor does not start:**  
This can happen if the awning is near the Upper limit switch (“0”). In this case you must lower the awning a little bit and give the Raise command again.
- ❑ **The system operates in the emergency condition with an operator present (hold-to-run):**
  - Check to see if the motor has undergone a significant electrical or mechanical shock.
  - Make sure each part of the motor is still in good condition.
  - Delete the UP (“0”) and DOWN (“1”) limit position and reprogram them.

## Disposal of the product

As in installation, also at the end of product lifetime, the disassembly and scrapping operations must be performed by qualified personnel.

This product comprises various types of materials: some may be recycled others must be disposed of. Seek information on the recycling and disposal systems envisaged by the local regulations in your area for this product category. **Caution!** – some parts of the product may contain pollutant or hazardous substances which, if disposed of into the environment, may cause serious damage to the environment or physical health. As indicated by the symbol on the left, disposal of this product in domestic waste is strictly prohibited. Separate the waste into categories for disposal, according to the methods envisaged by current legislation in your area, or return the product to the retailer when purchasing a new version. **Caution!** – Local legislation may envisage serious fines in the event of abusive disposal of this product.



The packing materials of the product must be disposed of in compliance with local regulations.

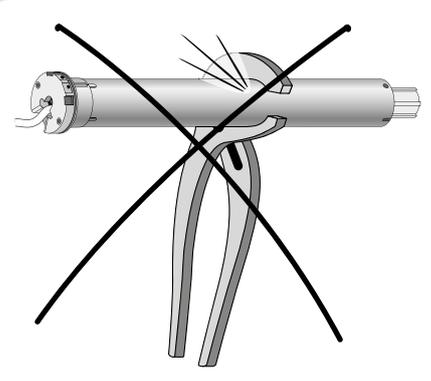
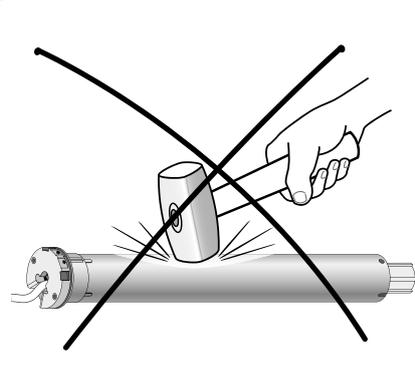
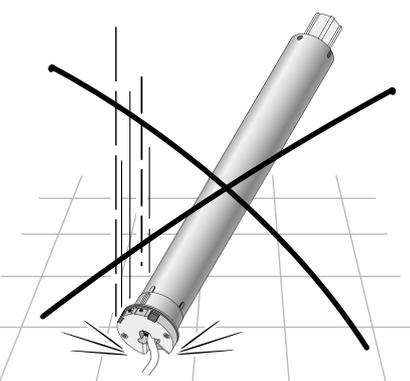
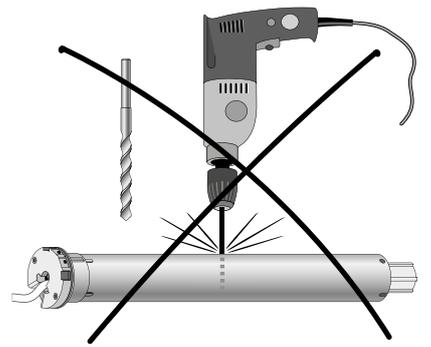
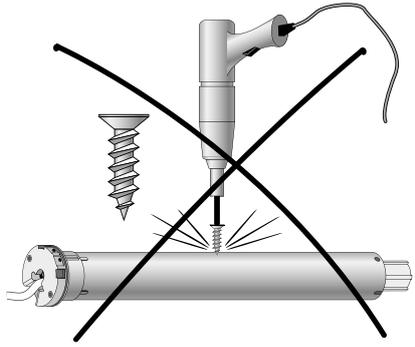
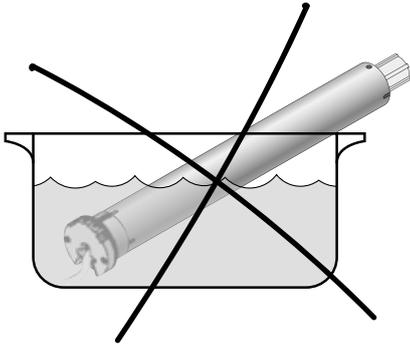
## Technical Characteristics

Refer to the technical characteristics stated on the motor's nameplate.

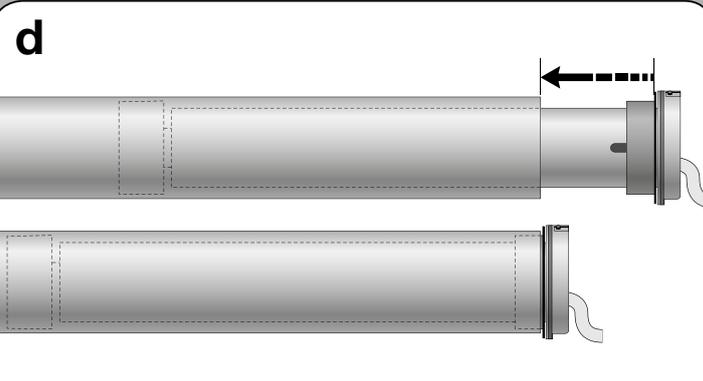
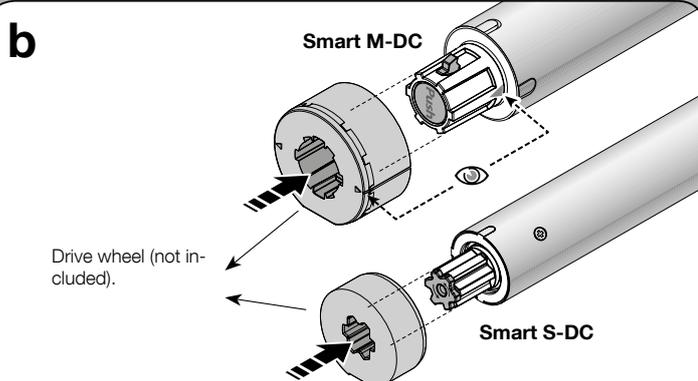
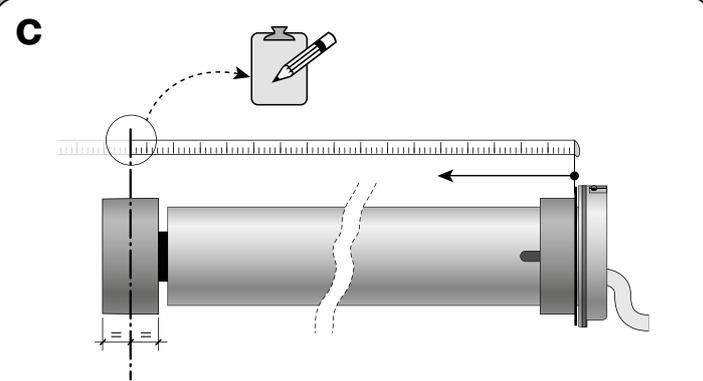
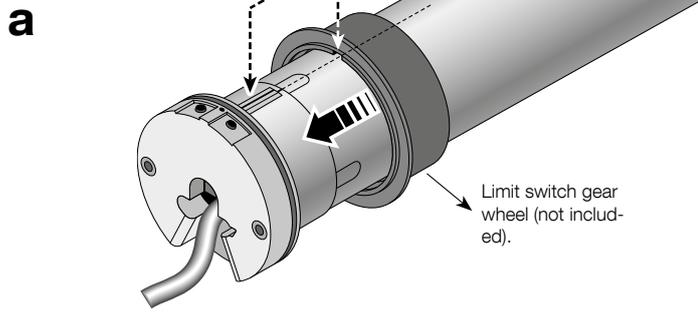
**Note:** • All technical specifications stated herein refer to an ambient temperature of 20° C (± 5° C). • Nice S.p.A. reserves the right to apply modifications to products at any time when deemed necessary, maintaining the same intended use and functionality.

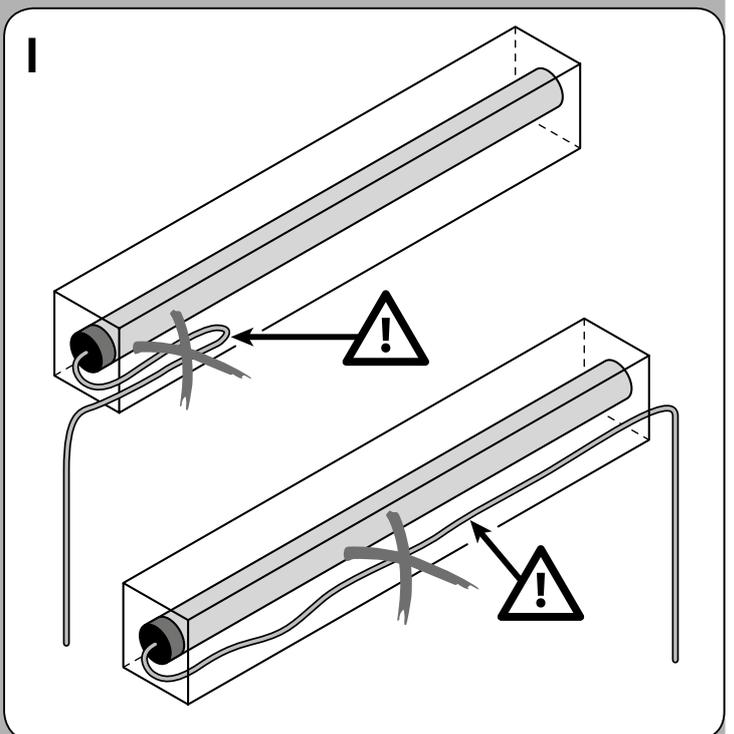
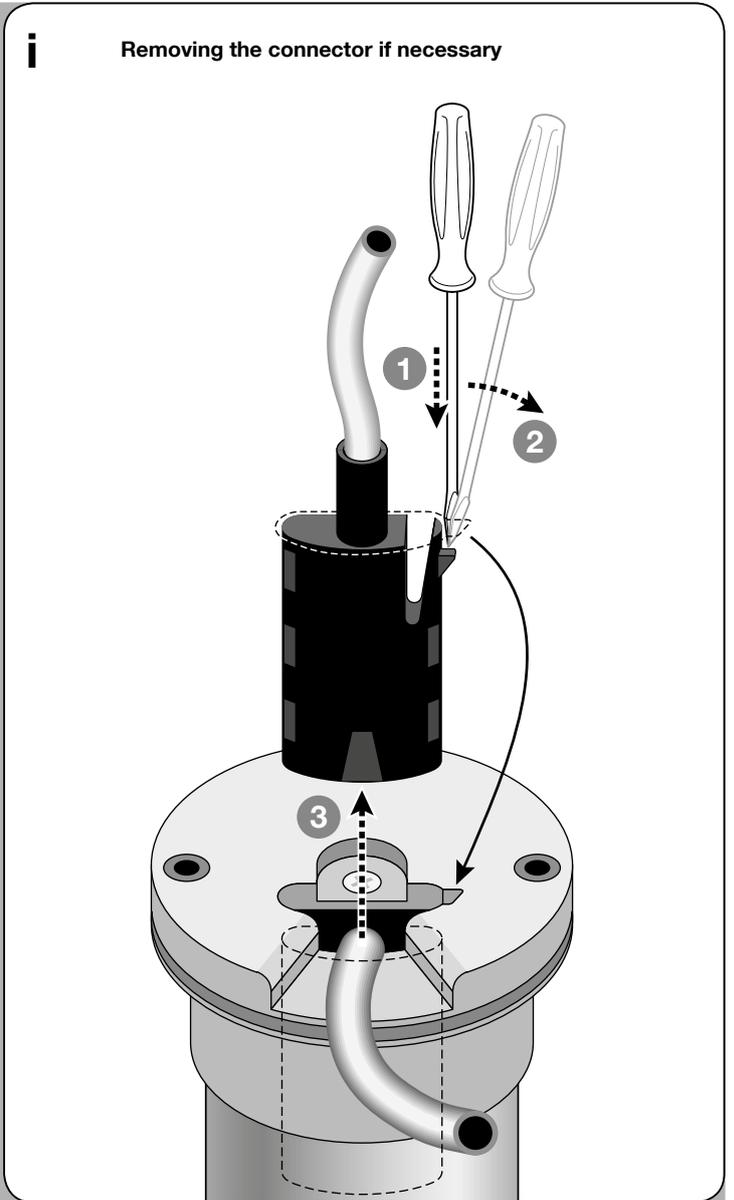
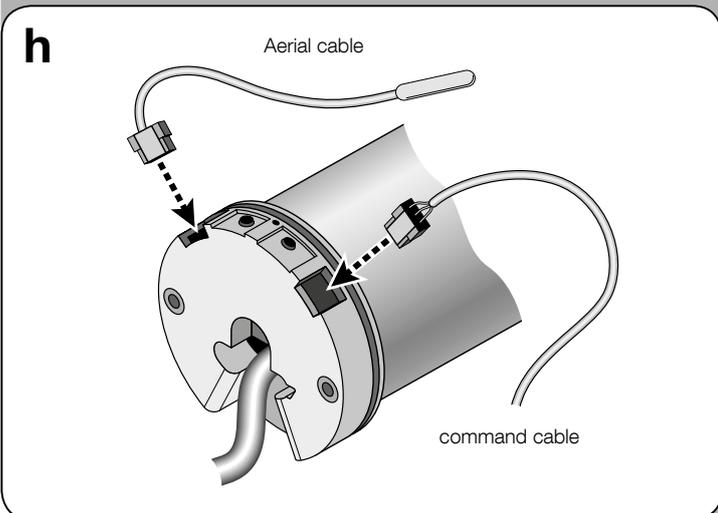
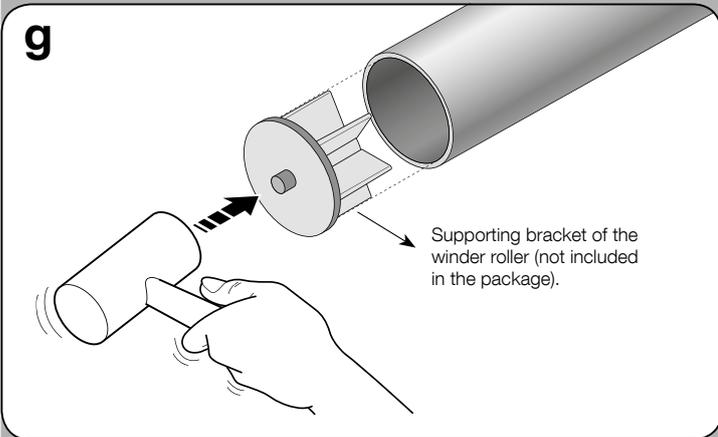
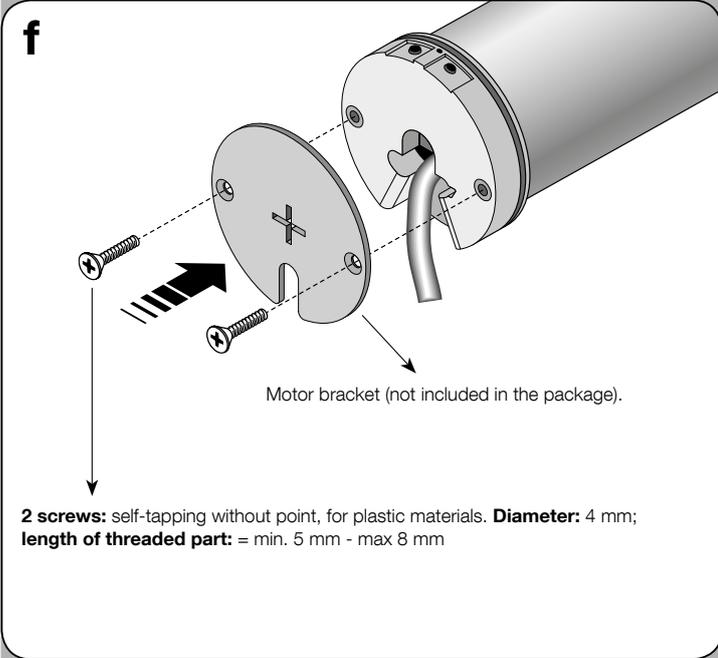
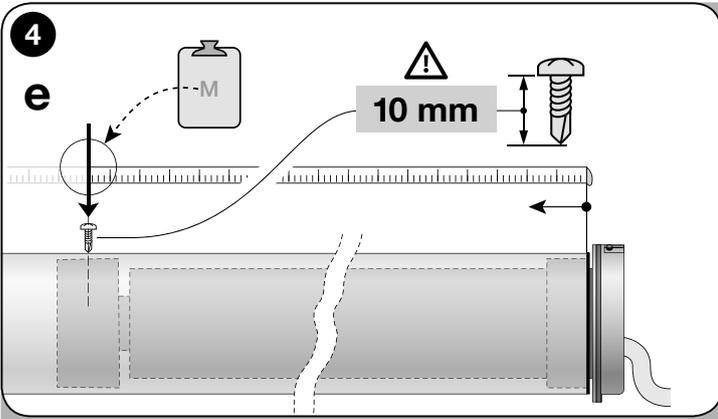
# Appendix

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4





**CAUTION!** - The smaller cables must be handled carefully because they contain very thin wires that could be damaged.



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