

WIDES - WIDESI

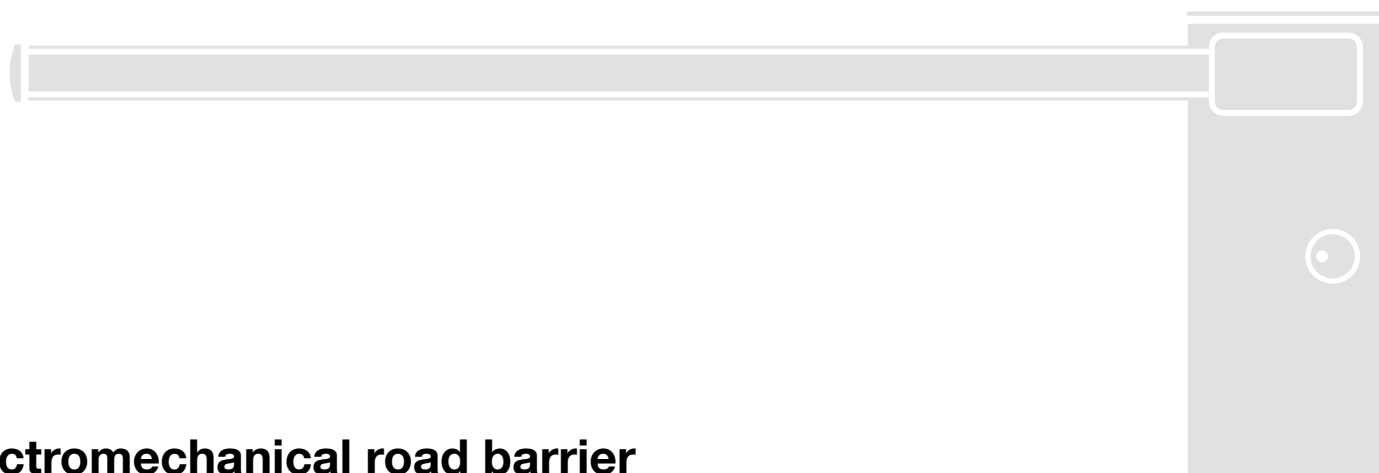
WIDEM - WIDEMI

WIDEL - WIDELI

WIDES/V1 - WIDESI/V1

WIDEM/V1 - WIDEMI/V1

WIDEL/V1 - WIDELI/V1



Electromechanical road barrier

EN - User, installation and safety instructions

CE declaration of conformity and declaration of incorporation of partly-completed machinery

**Declaration in accordance with the following Directives:
2014/30/UE (EMC); 2006/42/CE (MD) annex II, part B**

Note: The contents of this declaration correspond to declarations 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.

Declaration number: **561/WIDE**

Revision: **2**

Language: **EN**

Manufacturer's Name: NICE S.p.A.

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

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

Type of product: Electro-mechanical barrier

Model / Type: WIDES, WIDESI, WIDEM, WIDEMI, WIDEL, WIDELI

Accessories: -

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

- DIRECTIVE 2014/30/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (recast), in accordance with the following harmonised standards: EN 61000-6-2:2005, EN 61000-6-3:2007+A1:2011
- DIRECTIVE 2014/35/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (recast), in accordance with the following harmonised standards: EN 60335-1:2002 + A1:2004 + A11:2004 + A12:2006 + A2:2006 + A13:2008 + A14:2010 + A15:2011
EN 60335-2-103:2003 +A11:2009

In addition, the product conforms to the following directive in accordance with the provisions applicable to partly completed machinery:

- Directive 2006/42/EC OF THE EUROPEAN PARLIAMENT AND COUNCIL of 17 May 2006 regarding machines and amending directive 95/16/EC (consolidated text)
 - It is hereby declared that the relevant technical documentation has been compiled in accordance with Annex VII Part B of Directive 2006/42/CE 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. This shall be without prejudice to the intellectual property rights of the manufacturer of the partly completed machinery.
 - Should the partly completed machinery be put into service in a European country with an official language different to the one used in this declaration, a translation into that language must be provided by the person bringing the machinery into the language area in question.
 - The partly completed machinery may not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of Directive 2006/42/EC, where appropriate.

All parts of the product subject to the following standards comply with them:

EN 13241-1:2003+A1:2011, EN 12445:2002, EN 12453:2002, EN 12978:2003+A1:2009

Oderzo, 14 June 2016

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



CE DECLARATION OF CONFORMITY

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

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

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

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

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

CAUTION 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 permits complete disconnection under the conditions dictated by overvoltage category III
- Handle the product with care during installation, taking care to avoid crushing, denting or dropping it, or allowing contact with liquids of any kind. Keep the product away from sources of heat and naked flames. Failure to observe the above can damage the product, and increase the risk of danger or malfunction. If this should happen, stop installation immediately and contact Customer Service.
- The manufacturer assumes no liability for damage to property, items or persons resulting from non-compliance with the assembly instructions. In such cases the warranty for material defects is excluded
- The weighted sound pressure level of the emission A is lower than 70 dB(A)
- Cleaning and maintenance to be carried out by the user must not be carried out by unsupervised children
- Before working on the system (maintenance, cleaning), always disconnect the product from the mains power supply
- Check the system periodically, in particular all cables, springs and supports to detect possible imbalances, signs of wear or damage. Do not use, if repairs or adjustments are necessary, since installation failure or an incorrectly balanced automation may cause injury
- The packing materials of the product must be disposed of in compliance with local regulations
- When operating a biased-off switch, make sure that other persons are kept away from the automation.
- When performing an operation, keep an eye on the automated mechanism and keep all bystanders at a safe distance until the movement has been completed
- Do not operate the automation if anyone is working on it; disconnect its power supply before permitting such work to be done
- If the power cable is damaged, it must be replaced by the manufacturer or the latter's technical assistance service, or by a similarly qualified person, in order to prevent any type of risk

INSTALLATION PRECAUTIONS

- Prior to installing the drive motor, check that all mechanical components are in good working order and properly balanced, and that the automation moves correctly
- Make sure that the controls are at a safe distance from the moving parts, while allowing a good view of them. Unless a switch is used, the controls should be installed at least 1.5m off the ground and should not be accessible
- If the opening movement is controlled by a fire system, make sure that any windows larger than 200mm are closed by the controls
- Make sure that nothing can be trapped between the moving and fixed parts during manoeuvres
- Permanently affix the manual operation label next to the manual control
- After installing the drive motor, make sure that the mechanism, protective system and all manual manoeuvres operate properly

A - Special warnings in relation to European directives applicable to the product

• “Construction Products” Directive:

Special warnings for this product in relation to the Construction Products Regulation No. 305/2011:

- The full installation of this product, as described in this instruction manual and for certain types of use (e.g. excluding use solely for vehicles), may cause the product to fall within the scope of Regulation No. 305/2011 and its harmonised standard EN 13241-1.
- In paragraph B “Installation criteria and special warnings in relation to essential requirements”, all necessary installation criteria are given to ensure that the product meets the essential requirements of Regulation No. 305/2011; the installer must verify and ensure that all these criteria have been scrupulously complied with.
- The essential requirements might not be guaranteed if the road barrier mechanism is installed and used without compliance with one or more of these criteria. **It is forbidden to use the product in these situations until the installer has verified the compliance with the Directive requirements**; in this case the label attached to the product must be removed immediately and the “EC Declaration of Conformity” (Annex I to this manual) cannot be used. As a result, the installer in turn becomes the manufacturer of the “automatic barrier” product and must comply with the provisions of Regulation No. 305/2011 and its harmonised standard EN 13241-1. In this case the road barrier mechanism must be considered as “partly-completed machinery” and the “Declaration of Conformity” of Annex II can be used (for inclusion in the technical documentation).

• “Machinery” Directive:

- In paragraph B “Installation criteria and special warnings in relation to essential requirements”, all necessary installation criteria are given to ensure that the product meets the essential requirements of the Machinery Directive. The installer must verify and ensure that all these criteria have been scrupulously complied with.
- The essential requirements might not be guaranteed if the road barrier mechanism is installed and used without compliance with one or more of these criteria. **It is forbidden to use the product in these situations until the installer has verified the compliance with the Directive requirements**; in this case the “EC Declaration of Conformity: Annex I” cannot be used. As a result, the installer in turn becomes the manufacturer of the “automatic barrier” product and must comply with the provisions of the Machinery Directive. The manufacturer must make an assessment of the associated risks, including a list of the essential safety requirements as envisaged in “Appendix I of the Machinery Directive”, specifying the related adopted solutions. Note that the risk assessment is one of the documents included in the automation Technical documentation. This must be completed by a professional installer, and the “Declaration of conformity” of Annex II can be used and must be filled in by the installer of the road barrier mechanism.

Special warnings regarding the use of this product in relation to the “Machinery” Directive; these are to be taken into consideration if the installer becomes the manufacturer of the product.

- The road barrier mechanism comes onto the market as “partly-completed machinery” and is therefore manufactured to be integrated into a machine or assembled with other machines in order to create “a machine” pursuant to Machinery Directive, only in combination with other components and in the manner described in this instruction manual. As specified in the Machinery Directive, the use of this product is not admitted until the manufacturer of the machine on which this product is mounted has identified and declared it as conforming to the Machinery Directive.

• “Low Voltage” Directive:

Special warnings regarding the fitness of use of this product in relation to the “Low Voltage” Directive.

This product meets the provisions in the “Low Voltage” Directive if used for the use and in the configurations specified in this instruction manual and in combination with the items in the Nice S.p.A. product catalogue.

If the product is used in unspecified configurations or with other unspecified products, the requirements may not be guaranteed; the use of the product in these situations is prohibited until the installer has verified compliance with the specified requirements of the directive.

• “Electromagnetic compatibility” Directive:

Special warnings regarding the fitness of use of this product in relation to the “Electromagnetic compatibility” Directive.

This product has been subjected to electromagnetic compatibility tests in the most critical situations of use and in the configurations specified in this instruction manual and in combination with the items in the Nice S.p.A. product catalogue.

If the product is used in unspecified configurations or with other unspecified products, the electromagnetic compatibility may not be guaranteed; the use of the product is prohibited in these situations until the installer has verified compliance with the specified requirements of the directive.

B - Installation criteria and special warnings in connection with essential requirements

When installed correctly, this product meets the essential requirements laid down in Regulation No. 305-2011 according to the requirements in harmonised standard EN 13241-1, as indicated in **Table A** and in the European directive on “Machinery”.

Caution! – If the road barrier mechanism were intended solely for the transit of vehicles, it would be excluded from the scope of EN 13241-1; in this case, compliance with some of the requirements in Table A may not be required. Transit may be considered “solely for vehicles” when other types of transit (e.g. for pedestrians) are expressly prohibited – for example with appropriate signs – and when adequate space is provided in the immediate vicinity if other types of transit are required.

TABLE A - Essential requirements for CE marking (according to table ZA.1 of EN 13241-1)		
Essential characteristics	Clauses in the standard	Result
Water-tightness	4.4.2	PND*
Releasing of hazardous substances	4.2.9	Compliant
Resistance to wind load	4.4.3	Compliant
Thermal resistance	4.4.5	PND*
Air permeability	4.4.6	PND*
Safe opening for vertically moving doors	4.2.8	Compliant
Definition of geometry of glass components	4.2.5	PND*
Mechanical resistance and stability	4.2.3	Compliant
Operating forces for power-operated closures	4.3.3	Compliant
Durability of water-tightness, thermal resistance and air permeability	4.4.7	PND*
* PND = Performance not declared, when the product does not offer this performance, e.g. “Air permeability”, or when the requirement is not applicable, e.g. “Definition of geometry of glass components”.		

• Releasing of hazardous substances:

The product does not contain and/or release hazardous substances in accordance with the requirements of EN 13241-1 and according to the list of substances on the website of the European Community

Special warning to ensure the continued compliance with the requirement – It is essential that the other materials used in the installation, such as electrical cables, comply with this requirement

• **Resistance to wind load**

Table B shows the resistance of the boom to the differential pressure of the wind. The tests were performed on the barrier equipped with an impact protection profile; other accessories could increase its exposed surface area and thereby reduce its resistance to wind loads.

TABLE B				
Type:	WIDE S	WIDE M	WIDE L	
Class with XBA19	4	4	-	-
with XBA15	-	-	3	-
with XBA14 + XBA15	-	-	-	2
Wind pressure [Pa]	> 1000	> 1000	> 700	> 450
Maximum wind speed [km/h]	151	151	126	101
Description	Hurricane	Hurricane	Violent storm/gale	Storm

• **Safe opening for vertically moving doors**

The product does not cause uncontrolled movements or allow the boom to drop in the event of failure of a single component of the suspension or balancing (springs) system.

Special warnings to ensure continued compliance of the requirements:

- Install the product carefully following all the instructions described in Section 3 - Installation and Section 6 - Testing and commissioning.
- Make sure there is an organised maintenance schedule that follows scrupulously the provisions in the "Maintenance Schedule" Section (removable insert at the end of the manual).

• **Mechanical resistance and stability**

The product is designed and manufactured so that the forces, impacts and stress incurred during normal use do not cause any damage or jeopardise its mechanical performance.

Warning: See notes to the requirement "Safe opening for vertically moving doors".

• **Operating forces for power-operated closures**

The operating forces exerted by the boom with regard to the risks of crushing and impact are safeguarded against by means of one of these three methods:

1 For operation with "hold-to-run command" (man present): as specified in EN 12453. In this case the command button must be placed in view of the automation and if it is accessible to the public, the command button must not be available to them, e.g. use only with a key switch.

2 For "Semi-automatic" operation: by limiting the forces as specified in EN 12453

3 For "automatic" operation: by limiting the forces as specified in EN 12453; in this case, at least one pair of photocells must necessarily be installed as shown in Fig. 2.

Special warning to ensure continued compliance with the requirement: see notes to the requirement "Safe opening for vertically moving doors".

1 PRODUCT DESCRIPTION AND INTENDED USE

WIDE is an electromechanical road barrier mechanism for residential, public and industrial use: it controls the opening and closing of a driveway with a width from 3 to 7 metres depending on the model chosen (S - M - L).

⚠ CAUTION! – All uses other than the intended use described and use in environmental conditions other than those described in this manual should be considered improper and forbidden!

WIDE operates with electric power and, in the event of a power failure, you can use it manually by running the manual release. It can also be used with a back-up battery (mod. PS324 - optional accessory) which ensures performance of certain operations during power failures.

model:	INSTALLABLE ACCESSORIES						
	Boom	Rubber	Lights	Pivoting attachment	Jointed boom	Aluminium skirt	Mobile support
WIDE S	3 m	☑ XBA13	☑ XBA4	☑ WIA10	–	☑ 1pc - WA13	–
	4 m XBA19	☑ XBA13	☑ XBA4	☑ WIA10	–	–	–
WIDE M	4 m XBA19	☑ XBA13	☑ XBA4	☑ WIA10	☑ WIA11	☑ 2pcs - WA13	☑ WA12
WIDE L	3 + 3 m XBA15 + XBA9 + XBA15	☑ XBA13	☑ XBA6	–	–	☑ 2pcs - WA13	☑ WA12
	3 + 4 m XBA15 + XBA9 + XBA14	☑ XBA13	☑ XBA18	–	–	–	–
	5 m XBA5	☑ XBA13	☑ XBA6	–	–	☑ 2pcs - WA13	☑ WA12

List of available accessories:

- XBA19 - aluminium boom painted white L4000 mm
- XBA5 - aluminium boom painted white L5150 mm
- XBA14 - aluminium boom painted white L4150 mm
- XBA15 - aluminium boom painted white L3150 mm
- XBA4 - Boom lights WIDE S / WIDE M
- XBA6 - Boom lights WIDE L
- XBA18 - Boom lights WIDE L
- XBA9 - Universal joint

- SIA1 - Foundation plate WIDE S / WIDE M
- SIA2 - Foundation plate WIDE L
- WA12 - Mobile support
- WA13 - Aluminium skirt
- WIA10 - Pivoting attachment
- WIA11 - Jointed boom
- PS324 - Emergency batteries
- WA10 - Stickers
- XBA13 - Rubber impact protection kit

2 APPLICATION LIMITS

Check that all the values shown in Section 12 - Product technical specifications and estimated durability (paragraph 2.1) are compatible with the intended use.

2.1 - Product durability

Durability is the average economic life span of the product; its value is strongly influenced by the index of severity of the manoeuvres. To estimate durability, proceed as described below:

01. Add up the values for the items in Table 1 based on the chosen barrier mechanism model:

TABLE 1	SEVERITY INDEX		
	WIDE S	WIDE M	WIDE L
Jointed boom	/	15%	/
Presence of dust and sand	10%	10%	10%
Presence of Salinity	10%	10%	10%
Aluminium skirt	5%	5%	5%
Mobile support	/	15%	15%
Ambient temperature above 40°C or below 0°C	5%	5%	5%
Operation interrupted by photocell	10%	15%	15%
Operation interrupted by Stop	10%	15%	15%
Speed setting (trimmer FL) above 50%	10%	10%	15%
Force setting (trimmer I) above 50%	5%	10%	10%

02. Depending on the chosen barrier mechanism model, proceed as follows on the graph:

a - using the value found above, draw a vertical line until it crosses the curve

b - from this point draw a horizontal line until it crosses the line of "manoeuvre cycles"

The obtained value is the estimated life span of your product

Severity index (%)	manoeuvre cycles
0	500,000
10	400,000
20	320,000
30	260,000
40	220,000
50	190,000
60	170,000
70	150,000
80	135,000
90	120,000
100	110,000

3 INSTALLATION

⚠ Important! Before installing the product, refer to the 'WARNINGS' Section (at the beginning of the manual) and Section 12 (Technical specifications).

Fig. 1 shows the contents of the package (based on the purchased model): check that everything is present and correct.

- a - WIDE barrier mechanism cabinet (S-M-L)
- b - photocell box for barrier mechanism cabinet
- c - box for small hardware
- d - anchors
- e - manual lock/release key

- f - Boom cap + 2 caps to cover the rubber impact protectors (these are found in the box for small hardware)
- g - boom support
- h - foundation plate
- i - boom connectors (only WIDE L)

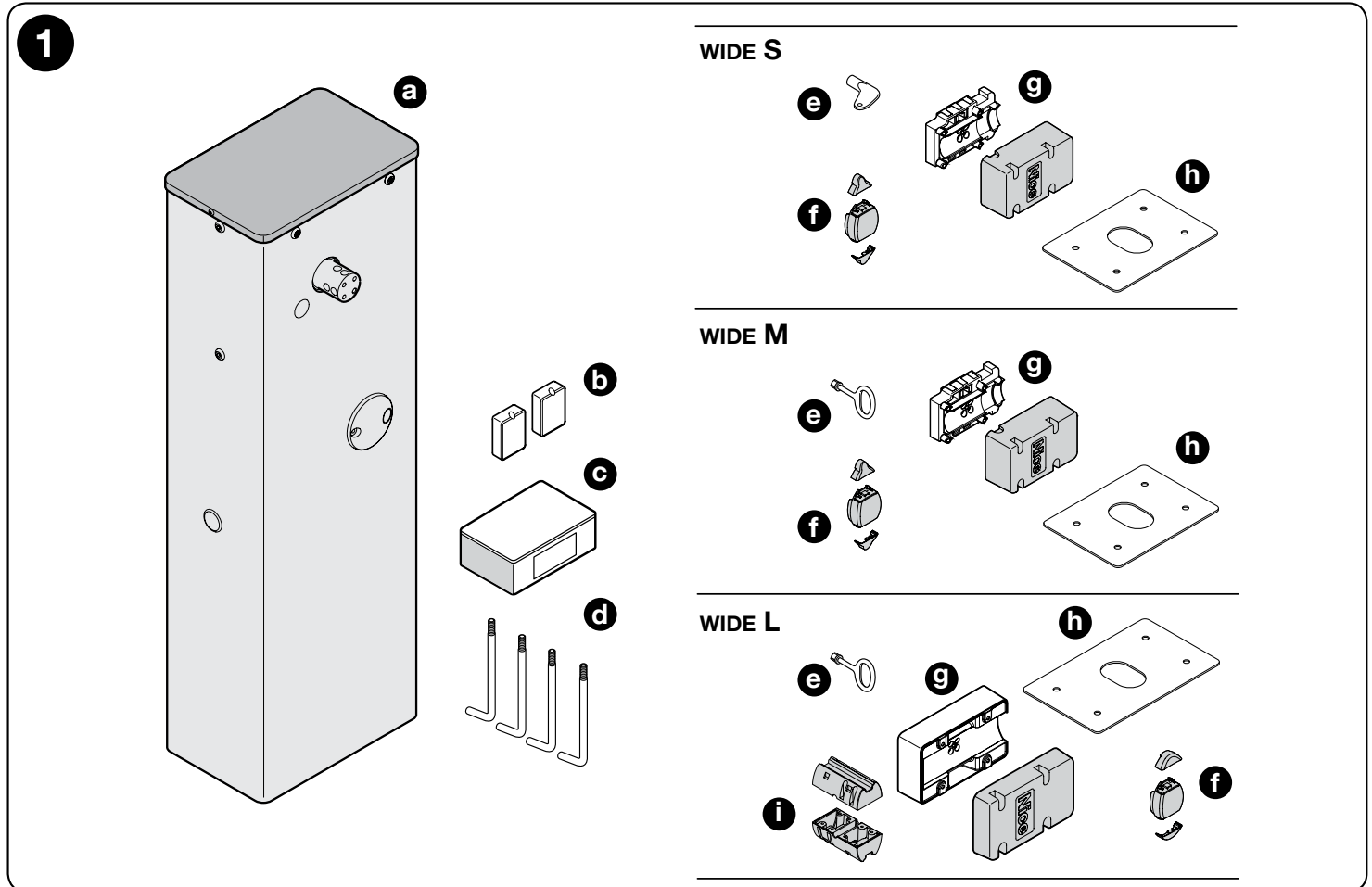
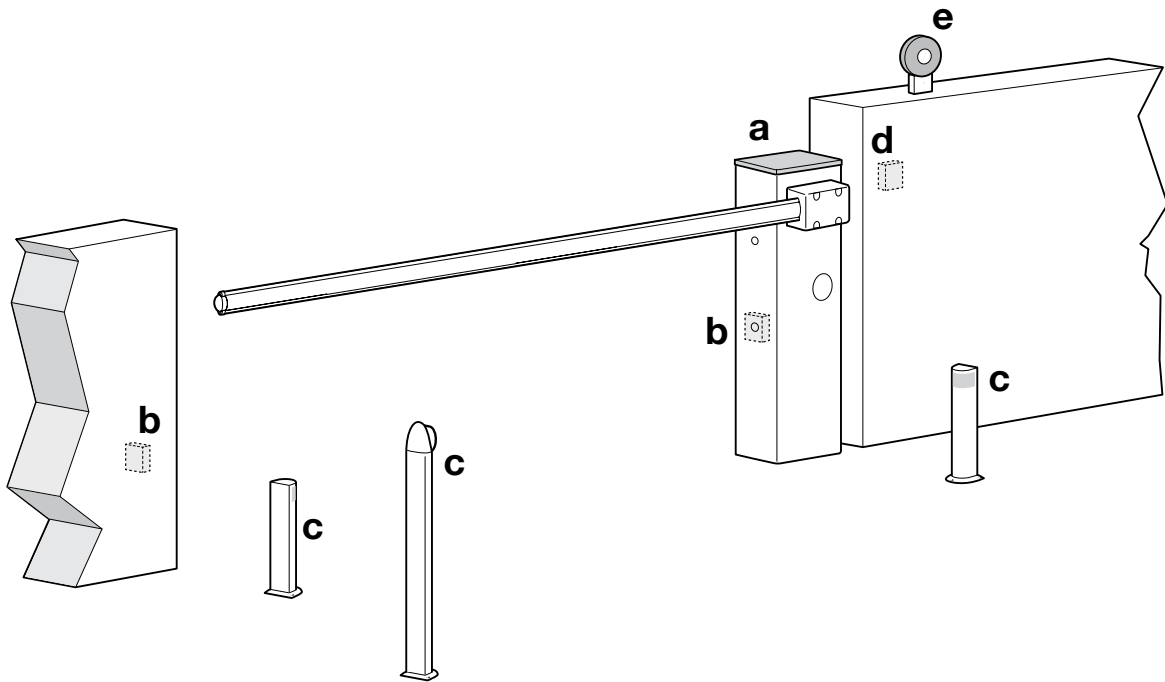


Fig. 2 shows the location of the components of a typical installation using Nice accessories:

- a - WIDE barrier mechanism (S-M-L) + boom
- b - photocells
- c - posts for photocells
- d - key-operated selector switch
- e - flashing light

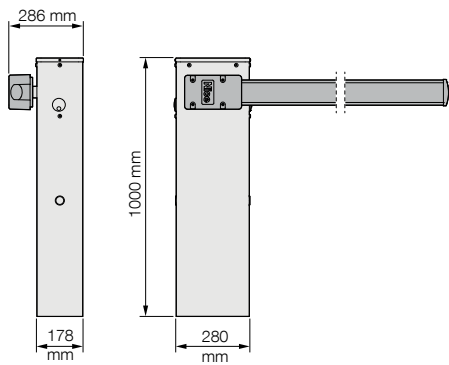
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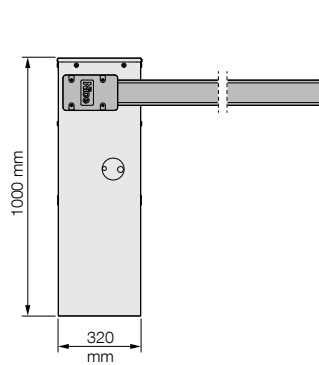
Before proceeding with installation, check the installation dimensions (Fig. 3):

3

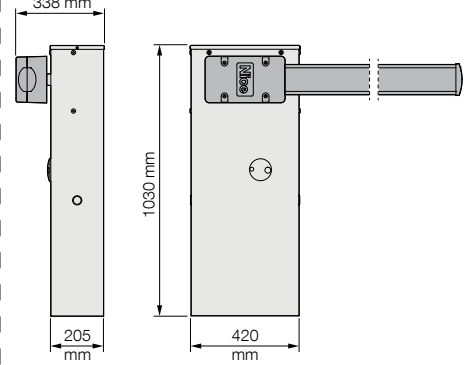
WIDE S



WIDE M



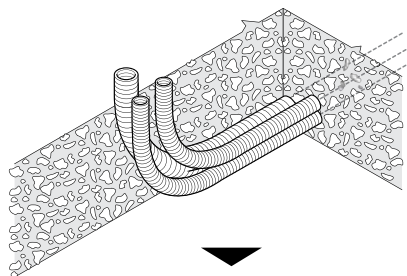
WIDE L



To install the barrier, proceed as described below:

01. Establish the installation position of the various system components (e.g. Fig. 2):

- If the base does not exist, start from step 02
- If the base exists, start from step 06

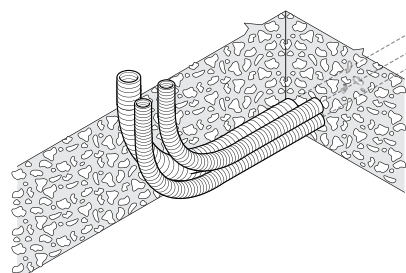


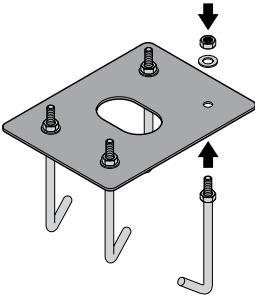
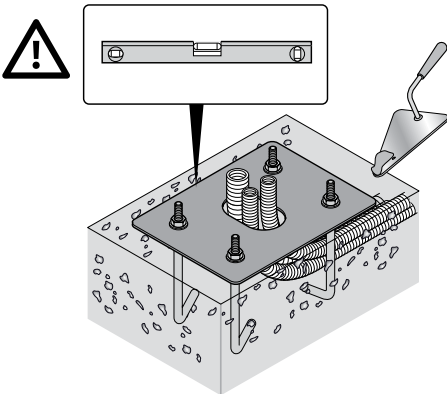
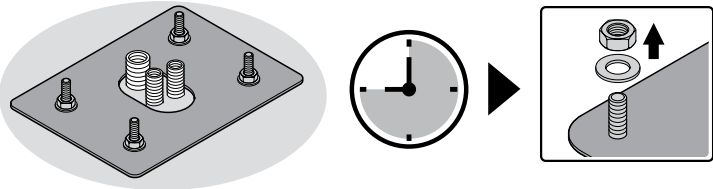
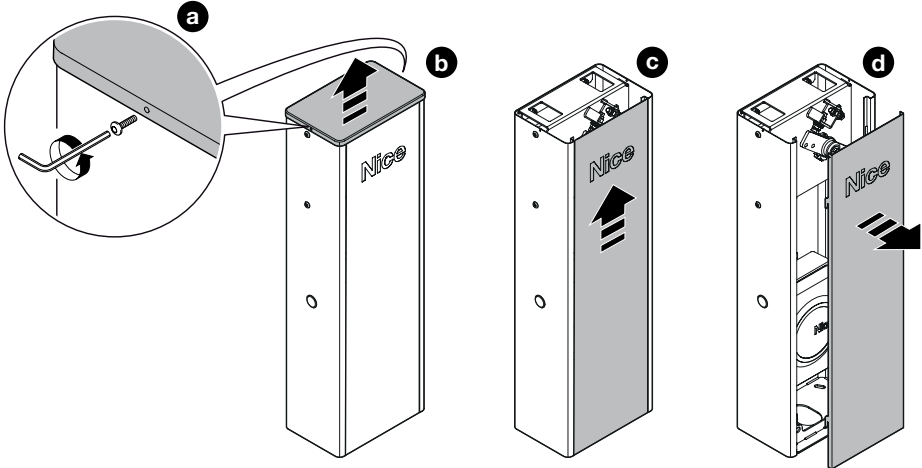
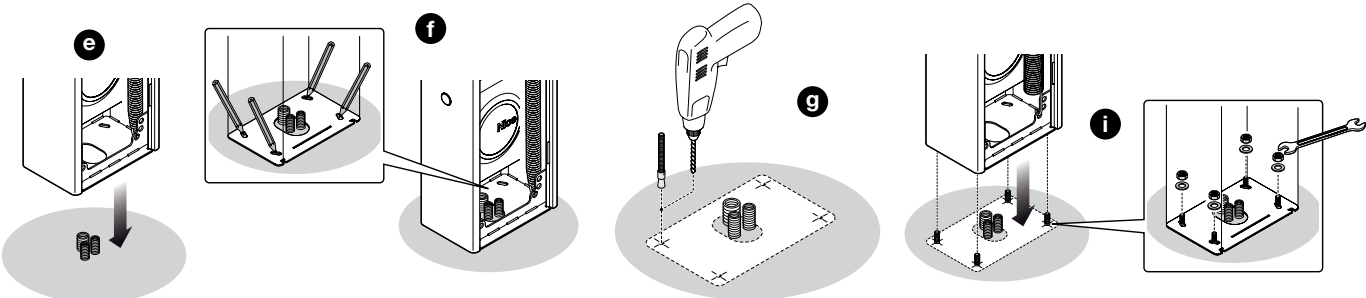
02



06

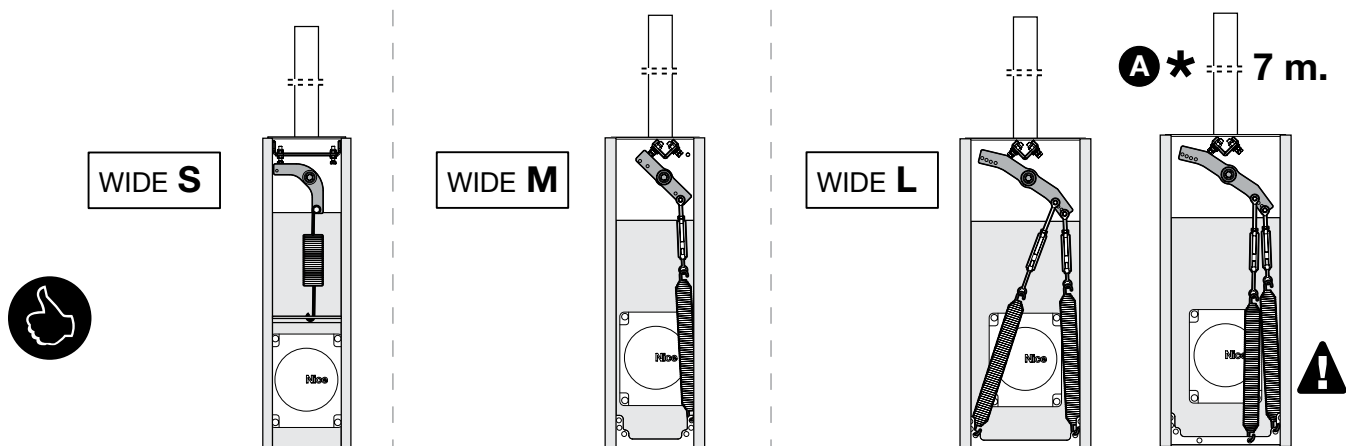
02. Dig the foundation ditch and prepare the tubes for the electrical cables: see Table 3 for the type of cables (Section 4)



03.	<p>Secure the 4 anchors to the foundation plate with one nut above and one below</p> <p>⚠ The lower nut must be screwed up to the end of the thread</p> 
04.	<p>Cast the concrete to secure the foundation plate</p> <p>⚠ Before the concrete hardens, make sure the foundation plate is perfectly level</p> 
05.	<p>Wait until the concrete hardens (usually at least two weeks) and then remove the 4 upper nuts of the anchors</p> 
06.	<p>Fixing the barrier mechanism cabinet</p> <p>a/b - unscrew the screws and remove the cover</p> <p>c/d - remove the cabinet door</p> 
	<p>e/f - position the cabinet and trace the fixing points of the slots</p> <p>g - drill these points on the support surface</p> <p>h - insert 4 expansion anchors (not supplied)</p> <p>i - set the cabinet and block it in position with the nuts and washers (not supplied)</p> 

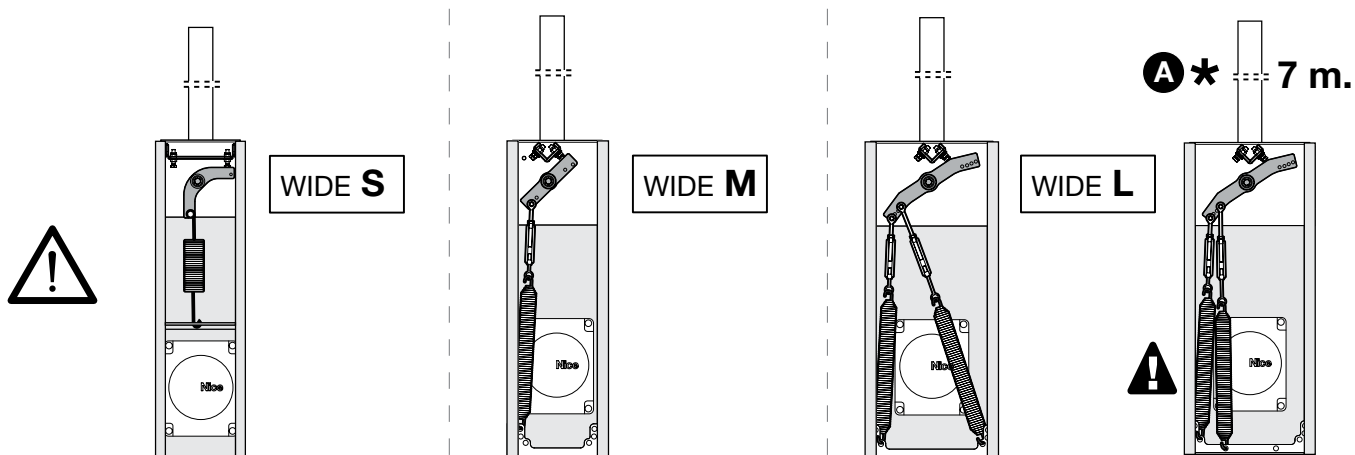
07. Set the DIRECTION OF THE BOOM:

If you require **LEFT-ORIENTED BOOM** with the cabinet on the right (the factory setting), move to step 08 for the adjustment of the balancing spring (N.B. in the factory it is anchored in non definitive holes)

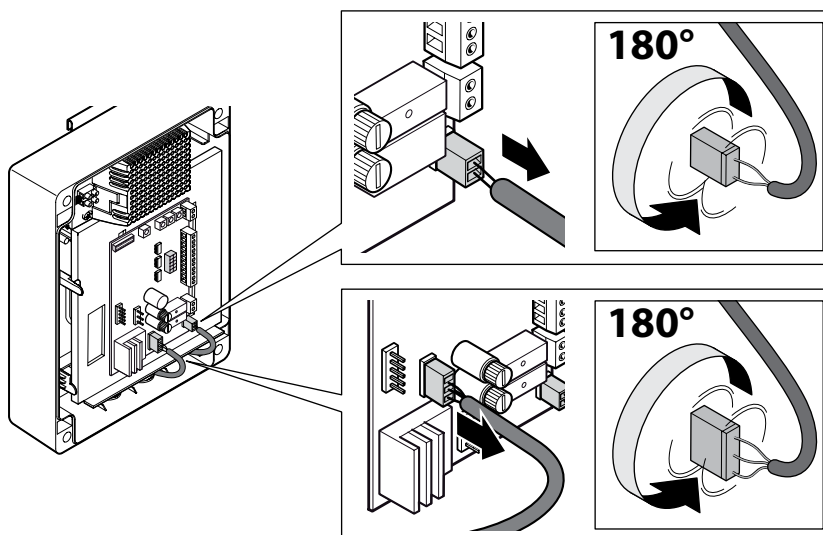


A* Only with 7 m boom place the balancing springs as shown in Figure "A"

If you require **RIGHT-ORIENTED BOOM** with the cabinet on the left, you must proceed as follows:



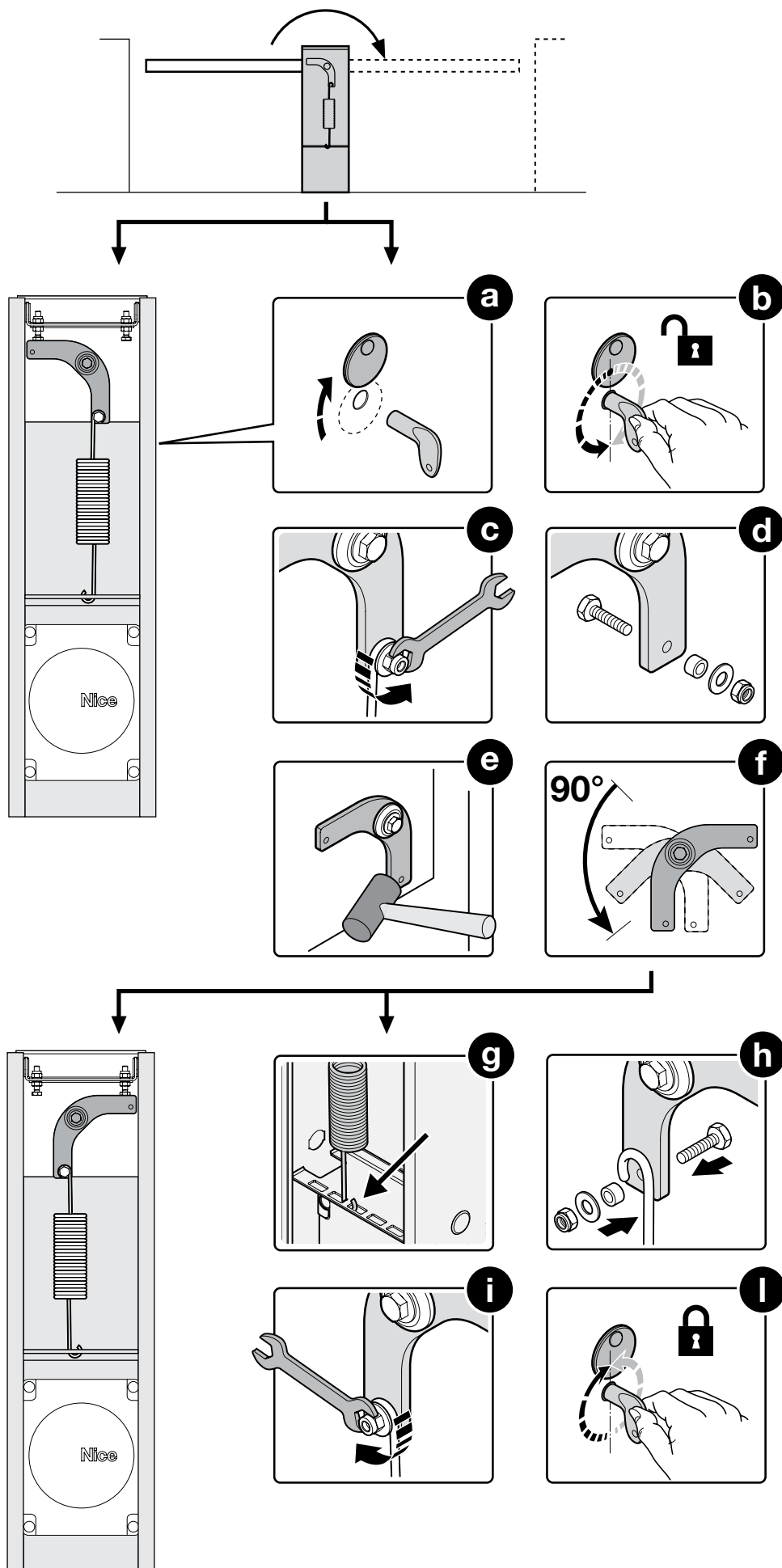
rotate through 180° the motor connector (MOTOR - Fig. 5) and the connector of the limit switches (LIMIT SWITCH - Fig. 5)



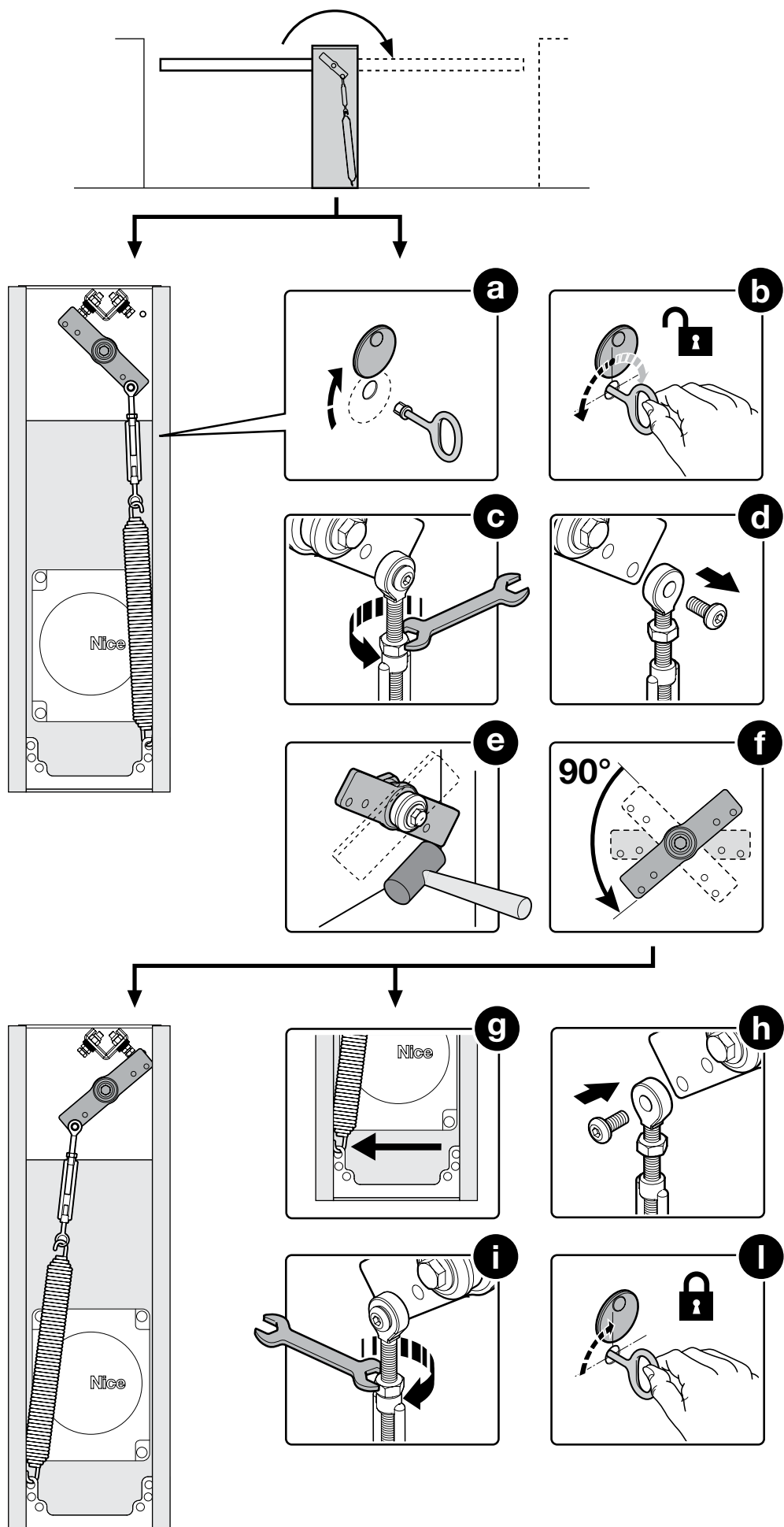
⚠ In the factory, the balancing spring is anchored in **non-definitive holes**.

Move the balancing spring attachment into one of the holes on the other arm of the WIDE balance lever (based on the model purchased)

WIDE S

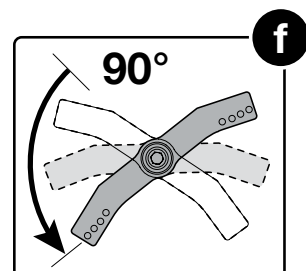
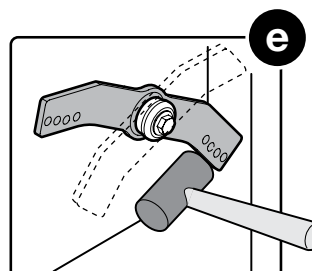
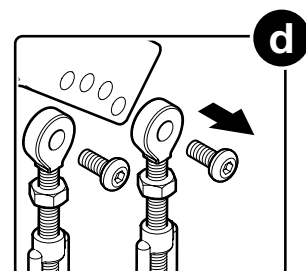
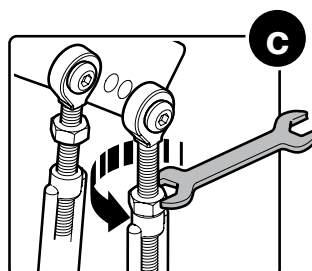
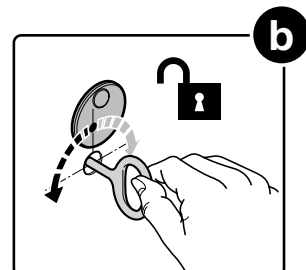
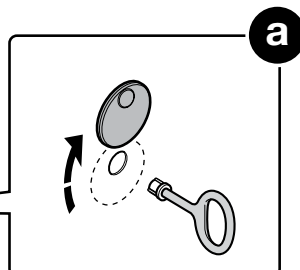
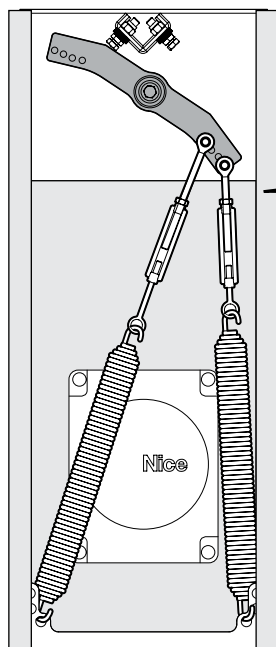
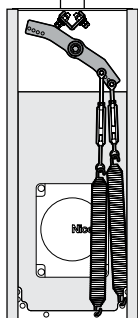


WIDE M

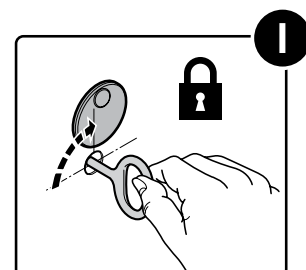
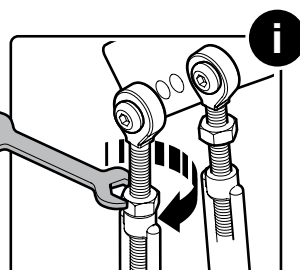
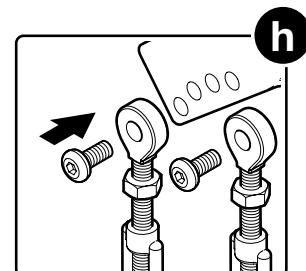
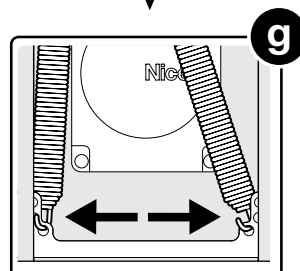
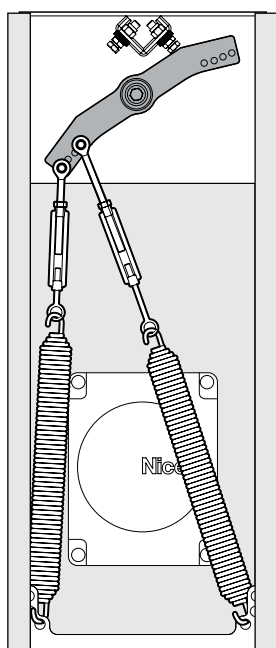
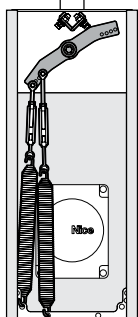


WIDE L

A * 7 m.



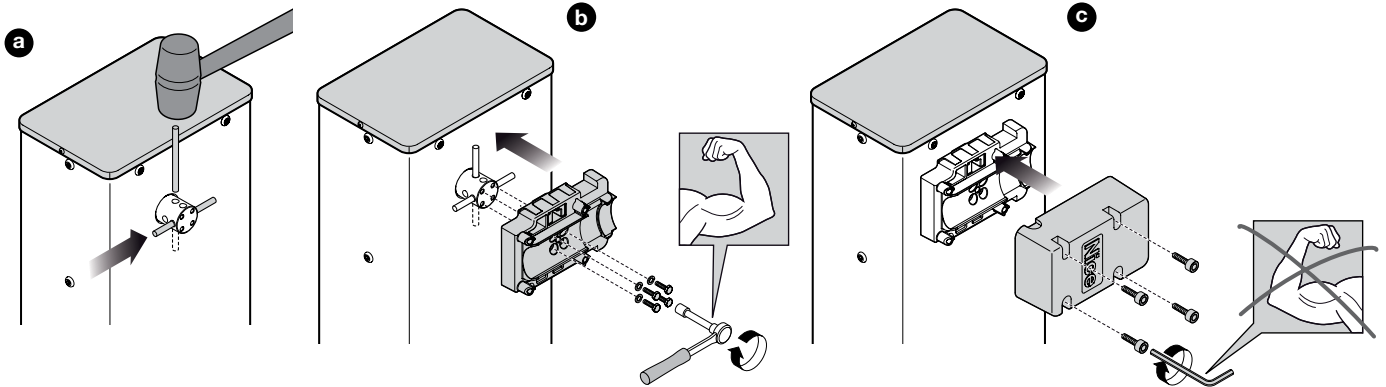
A * 7 m.



⚠ * Only with 7 m boom place the balancing springs as shown in Figure "A"

08. Installation of the boom and accessories:

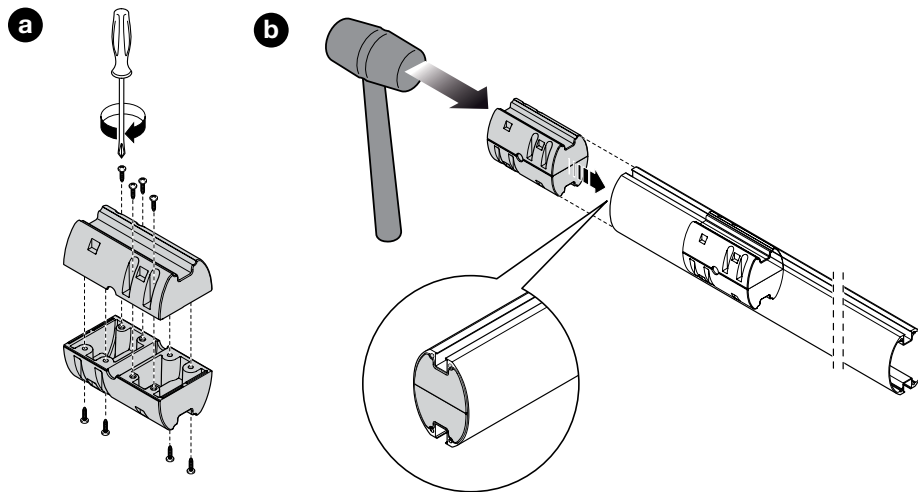
- a** - insert the two pins in their correct positions (on the motor shaft)
- b** - position the support on the drive shaft into a "vertical boom" position and secure it with the specific screws and open grover washers, screwing with force
- c** - place the cover of the boom and secure it partially with the 6 screws



09. Assembly BOOM CONSISTING OF 1 PIECE (whole or cut):

ONLY for WIDE L, start the assembly from this point:

- a** - Assemble the two boom connectors
- b** - insert them into the free end of the boom (if necessary use a rubber mallet) and continue with step '10'

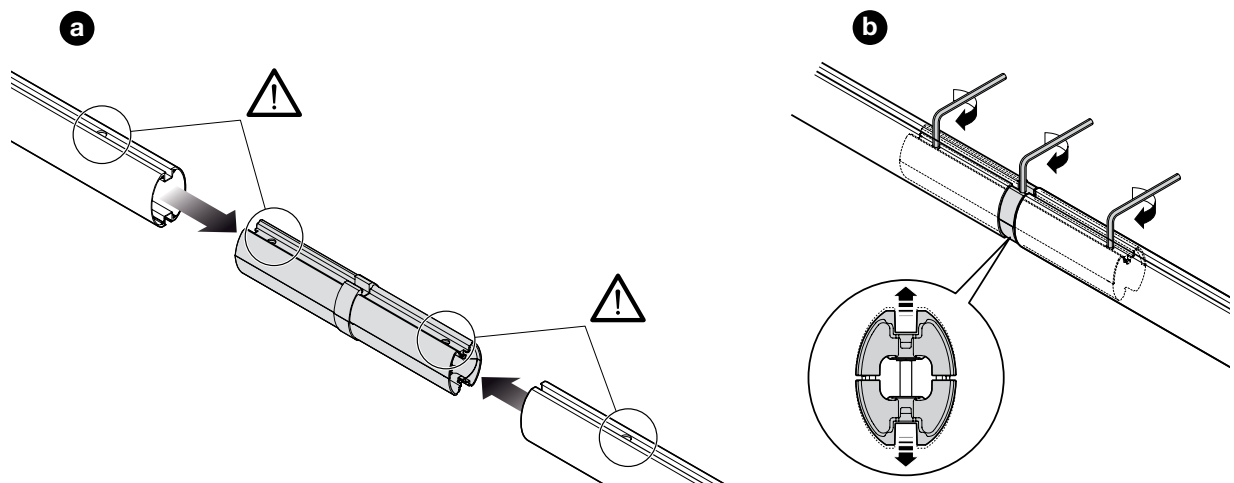


Assembly BOOM CONSISTING OF 2 PIECES (whole or cut):

⚠ CAUTION - With booms consisting of two pieces, you must secure the shorter piece of the boom to the aluminium support.

ONLY for WIDE L, start the assembly from this point:

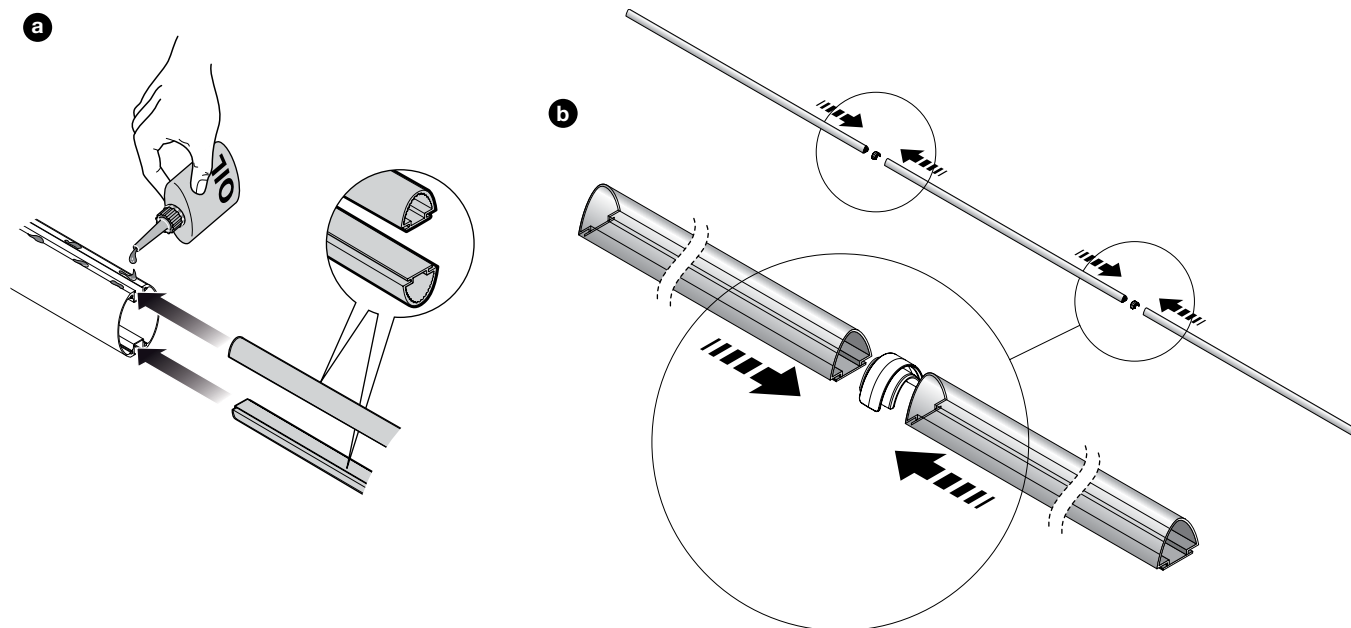
- a** - insert the universal joint into the free ends of the two booms. **Important:** pay attention to the orientation of the joint, because the screw heads must be on the same side as the holes on the booms
- b** - unscrew the 3 screws in equal measure to expand the joint inside the booms and continue with step '10'



10.

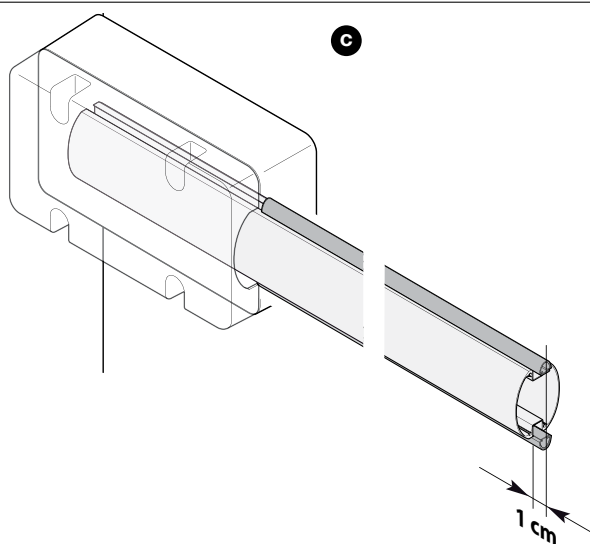
a - lightly oil the aluminium rail on both sides

b - insert the first piece of the rubber impact protector in the slot as far as the end of the boom: perform this action on both sides



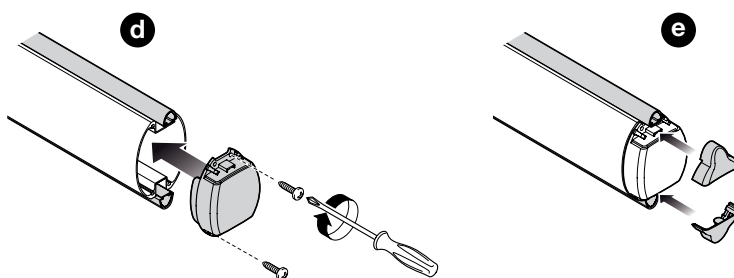
c - insert the joint for the rubber impact protector and repeat for the other pieces

Note - The rubber impact protector can protrude about 1 cm from the end of the aluminium profile

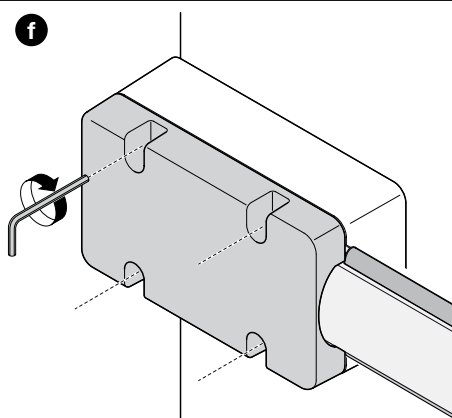


d - put on the boom cap and secure it with the 2 screws supplied

e - position and fit together the two caps to cover the rubber impact protectors

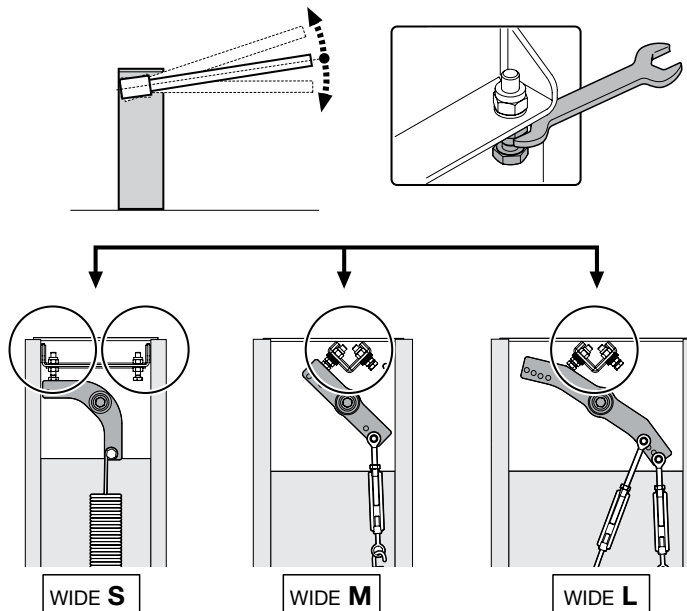


f - insert the whole boom within the support shell up to the stop, then fully tighten the 6 screws on the support



11. If any accessories are intended for the boom, they must be installed at this point: refer to the respective instruction manuals and Section 8 (Further details) in this manual

12. Adjust the mechanical stops of the limit switches



13. Adjust the balancing of the boom, according to the model purchased:

⚠ IMPORTANT - Versions WIDE L:

WIDE L with 5 m boom = requires 1 balancing spring positioned/anchored so as to guarantee the balancing at 45°

WIDE L with 6/7 m boom = requires 2 balancing springs positioned/anchored so as to have the balancing at 45°

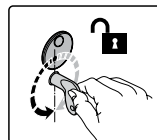
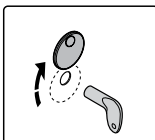
a - manually release the gearmotor

b - manually move the boom to about half way (45°): if the boom remains still, it means the balance is correct (a slight imbalance is allowed).

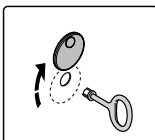
WARNING - The boom must never move heavily.

a

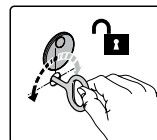
WIDE S



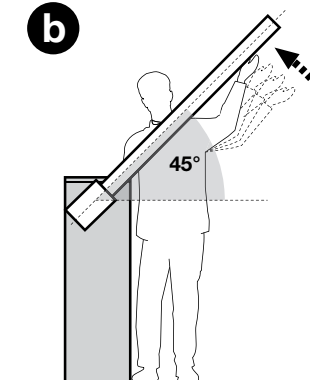
WIDE M



WIDE L

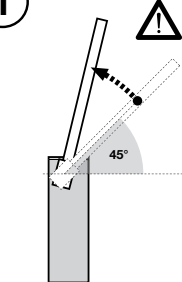


b

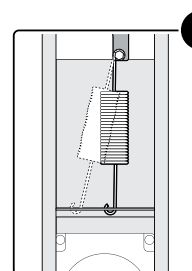
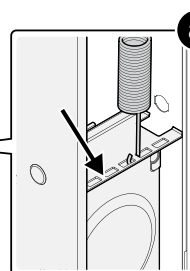
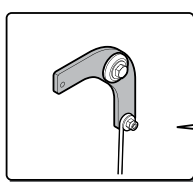


⚠ If the boom does not remain still 1 = if the boom tends to rise
proceed as follows: 2 = if the boom tends to drop

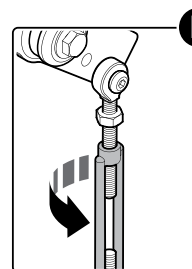
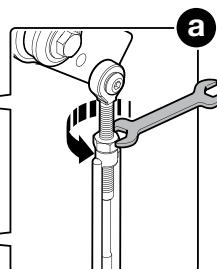
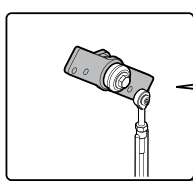
1



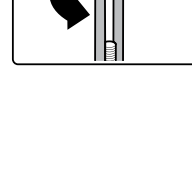
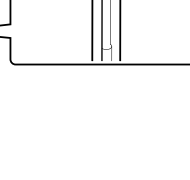
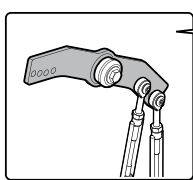
WIDE S



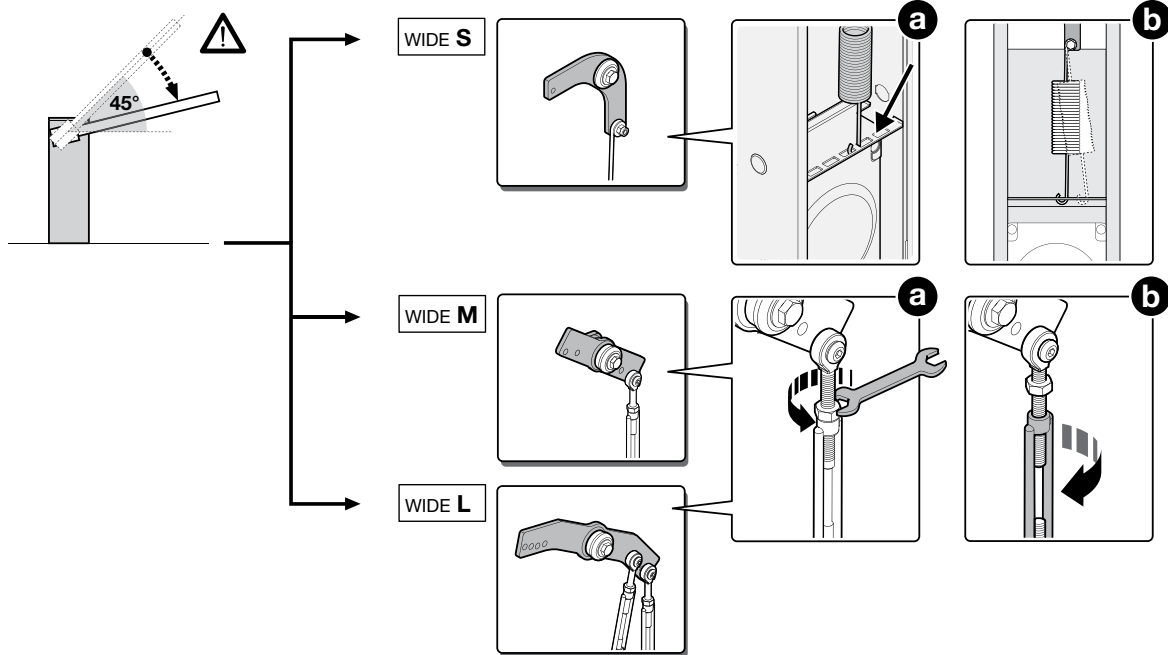
WIDE M



WIDE L

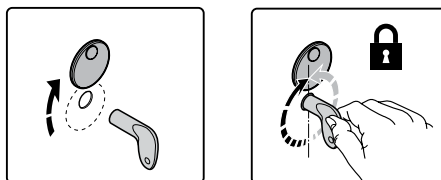


2



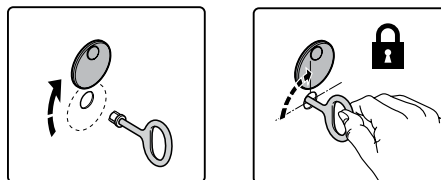
14. Lock the gearmotor
(based on the purchased model)

WIDE S



WIDE M

WIDE L



15. If any other devices (accessories) are intended for the system, they must be installed at this point: refer to the respective instruction manuals and Section 8 (Further details) in this manual

4 ELECTRICAL CONNECTIONS

CAUTION! - All electrical connections must be made with the system powered off. Incorrect connections can result in damage and injury.

Fig. 4 shows the hookup of a typical installation; fig. 5 shows the connections to be made on the control unit.

4.1 - Types of electrical cables: Fig. 4

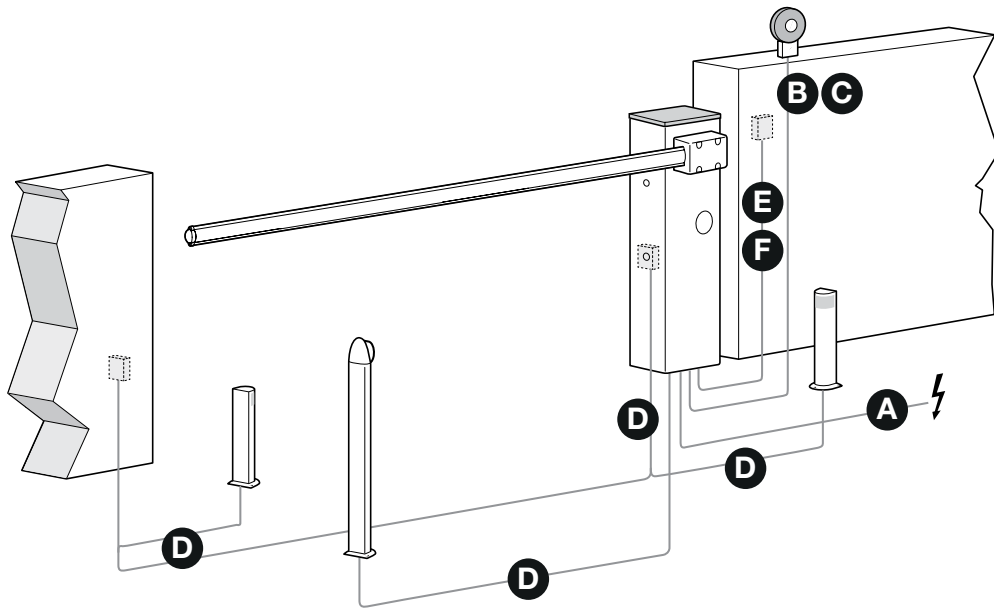
Table 3 - Types of electrical cable (see fig. 4)

	Connection	Type of cable	Maximum length
A	POWER	3 x 1.5 mm ²	30 m *
B	FLASHER WITH AERIAL	1 cable: 2 x 1.5 mm ²	10 m
C		1 shielded RG58 cable	10 m (< 5 m recommended)
D	PHOTOCELLS	1 cable: 2 x 0.25 mm ² (TX)	30 m
		1 cable: 4 x 0.25 mm ² (RX)	30 m
E - F	KEY SWITCH	2 cables: 2 x 0.5 mm ² **	20 m

* A power supply cable longer than 30 m may be used provided it has a larger gauge, e.g. 3x2.5mm², and that a safety grounding system is provided near the automation unit.

** The two 2 x 0.5 mm² cables can be replaced by a single 4 x 0.5 mm² cable.

4



4.2 - Electrical cable connections: Fig. 5

Table 4 - Description of the electrical connections (see Fig. 5)

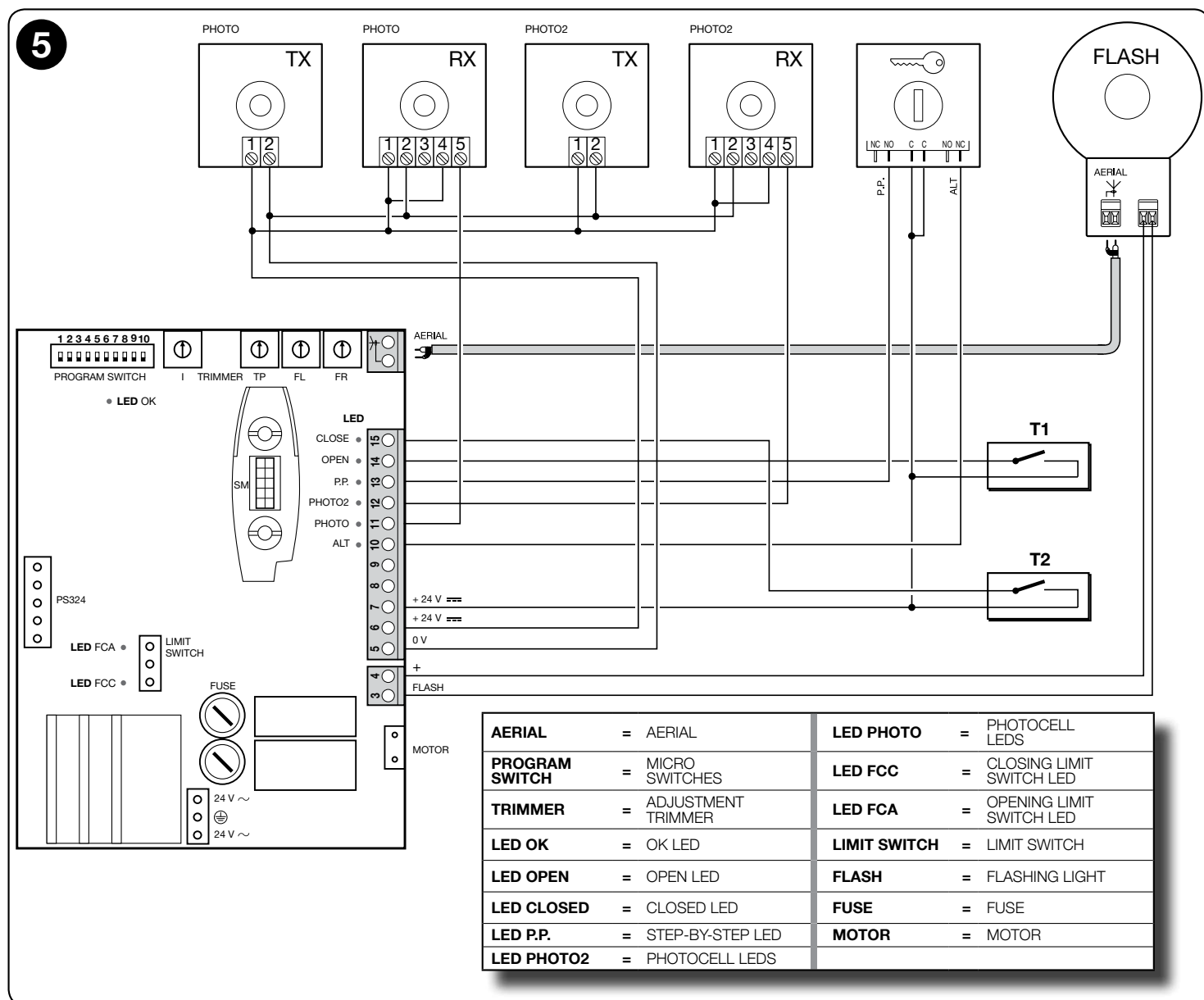
Terminals	Function	Description
3-4	Flashing light	Output for flashing light connection; when a manoeuvre is in progress, the flashing cycle is 0.5 s ON and 0.5 s OFF
5-6	Services	24 VDC output (-30% + 50%) to power the services, maximum 200 mA
7-8	Courtesy light	It comes on at the start of the operation and goes off 60 seconds after it finishes
7-9	S.C.A.	It is OFF when the boom is closed and ON when a manoeuvre is stopped with the boom in any position; it flashes slowly during opening and rapidly during closing
7-10	Stop	Input of normally closed (NC) type for devices which control blocking actions or the immediate stoppage of the manoeuvre in progress
7-11	Photo	Input of normally closed (NC) type for safety devices that cause reverse movement or stoppage if they intervene during a closing manoeuvre
7-12	Photo 2	Input of normally closed (NC) type for safety devices that cause reverse movement or stoppage if they intervene during an opening manoeuvre
7-13	Step-by-step	Input of normally open (NO) type for command devices whose intervention results in opening or closing with the sequence Open - Stop - Close - Stop
7-14	Open	Input of normally open (NO) type for command devices whose intervention results in an opening manoeuvre with the sequence: Open - Stop - Open - Stop
7-15	Close	Input of normally open (NO) type for command devices whose intervention results in a closing manoeuvre with the sequence Close - Stop - Close - Stop
43-44	Aerial	Radio receiver aerial input The aerial can be incorporated into the flashing light or mounted externally.

Note 1: as an alternative to terminal 7 (common for all inputs and outputs) you can use terminal 6

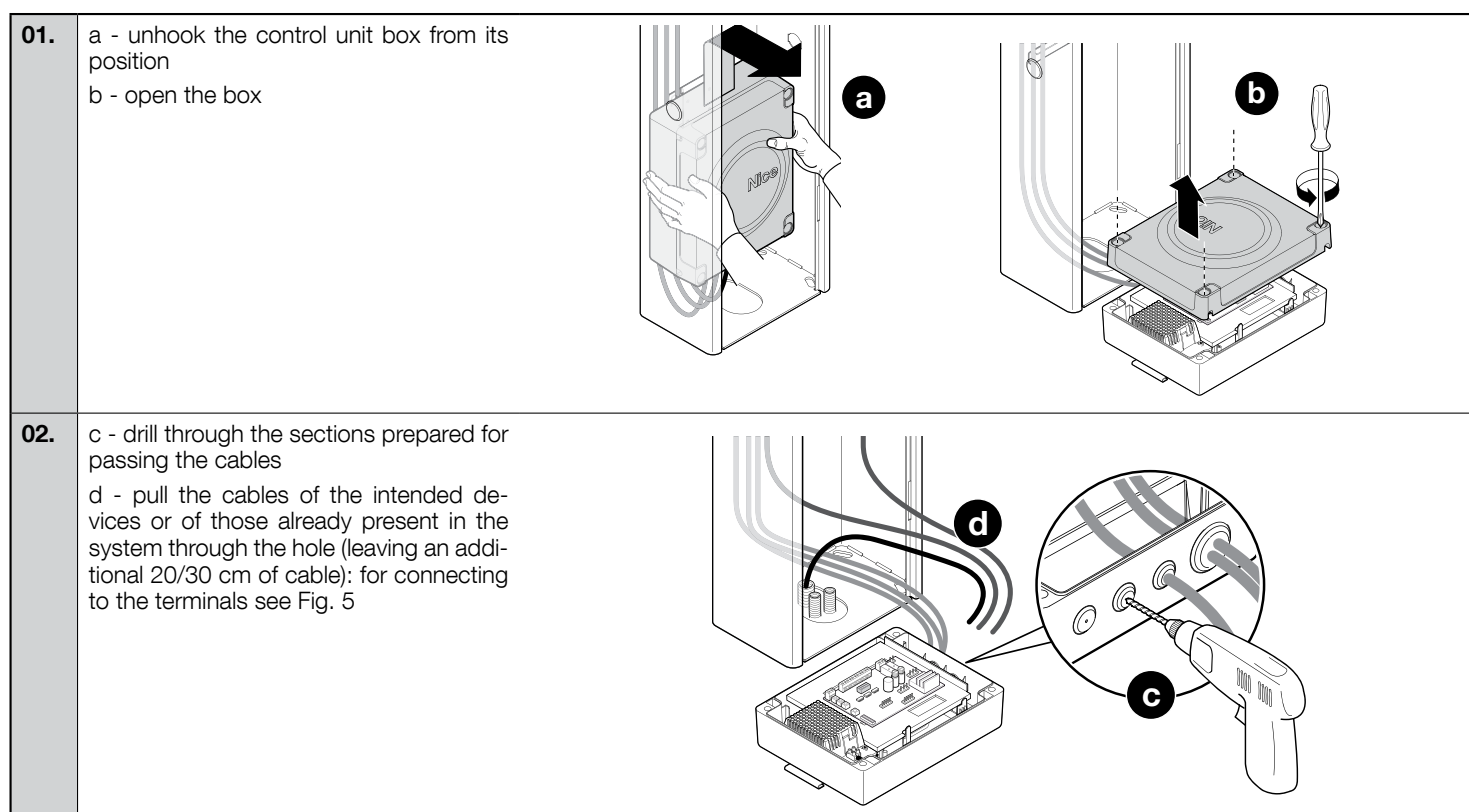
Note 2:

- If the contact inputs of type NC (Normally Closed) are not used, they must be jumpered to terminal 6 or 7.
- Contact inputs of type NO (Normally Open) must be left empty, if they are not used.
- The contacts of the devices connected to the control unit must be of the mechanical type and free from any potential; no connections are allowed to devices whose contacts are defined as "open collector", "PNP" or "NPN" types.

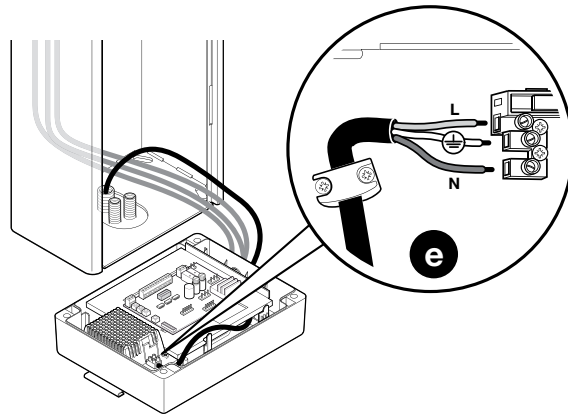
Other connections on the control unit	- Power supply transformer	Connection to the secondary winding of the transformer
	- Motor	output for connection to motor
	- Limit switch	input for connections to opening and closing limit switches
	- Radio (for accessories)	connection for radio receivers with SM connector (OXI, etc.)
	- Battery (for accessories)	connection for PS324 battery



To make the electrical hookup, proceed as described below with reference to Fig. 5:

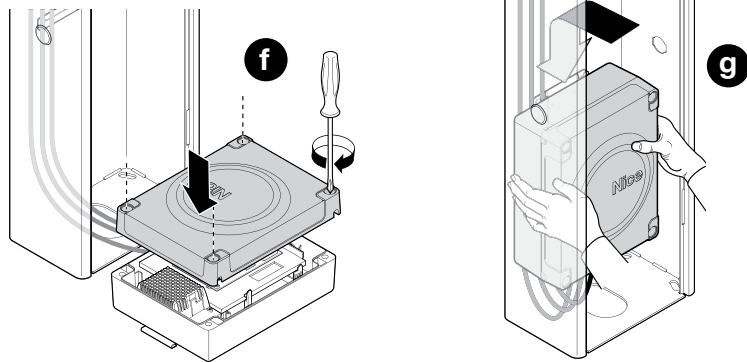


03. e - connect the mains power supply cable



CAUTION! - Before closing the cover, program the system as desired: Section 7

04. f - close the lid with its screw
g - hook up the control unit box



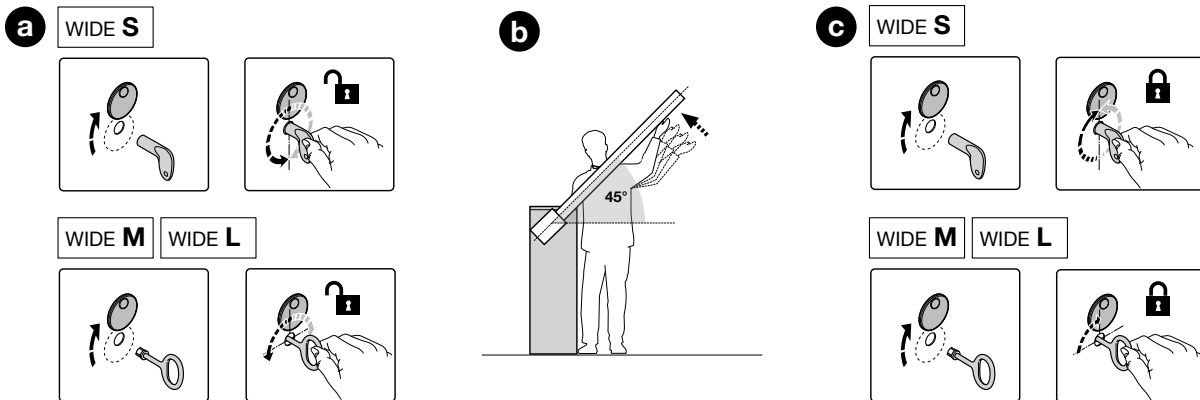
5 STARTING THE AUTOMATION AND CHECKING THE CONNECTIONS

5.1 - Hooking the automation up to the mains

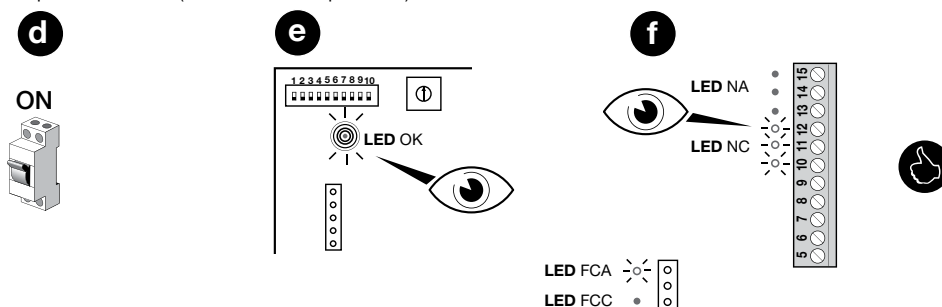
CAUTION! - The automation must be hooked up to the mains by an expert electrician, in observance of established local regulations.

Proceed as described below:

01. a - manually release the gearmotor, based on the model purchased
b - manually move the boom to about half way (45°)
c - manually lock the gearmotor



02. d - supply mains power to the automation
e - check that the OK LED starts flashing at regular intervals of about 1 flash per second
f - check that the LEDs relative to the inputs with NC type contacts are ON (all safety devices active) and the LEDs relative to the NO contact inputs are OFF (no command present)





If this does not occur, disconnect the mains supply immediately and check the connections and the efficiency of the devices more carefully

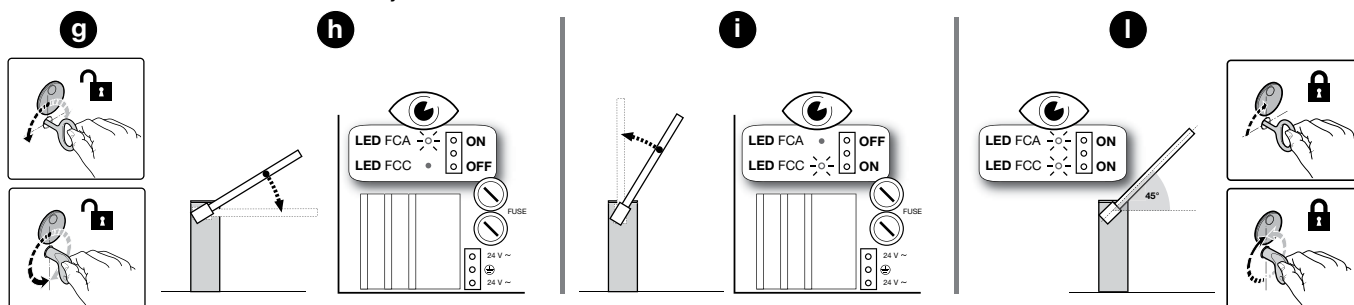
03. check the correspondence between the direction of the manoeuvre and the FCC and FCA limit-switch LEDs

g - manually release the barrier mechanism

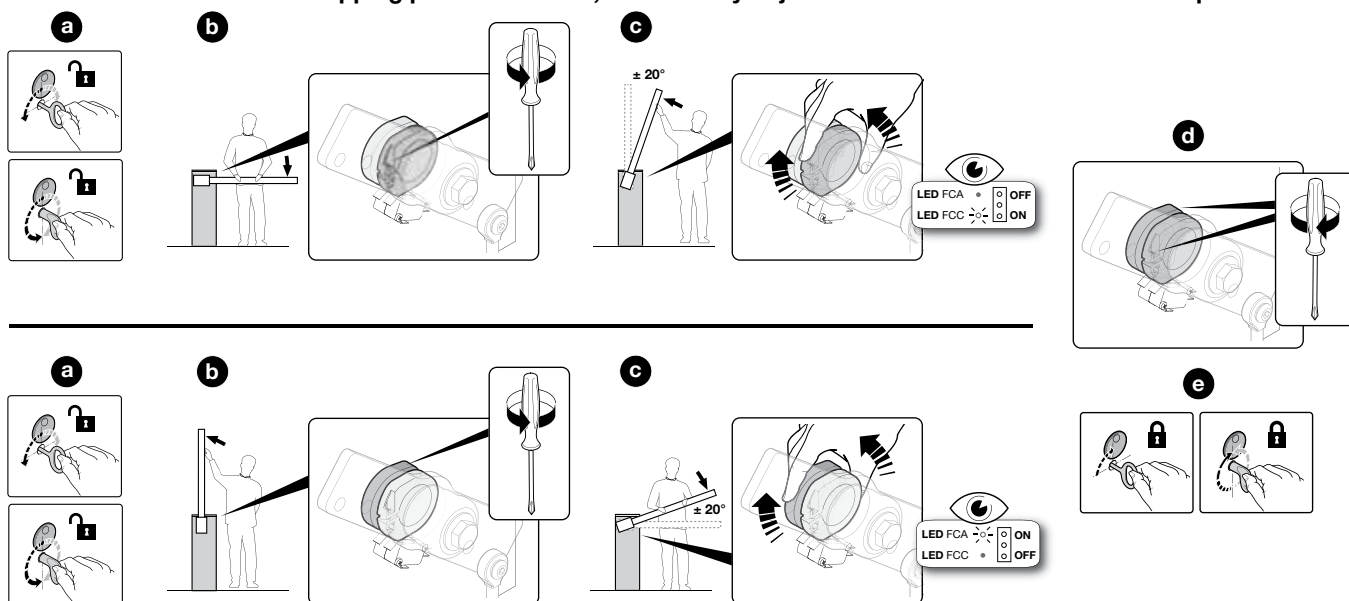
h - manually move the boom to the maximum closing position and check that the FCC LED is OFF and the FCA LED is ON

i - manually move the boom to the maximum opening position and check that the FCA LED is OFF and the FCC LED is ON

l - move the boom to 45° and manually lock the barrier mechanism



Note - In order to exploit the slowing down function most effectively, it is necessary that the limit switch triggers at about 20° before the mechanical stopping point is reached; if necessary adjust the two cams to set the desired point.

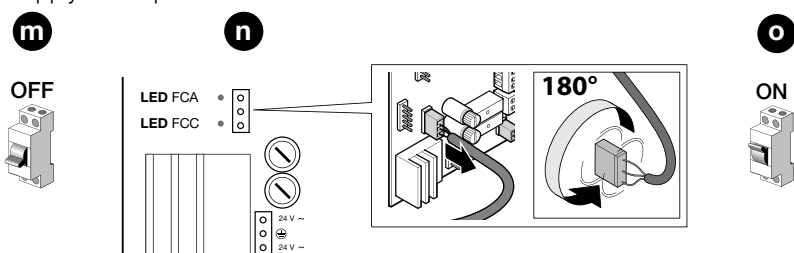


If this does not happen, you need to:

m - cut the mains power supply to the automation

n - rotate through 180° the limit switch connector on the control unit (LIMIT SWITCH - Fig. 5)

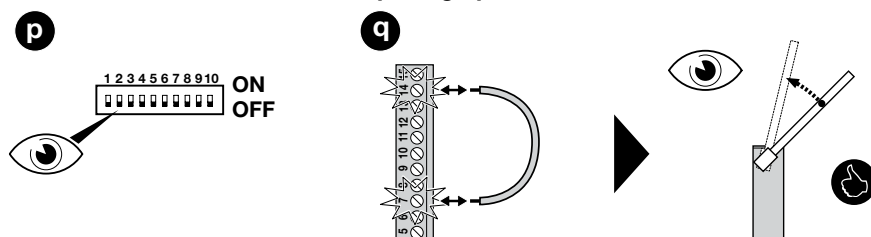
o - supply mains power to the automation



04. Verify that the direction of the manoeuvre corresponds to the command sent:

p - set all dip-switches to 'OFF' to have 'hold-to-run' operation

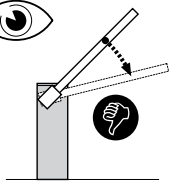
q - with the boom at 45°, give a short command pulse to one of the devices connected to the 'OPEN' input (T1 - Fig. 5) and check that the movement of the boom is in opening operation





If the boom is moving towards the closed position, proceed as follows:

- r - cut the mains power supply to the automation
- s - rotate through 180° the motor connector (MOTOR - Fig. 5)
- t - supply mains power to the automation

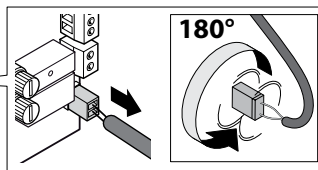
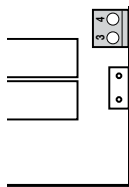


r

OFF



s



t

ON



6 TESTING AND COMMISSIONING

These are the most important phases of automation set-up to ensure maximum system safety.

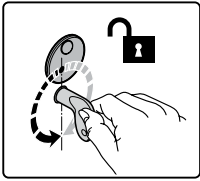
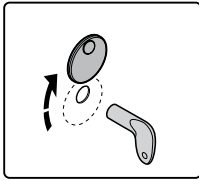
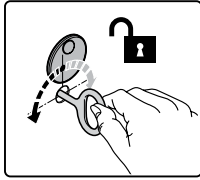
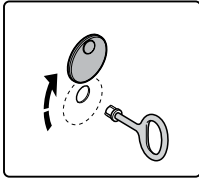
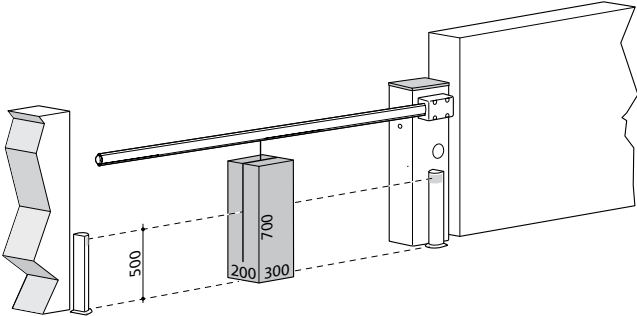
They must be done by a qualified technician who agrees to run the tests and check the solutions to any risks present, as well as checking compliance with regulations, standards and the law: in particular, the requirements of EN 13241-1, EN 12445 and EN 12453.

Any supplementary equipment must be tested separately for operation and interaction with WIDE: refer to the respective user manuals.

6.1 - Testing

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. To do so, follow the procedures given in the instruction manuals.

Run the test as follows:

01.	Ensure that all specifications in Section 1 "WARNINGS" have been observed in full
02.	Check the correct balancing of the boom: Section 3 - installation (step 13)
03.	Check the correct operation of the manual release and lock, based on the model purchased: <div><div><p>WIDE S</p></div><div><p>WIDE M WIDE L</p></div></div>
04.	Using the key selector or the command push button, do some tests on the Opening, Closing and Stop of the barrier mechanism and check that the movement corresponds to the commands given: it is recommended that you perform several tests to assess the movement of the boom and whether any errors have occurred in assembly or adjustment and whether there are any particular points of friction
05.	Verify the correct operation of all safety devices in the system (photocells, sensitive edges etc.): when a device is activated, the OK LED on the control unit flashes 2 times quickly, confirming that the control unit has recognised the event.
06.	<p>Check the operation of the photocells and for any interference with other devices: you need one or two blocks of hard material (e.g. wooden panels) measuring 70 x 30 x 20 cm. Each block must have three sides of reflective material (e.g. mirror or white gloss paint) one for each dimension, and three sides of an opaque material (e.g. matt black paint).</p> <p>To test the photocells positioned at 50 cm from the ground, the block must be placed on the ground or raised to 50 cm to test the photocells positioned at 1 m from the ground.</p> <p>If the test is on a pair of photocells, the testing block must be placed directly under the centre of the boom with the 20 cm sides facing the photocells and moved along the entire length of the boom.</p> 

	<p>If the test is on two pairs of photocells, the test must first be performed individually for each pair of photocells using 1 testing block and then repeated using 2 testing blocks.</p> <p>Every testing block must be positioned laterally in relation to the centre of the boom, at a distance of 15 cm and then moved along the entire length of the boom.</p> <p>During these tests, the testing block must be detected by the photocells at any position along the entire length of the boom.</p>	
07.	<p>a - Check that there is no interference between the photocells and other devices:</p> <ul style="list-style-type: none"> - interrupt the optical axis linking the pair of photocells using a cylinder (διάμετρος of 5 cm and length of 30 cm) - pass the cylinder first close to the TX photocell, then close to the RX and lastly at the centre between the two photocells. <p>b - Check that the device intervenes in all cases, going from active status to alarm status and vice versa</p> <p>c - Check that it causes the intended action in the control unit (e.g. a reverse movement during the closing manoeuvre).</p>	
08.	<p>Check on the safeguard against the lifting hazard: in automations with vertical movement you must ensure that there is no lifting hazard. Run the test as follows:</p> <ul style="list-style-type: none"> - at a point half-way along the boom, hang a weight of 20 kg (e.g. a sack of gravel) - send an Opening command and check that during the manoeuvre the boom does not exceed the height of 50 cm above its closed position. If the boom exceeds this height it is necessary to reduce the working force by using the FL trimmer (Section 7.1). 	
09.	<p>If the dangerous situations caused by the movement of the boom have been safeguarded by limiting the force of impact (step 8), the impact force must be measured according to EN Standard 12445 and, if the control of the “motor force” is used to assist the system for the reduction of the impact force, it is necessary to experiment and, in the end, find the adjustment that provides the best results.</p>	
10.	<p>Check the efficiency of the manual release system:</p> <ul style="list-style-type: none"> a - place the boom in its closed position and perform the manual release of the gearmotor, making sure that it takes place with ease b - check that the manual force for moving the boom to the Open position does not exceed 200 N (approximately 20 kg); the force is measured perpendicular to the boom and at 1 m from the axis of rotation c - check that the manual release key is available near the automation. 	
11.	<p>Check the power supply disconnection system:</p> <ul style="list-style-type: none"> a - operate the power disconnection device and disconnect any available back-up batteries b - check that all the LEDs on the control unit are OFF and that the boom remains still when a command is sent c - check the efficiency of the manual locking system to prevent any unintentional or unauthorised reconnection 	

6.2 - Commissioning

Commissioning can take place only after all testing phases have been terminated successfully (par. 6.1).

Partial or “makeshift” commissioning is strictly prohibited.

01.	Prepare and store the technical documentation for the automation for at least 10 years. This must include at least: an assembly drawing of the automation, a wiring diagram, an analysis of hazards and solutions adopted, a manufacturer's declaration of conformity of all the devices installed (use the annexed CE declaration of conformity); a copy of the automation system instruction manual and maintenance schedule
02.	Affix a label or plate permanently to the barrier mechanism, bearing instructions on how to manually release the gearmotor: use the figures included at the end of the User Manual (removable insert)
03.	Using the key switch or radio transmitter, test the Opening and Closing of the barrier mechanism and make sure that it moves in the intended direction
04.	Prepare the CE declaration of conformity for the automation system and deliver it to the owner
05.	Give the owner the user manual (tearout insert)
06.	Prepare and give the owner the maintenance schedule
07.	Before commissioning the gate, inform the owner in writing about the attendant residual risks.






Factory settings (default)

MICRO SWITCHES: OFF	<div>ON OFF</div> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div><div>7</div><div>8</div><div>9</div><div>10</div></div>			
TP Trimmer (Pause Time)	FL Trimmer (Working Force)	FR Trimmer (Deceleration Force)	I Trimmer (Stop Ampere)	
<div>TP</div> <div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><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7.1 - Control unit

The control unit has a variety of factory settings which can be reprogrammed: this chapter describes the available functions and how to program them. Also refer to chapter 8 'Further details'.

The control unit is equipped with micro-switches and trimmers (Fig.4):

Name	Symbol	Description
MICRO SWITCHES		Activates a function
TP Trimmer		This is used to adjust the 'Pause Time' parameter: it adjusts the time between the end of an Opening manoeuvre and the start of a Closing manoeuvre. Only if the control unit is programmed in 'automatic' operating mode (Table 5)
FL Trimmer		This is used to adjust the 'Working Force' parameter: it adjusts the maximum speed of the boom before the boom starts the slowing down phase, set between the limit switch and the mechanical stop. Adjustment: it must be set so as not to create jerking movements during normal operation; the movement must be as even as possible.
FR Trimmer		This is used to adjust the 'Deceleration Force' parameter: it adjusts the slowing down speed performed by the boom between the limit switch and mechanical stop. Adjustment: it must be set so as not to create jerking movements during normal operation; the movement must be as even as possible.
I Trimmer		This is used to adjust the 'Stop Ampere' parameter: it adjusts the intervention threshold of the obstacle detection system on the control unit: the system intervenes both in opening and closing. Note - Since the motor needs more power at the start of each manoeuvre (departure), the 'obstacle detection system' is excluded. Adjustment: it must be adjusted so that the boom stops or reverses its manoeuvre if a contrary action is applied that prevents its movement

To assess the effect of the trimmer adjustments, it is advisable to have the barrier mechanism perform a few opening and closing manoeuvres: **do this operation manually (hold-to-run):**

01.	Set the micro-switches to 'OFF'
02.	Provisionally adjust the trimmers: - 'Stop Ampere' and 'Working Force' = maximum stroke - 'Deceleration Force' = half way
03.	By acting on the devices connected to the Step-by-step, Open and Close inputs, make the barrier mechanism perform some opening and closing manoeuvres: check that the boom movement begins with a phase of acceleration, followed by a constant speed, and that it starts the deceleration phase 20' before the mechanical stop
04.	Release the command key to obtain the immediate stoppage of the manoeuvre: if the S.S (Step-by-Step) input is used as the command, the first movement after the stop will be an opening manoeuvre
05.	Adjust the trimmers so that the operation of the automated system is as you require

7.2 - Programmable functions

The control unit has a set of micro switches (PROGRAM SWITCH - Fig. 5) which activate functions to adapt the automation to the user's needs as well as making it safer to use.

The micro-switches allow the user to select the various operating modes and programme the desired functions, as described in Table 5.

To activate/deactivate a function:

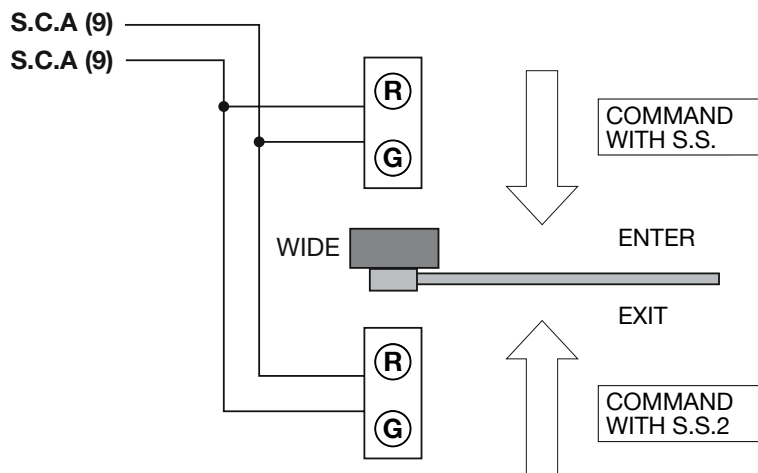
Micro switches: 1 ... 10	ACTIVATION = ON	DEACTIVATION = OFF
IMPORTANT! - some functions are safety critical; make sure to check which function is safest.		

Table 5

Switches 1-2	Operation	Description
OFF - OFF	Manual (hold-to-run)	the manoeuvre is only executed while the command is active (transmitter button is pressed hold-to-run)
ON - OFF	Semiautomatic	The sending of a command causes the complete opening or closing manoeuvre to be performed. CAUTION! - If during the closing manoeuvre, one of the devices connected to the PHOTO input intervenes, an 'Automatic Closure' is activated which causes the inversion of the manoeuvre (i.e. Opening), then a pause and a Closing.
OFF - ON	Automatic (automatic closing)	The sending of a command causes an Opening manoeuvre to be performed, then the system pauses and then a Closing manoeuvre is performed automatically. Caution! - If during the pause, one of the devices connected to the PHOTO input intervenes, the timer is reset with a new value. - If one of the devices connected to the 'STOP' input intervenes, the re-closing function will be reset and replaced by the 'Stop' status.
ON - ON	Automatic + Always Closes	If, when the power returns following a power failure, the control unit detects the boom is in an Opening position, it automatically starts a Closing manoeuvre preceded by 5 seconds of pre-flashing.
Note - For 'Semi-automatic', 'Automatic' and 'Automatic + Always Closes' operation: - if a command to open is sent in hold-to-run mode, when the boom reaches its maximum aperture it will remain blocked until the command button is released and then it will perform the closing manoeuvre - if a command to close is sent in hold-to-run mode, when the boom reaches its maximum closure it will remain blocked until the command button is released and then an opening manoeuvre can be performed		
Switch 3	Operation	Description
ON	Condominium (not available in manual mode)	- When a "Step-by-Step" command is sent and the barrier starts to open, it cannot be stopped by any other "Step-by-Step" or Open command sent by radio until the manoeuvre has completed. - Conversely, when the barrier is closing, a new Step-by-Step command will cause the stoppage and reverse movement.
OFF		Disabled
Switch 4	Operation	Description
ON	Step-by-step cycle	OPEN - CLOSE - OPEN - CLOSE
OFF		OPEN - STOP - CLOSE - STOP
Switch 5	Operation	Description
ON	Pre-flashing	When a command is sent, the flashing light starts flashing and, after 5 seconds (2 seconds in Manual mode), the movement starts.
OFF		Disabled
Switch 6	Operation	Description
ON	Flashing light also in pause	The flashing light remains active throughout the manoeuvre and also during the pause to indicate that a closing manoeuvre is about to occur.
OFF		The flashing light remains active only during the manoeuvre (opening or closing)
Switch 7	Operation	Description
ON	Close immediately after 'Photo' (only if set on 'Automatic' operating mode)	When set in Automatic mode, it holds the boom open only for the time required for vehicles or pedestrians to pass through it; in fact when the Photo safety devices have been cleared, the manoeuvre stops and after 5 seconds, a Closing manoeuvre starts automatically.
OFF		Disabled
Switch 8	Operation	Description
ON	'Photo' safety also in opening	- The intervention of the safety device also causes an interruption to the manoeuvre during Opening. - When set in 'Semi-automatic' or 'Automatic' modes, the Opening manoeuvre starts again as soon as the safety devices have been cleared.
OFF		The intervention of the safety device causes an interruption to the Closing manoeuvre.
Switch 9	Operation	Description
ON	One-way traffic light	The S.C.A. output assumes the function of one-way traffic light: - Traffic light OFF = when the boom is closed or in the process of closing - Traffic light ON = when the boom is open or in the process of opening
OFF	S.C.A.	It indicates the status of the boom
Switch 10	Operation	Description
ON	Traffic light in both directions	Function for controlling the flow of vehicles in the two directions using controlled transit of the barrier mechanism. A different opening command can be set for each traffic direction: 'S. S.' to enter 'S.S. 2' ('Open' input) to leave. Two traffic lights with 'Red' and 'Green' must be installed and connected to the 'S.C.A.' and 'Courtesy Light' outputs: - 'S.S.' Command to enter, the 'SCA' output is enabled = Green light on entry and Red light on exit. - 'S.S.2' Command to enter, the 'Courtesy Light' output is enabled = Green light on exit and Red light on entry. Opening: the light remains active throughout the operation and the subsequent pause. Closing: 'Green' and 'Red' lights are active at the same time and the result is a light of a 'Yellow' colour to indicate that there is no specific right of transit

Red Light	Green Light	Operation
OFF	OFF	boom closed - no transit in either direction
OFF	ON	boom open - transit free
ON	OFF	boom open - transit occupied
ON	ON	boom closing or transit not controlled

The 'S.C.A.' and 'Courtesy Light' outputs can command small lamps with 24 V DC (total maximum of 10 W per output). If you need to use lamps with higher wattage, you must use relays driven by outputs on the control unit which in turn control the traffic lights.



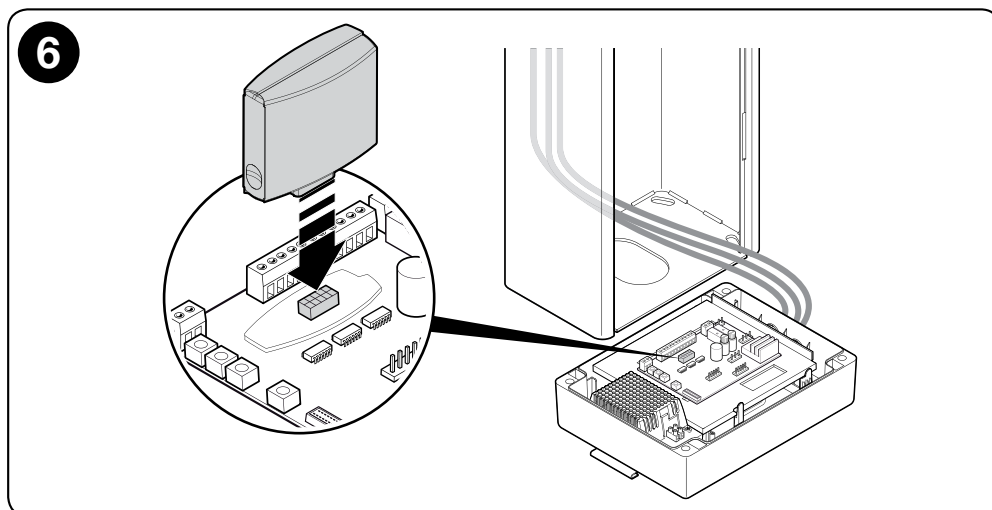
OFF	S.C.A. and courtesy light	Traffic light disabled: the S.C.A. and the courtesy light assume factory settings
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8 FURTHER DETAILS

8.1 - Connecting a radio receiver

The control unit has an SM connector for connection of an SMXI, SMXIS, OXI, OXIT or similar radio receiver (not supplied). Table 6 describes the actions taken by the control unit according to the enabled outputs or commands sent by the radio receiver. To connect the radio receiver see Fig. 6.

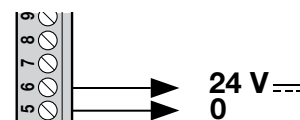
Table 6	
Output	Command description
1	Step-by-step
2	Stop
3	Open
4	Close



8.2 - Power for external devices

To provide power to the external devices (a radio receiver, or back-lighting for a key switch), you can connect the device to the product's control unit as shown in the figure below.

The power supply voltage is 24V_{DC} -30% to +50% with a maximum available current of 200 mA.



8.3 - Connecting boom lights

01. **⚠ IMPORTANT! - Refer to the instruction manual of the light cable to check warning details.**
 Proceed as indicated in the image below:

The diagram illustrates the connection of boom lights. It shows a boom light assembly with labels for WIDE S, WIDE M, and WIDE L. A light cable is connected to the assembly. A manual is shown with an eye icon and the word 'MANUAL'. A close-up shows the light cable being inserted into the boom light assembly, with a 'STOP' sign indicating the correct position.

8.4 - Connecting photocells within the barrier mechanism (cabinet)

You can install the TX or RX photocell inside the barrier mechanism cabinet in the space provided.

01. Proceed as indicated in the image below:

a - remove the card of the photocell from its box by levering with a screwdriver. **CAUTION! - Do not damage the internal electrical components**

b - open the box prepared for the photocells that is in the box of small hardware parts

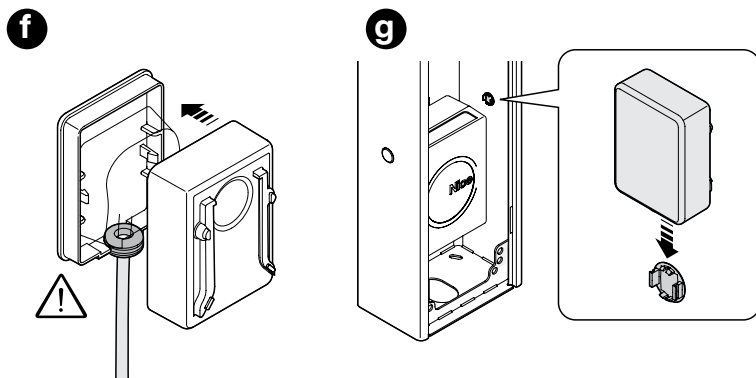
The diagram illustrates the connection of photocells. It shows a photocell card being removed from its box. A box for photocells is shown being opened. A card is shown being fitted onto the bottom of the box. A hole is shown being made through the rubber prepared for passing the electrical cable. The final step shows the photocell card connected to the photocell card, with labels for RX and TX.

c - fit the card onto the bottom of the box

d - make a hole through the rubber prepared for passing the electrical cable

e - connect it to the photocell card (see also Fig. 5 - Sect. 4)

f - close the box with the cover, blocking the rubber inside its housing
g - hook the box over the lens inside the cabinet, sliding it from the top downwards



For further information, refer to the instruction manual for the photocells.

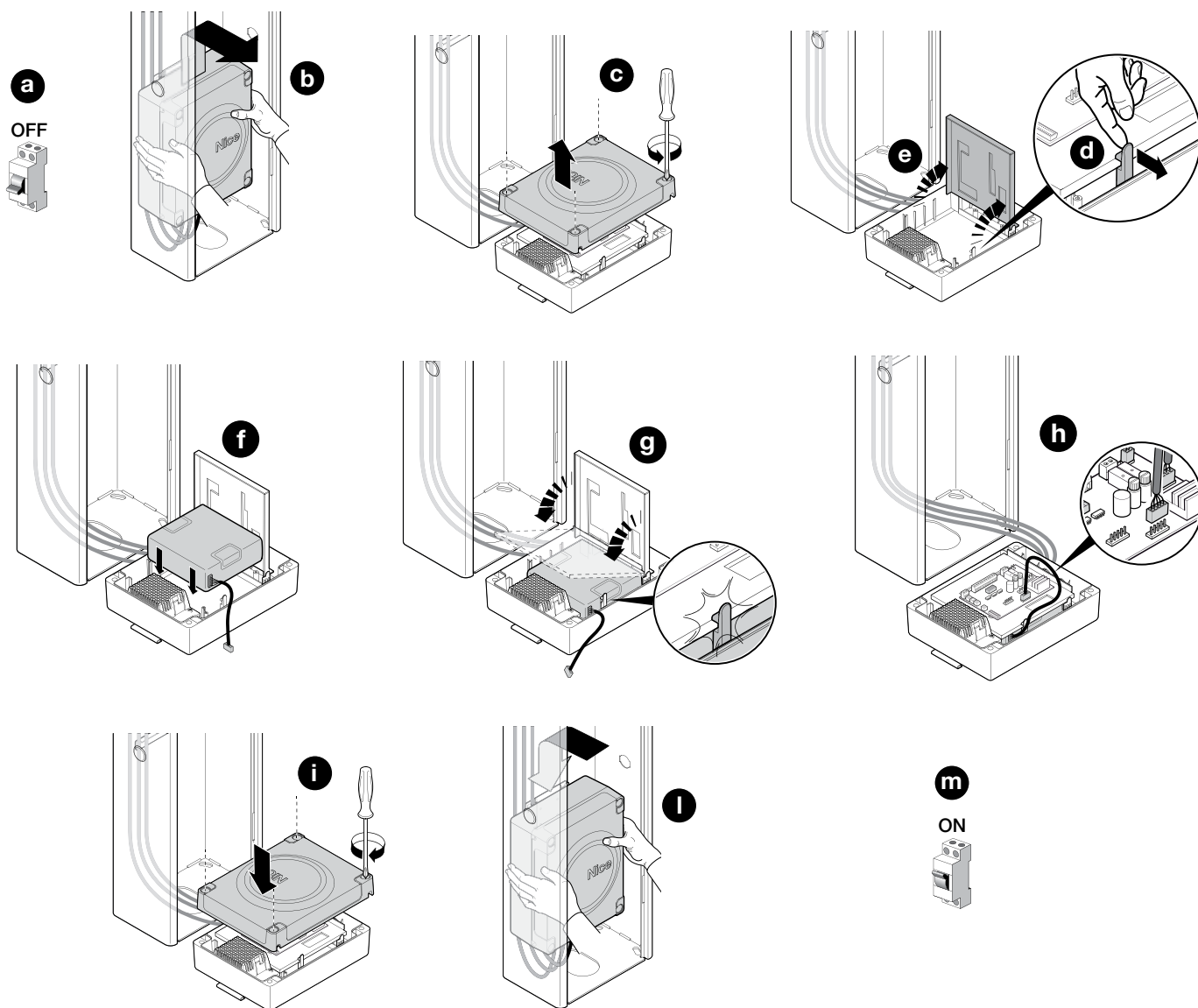
8.5 - Connecting the back-up battery (mod. PS324)

The road barrier mechanism is designed to accommodate a mod. PS324 back-up battery (not supplied) that, in the event of a power failure, supplies power to the automation for a specified time (refer to the battery instruction manual).

⚠ CAUTION! - The backup battery must ONLY be connected to the control unit after completing all phases of installation and programming, because the battery is an emergency power supply.

To install the back-up battery, proceed as described below:

01. Proceed as indicated in the image below:



9 DISPOSAL OF THE PRODUCT

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

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 different types of material, some of which can be recycled while others must be disposed of. Seek information on the recycling and disposal systems envisaged by the local regulations in your area for this product category.

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



As indicated by the symbol, the product may not be disposed of as 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.

⚠ CAUTION! - Local legislation may include the application of serious fines in the event of improper disposal of this product.

⚠ CAUTION! - Even if discharged, batteries can contain pollutant substances and therefore must NEVER be disposed of in common waste collection points. Dispose of them according to separate waste collection methods as envisaged by current local standards.

10 BASIC TROUBLESHOOTING...

In case of malfunction due to problems during installation or failure of parts, refer to table 6:

Table 6		
OK LED	Problem	Solution
Off	Fault	Check for presence of the power supply; check that the fuses are not blown; if necessary, identify the cause of the fault and then replace them with fuses with the same specifications.
On	Serious malfunction	There is a serious malfunction; try switching off the control unit for a few seconds; if the condition persists, it means there is a malfunction and the circuit board has to be replaced
1 flash per second	All OK	Normal operation of control unit
2 quick flashes	The status of the inputs has changed	This is normal when there is a change in one of the inputs: Step-by-step, Open, Close, Stop, Photo / Photo2 or a command is received from the radio transmitter
STOP LED	Problem	Solution
Off	Intervention of one of the devices connected to the STOP input	Check the devices connected to the STOP input
On	All OK	Stop Input active
FOTO LED	Problem	Solution
Off	Intervention of one of the devices connected to the PHOTO input	Check the devices connected to the PHOTO input
On	All OK	Photo Input active
PHOTO 2 LED	Problem	Solution
Off	Intervention of one of the devices connected to the PHOTO 2 input	Check the devices connected to the PHOTO 2 input
On	All OK	Photo 2 Input active
STEP-BY-STEP LED	Problem	Solution
Off	All OK	Step-by-Step input inactive
On	Intervention of Step-by-Step input	It is normal if the one of the devices connected to the Step-by-Step input is active
LED OPEN	Problem	Solution
Off	All OK	Open input not active
On	Intervention of Open input	It is normal if the one of the devices connected to the Open input is active
LED CLOSE	Problem	Solution
Off	All OK	Close input not active
On	Intervention of Close input	It is normal if the one of the devices connected to the Close input is active

11 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 apply modifications to products at any time when deemed necessary, maintaining the same intended use and functionality.

	WIDES - WIDESI	WIDEM - WIDEMI	WIDEL - WIDELI
Type	electromechanical road barrier mechanism for residential, public and industrial use		
Nominal voltage	230 V		
Nominal frequency	50/60 Hz		
Max. power	300 W	300 W	360 W
Nominal power	60 W	80 W	100 W
Absorption	1 A	1.1 A	1.2 A
Minimum opening time	4 s	3.5 s	5 s
Nominal torque	100 Nm	140 Nm	200 Nm
Working cycle	100 cycles/hour	300 cycles/hour	200 cycles/hour
Emergency power supply	Yes - model PS324 back-up battery		
Photovoltaic power supply	no		
Flash output	For 1 ML24 or ML24T flashing light (maximum lamp power = 25 W)		
Courtesy light output	24 V DC lamp output: maximum power = 10 W)		
S.C.A. output	24 V DC lamp output: maximum power = 10 W)		
Stop input	For normally-closed contacts		
Step-By-Step input	For normally-open contacts		
Open input	For normally-open contacts		
Close input	For normally-open contacts		
Radio connector	SM connector for SMXI, SMXIS, OXI and OXIT receivers		
Radio Aerial input	50 Ω for RG58 or similar type of cable		
Adjustable functions	using the trimmers (paragraph 7.1) and the micro switches (program switch - paragraph 7.2)		
Operating temperature	-20° C ... +50° C		
Protection class	IP 54		
Dimensions (mm)	280 x 178 x 1000 H	320 x 205 x 1000 H	420 x 205 x 1030 H
Weight	40 kg	46 kg	54 kg

	WIDES/V1 - WIDESI/V1	WIDEM/V1 - WIDEMI/V1	WIDEL/V1 - WIDELI/V1
Type	electromechanical road barrier mechanism for residential, public and industrial use		
Nominal voltage	120 V		
Nominal frequency	50/60 Hz		
Max. power	300 W	300 W	360 W
Nominal power	60 W	80 W	100 W
Absorption	2 A	2.2 A	2.4 A
Minimum opening time	4 s	3.5 s	5 s
Nominal torque	100 Nm	140 Nm	200 Nm
Working cycle	100 cycles/hour	300 cycles/hour	200 cycles/hour
Emergency power supply	Yes - model PS324 back-up battery		
Photovoltaic power supply	no		
Flash output	For 1 ML24 or ML24T flashing light (maximum lamp power = 25 W)		
Courtesy light output	24 V DC lamp output: maximum power = 10 W)		
S.C.A. output	24 V DC lamp output: maximum power = 10 W)		
Stop input	For normally-closed contacts		
Step-By-Step input	For normally-open contacts		
Open input	For normally-open contacts		
Close input	For normally-open contacts		
Radio connector	SM connector for SMXI, SMXIS, OXI and OXIT receivers		
Radio Aerial input	50 Ω for RG58 or similar type of cable		
Adjustable functions	using the trimmers (paragraph 7.1) and the micro switches (program switch - paragraph 7.2)		
Operating temperature	-20° C ... +50° C		
Protection class	IP 54		
Dimensions (mm)	280 x 178 x 1000 H	320 x 205 x 1000 H	420 x 205 x 1030 H
Weight	40 kg	46 kg	54 kg

Maintenance schedule

(to be given to the end user of WIDE)

MAINTENANCE REGISTER

Important – Before passing this maintenance register on to the owner of the automatism, make sure all the gaps are filled in with the information required.

This register must contain a list of all the maintenance activities, repair work and alterations to the automatism. The register must be updated every time work is carried out and must be stored carefully so that it is available for any inspections that may be required by the relative authorities. This Maintenance Register refers to the following automation:

model: WIDE - Serial No.: installation date, - at

The following attached documents are part of the Maintenance Register:

- 1) - Maintenance schedule
- 2) -
- 3) -
- 4) -
- 5) -
- 6) -

According to the enclosed document “Maintenance Schedule”, maintenance operations must be performed at the following intervals: **every 6 months** or **50,000 manoeuvre cycles**, depending on which event occurs first.

MAINTENANCE SCHEDULE

Caution! – All maintenance work on this system must be carried out by qualified technical personnel, in full compliance with the safety standards provided for by the laws in force and the safety instructions specified in Section 1 - - “General safety precautions and warnings”, found at the beginning of this manual.

In general, this road barrier mechanism does not require special maintenance; however, regular checks over time will ensure system efficiency and correct operation of the safety systems installed.

For maintenance of devices added to road barrier mechanism, follow the provisions laid down in the respective maintenance schedules.

As a general rule, it is advisable to perform a periodic check every 6 months or 50,000 manoeuvres.

It should be noted that even in the event of a spring breaking, the road barrier mechanism remains compliant with the requirement in 4.3.4 of the EN 12604: 2000 standard.

- The boom balancing system must be checked at least 2 times a year, preferably when the seasons change.

These checks and replacements must be performed at the scheduled maintenance intervals:

- 1 Disconnect all power supplies.
- 2 Check for any deterioration of the components which form the barrier mechanism, paying particular attention to corrosion or oxidation of the structural parts. Replace any parts which are below the required standard.
- 3 Make sure the screwed connections are properly tightened (especially those of the balancing spring)
- 4 Check that there is no play between the balance lever and the output shaft. If necessary, fully tighten the central screw.
- 5 Lubricate the swivel head of the balancing spring and the lower anchor.
- 6 On the WIDEL version, check the perfect locking between the two segments of the boom. If necessary, adjust the expansion screws.
- 7 Place the boom in an upright position and verify that the pitch between the coils of the balancing spring is constant with no deformation.
- 8 Release and check the correct balancing of the boom and for any obstacles during manual opening and closing.
- 9 Relock and carry out the testing procedure.
- 10 **Check on the safeguard against any lifting hazard:** in automations with vertical movement you must ensure that there is no lifting hazard. This test can be done as follows: hang a weight of 20 kg (for example, a sack of gravel) halfway along the length of the boom; command an Opening manoeuvre and check that during the manoeuvre the boom does not exceed a height of 50 cm above its closed position. If the boom exceeds this height it is nec-

essary to reduce the working force by using the FL trimmer (Section 7.1)

- 11 If the dangerous situations caused by the movement of the boom have been safeguarded by limiting the force of impact, the impact force must be measured according to EN Standard 12445 and, if the control of the “motor force” is used to assist the system for the reduction of the impact force, it is necessary to experiment and, in the end, find the adjustment that provides the best results.

- 12 **Check the efficiency of the manual release system:** a - place the boom in its Closed position and perform the manual release of the gearmotor (see paragraph 3.6), making sure that it takes place without difficulty. Check that the manual force for moving the boom to the Open position does not exceed 200 N (approximately 20 kg); the force is measured perpendicular to the boom and at 1 m from the axis of rotation. Finally, check that the manual release key is available near the automatism.

- 13 **Check on the power supply disconnection system:** operate the power disconnection device and disconnect any available back-up batteries; check that all the LEDs on the control unit are OFF and that the boom remains still when a command is sent. Check the efficiency of the locking system to prevent any unintentional or unauthorised connection.

Operation manual (to be given to the final user)

Before using the automation for the first time, ensure that the installer explains the sources of residual risks, and take care to read the instruction manual. Keep the manual for consultation when in doubt and ensure supply to new owners of the automation.

CAUTION! - Your automation is a machine that faithfully performs your commands; negligent or improper use may lead to hazardous situations:

- **Never activate automation controls if persons, animals or objects are present in the operating range.**
- **NEVER touch parts of the automation while the boom is moving!**
- **Transit is allowed only if the boom is fully open and stationary!**

- **Children:** automation systems are designed to guarantee high levels of safety and security. They are equipped with detection devices that prevent movement if people or objects are in the way, guaranteeing safe and reliable activation. However, it is advisable to ensure that children do not play in the vicinity of the automation to avoid inadvertent activation, and remote controls should always be kept out of reach. It is not a toy!

- The product is not intended for use by persons, including children, with limited physical, sensory or mental capacities, or who lack experience or knowledge, unless supervised or trained in the use of the product by a person responsible for their safety.

- **Malfunctions:** As soon as you note a malfunction or anomaly, disconnect the power supply from and activate the manual release. Do not attempt to repair the system yourself, but contact your installer. Meanwhile, the door can be operated manually, once the gearmotor has been disengaged as described below. **In the event of breakage or power failure**, the automation can still be used, while waiting for your installer to service the system or for the power to be restored, even if it does not have a back-up battery system. You must perform the manual release of the gearmotor (see Step 9 - Manual release and lock of the gearmotor) and move the boom manually as you want.

- **If the safety devices are out of order the automation must be repaired as soon as possible.**

- Do not modify the system or its programming and adjustment parameters in any way, even if you feel capable of doing it: your installation technician is responsible for the system.

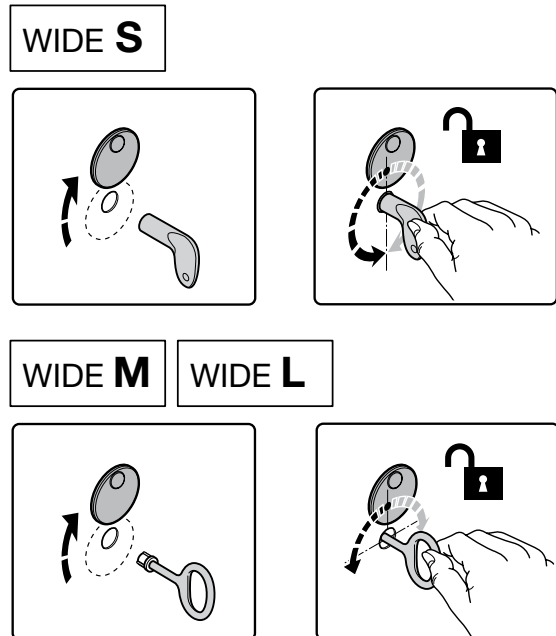
- Testing, periodic maintenance and any repairs must be documented by the person performing the operations, and the respective documents must be kept by the system owner. The only job which may be done by the user, and which we recommend doing on a regular basis, is to clean the photocell lenses and the automation system's glass panels. To prevent anyone from activating the barrier mechanism, remember to release the automation system (as described below). Only use a slightly damp cloth to clean.

- **Disposal:** At the end of the automation's lifetime, ensure that it is disposed of by qualified personnel and that the materials are recycled or scrapped according to local regulations.

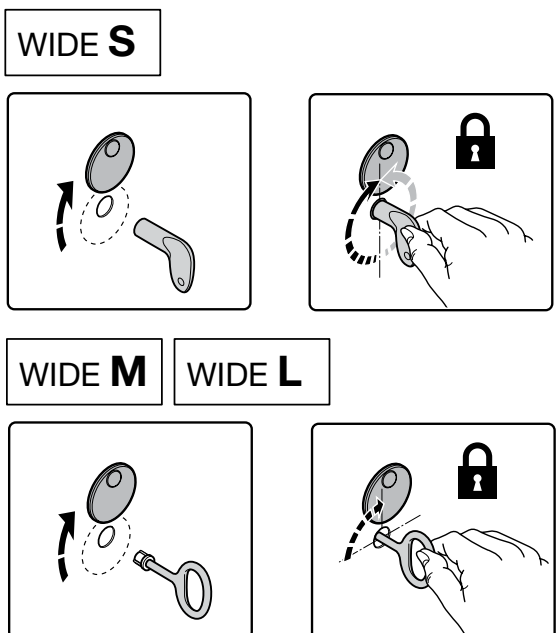
- **Manual release and lock of the gearmotor:** The gearmotor is equipped with a mechanical system that enables

manual opening and closing of the boom. These operations must be performed in the event of a power failure or system malfunctions.

- **Manual release of the gearmotor** (based on the model purchased)



- **Manual locking of the gearmotor** (based on the model purchased)





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