

Nice

SN6011



For garage doors

EN - Instructions and warnings for installation and use

Nice

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GENERAL WARNINGS: SAFETY - INSTALLATION - USE (instructions translated from Italian)

WARNING Important safety instructions. Observe all the instructions as improper installation may cause serious damage
WARNING Important safety instructions. It is important to comply with these instructions to ensure personal safety. Store these instructions

- Before commencing the installation, check the "Product technical specifications", in particular whether this product is suitable for automating your guided part. Should it be unsuitable, DO NOT proceed with the installation
- The product cannot be used before it has been commissioned as specified in the "Testing and commissioning" chapter

WARNING According to the most recent European legislation, the implementation of an automation system must comply with the harmonised standards set forth in the Machinery Directive in force, which allow for declaring the presumed conformity of the automation. On account of this, all operations regarding connection to the mains electricity, as well as product testing, commissioning and maintenance, must be performed exclusively by a qualified and skilled technician!

- Before proceeding with the product's installation, check that all materials are in good working order and are suitable for the intended applications
- The product is not intended for use by persons (including children) with reduced physical, sensory or mental capacities, nor by anyone lacking sufficient experience or familiarity with the product
- Children must not play with the appliance
- Do not allow children to play with the control devices of the product. Keep the remote controls out of reach of children

WARNING 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 mains power supply, with a contact opening distance that ensures complete disconnection under the conditions envisaged by Overvoltage Category III
- During the installation, handle the product with care by preventing crushing, impacts, falls and contact with fluids of any type; do not install the product close to sources of heat, nor expose it to open flames. Failure to observe the above can damage the product and increase the risk of danger or malfunctions. If this should happen, stop installation immediately and contact the 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 does not cover material defects
- 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 intervening on the system (maintenance, cleaning), always disconnect the product from the mains power supply and any back-up batteries
- Check the system periodically, in particular all cables, springs and supports to detect possible imbalances, signs of wear or damage. Do not use the product if repairs or adjustments are necessary, since an installation failure or an incorrectly balanced door may cause injury
- The packaging materials of the product must be disposed of in compliance with local regulations
- The product must not be installed outdoors
- Keep an eye on moving doors and do not let anyone go near them until they have opened or closed fully
- Be careful when activating the manual release (manual manoeuvre) device, as an open door may fall suddenly due to weak or broken springs, or if it is unbalanced
- Every month, check that the drive motor reverses when the door encounters a 50 mm-high object placed on the ground. If necessary, readjust the door and check it again, as incorrect adjustment is potentially dangerous (for drive motors incorporating a trapping safety system that intervenes when the door's lower edge encounters an obstacle)
- If the power cable is damaged, it must be replaced by the manufacturer or by an appointed servicing company or similarly qualified person in order to prevent any form of risk.
- Transport the product using the relevant hand trolley and the handles on the package to ensure that the operations are conducted safely.

INSTALLATION PRECAUTIONS

- Prior to installing the drive motor, check that the door is in good working order, correctly balanced and that it opens and closes properly
- Prior to installing the motor, remove all unnecessary cables or chains and deactivate any equipment – such as locking devices – not necessary for motor-driven operation
- Check that there are no points where trapping or crushing against fixed parts can occur when the moving section is in the fully open or closed position; adequately protect any such parts
- Install the manoeuvring assembly for manual release (manual manoeuvre) at a height below 1.8 m
NOTE: if removable, the manoeuvring assembly must be kept close to the door
- Make sure that the controls are kept at a safe distance from moving parts, while allowing a good view of these.
The manoeuvring assembly of a switch kept manually closed must be located in a position that is visible from the guided part but far from moving parts. It must be installed at a minimum height of 1.5 m
- Permanently attach the trapping hazard warning labels in a highly visible location or near the fixed control devices (if present)
- Permanently attach the manual release (manual manoeuvre) label close to the manoeuvring assembly
- After installation, make sure that the motor prevents or stops door opening when the latter is loaded with a 20-kg weight secured to the centre of its bottom edge (for drive motors that can be used with doors having opening widths exceeding 50 mm)
- After installation, make sure that the mechanism is properly adjusted and that the motor reverses when the door collides with a 50 mm-tall object placed on the ground (for drive motors incorporating a trapping safety system that intervenes when the bottom edge of the door encounters an obstacle);
Following installation, check and ensure that no door parts obstruct public roadways or pavements.

1 PRODUCT DESCRIPTION AND INTENDED USE

SPIN is a range of gearmotors designed for automating sectional doors and – in combination with accessory SPA5 (supplied separately) – protruding or non-protruding spring or counterweight overhead doors.

SPIN operates using electric power. In the event of a power failure, the gearmotor can be released in order to move the door manually.

⚠ WARNING! – Any use other than that specified herein or in environmental conditions other than those stated in this manual is to be considered improper and is strictly forbidden!

Table 1 - Description of the SPIN components

Model	Gearmotor	Guide	Radio receiver	Radio transmitter
SPIN10KCER10	SN6011	3 x 1 m	Incorporated	FLO2R-S*
SPIN11KCER10	SN6011	3 m	Incorporated	FLO2R-S*

* See Paragraph 7.4 for the types of transmitters that can be used.

2 APPLICATION LIMITS

The data relative to the performances of SPIN range products appear in Chapter 13 ("Technical specifications") and are the only values that allow for determining whether the products are suitable for the intended application.

The structural characteristics of the SPIN products make them suitable for use on sectional and overhead doors within the limits shown in Tables 2, 3 and 4.

Table 2 - SPIN gearmotor operating limits

Model	Sectional doors		Non-protruding overhead doors (with accessory SPA5)		Protruding overhead doors (with accessory SPA5) or spring overhead doors (without SPA5)	
	width	height	width	height	width	height
SPIN10KCER10	3.7 m	2.4 m	3.5 m	2.2 m	3.5 m	2.8 m
SPIN11KCER10	3.7 m	2.4 m	3.5 m	2.2 m	3.5 m	2.8 m

⚠ Warning! Any other use or use with dimensions greater than those specified is considered non-conforming. Nice declines all liability for damage and injury resulting from non-conforming use.

The measurements shown in Table 2 are purely indicative and are used for a general estimate only. The actual suitability of SPIN for automating a specific door depends on the degree of door leaf balancing, guide friction and other aspects, including occasional circumstances such as wind pressure or the presence of ice, which could obstruct the door's movement.

To determine the actual conditions, the force required to move the leaf throughout its path must be measured, to ensure that this value does not exceed the "rated torque" specified in Chapter 13 ("Technical specifications"); moreover, to calculate the number of cycles/hour and consecutive cycles, it is important to consider the data shown in Tables 3 and 4.

Table 3 - Limits relating to the door leaf height

Leaf height (metres)	Maximum no. of cycles/hour	Maximum no. of consecutive cycles
Up to 2	16	8
2 – 2.5	12	6
2.5 – 3	10	5
3 – 3.5	8	4

Table 4 - Limits relating to the force required to move the door leaf

Force required to move the leaf (N)	SN6011 cycle reduction percentage
Up to 200	100 %
200 – 300	70 %
300 – 400	25 %

The height of the door allows for calculating the maximum number of cycles per hour and consecutive cycles, while the force required to move the door allows for determining the cycle reduction percentage; for example, for a leaf that is 2.2 m high 12 cycles/hour and 6 consecutive cycles can be completed, but if a force of 250 N is required, these figures would have to be reduced to 70%, that is, 8 cycles/hour and roughly 4 consecutive cycles.

To avoid overheating, the control unit has a limiter that operates on the basis of the motor's effort and duration of the cycles, and intervenes when the maximum limit is exceeded.

Note: 1 kg = 9.81 N (example: 500 N = 51 kg)

3 INSTALLATION

3.1 - Gearmotor installation

⚠ Important! Before installing the gearmotor, check Chapter 2, the contents of the package to verify the materials and the overall dimensions of the gearmotor (Figs. 1 and 2).

⚠ Warning! The door must be able to move with ease. Limit to be observed (in accordance with EN 12604):

- private use = 150 N maximum
- industrial/commercial use = 260 N maximum

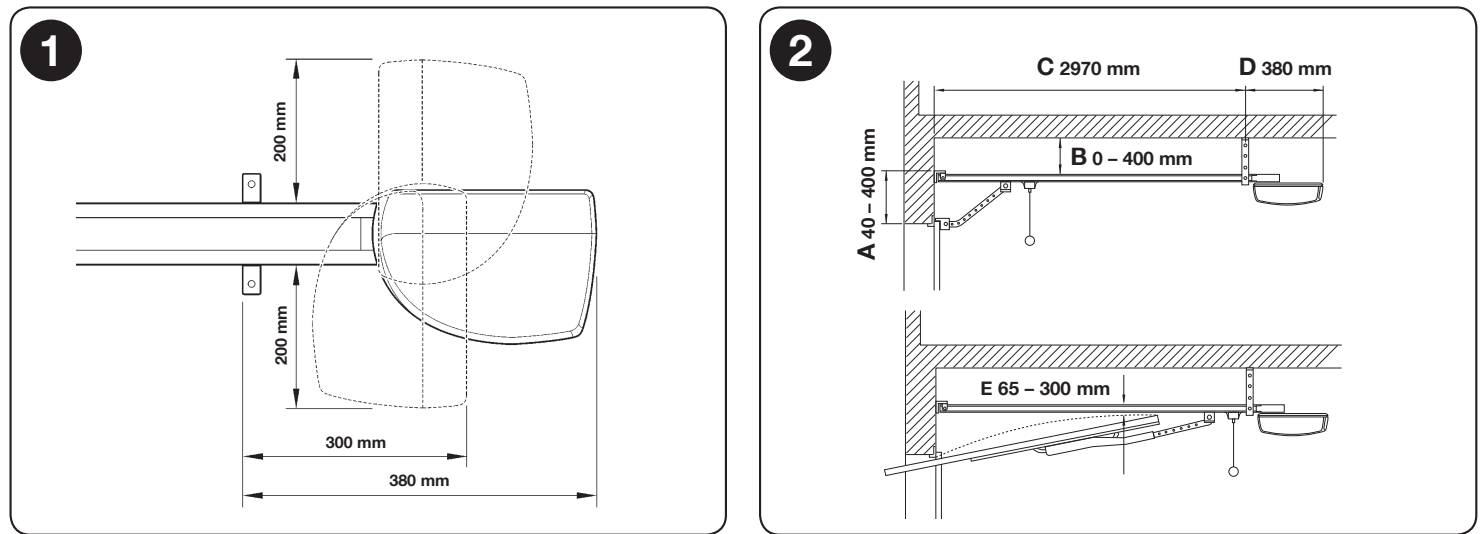
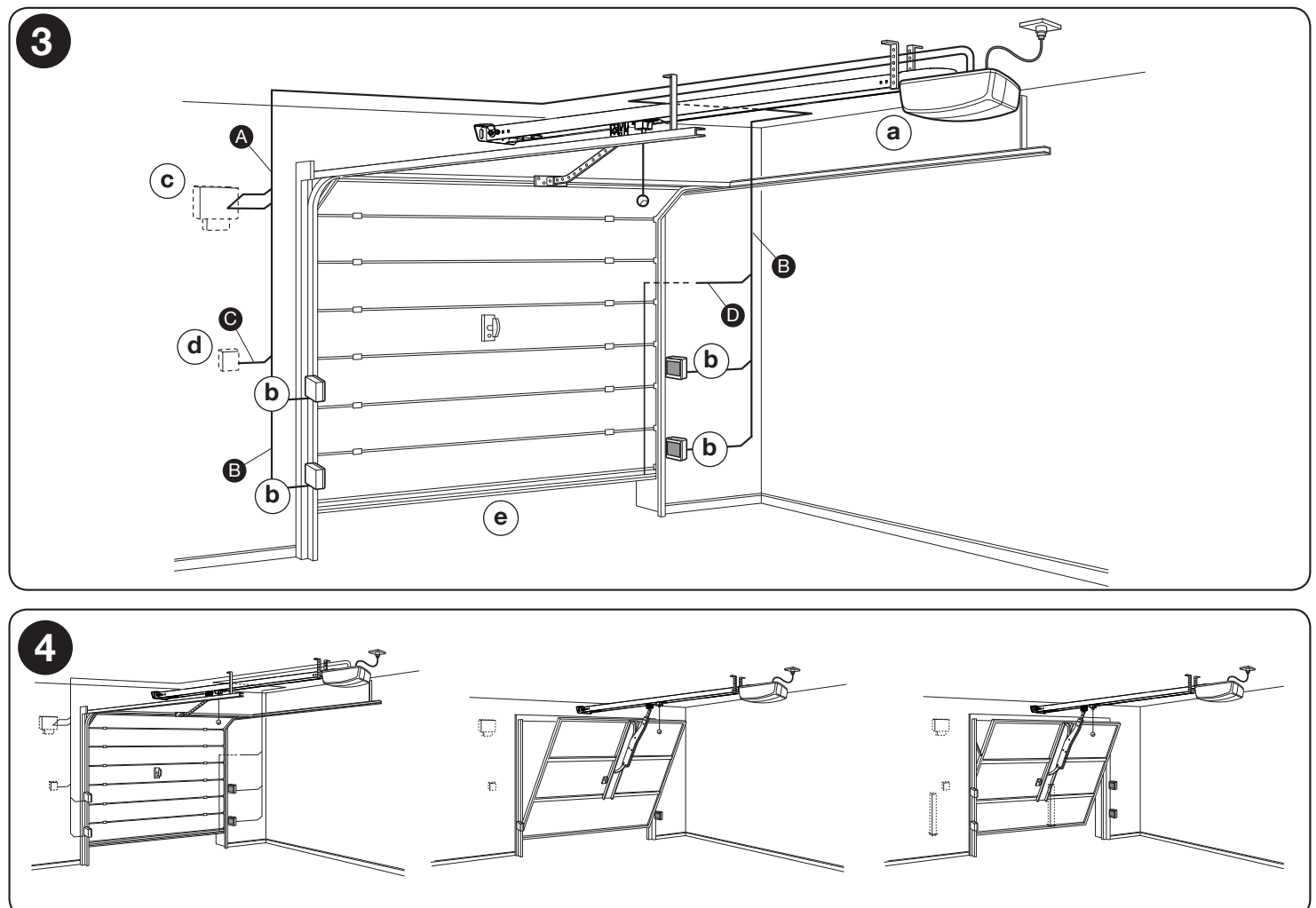


Fig. 3 shows the location of the various components of a typical installation and the electrical connections:

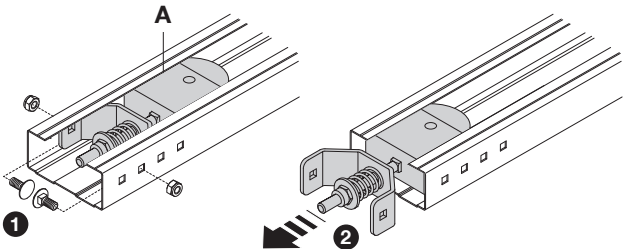
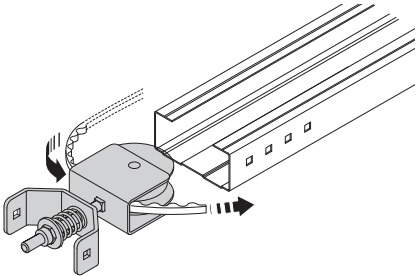
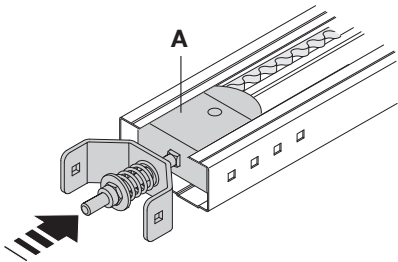
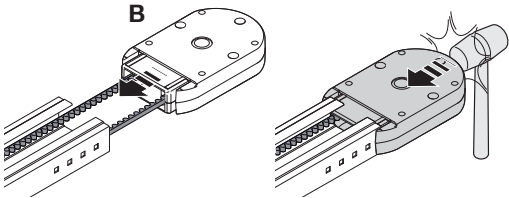
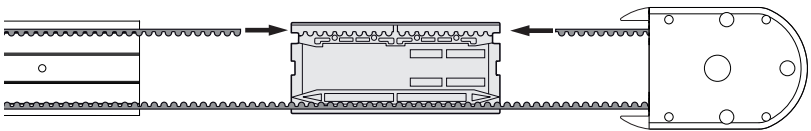
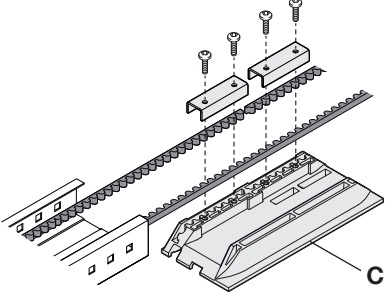
- a - gearmotor with incorporated control unit
- b - photocells
- c - flashing light with incorporated antenna
- d - key-operated selector
- e - primary sensitive edge

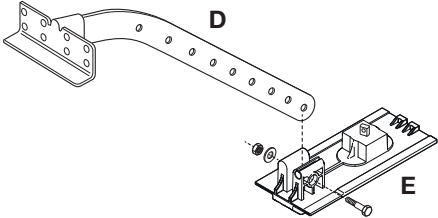
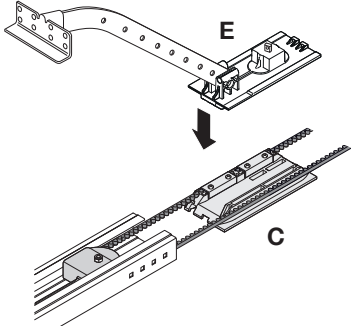
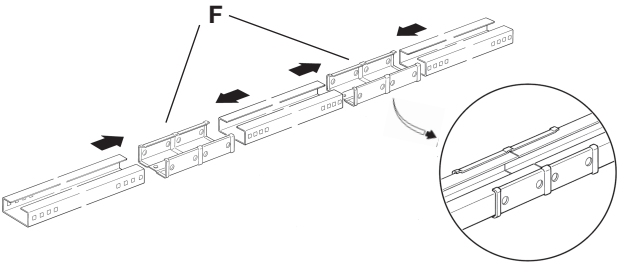
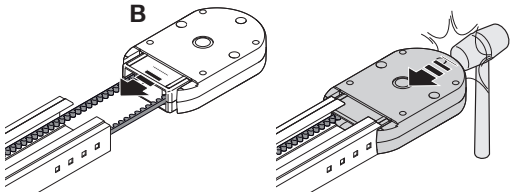
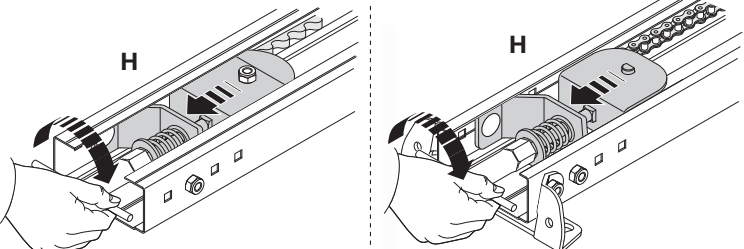
Fig. 4 illustrates typical installations for a protruding and non-protruding overhead door. **⚠ For installations on overhead doors, the SPA5 accessory is required.**



Before proceeding with the installation, check the overall dimensions of the gearmotor (**Fig. 1**). If the door to be automated is an overhead type, check the distance E in **Fig. 2**, that is, the minimum distance between the upper side of the guide and the maximum point reached by the upper edge of the door. In case of incompatibility, SPIN cannot be installed.

3.2 - Assembling the guide provided

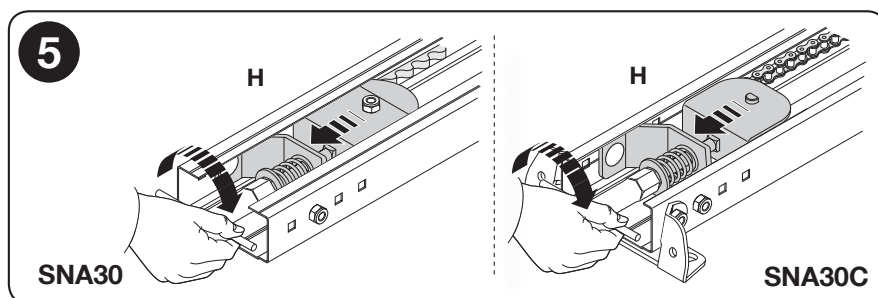
01.	Remove the belt tensioner device A	
02.	Insert one end of the belt into the pulley	
03.	Reinsert the belt tensioner device A into the guide	
04.	Pass the same end of the belt through the head B Note: Make sure that the belt is correctly positioned: it must be with its teeth facing inwards, straight and without twists.	
05.	Direct the lower section of the motor carriage so as to match the grooves with the two ends of the belt	
06.	1 - Position both ends of the belt into all of the shaped slots of the lower motor carriage C , occupying them all 2 - Fasten the ends of the belt with the 2 screws (V4.2x9.5) and 2 washers (R05)	

07.	<p>Fasten the belt guide D to the upper motor carriage E using the screw (V6x18) and relative washer (M6)</p> 
08.	<p>Attach the upper motor carriage E to the lower carriage C and transfer the entire carriage into the guide</p> 
09.	<p>Assemble the three pieces of the guide by attaching them vigorously onto the connection brackets F, with the aid of a hammer</p> <p>⚠ The guides must slide into the brackets until they click into position</p> 
10.	<p>Carefully position the belt into the guide, making sure that it does not twist</p>
11.	<p>Slot the head B vigorously into the free end of the guide</p> 
12.	<p>Lastly, tension the belt by adjusting screw H of the belt tensioning device</p> <p>⚠ An excessively TAUT belt could cause the gearmotor to break, while an excessively SLACK belt could cause unpleasant noises.</p> 

3.3 - Assembling the SNA30 and SNA30C guide

The SNA30 (belt) and SNA30C (chain) guide is already pre-assembled: the only operation required involves tensioning the belt/chain through the nut **H** (M8) (Fig. 5), until it is sufficiently taut.

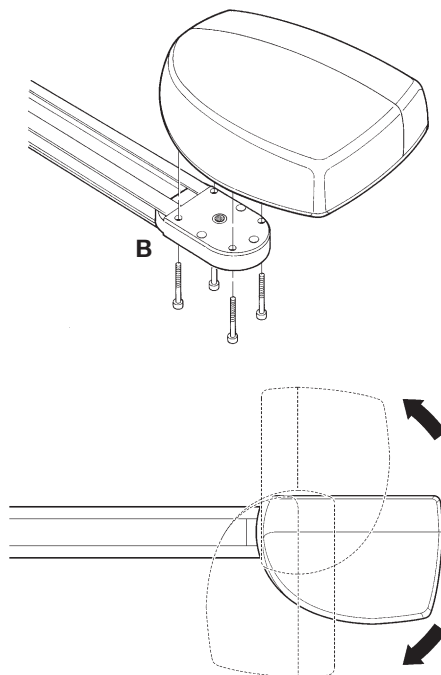
⚠ An excessively TAUT belt could cause the gearmotor to break, while an excessively SLACK belt could cause unpleasant noises.



3.4 - Fastening the gearmotor to the guide

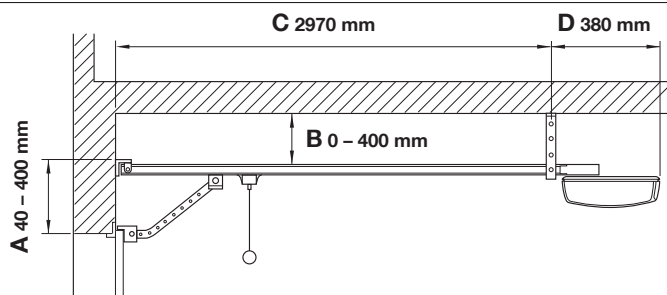
- 01.** Join the SPIN gearmotor to the end of the guide **B** and secure it with the 4 screws (V6.3x38)

⚠ The motor can be rotated in three different positions

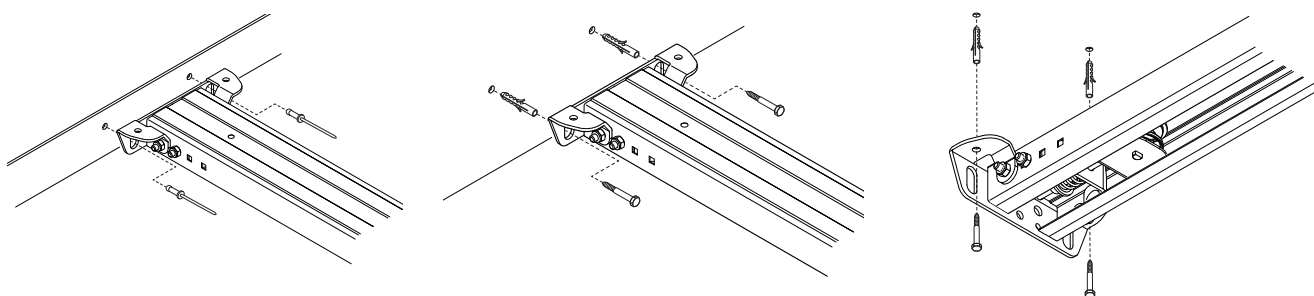


3.5 - Fastening the gearmotor to the ceiling

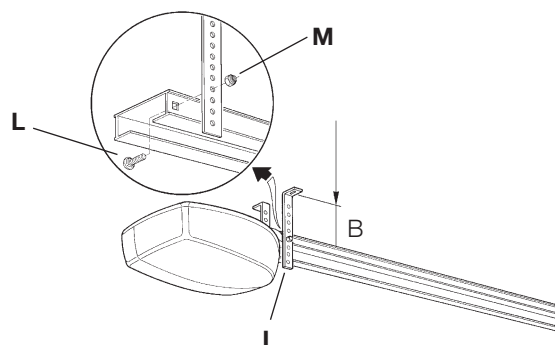
- 01.** On the basis of distances **A** and **B**, mark along the centre of the door the two fixing points of the front guide bracket. Depending on the type of material, the front bracket can be fastened with rivets, plugs or screws
If distances **A** and **B** are sufficient, the bracket can be fastened directly to the ceiling

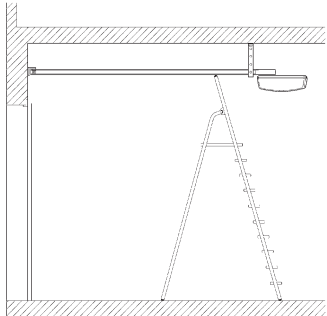
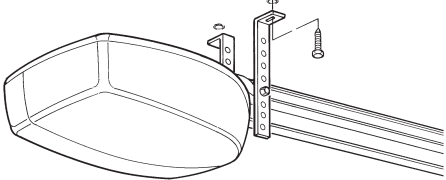
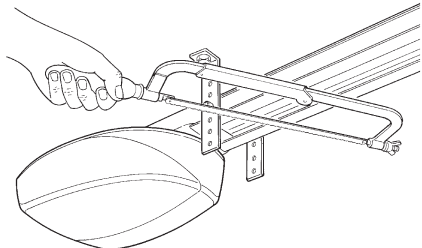
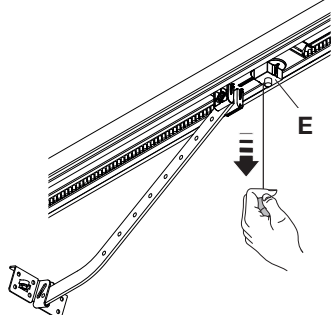
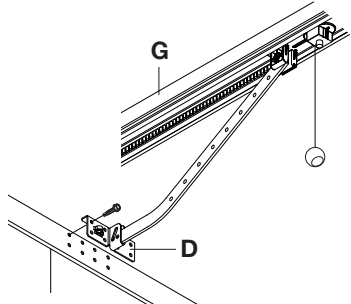
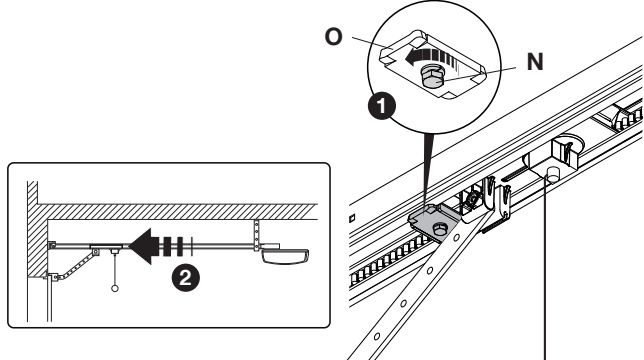


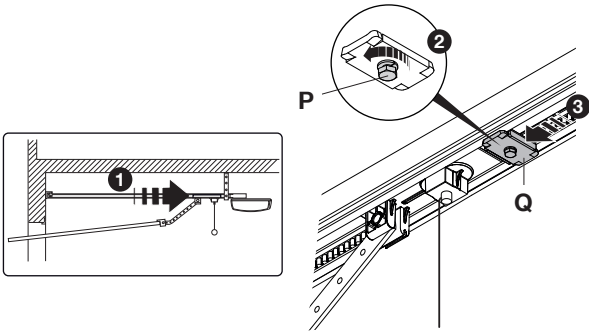
- 02.** After drilling the holes in the marked points, while leaving the gearmotor on the ground, lift the guide from the front part and secure it with two screws, plugs or rivets, depending on the installation surface.



- 03.** Secure the brackets **I** with the screws **L** (M6x15) and nuts **M** (M6), selecting the hole most suited to ensuring distance **B**



04.	<p>Using a ladder, lift the gearmotor until the brackets touch the ceiling.</p> <p>Mark the drilling points and then put the gearmotor back on the ground</p>	
05.	<p>Drill the surface on the marked points then, using a ladder, lift the gearmotor until the brackets lie against the drilled holes and secure it with screws and plugs suited to the material</p>	
06.	<p>Ensure that the guide lies perfectly horizontal, then cut off the excess section of the brackets with a saw</p>	
07.	<p>With the door closed, pull the cord to release the carriage E</p>	
08.	<p>Slide the motor carriage until the leaf connecting bracket D on the upper edge of the door lies exactly perpendicular to the guide G.</p> <p>Fasten the leaf connecting bracket D with rivets or screws. Use screws or rivets suited to the door material, and ensure that they are able to withstand the maximum force required to open and close the door.</p>	
09.	<p>Loosen the screws of the two mechanical stops, then move the front mechanical stop O in front of the motor.</p> <p>Push the carriage vigorously in the closing direction and, when it reaches the desired position, tighten the screw N firmly</p>	

- 10.** Manually open the door to the desired position.
Shift the rear mechanical stop **Q**, then place it alongside the motor carriage and lock it by vigorously tightening screw **P**.
- 
- 11.** Try to move the door manually. Check that the motor carriage slides smoothly without any friction on the guide and that manual manoeuvre does not require excessive force.

To install the specified accessories, refer to the respective instruction manuals.

4 ELECTRICAL CONNECTIONS

⚠ WARNING! – All electrical connections must be made with the system disconnected from the power supply. Incorrect connections can cause damage to the equipment and injury to people.

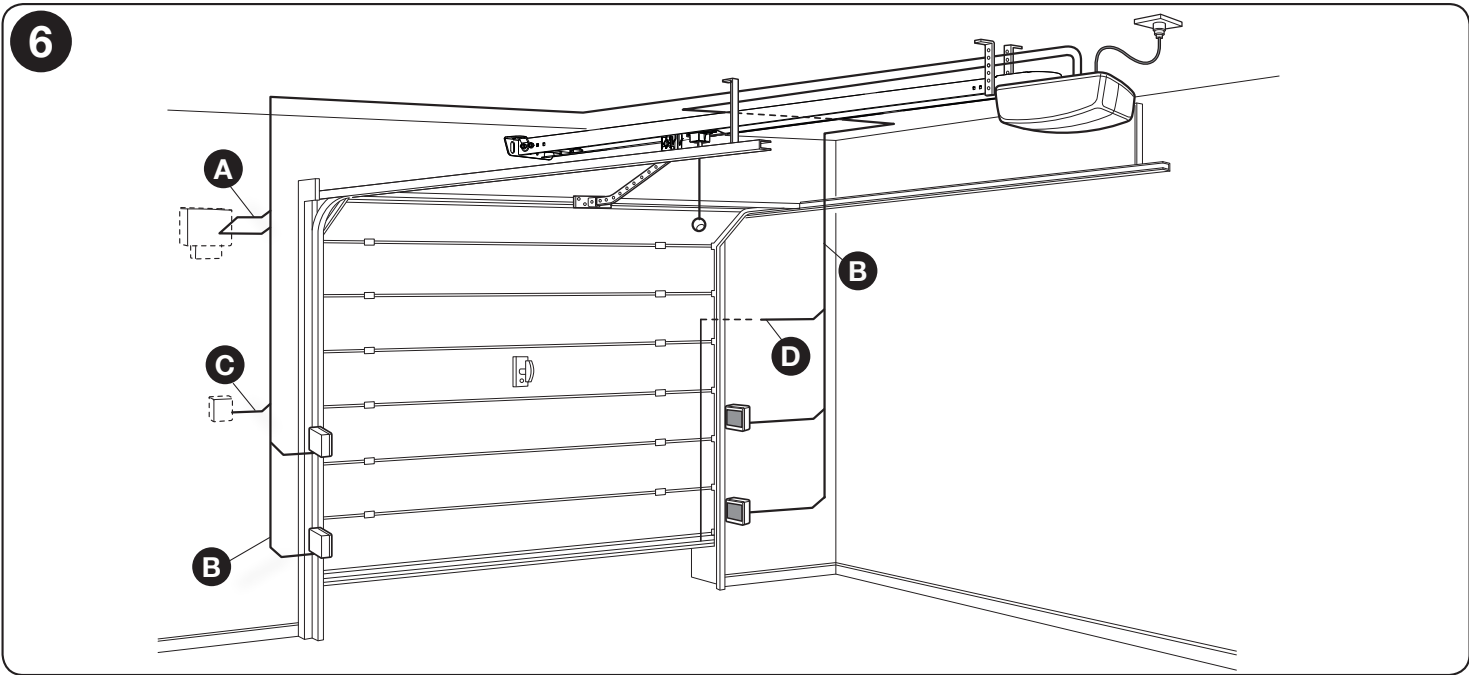
⚠ WARNING! – The cables used must be suited to the type of installation; for example a type-H03VV-F cable is recommended for indoor environments, and a type-H07RN-F cable for outdoor environments.

Fig. 7 shows the electrical connections in a typical installation; the adjacent diagram (step 02.) shows the connections to be made on the control unit.


4.1 - Types of electrical cables

Table 5 - Types of electrical cables (see Fig. 6)			
	Connection	Type of cable	Maximum length
A	FLASHING LIGHT WITH ANTENNA	1 cable: 2 x 0.5 mm ² 1 type-RG58 shielded cable	20 m 20 m (recommended < 5 m)
B	PHOTOCELLS	1 cable: 2 x 0.25 mm ² (TX) 1 cable: 2 x 0.25 mm ² (RX)	30 m 30 m
C	KEY SELECTOR	2 cables: 2 x 0.5 mm ² *	50 m
D	PRIMARY SENSITIVE EDGES	1 cable: 2 x 0.5 mm ² **	30 m

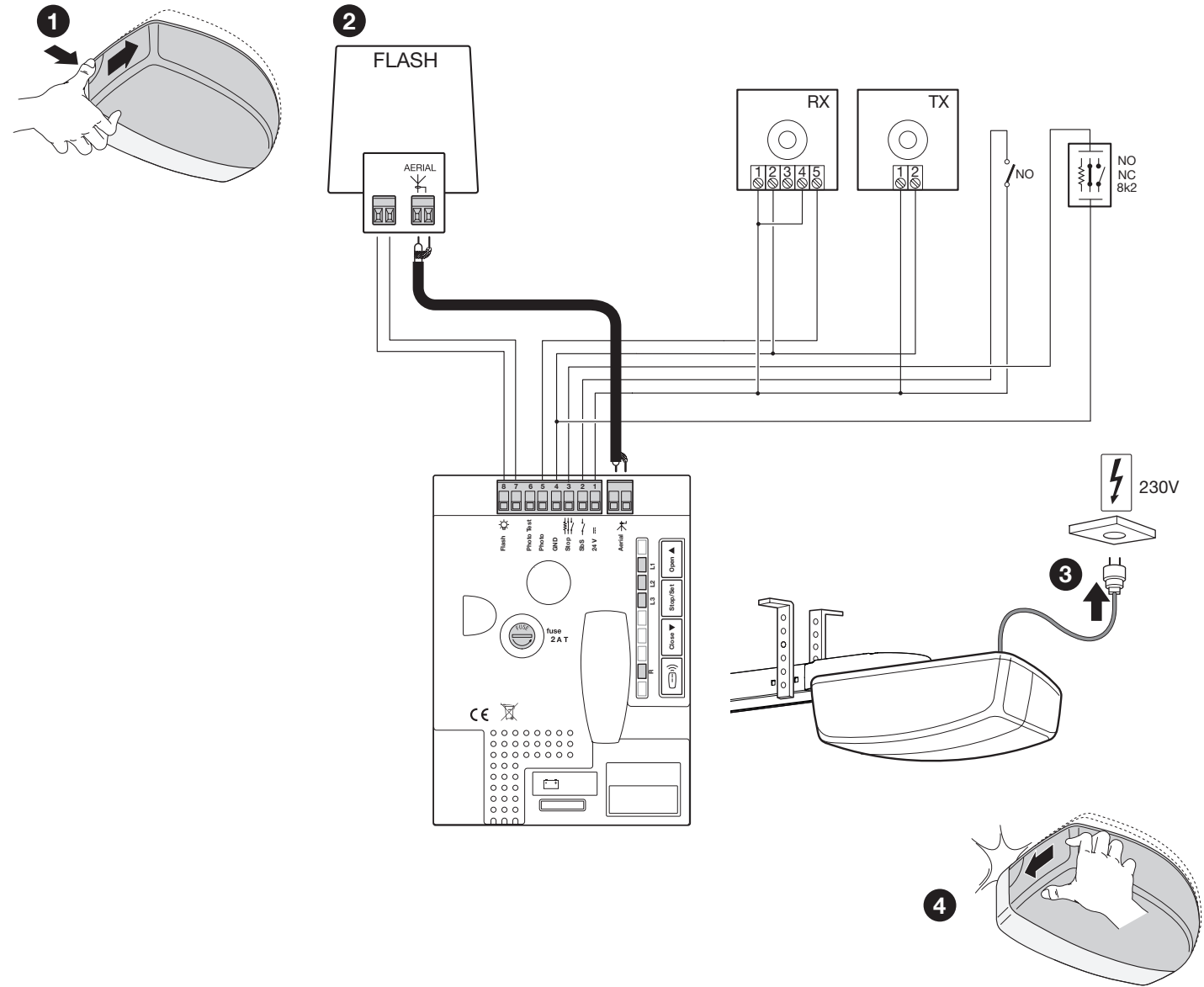
* The two 2 x 0.5 mm² cables can be replaced by a single 4 x 0.5 mm² cable.
** Special devices, which enable connection even when the leaf is moving, must be used to connect movable edges to sliding leaves.



4.2 - Electrical cable connections

Table 6 - Description of the electrical connections (see diagram below)		
Terminals	Function	Description
	ANTENNA	- connection input for the radio receiver antenna. The antenna is incorporated in the warning light; alternatively, an external antenna can be used, or a section of wire already present on the terminal, which functions as an antenna, can be left
1 - 2	SbS	- input for devices that control the movement; it is possible to connect Normally Open (NO) devices to this input
3 - 4	STOP	- input for devices that block or even stop the current manoeuvre; Normally Closed (NC) contacts, Normally Open (NO) contacts or 8.2 kΩ fixed resistor devices can be connected by making special arrangements on the input. For further information on the STOP function, see Paragraph 8.1 - STOP input
1 - 5	PHOTO	- input for safety devices such as photocells. They intervene during the closing phase, by reversing the manoeuvre. Normally Closed (NC) contacts can be connected. For further information on the PHOTO function, see Paragraph 8.1 - Photocells
4 - 6	PHOTOTEST	- whenever a manoeuvre is begun, the relative safety devices are all checked and the manoeuvre only starts if the test has a positive outcome. This can only be accomplished using a special type of connections: the "TX" photocells are powered separately with respect to the "RX" receivers. For further information on the connection, see Paragraph 8.1 - Photocells
7 - 8	FLASH	- on this output it is possible to connect a Nice warning light (for the relevant models see Chapter 13 - Technical specifications). During the manoeuvre the light flashes at intervals of 0.5 seconds on and 0.5 seconds off.

- 1 - over the cover
- 2 - connect the electrical cables of the motor and accessories (depending on the control unit model)
- 3 - connect the power cable
- 4 - after completing the programming sequences, close the cover



5 STARTING THE AUTOMATION AND CHECKING THE CONNECTIONS

5.1 - Connecting the automation to the mains electricity

To connect SPIN to the main electricity, simply insert the plug into a power outlet; if necessary, use a common adapter if the plug version is not compatible the available socket.

⚠ Never cut or remove the cable supplied with SPIN. If it is not already available, the power socket for connecting SPIN must be made by qualified and experienced personnel in strict observance of current legislation, standards and regulations. The power supply line must be protected against short-circuits and ground leakage; a device must be provided to enable disconnection of the power supply during the installation and maintenance of SPIN (the plug with outlet are suitable for this purpose).

01.	<p>Proceed as described below:</p> <ul style="list-style-type: none"> • Make sure that the green “OK” LED flashes regularly, with one flash per second. • Check that the motor does not control the movement of the door and that the flashing light and courtesy light are off.
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⚠ If the above conditions are not satisfied, immediately switch off the power supply to the control unit and carefully check the electrical connections. Additional useful information on troubleshooting can be found in Chapters 9 and 10.

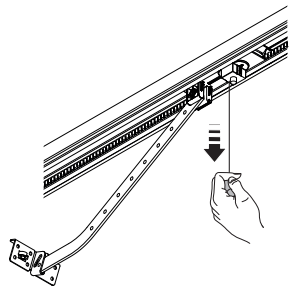
6 TESTING AND COMMISSIONING

These are the most important phases in the automation's arrangement to ensure maximum system safety.

They must be carried out by a qualified and expert technician who must define the necessary tests to verify the solutions adopted to counter any risks present, and check compliance with the laws, regulations and standards: in particular, with all the requirements of the EN 13241-1, EN 12445 and EN 12453 standards.

6.1 - Testing


Before running the testing procedure, it is first necessary to have completed the “device acquisition” procedure (see Paragraph 7.2). The testing procedure can also be performed as a periodic check of the automation devices. Each component of the system (sensitive edges, photocells, emergency stop, etc.) requires a specific testing phase; for these devices, observe the procedures given in the respective instruction manuals. Run the SPIN test as follows:

01.	Check that all provisions stated in the “General warnings” chapter have been strictly observed.
02.	<p>Release the door by pulling the release cord and verify whether it can be moved manually in both the opening and closing directions with a force no greater than 225 N.</p> 
03.	Put the motor carriage back.
04.	Using the key-operated selector or the transmitter or the control unit buttons, test the opening and closing of the garage door and make sure that it moves in the intended direction.
05.	Perform the test several times to verify that the door moves smoothly, that there are no points of excessive friction and that there are no defects in the assembly or adjustment.
06.	Check the proper operation of all the safety devices, one by one (photocells, safety edges, etc.). In particular, whenever a device is activated, the green OK LED on the control unit emits 2 faster flashes to confirm that the control unit has recognised the event.
07.	<p>Check the operation of the photocells and any interference with other devices:</p> <ol style="list-style-type: none"> 1 - insert a cylinder with 5 cm diameter and 30 cm length across the line of sight, first near the TX then near the RX 2 - check that the photocells intervene in any case, switching from the active status to the alarm status and vice-versa 3 - check that their intervention determines the intended response of the control unit: for example, that it causes the movement to invert during the closing manoeuvre.

08.	<p>If the dangerous situations caused by the movement of the door have been safeguarded by limiting the force impact, the user must measure the impact force according to the EN 12445 standard.</p> <p>If the adjustment of the 'Speed' and control of the 'Motor Force' are used to assist the system for the reduction of the impact force, try to find the adjustment that gives the best results.</p>
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6.2 - Commissioning

Commissioning can only take place once all the testing phases have terminated successfully (Paragraph 6.1).
Partial or makeshift commissioning is forbidden.

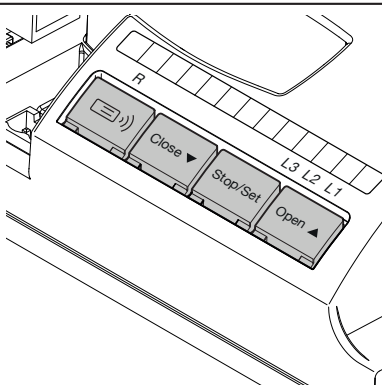

01.	Draw up and store (for at least 10 years) the automation's technical file, which must include at least the following: the assembly drawing of the automation, a wiring diagram, risk analysis and relative solutions adopted, the manufacturer's declaration of conformity for all the devices used (for SPIN use the enclosed EC Declaration of Conformity), and a copy of the automation's instructions for use and maintenance schedule.
02.	Permanently attach the manual release (manual manoeuvre) label close to the manoeuvring assembly
03.	<p>Permanently attach a label or sign on the door containing the adjacent picture (min height 60 mm):</p> 
04.	Affix a label to the door containing at least the following data: type of automation, name and address of manufacturer (person responsible for commissioning), serial number, year of manufacture and the CE mark.
05.	Draw up the declaration of conformity of the automation and hand it to the owner of the automation.
06.	Deliver the user manual (pull-out insert) to the owner of the automation.
07.	Draw up the maintenance schedule and hand it to the owner of the automation.
08.	<p>The force adjustment is an important safety factor and must be done with the utmost care by qualified technicians</p> <p>Important! - Adjustments set to force loads higher than those allowed may cause injury to persons and animals or damage to things. Adjust the force to the minimum available value to allow rapid and reliable detection of any obstacles.</p>
09.	Before commissioning the door, inform the owner properly and in writing about the attendant residual risks.

7 PROGRAMMING

7.1 - Programming keys

A number of programmable functions are available on the SPIN control unit; they can be adjusted using 4 keys on the control unit and are displayed with 4 LEDs: L1, L2, L3, R.

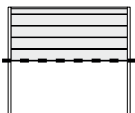



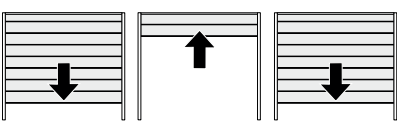







The default settings should satisfy most requirements, but can be modified at any time using the appropriate programming procedure; see Paragraph 7.6.

Buttons	Function	
Open ▲	The “ OPEN ” key enables the user to open the door or scroll up through the programming steps.	
Stop / Set	The “ STOP ” button can be used to stop the manoeuvre; if pressed for more than 3 seconds, it allows for entering the programming mode, as described below.	
Close ▼	The “ CLOSE ” key enables the user to close the door or scroll down through the programming steps.	
Radio 	The “ RADIO ” key allows for memorising and deleting the transmitters to be used with SPIN.	

7.2 - QUICK SET-UP

The “Quick set-up” function allows for speeding up the motor’s commissioning. It only works with an empty memory.

This procedure allows for detecting and memorising the STOP input configuration, the presence or absence of the connection in “Phototest” mode of the PHOTO input, the opening and closing positions and the transmitter (if present) memorised in Mode 2 with the Step-by-Step control.

Table 7 - Quick set-up procedure		
01.	Make sure that the carriage is attached to the door and is partially open	
02.	Power the control unit through the mains and wait 10 seconds	
03.	Press and release ▲	
04.	Device recognition phase: LEDs L2 and L3 flash rapidly for the entire duration of the recognition phase and the door performs the opening, closing and closing manoeuvres	<div>L2 and L3 </div> 
05.	LED L4(R) flashes once every second: press and release after 5 seconds the key of the transmitter to be memorised	<div>L4(R)  ... </div>
	<p>If the memorisation procedure was successful, LED L4(R) on the control unit will flash 3 times.</p> <p>Repeat the procedure for each transmitter to be memorised.</p> <p>The memorisation phase terminates if nothing is memorised for 10 seconds.</p>	<div>L4(R)    </div>

7.3 - Acquisition of the opening and closing positions

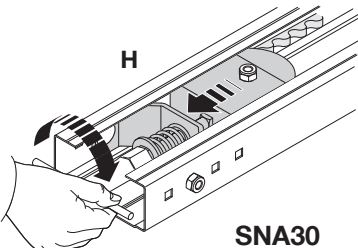
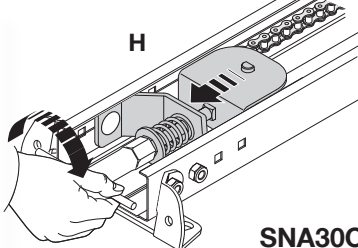
The control unit must acquire the opening and closing positions of the door. In this phase, the door stroke from the closing mechanical stop to the opening mechanical stop is detected. Besides the positions, the STOP input configuration is detected and memorised in this phase, in addition to the presence or absence of the connection in “Phototest” mode of the PHOTO input.

01.	Ensure that the drive belt/chain is correctly tensioned and that the two mechanical stops are fully secured
02.	Attach the motor carriage
03.	Simultaneously press and hold the Close ▼ and Set keys
04.	When the manoeuvre starts (after roughly 3 seconds), release the keys

05.	Wait for the control unit to complete the acquisition phase: closing, opening and closing again of the door
06.	Press and release the Open key to perform a complete opening manoeuvre
07.	Press and release the Close key to perform a complete closing manoeuvre

• During these manoeuvres, the control unit memorises the force required to open and close the door.
 • If LEDs L2 and L3 flash at the end of the acquisition process, it means that an error has occurred (see Chapters 9 and 10).
• It is important that these initial manoeuvres are not interrupted, for example by a STOP command. Should this occur, the acquisition process must be repeated from step 01.
 • The acquisition phase of the positions and of the STOP and PHOTO input configuration can be repeated at any time, even after the installation (for example, if one of the mechanical stops is shifted); simply repeat the procedure from step 01.

⚠ If, during the position acquisition procedure, the belt/chain is not sufficiently taut, the belt/chain may slip on the pinion. Should this occur, stop the acquisition using the Stop key; tension the belt/chain by screwing nut H (M8) then repeat the acquisition procedure from step 01.

7.4 - Checking the door movement

Once the opening and closing positions have been acquired, a series of manoeuvres should be carried out to check whether the door moves properly.

01.	Press and release the Open key to command an opening manoeuvre: check that this occurs smoothly and without any changes in speed. Important - The door must slow down when it lies between 30 cm and 20 cm from the mechanical opening stop, and stop against the latter. A brief closing manoeuvre is then performed to release the belt/chain tension.
02.	Press and release the Close key to close the door: check that this happens smoothly and without any changes in speed. Important - The door must slow down when it lies between 30 cm and 20 cm from the mechanical closing stop, and stop against the latter. A brief opening manoeuvre is then performed to release the belt/chain tension.
03.	During the manoeuvre, check that the flashing light (if any) flashes at a speed of 0.5 seconds on and 0.5 seconds off.
04.	Open and close the door several times to make sure that there are no defects in its assembly and adjustment or other anomalies (e.g. points with excessive friction).
05.	Check that the gearmotor, guide and mechanical stops are fastened in a solid, stable and suitably resistant manner, even during sudden door acceleration or slowdown movements.

7.5 - Integrated radio receiver

The control unit has an incorporated radio receiver for remote control, which operates at a frequency of 433.92 MHz and is compatible with the following types of transmitters (due to the fact that the type of encoding system differs, the first transmitter inserted also determines the type of those memorised subsequently – up to 100 transmitters can be memorised):

FLO, FLOR, O-CODE, SMILO

7.6 - Programming the functions

There are two groups of programming processes:

- **Programming upon start-up:** this programming mode can be carried out only after powering SPIN from the mains; while switching on the control unit, the programming mode can be activated by pressing and holding the **Set** key.

- **Standard programming:** this programming mode can be used at any time and is activated by pressing and holding the **Set** key for roughly 3 seconds.

For both modes, the programming and programmable functions available are divided into 2 levels:

Level 1 (Paragraphs 7.6.1 and 7.6.2): functions settable in ON-OFF mode (enabled or disabled); in this case, each LED **L1**, **L2** and **L3** indicates a function: if lit, the function is enabled; if off, the function is disabled. See Tables 8 and 9.

- **Level 2 (Paragraphs 7.6.3 and 7.6.4):** functions settable on a scale of values from 1 to 3; in this case each LED **L1**, **L2** and **L3** indicates a set value from the possible 3. See Tables 14 and 15.

7.6.1 - Level 1 functions (ON-OFF)

Table 8 - Functions of the programming upon start-up		
LED	Function	Description
L1	Variable sensitivity (obstacle detection)	This function allows the user to enable or disable the sensitivity with which obstacles are detected. The sensitivity default setting is variable (LED L1 off): greater sensitivity in the case of low motor force, and less sensitivity where the motor force increases. The aim is to ensure the utmost detection precision. Variable sensitivity can be disabled, and 3 "fixed" motor force levels (LED L1 lit).

L2	Phototest / Electric lock	This function allows the user to enable output 6 of the terminal board for operation with the Phototest or with the electric lock. The factory setting of output 6 is with the “phototest” function enabled (L2 LED off). Alternatively, the output can be programmed on the SPIN control unit to control an electric lock (LED L2 lit).
L3	Partial open	This function allows for selecting a long or short partial opening interval. The default setting for partial opening is long (roughly 1 m, LED L3 lit). Alternatively, partial opening can be set to short (roughly 15 cm, LED L3 off).

At the end of the procedure, LEDs L1, L2 and L3 show the status of the functions of the **Standard programming** mode (Table 9).

Table 9 - Functions of the standard programming mode		
LED	Function	Description
L1	Closing speed	This function allows for selecting the motor speed during the closing manoeuvre among 2 levels: “high” and “low”. The default setting is “high” (LED L1 lit). Alternatively, the function can be disabled to set the “low” speed (LED L1 off).
L2	Opening speed	This function allows for selecting the motor speed during the opening manoeuvre among 2 levels: “high” and “low”. The default setting is “high” (LED L2 lit). Alternatively, the function can be disabled to set the “low” speed (LED L2 off).
L3	Automatic closing	This function enables automatic closure of the door after a programmed pause; the default Pause Time is set to 30 seconds but can be modified to 15 or 60 seconds. The default setting is “semi-automatic” as Automatic closure is disabled (LED L3 off).

During normal operation of SPIN, LEDs **L1**, **L2** and **L3** are lit or off depending on the status of the associated function in the **standard programming** mode, for example LED **L3** is lit if the “Automatic closure” function is enabled.

7.6.2 - Programming the Level 1 functions (ON-OFF)




























Table 10 - Programming on start-up procedure	
01. Disconnect the mains power	
02. Hold down the Set key until step 04	
03. Restore the power supply	 
04. (While holding down the Set key) wait for the initial flash on start-up of the control unit (roughly 6 seconds) to end	  6 s
05. When LED L1 starts flashing, release Set	 L1 
06. Press and release the ▲ / ▼ keys to shift the flashing LED to the LED of the function to be modified	 
07. Press and release the Set key to change the function status (short flashing = OFF; long flashing = ON)	   
08. Wait 10 seconds to exit the programming mode following the expiry of the maximum time limit	 10 s
 Steps 06 and 07 can be repeated during the programming phase to set other functions to ON or OFF	

Table 11 - Standard programming procedure	
01. Press and hold the Set key for roughly 3 seconds	
02. When LED L1 starts flashing, release the Set key	 L1 
03. Press and release the ▲ / ▼ keys to shift the flashing LED to the LED of the function to be modified	 
04. Press and release the Set button to change the status of the function (short flashing = OFF; long flashing = ON)	   
05. Wait 10 seconds to exit the programming mode following the expiry of the maximum time limit	 10 s
 Steps 03 and 04 can be repeated during the programming phase to set other functions to ON or OFF	

7.6.3 - Level 2 functions (adjustable parameters)

Table 12 - Functions of the programming upon start-up procedure

LED	Function	Level	Value	Description
L1	Variable sensitivity	L1	High	When the variable sensitivity is enabled, it can be set to 3 different activation thresholds. The “High” variable sensitivity is most suited to small-size correctly balanced doors.
		L2	Medium	
		L3	Low	
L2	Belt/chain recovery	L1	No recovery	Adjusts the belt/chain recovery value. Once the door has closed completely, a brief opening manoeuvre is then performed which can be adjusted using this parameter.
		L2	Minimum recovery	
		L3	Maximum recovery	
L3	Closure slowdown	L1	Short	Controls how long closure slowdown takes.
		L2	Average	
		L3	Long	

Note: “ ” default function

Table 13 - Functions of the standard programming mode

LED	Function	Level	Value	Description
L1	Motor force	L1	Low	Adjusts the maximum force generated by the motor to move the door.
		L2	Medium	
		L3	High	
L2	SbS function	L1	Open - Stop - Close - Open	Adjusts the sequence of commands associated with the “Step-by-step” input or the 1st radio command (see tables 8 and 9).
		L2	Open - Stop - Close - Stop	
		L3	Condominium	
L3	Pause Time	L1	15 seconds	Adjusts the pause time, that is, the time that elapses before automatic re-closure. Is effective only if automatic closure is enabled
		L2	30 seconds	
		L3	60 seconds	


















Note: “ ” default function

All the parameters can be adjusted as required without any contraindications; only the adjustment of “motor force” could require special attention:

- Do not use high force values to compensate for points of abnormal friction on the leaf. Excessive force can compromise the operation of the safety system or damage the leaf.
- If the “motor force” control is used to assist the impact force reduction system, measure the force again after each adjustment in compliance with the EN 12445 standard.
- Wear and atmospheric conditions influence the door’s movement, so the force settings should be checked periodically.

7.6.4 - Level 2 programming (adjustable parameters)

Table 14 - Programming on start-up procedure

01. Disconnect the power supply to SPIN	
02. Hold down the Set key until step 04	
03. Restore the power supply to SPIN	 
04. (While holding down the Set key) wait for the initial flash on start-up of the control unit (roughly 6 seconds) to end	  6 s
05. When LED L1 starts flashing, release Set	 L1 
06. Press and release the ▲ / ▼ keys to shift the flashing LED to the LED of the parameter to be modified	 
07. Hold down the Set key up to step 09	
08. Wait roughly 3 seconds for the LED associated with the current level of the parameter to be modified to light up	  3 s
09. Press and release the ▲ / ▼ keys to shift the lit LED that represents the value of the parameter	  
10. Release Set	












11.	Wait 10 seconds to exit the programming mode following the expiry of the maximum time limit	 10 s
	Steps 06 and 10 can be repeated during the same programming phase to modify multiple parameters	

Table 15 - Standard programming procedure

01.	Press and hold the Set key for roughly (seconds)	
02.	When LED L1 starts flashing, release Set	
03.	Press and release the ▲ / ▼ keys to shift the flashing LED to the LED of the parameter to be modified	
04.	Hold down the Set key up to step 06	
05.	Wait roughly 3 seconds for the LED associated with the current level of the parameter to be modified to light up	
06.	Press and release the ▲ / ▼ keys to shift the lit LED that represents the value of the parameter	
07.	Release Set	
08.	Wait 10 seconds to exit the programming mode following the expiry of the maximum time limit	 10 s
	Steps 03 and 07 can be repeated during the same programming phase to modify multiple parameters	

7.7 - Transmitter memorisation

Each transmitter to be used in the system must be memorised in the control unit's radio receiver; the transmitters can be memorised in two modes: Mode 1 and Mode 2 (Paragraphs 7.7.1 and 7.7.3).

7.7.1 - Mode 1 transmitter memorisation






In this mode the function of the transmitter buttons is fixed and each button corresponds to the command in the control unit shown in Table 15; a single memorisation phase is carried out for each transmitter, during which all the transmitter buttons are memorised. During this phase it is irrelevant which button is pressed.

Note - The single-channel transmitters only have button 1, while dual-channel transmitters only have buttons 1 and 2.

Table 16 - Commands available in Mode 1

Button	Command
1	SbS
2	Partial open
3	Open
4	Close

7.7.2 - Mode 1 memorisation procedure

01.	Press and hold for at least 3 seconds the radio button  on the control unit	
02.	Release the button when the LED lights up	
03.	Within 10 seconds press and hold for at least 2 seconds the 1st key on the transmitter to be memorised	
	If the memorisation procedure was successful, LED R on the control unit will flash 3 times. Repeat the procedure for each transmitter to be memorised. The memorisation phase terminates if nothing is memorised for 10 seconds.	



7.7.3 - Mode 2 transmitter memorisation











In this mode, each transmitter button can be associated with one of the 4 possible control unit commands shown in Table 18; only one button is memorised for each stage, namely the one that was pressed during the memorisation phase.

Note - Single-channel transmitters only have button T1, while dual-channel transmitters only buttons T1 and T2.

Table 18 - Commands available in Mode 2

Button	Command
1	SbS
2	Partial open
3	Open
4	Close

7.7.4 - Mode 2 memorisation procedure

Table 19 - Mode 2 memorisation procedure		Example
01.	Press and release the radio button  on the control unit for a number of times corresponding to the desired command (1...4 - Table 18)	 1...4
02.	Make sure that LED R on the control unit emits a number of flashes equal to the number of the desired command (1...4)	 1...4
03.	Within 10 seconds press the desired button on the transmitter to be memorised, holding it down for at least 3 seconds before releasing it	 3 s 
	If the memorisation procedure was successful, LED R on the control unit will flash 3 times. Repeat the procedure for each transmitter to be memorised. The memorisation phase terminates if nothing is memorised for 10 seconds.	
		   

7.8 - Transmitter memorisation near the control unit (with two transmitters)

This procedure can be used to memorise a NEW transmitter by using a second (OLD) transmitter, which has already been memorised and works properly, without using the buttons on the control unit, by merely standing close to the control unit.

During the procedure the NEW transmitter is memorised in the same way that the OLD transmitter was memorised (Mode 1 or Mode 2).






 **This procedure can be performed on all the receivers lying within the transmitter's range; therefore, only the device involved in the operation should be powered.**




Table 20 - Transmitter memorisation procedure near the control unit	
01.	Draw near the control unit with the two transmitters:  wait 1 second between one step and the next.
02.	On the NEW transmitter, press and hold any key for at least 8 seconds then release it
03.	On the OLD transmitter press and release the button slowly for 3 times
04.	On the NEW transmitter press and release the button slowly once
	Repeat the procedure for each transmitter to be memorised

7.9 - Deleting all memorised transmitters from the memory

Table 21 - Transmitter deletion procedure	
01.	Press and hold the radio button  on the control unit up to step 02
02.	Wait for LED R to light up then wait for it to switch off and to flash 3 times
03.	Release the button exactly during the 3rd flash
	If the memorisation procedure was successful, LED R on the control unit will emit 5 slow flashes

7.10 - Locking / unlocking of the radio memory

 This procedure locks the memory, thus preventing the recognition and deletion of radio transmitters.

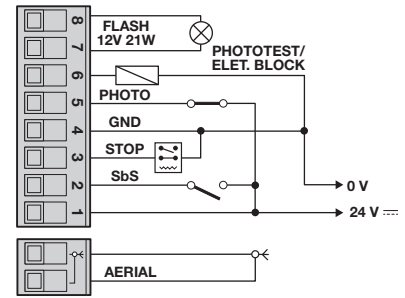
Table 21A - Procedure for locking/unlocking the radio memory	
01.	Disconnect the control unit from the power supply
02.	Press and hold the radio button  on the control unit up to Step 03
03.	Power the control unit again (continue holding the button down)
04.	After 5 seconds LED L4(R) will emit 2 slow flashes: at this point release the button
05.	(Within 5 seconds) repeatedly press and release the radio button  on the control unit to select one of the following options: - LED off = Deactivation of the memory lock. - LED on = Activation of the memory lock.
	Five seconds after last pressing the button, LED L4(R) will emit 2 slow flashes to signal the end of the procedure.

8 FURTHER INFORMATION

8.1 - Adding or removing devices

It is possible to add or remove devices at any time; in particular, various types of devices can be connected to the STOP input, as described in the following paragraphs; for the relevant procedure see Paragraph 7.3 ("Acquisition of the opening and closing positions").

The adjacent figure shows the wiring diagram for connecting the various devices.



STOP input

This input stops the movement immediately, followed by a brief reversion. Devices with output featuring normally open (NO) contact, Normally Closed (NC) contact, as well as devices with 8.2 kΩ fixed resistor output (sensitive edges), can be connected to this input. The control unit recognises the type of device connected to the STOP input during the acquisition phase (Paragraph 7.3); subsequently, a STOP command is triggered whenever the device detects any difference from the acquired setting. Multiple devices – even of different types can be connected to the input:

- Any number of NO devices can be connected in parallel.
- Any number of NC devices can be connected in series.
- Multiple NC devices can be "cascade" connected with a single 8.2 kΩ terminating resistor.
- It is possible to create the NO and NC combination by connecting two NO contacts in parallel, but the NC contact must be connected in series to an 8.2 kΩ resistor.

⚠ If the STOP input is used to connect devices with safety functions, only the devices with 8.2 kΩ fixed resistor guarantee Category 3 safety against faults, in accordance with the EN 13849-1 standard.

Photocells

The control unit features a "Phototest" function which increases the reliability of the safety devices, enabling it to be classified in Category 2 in accordance with the EN 13849-1 standard regarding the combination of the control unit and safety photocells.

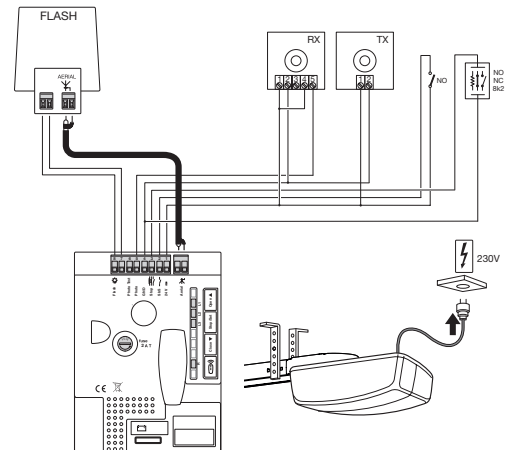
Each time a manoeuvre is started, all safety devices involved are checked and only if everything operates correctly will the manoeuvre be started.

Should the test fail (photocell blinded by the sun, cables short-circuited, etc.), the fault is identified and the manoeuvre is disabled.

To add a pair of photocells, connect them as described below:

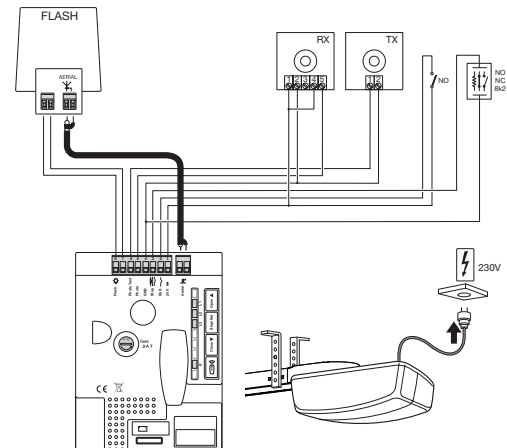
• Connection without "Phototest" function:

Power the receivers directly from the control unit's device output (terminals 1 - 4).



• Connection with "Phototest" function:

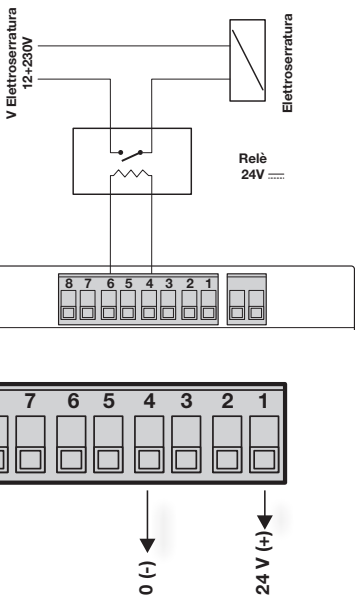
The receiver power comes directly from the services output (terminals 1 - 4), while that of the transmitters is from the "Phototest" output (terminals 4 - 6). The maximum admissible current on the "Phototest" output is 100 mA.



⚠ If two pairs of photocells are used, to prevent them from interfering with each other activate the synchronisation function described in the photocell instruction manual.

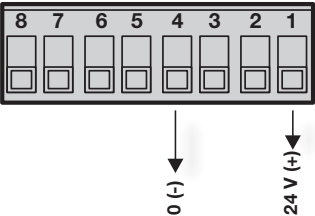
8.2 - Electric lock

The “phototest” output is active by default for the “phototest” function.
Alternatively, the output can be programmed to control an electric lock. When the opening manoeuvre starts, the output is activated for 2 seconds; in this way an electric lock can be connected. The output is not activated during the closing manoeuvre and, therefore, the electric lock must reset mechanically.
The output cannot directly command the electric lock but only a 24V== 2 W load.
The output must be interfaced with a relay, as shown in the adjacent figure.














8.3 - Connecting external devices

If the user needs to power external devices, such as a proximity reader for transponder cards or the light for the key-operated selector, it is possible to tap power as shown in the adjacent figure.
The power is supplied at 24 V== -30% to +50% with 100 mA maximum available current.



8.4 - Full deletion of the memory

When full deletion of the memory is required, to restore the default settings, perform the following procedure with the motor stationary:

Table 22 - Procedure for fully deleting the memory	
01. Press and hold the (arrow up) and (arrow down) keys simultaneously for 3 seconds.	 3 s 
02. When all the LEDs light up simultaneously, release the keys.	    
03. LEDs L1, L2 and L3 will start flashing at the end of the procedure.	  
 After the Full Deletion the limit switch acquisition procedure can be started by pressing OPEN or CLOSE .	

8.5 - Special functions

“Always open” function
This function is a control unit feature that enables the user to command an opening manoeuvre when the “Step-by-Step” command lasts longer than 3 seconds. This is useful, for example, for connecting a timer contact to the “Step-by-Step” input in order to keep the door open during a specific time bracket. This feature is valid regardless of the “Step-by-Step” input programming (see the “Step-by-Step Function” parameter - Table 13).
“Move anyway” function
In the event that one of the safety devices is not functioning properly or is out of order, it is still possible to command and move the door in “Man present” mode. For further details, refer to the “USER GUIDE” pull-out insert (final part of the manual)

8.6 - Accessories

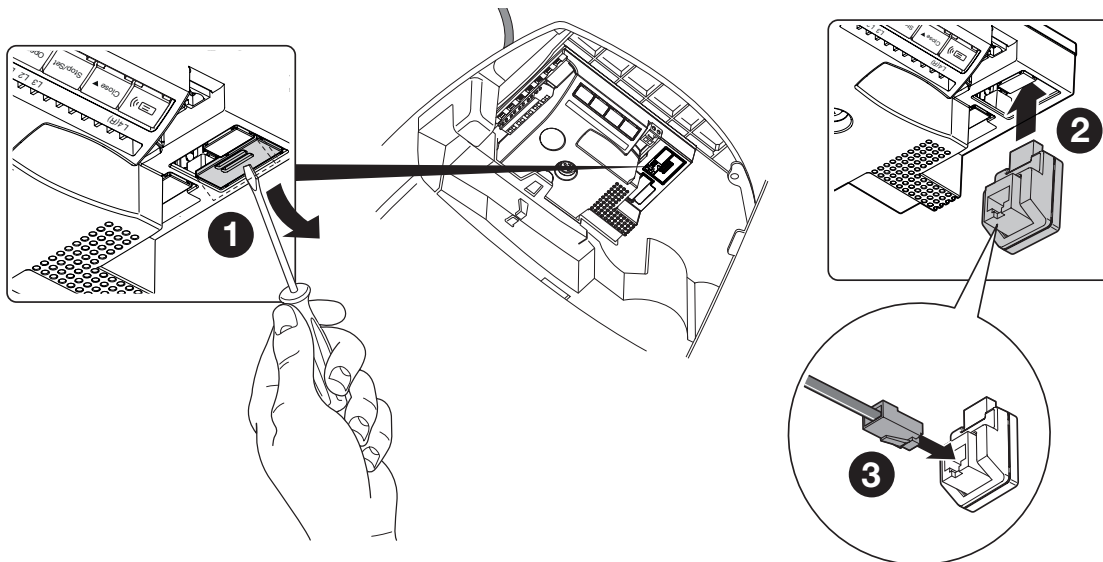
- The following optional accessories are available:
- **SPA2:** mechanical release device with metal cord. For use in systems that envisage only the automated door as a point of access.
 - **SPA5:** oscillating arm. Required if the door to be automated is an overhead door with springs or counterweights.

8.7 - Connecting the Oview programmer

It is possible to connect the Oview programming unit to the control unit, via the IBT4N interface through a bus cable with 4 electrical wires inside. This unit enables quick and full programming of the functions, parameter adjustment, updating of the control unit firmware, diagnostics to detect any malfunctions and periodic maintenance.
The Oview allows for operating on the control unit at a maximum distance of roughly 100 m. If several control units are networked with each other in a BusT4 network, by connecting the Oview to one of them, it is possible to view on the display all the networked control units (up to a maximum of 16 units).
The Oview unit can also be left connected to the control unit during normal operation of the automation, so that the user can send commands using a specific menu.

 **Warning!** - Before connecting the IBT4N interface, it is necessary to disconnect the control unit from the power supply.

7



9 DIAGNOSTICS

Certain devices emit special signals showing the operating status or any malfunction.

9.1 - Warning light signals and courtesy light

During the manoeuvre the flashing light flashes once every second; when a fault occurs, the flashes become more frequent and are repeated twice with a 1-second pause in between. The courtesy light emits the same diagnostics signals.

Table 23 - Warning light signals and courtesy light

Signal	Cause	Solution
2 flashes 1-sec pause 2 flashes	Intervention of a photocell	At the start of the manoeuvre, one or more photocells prevent movement; check whether there are any obstacles. This is normal when there is an obstacle hampering the closing movement.
3 flashes 1-sec pause 3 flashes	Activation of the "Motor Force" limiting device	During the movement, the gate experienced excessive friction; identify the cause.
4 flashes 1-sec pause 4 flashes	Triggering of the STOP input	At the start of the manoeuvre or during the movement, the STOP input intervened; identify the cause.
5 flashes 1-sec pause 5 flashes	Internal parameter memorisation error	Wait at least 30 seconds during which the control unit will attempt to restore the function. If the condition persists, delete the memory and rerun the memorisation procedure.
6 flashes 1-sec pause 6 flashes	The maximum manoeuvre limit per hour has been exceeded	Wait a few minutes until the manoeuvre limiting device drops below the maximum limit.
7 flashes 1-sec pause 7 flashes	Error in the internal electric circuits	Disconnect all the power circuits for a few seconds and then try giving a command again; if the condition persists it means there is a serious fault on the electronic board or the motor cabling: perform the necessary checks and replace components, if necessary.
8 flashes 1-sec pause 8 flashes	Command already present.	Another command is already present. Remove the command present to be able to send other commands.
10 flashes 1-sec pause 10 flashes	Manoeuvre time-out or lack of motor power during the position recognition phase	The time-out denotes that the manoeuvre is too long. Shorten the manoeuvre time by increasing the speed or balancing the gate to reduce the motor's effort. If the motor lacks power check whether the board is properly inserted in its housing

9.2 - Signals of LEDs on the control unit

The control unit contains LEDs that can emit special signals both during normal operation and in case of anomalies.

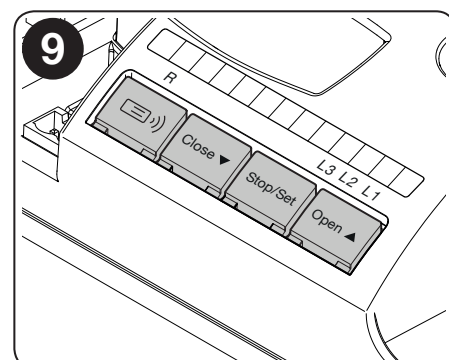
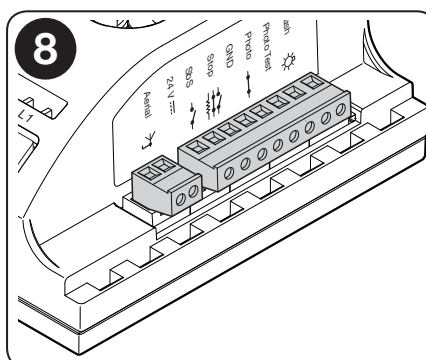


Table 24 - Terminal LEDs (Fig. 8)

OK LED	Cause	Solution
OFF	Fault	Make sure there is power supply; check to see whether the fuses are blown; if necessary, identify the reason for the failure then replace them with others of the same type.
On	Serious fault	Try switching off the control unit for a few seconds; if the condition persists, it means that there is a malfunction and the electronic circuit board has to be replaced.
1 flash per second	All OK	Normal control unit operation.
2 quick flashes	Input status variation	This is normal when there is a change in one of the inputs: SbS, STOP, intervention of photocells or the radio transmitter is used.
Series of red flashes separated by a 1-second pause	Various	Same signal on the warning light or courtesy light: see Table 21
STOP LED (red)	Cause	Solution
OFF	Triggering of the STOP input	Check the devices connected to the STOP input
On	All OK	STOP input active

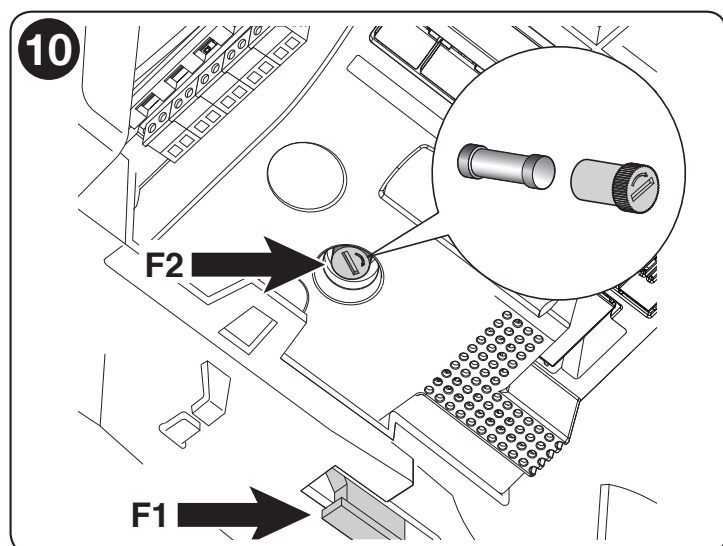
Table 25 - Button LEDs (Fig. 9)

L1	Description
Off	Indicates "Motor opening speed" off during normal operation.
On	Indicates the fast "Motor opening speed" during normal operation.
Flashes	Function programming in progress
L2	Description
OFF	Indicates the slow "Motor closing speed" during normal functioning.
On	Indicates the fast "Motor closing speed" during normal operation.
Flashes	- Function programming in progress - If it flashes together with LED L3, the user must run the acquisition phase of the door opening and closing positions (Paragraph 7.2).
L3	Description
OFF	During normal operation the device indicates "Automatic Closing" is inactive.
On	During normal operation the device indicates "Automatic Closing" is active.
Flashes	- Function programming in progress - If it flashes together with LED L2, the user must run the acquisition phase of the door opening and closing positions (Paragraph 7.2).
L4(R) (radio)	Description
On	During normal operation it indicates that a radio code not present in the memory has been received.
Flashes	Transmitter programming or deletion under way

10 TROUBLESHOOTING

Table 24 contains useful instructions to help you solve malfunctions or errors that may occur during the installation stage or in case of fault.

Table 26 - Troubleshooting	
Problem	Solution
The radio transmitter does not control the door and the LED on the transmitter does not light up	Check to see if the transmitter batteries are exhausted and replace them if necessary.
The radio transmitter does not control the door and the LED on the transmitter lights up	<ul style="list-style-type: none"> - Check whether the transmitter has been memorised correctly in the radio receiver. - Check whether the transmitter emits the radio signal correctly by means of this practical test: push a key and place the LED on the antenna of a normal radio (preferably a cheap one) that is tuned to 108.5 Mhz FM or as close as possible to this frequency; a slight crackling sound should be heard.
No manoeuvre starts and the OK LED fails to flash	Check whether the gearmotor is powered at 230 V mains voltage. Check that fuses F1 and F2 have not blown; if they have, identify the reason for the fault then replace them with others having the same current rating and characteristics (Fig. 10).
No manoeuvre starts and the warning light is off	Check that the command is actually received. If the command reaches the Step-by-Step input, the OK LED flashes twice indicating that the command has been received.
The manoeuvre does not start and the courtesy light flashes a few times	Count the number of flashes and check them against Table 22.
The manoeuvre starts but it is immediately followed by a brief reverse run	The selected force value may be too low to move the door: check whether there are any obstacles and, if necessary, select a higher force.



11 PRODUCT DISPOSAL

This product constitutes an integral part of the automation and, therefore, must be disposed of together with it.

Similarly to the installation phase, once the product reaches the end of its useful life, the disassembly and scrapping operations must be performed by qualified personnel.

This product is made of various types of materials, some of which can be recycled while others must be scrapped. Seek information on the recycling and disposal systems envisaged by local regulations in your area for this product category.

⚠ WARNING! - Some parts of the product may contain polluting or hazardous substances which, if released into the environment, constitute serious environmental and health risks.





As indicated by the adjacent symbol, the product may not be disposed of together with domestic waste. Sort the materials for disposal, according to the methods envisaged by current legislation in your area, or return the product to the retailer when purchasing an equivalent product.

⚠ WARNING! - Local regulations may envisage the application of heavy fines in the event of improper disposal of this product.

12 MAINTENANCE

To ensure constant safety levels a long service life, the system must be serviced regularly: at least every 6 months or after maximum 3,000 movements since the last service.

⚠ WARNING! – The maintenance operations must be performed in strict compliance with the safety directions provided in this manual and according to applicable legislation and standards.

01.		Disconnect the power supply to the gearmotor and check the state of deterioration of all the automation's constituent materials: pay special attention to erosion and oxidation of structural components. Replace any parts that are not to standard
02.		Check the state of wear of moving parts: the pinion and all parts of the door, and replace any worn components if necessary
03.		Restore the power supply and run all the tests and checks indicated in Paragraph 6.1 - Testing

13 TECHNICAL SPECIFICATIONS

All technical specifications stated herein refer to an ambient temperature of 20°C (± 5°C). • Nice S.p.A. reserves the right to modify its products at any time when deemed necessary, while nonetheless maintaining their intended use and functionality.

	SN6011
Product type	Electromechanical gearmotor for the automatic movement of garage doors for residential use, inclusive of electronic control unit
Pinion	Diameter 9.5 mm, 28 teeth; for SNA30 or SNA30C guides and guides supplied with SPIN10KCE
Peak torque (corresponding to the force required to move the door)	9.9 Nm (550 N)
Nominal torque (corresponding to the force required to keep the door moving)	4.95 Nm (275 N)
No-load speed (corresponding if “Fast” speed is programmed)	106 rpm (0.20 m/s) The control unit allows for programming 2 speeds equal to roughly 100%–60%
Nominal torque speed (corresponding if “Fast” speed is programmed)	45 rpm (0.08 m/s)
Maximum frequency of operating cycles	30 cycles per day (the control unit limits the cycles to the maximum shown in Tables 3 and 4)
Maximum continuous operating time	4 minutes (the control unit limits continuous operation to the maximum values given in Tables 3 and 4)
Application limits	In general, SPIN is able to automate sectional or overhead doors that fall within the dimensions stated in Table 2 and the limits specified in Tables 3 and 4
SPIN power supply SPIN/V1 power supply	230 V~ (±10%) 50/60 Hz 120 V~ (±10%) 50/60 Hz
Maximum power input	200 W
Insulation class	1 (a safety earthing system is required)
Emergency power supply	No
SPIN courtesy light SPIN/V1 courtesy light	Internal LED courtesy light (fitting not accessible to the user)
FLASH flashing light output	for 1 ELDC flashing LED
STOP input	For normally closed, normally open or 8.2 kΩ fixed resistor contacts; with self-recognition (any variation from the memorised status triggers the “STOP” command).
SbS input	For normally open contacts (closing of the contact triggers the SbS command).
Radio ANTENNA input	52 Ω for RG58 or similar type cable
Radio receiver	Incorporated
Programmable functions	6 ON-OFF and 6 adjustable functions
Self-recognition functions	Self-recognition of the type of “STOP” device (NO or NC contact or 8.2 kΩ resistor) Self-recognition of the door opening and closing positions and calculation of the slowdown and partial opening points.
Operating temperature	–20°C ... +55°C
Protection rating	IP 40 (to be used only in indoor or protected environments)
Dimensions / weight	225 mm x 330 mm (h) x 100 mm / 3.3 kg

	Guide contained in SPIN10KCE	SNA30	SNA30C
Type	3-piece galvanised steel profile	single galvanised steel profile	single galvanised steel profile
Guide length	3.15 m	3.15 m	3.05 m
Guide height	35 mm	35 mm	35 mm
Useful stroke	2.6 m	2.6 m	2.5 m
Belt/chain length	6 m	6 m	5,778.5 m
Belt height	10 mm	10 mm	/
Resistance to traction	1,220 N	1,220 N	/

	incorporated radio receiver
Product type	4-channel receiver for incorporated radio remote control
Frequency	433.92 MHz
Coding	12-bit FLO-type fixed code 52-bit FLOR-type digital rolling code 64-bit SMILO-type digital rolling code
Transmitter compatibility (1)	Supported protocols: Flo, Flor, O-Code, Smilo
Memorisable transmitters	Up to 100 if memorised in Mode 1
Input impedance	52 Ω
Sensitivity	better than 0.5 μ V
Transmitter range	From 100 to 150 m; this range can vary if there are obstacles or electromagnetic disturbances, and depends on the position of the receiving antenna
Outputs	-
Operating temperature	-20°C ... +55°C

EC Declaration of Conformity (No. 194/SPIN) and declaration of incorporation of “partly completed machinery”

Note - The contents of this declaration correspond to that stated in the official document filed in the offices of Nice S.p.A. and, in particular, the latest version thereof available prior to the printing of this manual. The text herein has been re-edited for editorial purposes. A copy of the original declaration can be requested from Nice S.p.A. (TV) Italy.

Revision: **8**

Language: **EN**

Manufacturer's name: NICE S.p.A.
Address: Via Pezza Alta 13, 31046 Rustignè di Oderzo (TV), Italy
Subject authorised to draw up the technical documentation: NICE S.p.A.
Product type: Electromechanical gearmotor with incorporated control unit and radio receiver
Model / Type: SN6011
Accessories: ELDC, EPMA

The undersigned, Roberto Griffa, as Chief Executive Officer, hereby declares under his own responsibility that the product identified above complies with the provisions of the following directives:

Directive 2014/53/EU (RED) - Health and safety (Art. 3(1)(a)): EN 62479:2010
- Electrical safety (Art. 3(1)(a)): EN 60950-1:2006+A11:2009+A12:2011+A1:2010+A2:2013
- Electromagnetic compatibility (Art. 3(1)(b)): EN 301 489-1 V2.2.0:2017, EN 301 489-3 V2.1.1:2017
- Radio spectrum (Art. 3(2)): EN 300 220-2 V3.1.1:2017

In addition, the product conforms to the following directive in accordance with the provisions applicable to “partly-completed machinery” (Annex II, Part 1, Section B):

Directive 2006/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 May 2006 regarding machinery and amending Directive 95/16/EC (recast).

- It is hereby declared that the relevant technical documentation has been compiled in accordance with Annex VII, Part B, of Directive 2006/42/EC and that the following essential requirements have been applied and fulfilled: 1.1.1- 1.1.2- 1.1.3- 1.2.1-1.2.6- 1.5.1-1.5.2- 1.5.5- 1.5.6- 1.5.7- 1.5.8- 1.5.10- 1.5.11

- The manufacturer undertakes to transmit, in response to a reasoned request by the national authorities, relevant information on the “partly-completed machinery”, without prejudice to the intellectual property rights of the manufacturer of the “partly-completed machinery”.

- If the “partly-completed machinery” is commissioned in a European country with an official language other than the language used in this declaration, the importer must include a translation to accompany this declaration.

- The “partly-completed machinery” must not be commissioned until the final machine in which it is to be incorporated is declared to conform to the provisions of Directive 2006/42/EC, if applicable.

The product also complies with the following standards:

EN 60335-1:2012+A11:2014

EN 62233:2008

EN 60335-2-103:2015

EN 61000-6-2:2005, EN 61000-6-3:2007+A1:2011

Place and Date: Oderzo, 12 July 2017

Mr **Roberto Griffa** (Chief Executive Officer)



⚠ This user guide should be stored and handed to all users of the automation.

WARNINGS

- Keep at a safe distance from the moving door until it is completely open or closed; do not transit through the door until it is completely open and has come to a standstill.
- Do not allow children to play near the door or with the controls.
- Keep the transmitters away from children.
- Suspend the use of the automation immediately as soon as you notice any abnormal operation (noises or jolting movements); failure to follow this warning may cause serious danger and accidents.
- Do not touch moving parts.
- Regular checks must be carried out by qualified personnel according to the maintenance plan.
- Maintenance or repairs must only be carried out by qualified technical personnel.
- Send a command with the safety devices disabled:

In the event of safety devices malfunctioning or out of service, the door may still be moved.

01. Command the door control with the transmitter. The door will open normally if the safety devices give the enable signals, otherwise within 3 seconds the control must be activated again and held.
02. After approximately 2 seconds the door will start moving in the "man present" mode, i.e. so long as the control is held the door will keep moving; as soon as the control is released the door will stop.

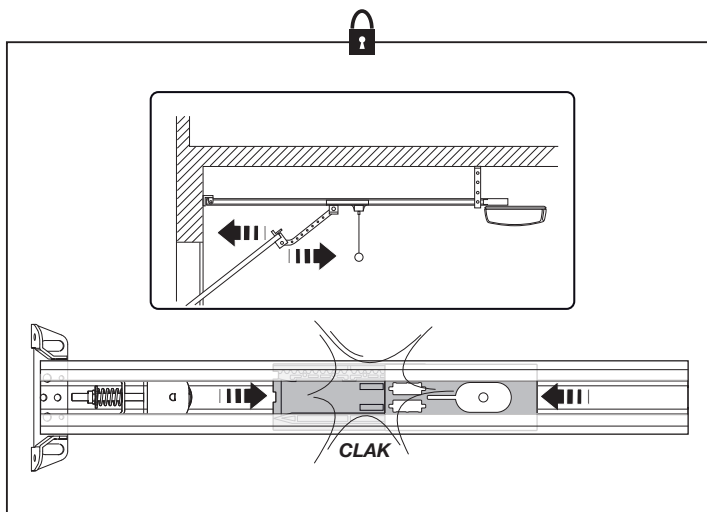
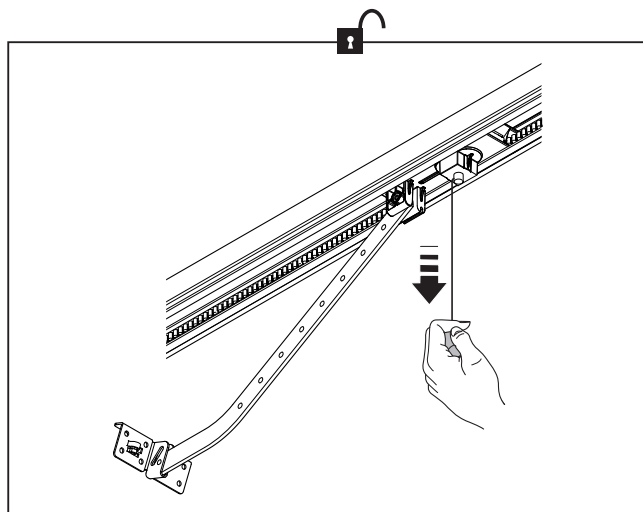
If the safety devices are out of order, arrange to repair the automation as soon as possible.

Releasing and locking the gearmotor (manual operation)

The gearmotor is equipped with a mechanical system that allows for manually opening and closing of the door.

Manual operation must be performed in the case of a power outage or in the event of anomalies affecting the system.

In the event of a gearmotor fault, it is still possible to try release the motor to check whether the fault lies in the unlocking mechanism.



Maintenance operations admissible to the user

The operations that the user must carry out periodically are listed below:

- **Cleaning of the surfaces of the devices:** use a slightly damp (not wet) cloth. Do not use substances containing alcohol, benzene, thinners or other flammable substances; the use of these substances may damage the devices and cause fires or electric shocks.
- **Removal of leaves and stones:** disconnect the power supply to the automation before proceeding, to prevent anyone from moving the door. If a buffer battery is fitted, disconnect it.



Nice S.p.A.
Via Pezza Alta, 13
31046 Oderzo TV Italy
info@niceforyou.com

www.niceforyou.com