

Soon

Garage door opener

CE



Instructions and warnings for the fitter
Istruzioni ed avvertenze per l'installatore
Instructions et recommandations pour l'installateur
Anweisungen und Hinweise für den Installateur
Instrucciones y advertencias para el instalador
Instrukcje i uwagi dla instalatora

Nice

Soon

Summary:

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INTRODUCTION

This manual explains how to install, program and use the Soon sectional door opening automation. The various subjects are divided into three sections.

SECTION 1 is a step-by-step guide illustrating the phases required for physical installation of the product and operation start-up.

SECTION 2 describes how to personalise operation of Soon, by the programming of specific functions and selection of special operations and settings.

There is also a section on maintenance and disposal of the product.

⚠ The **First** and **Second Part** of the manual are aimed exclusively at qualified Technical Personnel assigned to install the automation. None of this information is relevant for the final user of the product.

Instructions for installation and start-up of the automation

This SECTION provides a step-by-step description of all phases of product installation (mechanical assembly, electrical connections, testing) and initial start-up (operating settings).

These phases are preceded by a number of very important instructions, which regard safety, product characteristics and system feasibility.

1) Working in safety

1.1) Safety precautions and warnings

⚠ The product installation, programming and start-up procedures must be performed exclusively by technically qualified personnel, in observance of current legislation and standards governing these operations, and according to the instructions in this manual.

This manual has been drawn up to provide a step-by-step guide to the procedures of installation, programming and start-up of the Soon gearmotor. All tasks required, together with the necessary instructions, are specified in the exact order in which they must be performed.

It is therefore important to read all sections of the manual before starting installation. We recommend in particular to carefully read the Sections containing the essential information on SAFETY, i.e. this Section 1, Section 3 - CHECKS BEFORE INSTALLATION AND PRODUCT APPLICATION LIMITS and Section 8 - SYSTEM TESTING AND COMMISSIONING.

In consideration of the hazards that may arise during installation and daily use of the product, installation must be in full observance of the European Directive 98/37/EC (Machinery Directive governing the installation of power-operated doors and gates) and in particular standards EN 12445, EN 12453 and EN 12635.

Compliance with this Directive will enable operation in maximum safety, and the issue of the relative declaration of conformity at the end of installation, with the consequent guarantee of system safety.

NOTE: Further information and guidelines on the risk assessment, useful when drawing up the "Technical Documentation" are available on the Internet site: www.niceforyou.com

- Use of the Soon product other than as specified in this manual is strictly prohibited. Improper use constitutes a risk of damage to the product and a hazard to persons and objects.
- Never apply modifications to any of the product components, unless expressly specified in the manual. Unauthorised interventions can lead to malfunctions and Nice® declines all liability for damage caused by makeshift modifications to the product.
- Before starting installation, an assessment of the associated risks must be made, including a list of the essential safety requirements as envisaged in Appendix I of the Machinery Directive, specifying the relative solutions adopted. Note that the risk assessment is one of the documents included in the automation Technical documentation.
- Before starting installation, check whether other devices or materials are required to complete automation with Soon, evaluating the specific application and associated risks; for example considering the risks of impact, crushing, shearing, dragging and other hazards in general.

- Connect the Soon control unit only to an electric power line equipped with an earthing system.
- During installation, prevent any parts of the automation from coming into contact with water or other liquids, or penetration of these liquids and/or objects inside the control unit and other open devices. Should this occur, disconnect the power supply immediately and contact a Nice® service centre:

⚠ Use of Soon in these conditions constitutes a hazard!

- Never keep Soon components near to sources of heat and never expose to naked flames. This may damage system components and cause malfunctions, fire or hazardous situations
- During installation, all operations requiring access to internal parts, concealed by the Soon cover (e.g. terminals) must be performed with the power supply disconnected. If the connection is already made and the disconnection devices are concealed, a suitable notice must be affixed, indicating: WARNING: MAINTENANCE IN PROGRESS:
- During installation, if electrical safety device trip, such as circuit breakers or fuses, the cause of the fault must be identified and eliminated before resuming normal operation.
- At the end of installation, the automation may only be used after completing the "commissioning" procedure as specified in Section 8 - SYSTEM TESTING AND COMMISSIONING.
- In the event of prolonged periods of disuse, the optional battery of Soon should be removed and stored in a dry location. This precaution will prevent deterioration and the risk of leakage of hazardous substances from the battery.
- In the event of a fault not remediable with the information in this manual, contact an authorised Nice® Service centre.
- The Soon product packaging material must be disposed of in full observance of current local legislation governing waste disposal.
- Take care to conserve this manual to facilitate future maintenance and interventions on the product.

2) Product specifications

2.1) Product description, intended use and technical data

SOON is an electromechanical operator for the automation of sectional doors up to 20 m². Thanks to the cable outlet shaft, it enables simple connection with the spring support shaft of most commercially available sectional doors.

The SOA2 control unit, as well as powering the DC motor, enables optimal control of the gearmotor torque and speed and precise mea-

surement of distances, gradual start-up and closure, and obstacle detection. It is also equipped with a maintenance indicator to enable recording of the manoeuvres performed by the gearmotor during its lifetime.

The release mechanism, activated from the ground, disengages the motor from the reduction unit.

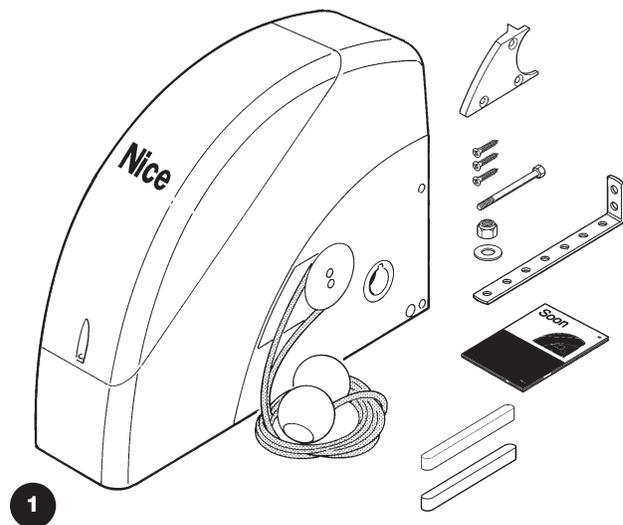
3) Installation feasibility check

Before proceeding with installation, check the condition of the product components, suitability of the selected model and conditions of the intended installation environment.

3.1) Check product components (see fig. 1)

Check the condition of the packaging:
unpack the product and ensure presence of:

- 1 Soon gearmotor
- 1 fixing bracket
- 4 release half-rings
- 2 keys
- 1 M8x130 screw
- 1 M8 locknut
- 1 D8 washer
- 1 gear
- 3 black self-tapping screws
- 1 instruction manual



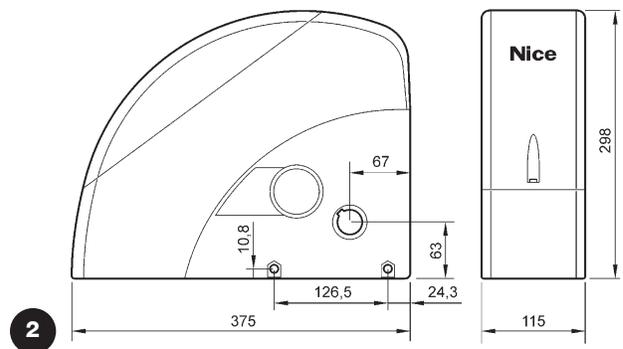
3.2) Check suitability of environment

- Check that the selected site of installation is compatible with the overall dimensions of the Soon model (Fig. 2).
- Check that there are no obstacles along the trajectory of the section door, which could obstruct total opening and closing movements.
- Check that the selected site of installation enables easy and safe execution of manual manoeuvres
- Check that each device to be fixed is positioned on a solid surface protected from the risk of accidental impact.

3.3) Check product application limits (see fig. 2)

Check the application limits of the Soon model and relative accessories to be installed, assessing suitability of the characteristics to meet the requirements of the environment and the limitations specified below.

- Ensure that the size of the sectional door is less than 20 m².
- Ensure that the section door drive shaft is compatible with the Soon outlet shaft, using the keys provided in the pack.
- Ensure that the wall fixing brackets are sufficiently long.



4) Install the various components

⚠ Installation of the automation must be performed exclusively by qualified personnel, in observance of current legislation and standards governing these operations, and according to the instructions in this manual.

4.1) Standard installation layout (see fig. 3)

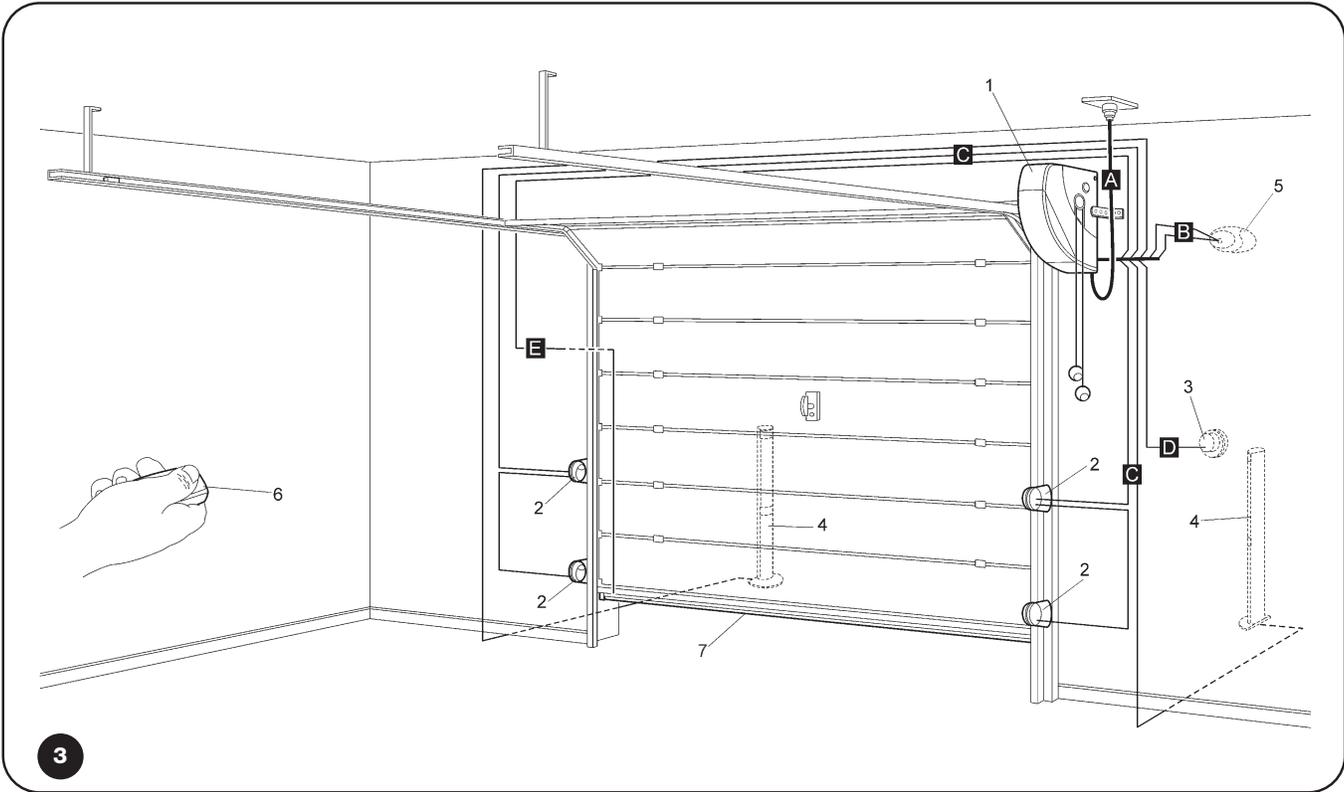
Fig. 3 illustrates the complete installation of a Soon gearmotor. The drawing shows the various components and cables required for connection, all assembled and positioned according to a standard layout.

Key to mechanical components in Fig. 3:

- 1** - Soon gearmotor
- 2** - Photocell
- 3** - Key-operated selector switch
- 4** - Post for photocell
- 5** - Flashing light
- 6** - Transmitter
- 7** - Main edge

Key to electric cables in Fig. 3:

- A** - Electric power line
- B** - Flashing light with aerial
- C** - Photocells
- D** - Key-operated selector switch
- E** - Main edge



3

4.2) Install the mechanical components

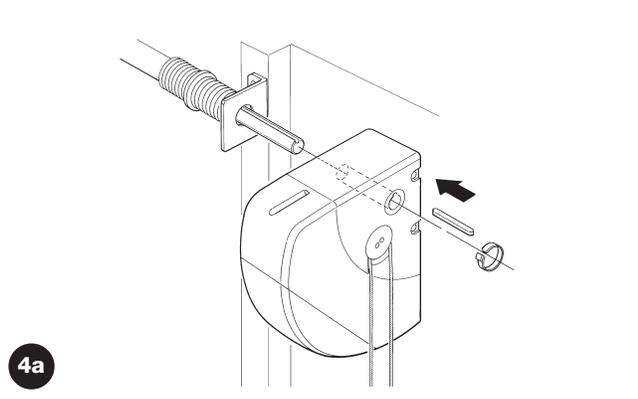
After completing the preliminary installation tasks (such as digging the routes for the electric cables or laying external ducting; possible embedding of pipelines and other preparation work), assembly and installation procedures can be started. complete with all mechanical and electrical components of the Soon gearmotor. Proceed in the order specified below.

Mounting the Soon gearmotor (see Fig. 4)

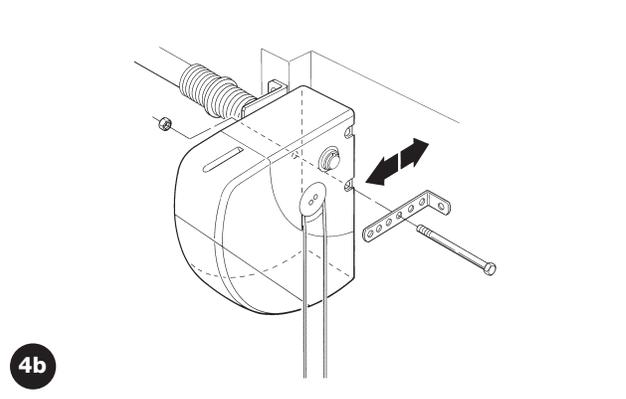
1. (Fig. 4-a) Insert the Soon outlet shaft in the sectional door drive shaft, coupling them using the keys provided in the pack.

Perform this operation with the door CLOSED.

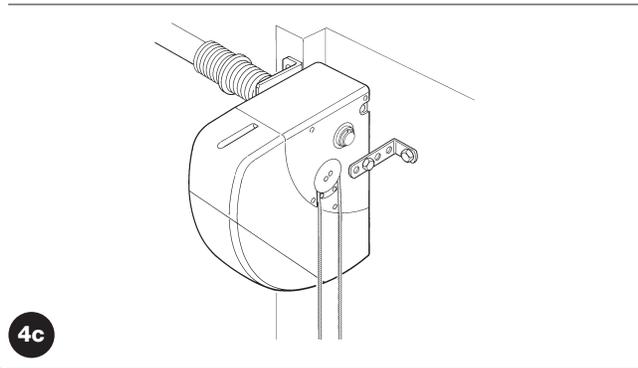
2. (Fig. 4-b) Secure the bracket to the Soon gearmotor by means of the screw, nut and washer supplied.
3. (Fig. 4-c) Fix the bracket to the wall by means of a plug (not supplied) suited to the wall material.
4. (Fig. 4-d) The Soon gearmotor can be installed horizontally using the special gear (supplied) which should be fixed by means of the three screws (supplied) in the position shown in the figure, taking care to position the release mechanism cable outlets correctly.



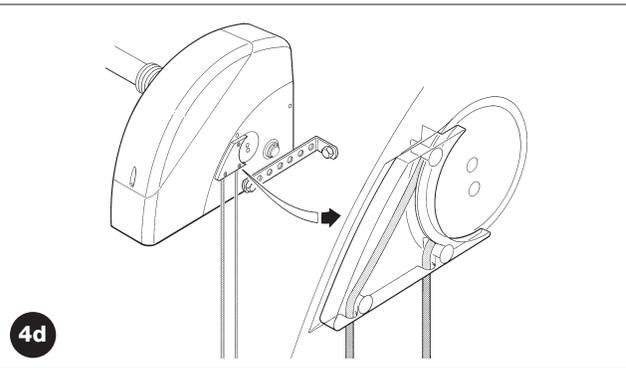
4a



4b



4c



4d

4.3) Laying electric cables (see fig. 3 and table 1)

On completion of installation of all mechanical components, proceed with laying all electric cables required, with reference to Fig. 3 showing the typical location of these cables, and Table 1 which analyses the technical characteristics in detail.

⚠ The cables used for connecting the various devices must be suitable for the type of installation to be obtained: in the case of installation in a covered environment or indoors, use cable type H03VV-F.

ELECTRIC CABLE SPECIFICATIONS

(The letters associated with the cables as indicated also in Fig. 3)

Table 1: cable list		
Connection	Cable type	Max. admissible length
A: Electric power line	n° 1 cable (3 x 1.5 mm ²)	30 m (*)
B: Flashing light	n° 1 cable (2 x 1 mm ²)	20 m
C: Aerial	n° 1 shielded cable (type RG58)	20 m (recommended: less than 5 m)
D: Photocell	n° 1 cable (2 x 0.5 mm ²)	30 m
E: Key-operated selector switch	n° 1 cable (4 x 0.5 mm ²)	50 m
F: Mobile edge connection	n° 1 cable (2 x 0.5 mm ²)	20 m

Note: (*) if the power cable is longer than 30 m, a cable with a larger section is required, (e.g. 3 x 2,5 mm²) and safety earthing is necessary in the vicinity of the automation.

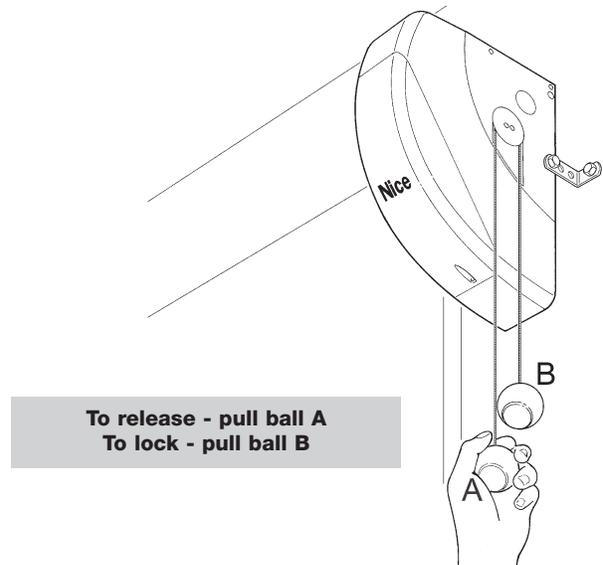
4.4) Manual lock and release procedure

⚠ Refer to this procedure when the text of the manual requires “locking” or “release” of the SOON mechanism.

Note:

The release or locking manoeuvres of the mechanism must be performed exclusively with the gearmotor completely stationary.

- The manual operation must be performed in the event of a power failure, system faults or when expressly requested in the manual.
- Manual release enables free travel of the sectional door.



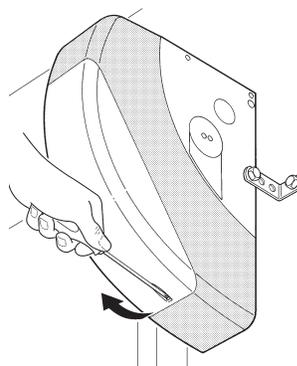
5) Make electrical connections

⚠ To ensure the Safety of the installer and avoid damage to automation components, before making electrical connections or connecting the radio receiver, ensure that the control unit is DISCONNECTED from the mains and any buffer batteries

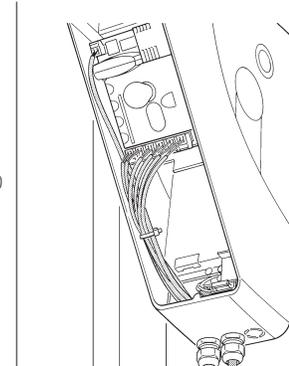
5.1) Connect all devices

All electrical connections must be made with the system disconnected from the power supply

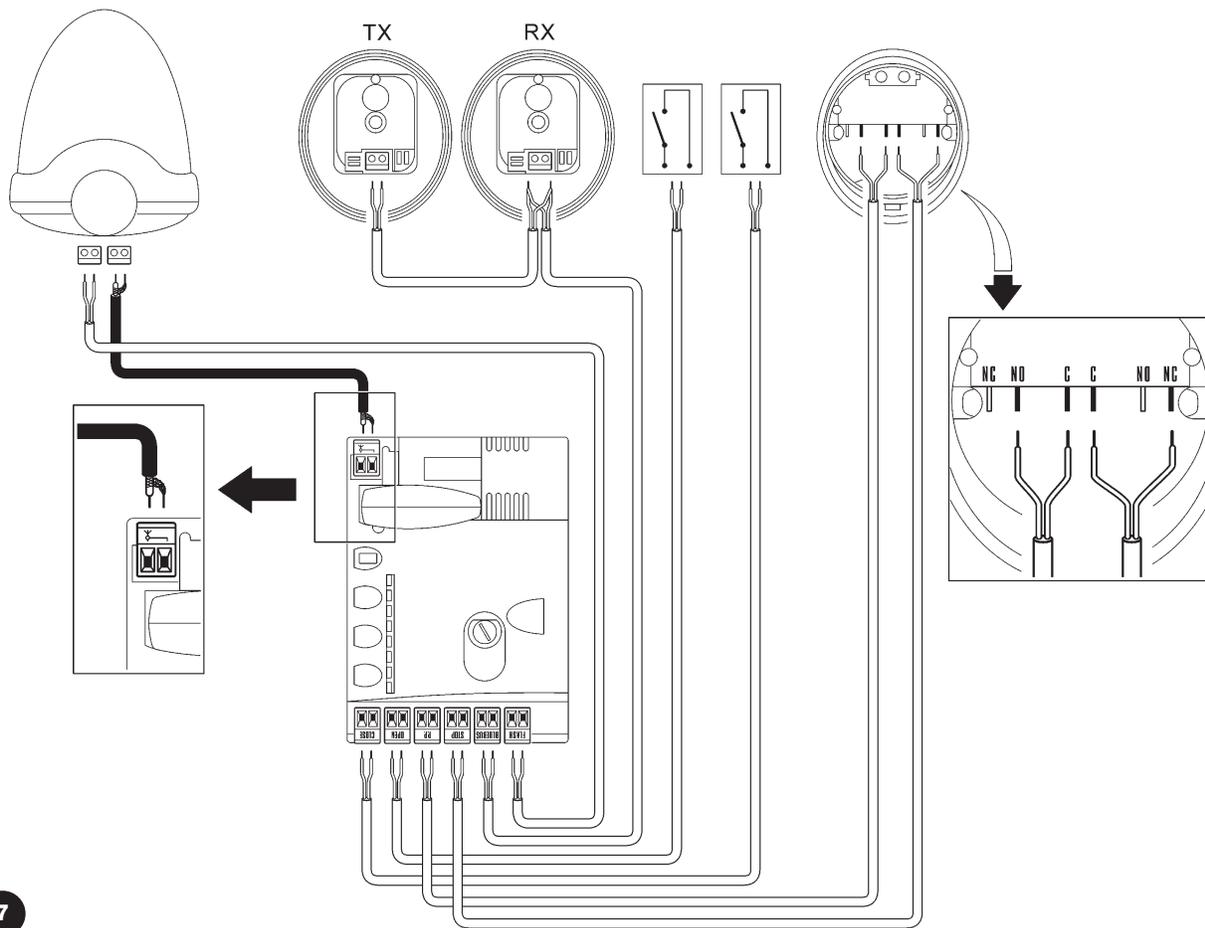
1. To remove the protection cover and access the SOON electronic control unit, remove the screw and pull the cover up-wards to remove (Fig. 5).
2. Loosen the free cable clamp and route the cables through for connection to the control unit terminals. Leave a cable length of 20-30 cm longer than necessary. See table 1 for the cable types and Fig. 6 for connections.
3. Make cable connections as shown in the diagram of Fig. 7. To facilitate work, the terminals are removable
4. On completion of connections secure the cables by pressing down the cable clamp. The excess aerial cable should be secured to the other cables with a clip.



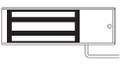
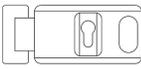
5



6



7

FLASH	this output is programmable (see SECTION 2 of the manual) to connect one of the following devices:
	Flashing light If programmed as "flashing light" the "FLASH" output can be connected to a NICE "LUCY B" flashing light with a 12V 21W car type lamp. During the manoeuvre the light flashes at an interval 0.5s on and 0.5s off
	"Door open indicator" output If programmed as "door open indicator" the "FLASH" output can be connected to a 24V max 5W indicator light for the door open signal. It can also be programmed for other functions; see SECTION 2 of the manual.
	Suction cup* If programmed as "suction cup" the "FLASH" output can be connected to a 24V max 10W suction cup (versions with electromagnet only, without electronic devices). When the door is closed, the suction cup is activated to lock the door in place. During the opening and closing manoeuvre it is deactivated.
	Electric block* If programmed as "electric block" the "FLASH" output can be connected to a max. 24V electric lock with latch (versions with electromagnet only, without electronic devices). During the opening manoeuvre, the electric lock is activated and remains active to free the door and perform the manoeuvre. In the closing manoeuvre ensure that the electric block re-engages mechanically.
	Electric lock* If programmed as "electric lock" the "FLASH" output can be connected to a 24V max 10W electric lock with latch (versions with electromagnet only, without electronic devices). During the opening manoeuvre, the electric lock is activated for a brief interval to free the door and perform the manoeuvre. In the closing manoeuvre ensure that the electric lock re-engages mechanically.
BLUEBUS	This terminal enables the connection of compatible devices; all are connected in parallel with just two wires conveying the electric power and communication signals. More information on BlueBUS is available in paragraph "5.2 - Connect the BlueBUS devices".
STOP	Input for devices that block or shut down the manoeuvre in pro-gress; by setting the input accordingly, it is possible to connect Normally Closed type contacts, Normally Open contacts, constant resistance or optical devices. More information on STOP is available in paragraph "5.3 - Connect devices to the STOP input".
SS	Input for devices that control movement in Step-Step mode, enabling the connection of Normally Open contacts.
OPEN	Input for devices that control opening movement only, enabling the connection of Normally Open contacts.
CLOSE	Input for devices that control closing movement only, enabling the connection of Normally Open contacts.
AERIAL	input for connection of the aerial for the radio receiver (the aerial is incorporated on LUCY B)

* Only devices containing exclusively the electromagnet can be connected.

⚠ Never use devices other than those specified

5.2) Connect bluebus devices

BlueBUS is a technology that enables the connection of compatible devices with just two wires conveying the electric power and communication signals. All devices are connected in parallel on the same 2 BlueBUS wires, without the need to observe polarity; each device is recognised individually as it is assigned with an exclusive address during installation. BlueBUS can be used, for example, to connect the following: photocells, safety devices, control pushbuttons, indicator lamps, etc. The SOON control unit recognises each one of the devices connected by means of a specific self-learning phase and is

able to detect all possible faults in maximum safety and with the utmost precision. For this reason each time a device is connected to or removed from BlueBUS the self-learning phase must be repeated, as described in paragraph "7.1 - Memorising devices".

5.2.1) Photocells

The "BlueBUS" system enables, by means of address assignment using the specific jumpers, recognition of the photocells by the control unit and assignment of the correct detection function. The address assignment procedure is performed both on the TX and RX (setting the jumpers in the same way) and ensuring that there are no other pairs of photocells with the same address.

On an automation for sectional doors with a SOON gearmotor, photocells can be installed as shown in Fig. 8. After installation the self-learning phase must be repeated on the control unit, as described in paragraph "7.1 - Memorising devices".

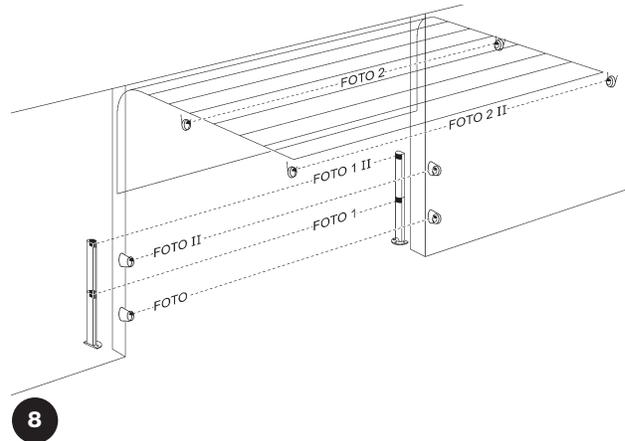


Table 2: photocell addresses

Photocell	Jumpers	Photocell	Jumpers
PHOTO Photocell h = 50 With activation on closing		PHOTO 2 Photocell With activation on opening	
PHOTO II Photocell h = 100 With activation on closing		PHOTO 2 II Photocell With activation on opening	
PHOTO 1 Photocell h = 50 With activation on closing and opening		PHOTO 3 CONFIGURATION NOT ADMITTED	
PHOTO 1 II Photocell h = 100 With activation on closing and opening			

5.2.2) Photosensor ft210b

Photosensor FT210B combines in a single device a force limitation system (type C to the standard EN12453) and a presence detector that detects obstacles on the optic axis between the transmitter TX and receiver RX (type D to standard EN12453). On photosensor FT210B the signals of the sensitive edge status are sent via the photocell beam, integrating the 2 systems in a single device. The transmitting section on the mobile leaf is battery-powered, thus eliminating unsightly connection system; special circuits reduce battery consumption to guarantee a lifetime of up to 15 years (see details of the estimated lifetime in the product instructions).

A single FT210B device combined with a sensitive edge (e.g. TCB65)

enables the safety level of the "main edge" as required by the standard EN12453 for any "type of use" and "type of activation". Photosensor FT210B combined with "resistive" sensitive edges (8,2Kohm), is safe with single faults (class 3 to standard EN 954-1). It is equipped with a special anti-collision circuit to prevent interference with other detectors, even not synchronised, and enables the addition of other photocells; for example in the case of transit of heavy vehicles where a second photocell is normally positioned at 1 m from the ground.

For further information on connection methods and address assignment, see the instruction manual for FT210B.

5.3) Connect devices to stop input

STOP is the input that causes immediate shutdown of the movement followed by a brief inversion of the manoeuvre. This input can be connected to devices with an output for NO normally open contact, NC normally closed contact, constant resistance 8,2KΩ or optical devices, such as sensitive edges.

As in the case of BlueBUS, the control unit recognises the type of device connected to the STOP input during the self-learning phase (see paragraph "7.1 - Memorising devices"); after which a STOP

command is activated whenever a variation with respect to the learned status is detected.

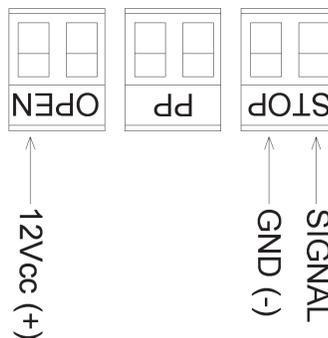
When set accordingly, more than one device can be connected to the STOP input, also different from one another:

- Several NO devices can be connected in parallel with no limit to number.

- Several NC devices can be connected in parallel with no limit to number.
- Two devices with constant resistance 8,2KΩ can be connected in parallel; if there are more than 2 devices then all must be connected in cascade, with a single terminating resistance of 8,2KΩ.
- NO and NC combinations are possible by placing the 2 contacts in parallel, taking care to place a 8,2KΩ resistance in parallel to the NC contact (thus enabling the combination of 3 devices: NO, NC and 8,2KΩ).

⚠ If the STOP input is used to connect devices with safety functions, only devices with the constant resistance 8,2KΩ output or OPTO SENSOR optical devices guarantee safety class 3 against faults, according to standard EN 954-1.

For connection of an OPTO SENSOR type optical device, make connections as shown in Fig. 9:



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5.4) Connect electrical power supply

For electrical power supply of SOON, simply insert the plug in a mains socket. If necessary, use a commercially available adapter if the SOON plug does not correspond to the mains socket available.

6) Initial system start-up - checks

⚠ The following operations will be performed on live electrical circuits and therefore manoeuvres may be hazardous! Therefore take great care and never perform operations alone.

On completion of component installation and electrical connections, a number of simple checks must be made to ensure correct operation of the system operation, before proceeding. Perform the following operations as specified and cross off the points as conformity of results is verified.

6.1) Operating test

As soon as SOON is powered up, proceed as follows:

- Check that the BlueBUS led flashes regularly at the frequency of one flash per second.
- If photocells are present, ensure that the relative leds are also flashing (both on TX and RX); the type of flash is not significant, as this depends on other factors.
- Check that the device connected to the FLASH output is off.
- Check that the courtesy light is off.

If none of these conditions occur, disconnect the power supply immediately and check the electrical connections thoroughly.

7) Memorising devices and positions

7.1) Memorising devices

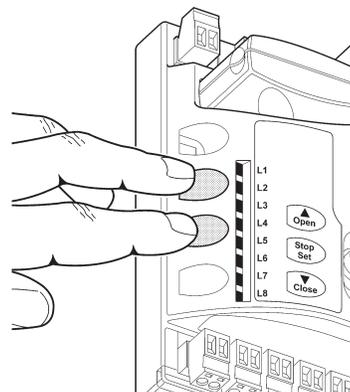
After connecting to the power supply, the control unit must recognise the devices connected to the inputs BlueBUS and STOP. Before this phase, leds L1 and L2 flash to indicate that the device self-learning process must be performed.

⚠ The device self-learning phase must be performed even if no device is connected

1. Press and hold keys [▲] and [Set]
2. Release the keys when leds L1 and L2 start to flash quickly (after around 3s)
3. Wait a few seconds for the control unit to finish device self-learning.

At the end of the self-learning process, the STOP led must remain lit, while leds L1 and L2 turn off (where relevant leds L3 and L4 start flashing).

The phase of self-learning the devices connected can be repeated at any time also after installation, such as in the case that a device is added.



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7.2 Memorising positions

After self-learning the devices, the control unit must recognise the door opening and closing positions. Up to 6 positions can be programmed as follows:

Position	Meaning
A1	Maximum required opening position. When the door reaches this position it stops.
RA1	Slowdown start position during opening manoeuvre. When the door reaches this position the motor decelerates to the minimum speed.
RINT	Intermediate slowdown position in closing manoeuvre. When this point is programmed, the door starts to decelerate at approx. 50 cm beforehand, to pass the position RINT to minimum speed. On passing the RINT position the motor returns to the set speed.
AP	Partial opening position. This is the position at which the door stops after receiving a partial opening command.
RA0	Slowdown start position during closing manoeuvre. When the door reaches this position the motor decelerates to the minimum speed.
A0	Maximum closing position. When the door reaches this position it stops.

When the positions have not been acquired, leds L3 and L4 flash.

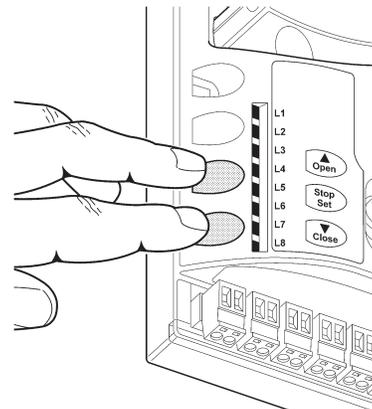
The position memorisation procedure is described below: Positions A1 and A0 must be programmed, while the other positions can be skipped. In the latter case, they are calculated automatically by the control unit.

1.	Press [Set] + [▼] for 3 seconds to enter in position memorisation mode.
Led 1 flashes: Position A1 programming	
2.	Use keys [▲] or [▼] to move the door to the maximum opening position.
3.	Press [Set] for 2 seconds to confirm position A1. Led L1 remains lit.
Led 2 flashes: Position RA1 programming	
4.	If the opening slowdown position programming is not required, press the key [Set] twice quickly to skip to the next programming; led L2 remains off. Otherwise proceed with the sequence.
5.	Use keys [▲] or [▼] to move the door to the opening deceleration position.
6.	Press [Set] for 2 seconds to confirm position RA1. Led L2 remains lit.
Led 4 flashes: Position RINT programming	
7.	If the intermediate slowdown position programming is not required, press the key [Set] twice quickly to skip to the next programming; led L4 remains off. Otherwise proceed with the sequence.
8.	Use keys [▲] or [▼] to move the door to the intermediate deceleration position.
9.	Press [Set] for 2 seconds to confirm position RINT. Led L4 remains lit
Led 5 flashes: Position RAP programming	
10.	If the partial opening position programming is not required, press the key [Set] twice quickly to skip to the next programming; led L5 remains off. Otherwise proceed with the sequence
11.	Use keys [▲] or [▼] to move the door to the partial opening position.
12.	Press [Set] for 2 seconds to confirm position RAP. Led L5 remains lit
Led 7 flashes: Position RA0 programming	
13.	If the closing slowdown position programming is not required, press the key [Set] twice quickly to skip to the next programming; led L7 remains off. Otherwise proceed with the sequence
14.	Use keys [▲] or [▼] to move the door to the closing deceleration position.
15.	Press [Set] for 2 seconds to confirm position RA0. Led L7 remains lit.
Led 8 flashes: Position A0 programming	
16.	Use keys [▲] or [▼] to move the door to the maximum closing position.
17.	Press [Set] for 2 seconds to confirm position A0. Led L8 remains lit.
18.	On release of [Set] all leds turn off.
19.	Give an open command by pressing [Open] to execute a complete opening manoeuvre.
20.	Give a close command by pressing [Close] to execute a complete closing manoeuvre.

During these manoeuvres, the control unit memorises the force required for the opening and closing movements

It is important that these preliminary manoeuvres are not interrupted for example by a STOP command.

The position learning phase can be repeated at any time also after installation, by simply repeating the procedure from point 1. However, if only one position needs to be modified, repeat the sequence from point 1 and skip programming of the positions not involved by pressing the key **[Set]** twice quickly for each position to skip.



8) Perform final testing of system

8.1) Final testing

Each component of the automation, such as the sensitive edges, photocells, emergency stop, etc., requires a specific testing phase; for these devices the specific procedures in the respective instruction manuals must be performed. To test SOON proceed as follows:

1. Ensure that all specifications in chapter 1 "WARNINGS" have been observed.
2. Release the door from the motor by pulling the release cord down. Check that the door can be moved manually in opening and closing with a maximum force of 225N.
3. Lock the door to the motor by pulling the locking cord down.
4. Using the selector or radio transmitter, perform door opening and closing tests and ensure that the movement corresponds to specifications.
5. Test several times to assess smooth operation of the door and check for any defects in assembly or adjustment and any possible points of friction.
6. Check operation of all system safety devices one at a time (photocells, sensitive edges, etc.) In particular, each time a device is activated the "BlueBUS" led on the control unit must flash rapidly twice to confirm acknowledgement of the event.

7. To check the photocells, and in particular to ensure there is no interference with other devices, pass a cylinder with diameter of 5cm and length 30cm on the optical axis, first close to the TX, then close to the RX and lastly at the centre between the two and ensure that in all cases the device engages, changing from the active status to alarm status and vice versa, and that the envisaged action is generated on the control unit, for example: in the closing manoeuvre it inverts movement.
8. If hazardous situations generated by the moving door are protected by means of impact force limitation, measure the force as specified in the standard EN 12445. If speed and motor force controls are used as auxiliary functions with the system for reduction of impact force, test and identify the setting that obtains the best results.

8.2) Commissioning

Commissioning can only be performed after positive results of all test phases on Soon and the other devices present. Partial or "makeshift" commissioning is strictly prohibited.

1. The prepared automation technical documentation should be conserved for at least ten years and must contain at least the following: overall drawing of the automation, electrical wiring diagram, risk assessment and relative solutions adopted, manufacturer's declaration of conformity for all devices used (in the case of Soon, use the EC declaration of conformity enclosed); copy of the operation instruction manual and maintenance schedule for the automation.
2. Affix a dataplate on the door, specifying at least the following data: type of automation, name and address of manufacturer (responsible for commissioning), serial number, year of construction and CE mark
3. Permanently affix a label or plate in the vicinity of the door, indicating the operations for door release and manual manoeuvres.
4. Permanently affix a label or plate on the door, bearing this image (min. height 60 mm).
5. Prepare and provide the owner with the declaration of conformity of the automation.
6. Prepare and provide the owner with a the manual "Automation operation instructions and warnings".

7. Prepare and provide the owner with the automation maintenance schedule (containing all prescriptions for maintenance of individual devices).
8. Before commissioning the automation, ensure that the owner is adequately informed in writing (such as in the automation instruction and warning manual) of all associated risks and hazards.



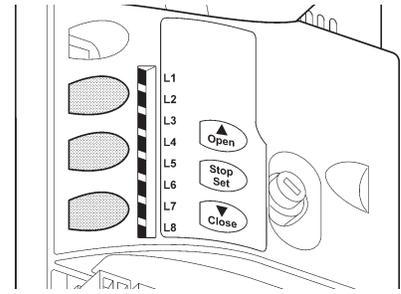
9) Instructions for personalised automation operation

SECTION 2 describes how to personalise operation of the automation, by means of settings and options to be memorised in the control unit. The final section is dedicated to troubleshooting, maintenance and disposal of the product.

9.1) Programming keys

The SOON control unit is fitted with 3 keys which can be used both for the control of the unit during testing and the programming pro-cedure:

OPEN ▲	The "OPEN" key enables the user to open the door or scroll up through the programming steps
STOP SET	The "STOP" key enables the user to stop the manoeuvre, or when pressed for 5 seconds enables access to programming mode.
CLOSE ▼	The "CLOSE" key enables the user to close the door or scroll down through the programming steps



10) Settings

The SOON control unit is equipped with a number of programmable functions; function settings are entered by means of the 3 keys on the control unit: [▲] [Set] [▼] and are displayed by means of 8 leds: **L1....L8**.

The programmable functions available on SOON are divided into 2 levels:

Level 1: functions settable in ON-OFF mode (enabled or disabled); in this case each led **L1....L8** indicates a function, if lit the function is enabled, if off the function is disabled; see Table 3.

Level 2: parameters settable on a scale of values (from 1 to 8); in this case each led **L1....L8** indicates a set value from the possible 8; see Table 4.

10.1) Level 1 functions

Table 3: list of programmable functions: level 1

Led	Function	Description
L1	Automatic closure	This function enables automatic closure of the gate after a set pause time; by default the Pause Time is set at 30 seconds, but can be modified to 10, 20, 40, 60, 80, 120, 160 or 200 seconds. If the function is disabled, operation is "semiautomatic".
L2	Close After Photo	This function enables the system to keep the door open only for the time required for transit, in fact activation of "Photo" always causes automatic closure with a pause time of 5s (regardless of the set value) The behaviour changes according to whether the function "Automatic closure" is enabled or disabled. With "Automatic closure" disabled: the door always reaches the totally open position (even if Photo is disengaged beforehand). On release of Photo, automatic closure is activated with a pause of 5s. With "Automatic closure" enabled: the opening manoeuvre stops immediately after release of the photocells and automatic closure is activated with a pause of 5s. The function "Close After Photo" is always disabled in manoeuvres interrupted by means of a Stop command. If the function "Close After Photo" is disabled, the pause time is as set; otherwise there is no auto-matic closure if the function is disabled.
L3	Always Close	The function "Always Close" is activated, causing closure, when an open door is detected on restoral of power supply. For safety reasons, the manoeuvre is preceded by a 3-second pre-flashing interval. If the function is disabled, the door remains stationary on restoral of power.
L4	Stand-By	This function enables reduction of consumption to a minimum. If this function is enabled, 1 minute after completion of the manoeuvre the control unit turns off the BlueBUS output (and therefore the devices) and all leds, with the exception of the BlueBUS led, which flashes at a slower speed. When the control unit receives a command it restores full operating conditions. If the function is disabled, no reduction in consumption is enabled.
L5	Long inversion	This function enables the selection of the type of inversion executed by the door after activation of a STOP command or the force limiter device. If the function is disabled, inversion is short (approx. 15cm). If the function is enabled, inversion continues through to the maximum opening or closing position.
L6	Preflashing	The pre-flashing function is added to a pause of 3s between activation of the flashing light and the start of the manoeuvre to warn of a hazardous situation. If preflashing is disabled, activation of the flashing light coincides with the start of the manoeuvre.
L7	Sensitivity	This function enables a significant increase in sensitivity of the motor for obstacle detection. If used in support of detection of the impact force, the parameters "Speed" and "Motor force" must also be set in the level 2 menu.
L8	Compensation	This function enables recovery of the extension over time of the metal tops of the door and is subordinate to the use of a 8,2KΩ resistive type sensitive edge or OSE optic sensor.

During normal operation of SOON, when no manoeuvre is in progress, leds **L1....L8** are lit or off depending on the status of the associated function, for example **L1** is lit if the function "Automatic closure" is enabled.

10.2) Level 1 programming

By default level 1 function are all set to OFF, but can be modified at any time as described below. Take care during modification procedures, as there is a maximum time interval of 10 seconds between pressing one key and another; otherwise the system exits the procedure automatically memorising the changes made up to that time.

1. Press and hold **[Set]** for approx. 3s
2. Release **[Set]** when led L1 starts flashing.
3. Press keys **[▲]** or **[▼]** to move the flashing led to the led associated with the function to be modified
4. Press **[Set]** to change the status of the function (short flash = OFF; long flash = ON)

Wait 10s to exit the programming mode automatically after the maximum time interval.

Note: points 3 and 4 can be repeated during the same program-ming phase to set other functions to ON or OFF.

10.3) Level 2 Functions (settable parameters)

Table 4: list of programmable functions: level 2

Input Led	Parameter	Led (level)	Value	Description
L1	Pause Time	L1	10 seconds	Sets the pause time, i.e. the time before automatic closure. Applied only when auto-matic closure function is enabled
		L2	20 seconds	
		L3	40 seconds	
		L4	60 seconds	
		L5	80 seconds	
		L6	120 seconds	
		L7	160 seconds	
		L8	200 seconds	
L2	Funzione P.P.	L1	Open - stop - close - stop	Sets the sequence of commands associated with the SS input or the 1st radio command.
		L2	Open - stop - close- open	
		L3	Open - close - open - close	
		L4	Apartment block	
		L5	Apartment block 2 (more than 2" generates stop)	
		L6	Step-step 2 (less than 2" generates partial open)	
		L7	Hold-to-run	
		L8	Opening in "semiautomatic", closure in "hold-to-run"	
L3	Motor speed	L1	Speed 1 (30% - slow)	Sets the motor speed during normal travel.
		L2	Speed 2 (44%)	
		L3	Speed 3 (58%)	
		L4	Speed 4 (72%)	
		L5	Speed 5 (86%)	
		L6	Speed 6 (100% - fast)	
		L7	Open V4, close V2	
		L8	Open V6, close V4	
L4	FLASH output.i	L1	Door Open Indicator	Selects the device connected to the FLASH output.
		L2	Active if door closed	
		L3	Active if door open	
		L4	Flashing light	
		L5	Electric block	
		L6	Electric lock	
		L7	Suction cup	
		L8	Maintenance indicator	
L5	Motor Force on opening	L1	Force 1 (low)	Sets the system for controlling motor force, to adapt it to the weight of the door during the opening manoeuvre.
		L2	Force 2	
		L3	Force 3	
		L4	Force 4	
		L5	Force 5	
		L6	Force 6	
		L7	Force 7	
		L8	Force8 (high)	
L6	Motor Force on closing	L1	Force 1 (low)	Sets the system for controlling motor force, to adapt it to the weight of the door during the closing manoeuvre.
		L2	Force 2	
		L3	Force 3	
		L4	Force 4	
		L5	Force 5	
		L6	Force 6	
		L7	Force 7	
		L8	Force8 (high)	

Note: "■" represents factory settings

SEGUE

Input Led	Parameter	Led (level)	Value	Description
L7	Maintenance notification	L1	Automatic (based on gravity of manoeuvre)	Controls the number of manoeuvres after which the automation maintenance notification signal is sent (see paragraph "13 Maintenance notification").
		L2	1.000	
		L3	2.000	
		L4	4.000	
		L5	6.000	
		L6	8.000	
		L7	10.000	
		L8	12.000	
L8	Fault log list	L1	Result of 1 st manoeuvre (most recent)	Enables the user to check the type of faults occurring in the last 8 manoeuvres (see paragraph "14 Fault log list").
		L2	Result of 2 nd manoeuvre	
		L3	Result of 3 rd manoeuvre	
		L4	Result of 4 th manoeuvre	
		L5	Result of 5 th manoeuvre	
		L6	Result of 6 th manoeuvre	
		L7	Result of 7 th manoeuvre	
		L8	Result of 8 th manoeuvre	

Note: "■" represents factory settings

All parameters can be adjusted as required without any contraindications, only the "Motor force on opening" and "Motor force in closing" may require special attention:

- Use of high force values are not recommended to compensate for the fact that the leaf has anomalous points of friction; excessive force may impair the safety system and damage the leaf.
- If the "Motor force control" is used in support of the system for impact force reduction, after each adjustment the force measurement procedure must be performed, as envisaged by standard EN 12445.
- Wear and atmospheric conditions influence movement of the gate; and force settings should be checked periodically.

10.4) Level 2 programming

By default the settable parameters are set as shown in Table 4 with: "■" but can be modified at any time as described below. Take care during modification procedures, as there is a maximum time interval of 10 seconds between pressing one key and another; otherwise the system exits the procedure automatically memorising the changes made up to that time.

1.	Press and hold [Set] for approx. 3s
2.	Release [Set] when led L1 starts flashing.
3.	Press keys [▲] or [▼] to move the flashing led to the "in-put led" associated with the parameter to be modified
4.	Press and hold [Set] during steps 5 and 6
5.	Wait approx. 3s after which the led associated with the current level of the parameter to be modified will light up.
6.	Press keys [▲] or [▼] to move the led associated with the parameter value
7.	Release [Set]

Wait 10s to exit the programming mode automatically after the maximum time interval.

Note: points 3 to 7 can be repeated during the same programming phase to modify other parameters.

11) Maintenance notification

SOON enables the user to be notified when a maintenance check needs to be performed on the automation. The number of manoeuvres after which the signal can be enabled is selectable from 8 levels, by means of the modifiable parameter "Maintenance notification" (see Table 4).

Adjustment level 1 is "automatic" and takes into account manoeuvre stress, i.e. force and duration of the manoeuvre, while the other adjustments are set on the basis on the number of manoeuvres.

The maintenance requirement notification is via the flashing light or the maintenance indicator, depending on the relative settings (see Table 4).

On the basis of the number of manoeuvres performed with respect to the programmed limit, the Flash flashing light and maintenance indicator activate the signals as described in Table 5.

Table 5: maintenance notification signal with Flash and maintenance indicator

Number of manoeuvres	Signal on Flash	Signal on maintenance indicator
Less than 80% of the limit	Normal (0.5s on, 0.5s off)	On for 2s at the start of opening
Between 81 and 100% of the limit	At the start of the manoeuvre, remains lit for 2s then proceeds normally	Flashes throughout manoeuvre
Over 100% of the limit	At the start of the manoeuvre, remains lit for 2s then proceeds normally	Flashes continuously.

11.1) Check of number of manoeuvres performed

The function "Maintenance notification" enables the user to check the number of manoeuvres performed as a percentage of the set limit. To check, proceed as follows:

1. Press and hold **[Set]** for approx. 3s
2. Release **[Set]** when led L1 starts flashing.
3. Press keys **[▲]** or **[▼]** to move the flashing led to L7, i.e. the "input led" associated with the parameter to be "Maintenance notification"
4. Press and hold **[Set]** during steps 5, 6 and 7
5. Wait approx. 3s after which the led associated with the current level of the parameter "Maintenance notification" will light up.
6. Briefly press keys **[▲]** and **[▼]**.
7. The led corresponding to the selected level flashes a few times. The number of flashes indicates the percentage of manoeuvres performed (in multiples of 10%) with respect to the set limit. For example: when the maintenance notification is set on L7 i.e. 10000, 10% corresponds to 1000 manoeuvres; if the indicator led flashes 4 times, this means that 40% of the maximum number of manoeuvres has been reached (i.e. between 4000 and 4999 manoeuvres). If 10% has not yet been reached, the led does not flash at all.
8. Release **[Set]**

11.2) Manoeuvre counter reset

After performing system maintenance the manoeuvre counter must be reset. Proceed as described in table:

1. Press and hold **[Set]** for approx. 3s
2. Release **[Set]** when led L1 starts flashing.
3. Press keys **[▲]** or **[▼]** to move the flashing led to L7, i.e. the "input led" associated with the parameter "Maintenance notification"
4. Press and hold **[Set]** during steps 5 and 6
5. Wait approx. 3s after which the led associated with the current level of the parameter "Maintenance notification" will light up.
6. Press and hold keys **[▲]** and **[▼]** for at least 5 seconds, then release. The led corresponding to the selected level shows a series of quick flashes to indicate that the manoeuvre counter has been reset.
7. Release **[Set]**

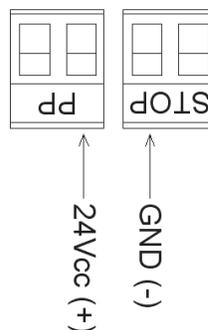
12) Fault log list

SOON enables the display of any faults that have occurred in the last 8 manoeuvres, for example interruption of a manoeuvre due to activation of a photocell or sensitive edge. To check the list of faults, proceed as follows:

1. Press and hold **[Set]** for approx. 3s
2. Release **[Set]** when led L1 starts flashing.
3. Press keys **[▲]** or **[▼]** to move the flashing led to L8, i.e. the "input led" associated with the parameter "Fault log"
4. Press and hold **[Set]** during steps 5 and 6
5. Wait approx. 3s after which the leds corresponding to the manoeuvres subject to faults will light up. Led L1 indicates the result of the most recent manoeuvre, while led L8 indicates the result of the eighth manoeuvre. If the led is lit this means that faults have occurred during the manoeuvre; if off this means that the manoeuvre was completed without faults.
6. Press the keys **[▲]** and **[▼]** to select the required manoeuvre: The corresponding led emits a number of flashes equal to those normally emitted by the flashing light after a fault.
7. Release **[Set]**

13) Connecting other devices

If external devices need to be powered, such as a proximity reader for transponder badges or the lighting of a key-operated selector switch, power can be supplied as shown in figure 12. The supply voltage is 24Vcc -30% ÷ +50% with maximum available current of 100mA.



14) Further details: special functions

14.1) “Always open” function

The “always open” function is a feature of the control unit that enables continuous activation of an opening manoeuvre when the “Step-by-step” command lasts more than 2 seconds; this can be useful for example to connect the SS terminal with the contact of a programme clock to keep the gate open during a specific time band. This feature is valid regardless of the setting of the input SS with exception of the setting as “Apartment block 2”, see parameter “Function SS” in Table 4.

14.2) “Move anyway” function

In the event that a safety device malfunctions or is out of service, the gate may still be moved in “hold-to-run” mode. For details, refer to the paragraph “Control with safety devices out of service” in the enclosure “Instructions and warnings for the SOON gearmotor user”.

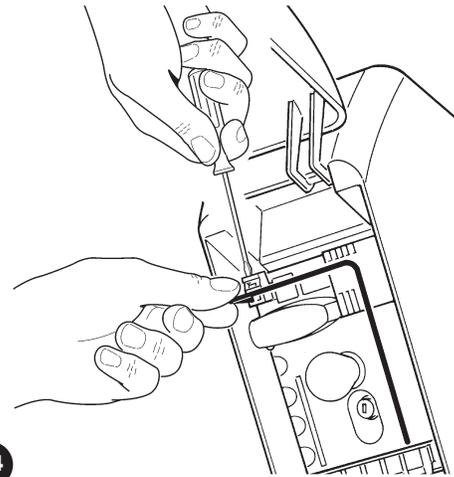
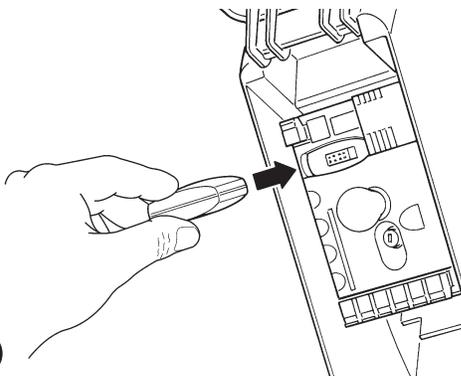
15) Automation operation by means of transmitter and “SM” radio receiver

The Control unit is fitted with a connector specially for the installation of a radio receiver with “SM” type connection (Fig. 13), to control the automation using a radio transmitter (receiver and transmitter are optional accessories). The four Outputs of the Receiver enable delivery of the following commands to the control unit:

Table 6: commands with receiver SMXI, SMXIS

Output N°1	“SS” command (Step-Step)
Output N°2	“Partial open” command
Output N°3	“Open” command
Output N°4	“Close” command

If the aerial incorporated in LUCYB or other type of external aerial is not used, screw the rigid cable supplied with the receiver onto the aerial terminal (Fig. 14).



16) Automatic fault finding and diagnostics

During normal operation, the control unit constantly monitors the automation processes and is designed to indicate any faults that arise, by means of a pre-set sequence of flashes emitted by the flashing light, courtesy light and the “BlueBUS Led” (the diagnostics flashes always refer to the last action performed by Soon) For an explanation of the number of flashes and associated cause, refer to the table below:

Table 7: diagnostics flash signals

n° flash	Cause
1	BlueBUS synchronisation error
2	Activation of Photocell or Phototest error
3	Gearmotor force insufficient or obstacle detected during travel
4	Stop device activation
5	Memory parameter error
6	Internal manoeuvre limiter activation
7	Power failure on motor circuits
8	Overcurrent on motor circuits

17) What to do if... (Troubleshooting guide)

This is a small guide to solving the most common problems that may arise during installation and programming of the automation.

- **...no manoeuvre is activated and the "BlueBUS" led does not flash**

- Ensure that Soon is powered from a 230V mains. Ensure that fuses F1 and F2 (Fig. 15) are not blown; in this case, identify the cause of the fault and then replace with versions of the same current value and specifications.

- **...no manoeuvre is activated and the flashing light is off**

- Check that the command is effectively received. If the command is delivered to the input SS the relative "SS" led must light up; otherwise if the radio transmitter is used, the "BlueBUS" led flashes quickly twice.

- **...the manoeuvre does not start and the courtesy light flashes a few times**

Count the number of flashes and check with reference to the data in Table 7.

- **...a brief inversion is activated during the manoeuvre**

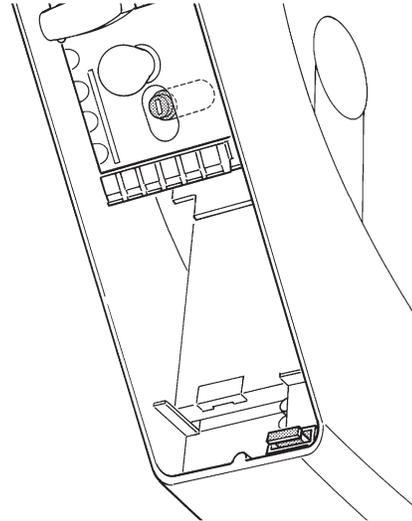
- The selected force may be too low to move the door. Check whether there are any obstacles, and if necessary select a higher force.
- Check whether a safety device connected to the STOP input has tripped.

- **...the manoeuvre is executed by the device connected to the FLASH output does not work**

- Check that the device connected to the FLASH output is effectively the one programmed
- Check that when the device should be powered that there is voltage present on the device terminal; if voltage is present, the problem is caused by the device, which should be replaced with one of the same characteristics. If no voltage is present, this means that there is an electric overload on the output. Check that there are no short circuits on the cable

- **...during the position memorisation phase led L1 or led L8 flashes quickly**

- This means that the upper overtravel limit position has been reached (L1 flashing quickly) or lower overtravel limit (L8 flashing quickly).
- If led L1 flashes, perform a closing manoeuvre until L1 stops flashing quickly. Then detach Soon from the spring support shaft, open the door to the maximum position and re-install Soon in this position.
- If led L8 flashes, perform an opening manoeuvre until L8 stops flashing quickly. Then detach Soon from the spring support shaft, close the door to the maximum position and re-install Soon in this position.



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18) Disposal

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

This product is made up of various types of materials: some may be recycled, and 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.

⚠ 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 shown by the symbol in Fig. 16, 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.

⚠ Local legislation may envisage serious fines in the event of abusive disposal of this product.



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