

MLAE

MLAE 21

MLAE 22

MLAE 44



I/O expansion board

EN - Instructions and warnings for installation

Nice

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1 GENERAL SAFETY WARNINGS AND PRECAUTIONS

1.1 GENERAL WARNINGS



WARNING! Important safety instructions. Observe all the instructions as improper installation may cause serious damages.



WARNING! Important safety instructions. It is important to comply with these instructions to ensure personal safety. Store these instructions carefully.

WARNING! Observe the following warnings:

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




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

- Before proceeding with the product's installation, check that all the 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 lacking sufficient experience or familiarity with the product.
- Children must not play with the appliance.
- Do not allow children to play with the control devices of the product. Keep the remote controls away from children.
- Handle the product with care during installation, taking care to avoid crushing, knocks, falls or contact with liquids of any kind. Keep the product away from sources of heat and open flames. Failure to observe the above can damage the product and increase the risk of danger or malfunctions. Should this happen, stop installation immediately and contact Customer Service.
- The manufacturer assumes no liability for damage to property, items or persons resulting from non-compliance with the assembly instructions. In such cases, the warranty for material defects is excluded.
- The weighted sound pressure level of the emission A is lower than 70 dB(A).
- Cleaning and maintenance reserved for the user must not be carried out by unsupervised children.
- Before intervening on the system (maintenance, cleaning), always disconnect the product from the mains power supply and from any batteries.
- The packing materials of the product must be disposed of in compliance with local regulations.

2 PRODUCT DESCRIPTION

MLAE21, MLAE22 and **MLAE24** are expansion boards for modular control units. The expansion board makes available additional inputs and outputs. Each additional input and/or output can be personalised as if it were a physical input and/or output of the control unit.

Whenever an expansion board is added or removed, it may be necessary to run the “**device acquisition**” procedure. Should this not occur, the motor’s motion will be limited to the “hold-to-run” mode.

 For further information, refer to the control panel manual.

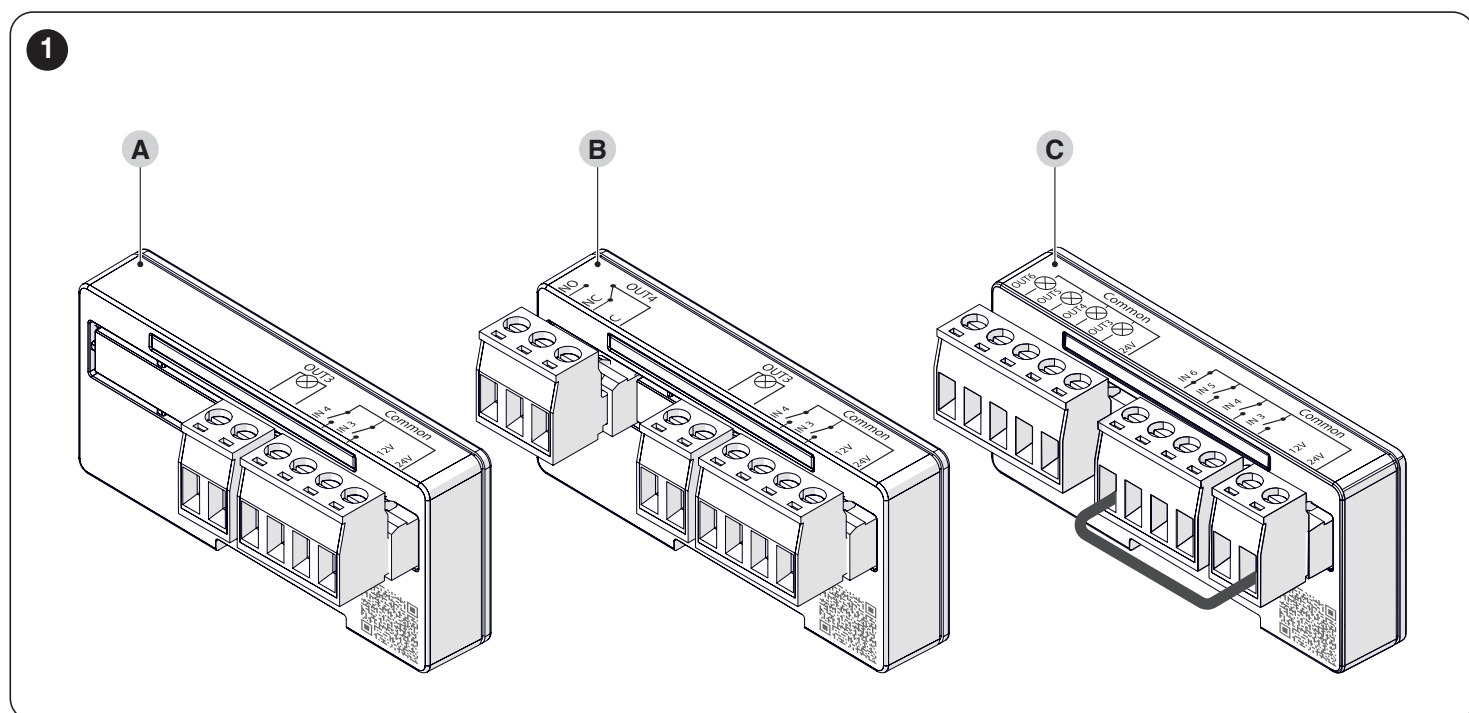
 The addition or removal of expansion boards must always occur without power supply, by removing any fuses and/or the battery pack.

Table 1

TECHNICAL SPECIFICATIONS			
DESCRIPTION	VALUE		
Maximum current draw	MLAE21: 0.6 A	MLAE22: 0.6 A	MLAE44: 1.8 A
Maximum current draw (12 V)	100 mA		
Maximum current draw (24 V)	100 mA		
Protection rating	IP44		
Operating temperature	-20°C ... +55°C		
Dimensions	60x90x35 mm		
Weight	60 g		

Table 2

ELECTRICAL CHARACTERISTICS OF INPUTS AND OUTPUTS			
PRODUCT	NUMBER OF INPUTS / OUTPUTS	INPUT	OUTPUT
MLAE21 (A)	2 Inputs 1 Output	IN 3 = dry contact (COM - IN3) IN 4 = dry contact (COM - IN4)	OUT 3 = Open drain (max 10 W = 24 V - 0.4 A)
MLAE22 (B)	2 Inputs 2 Outputs	IN 3 = dry contact (COM - IN3) IN 4 = dry contact (COM - IN4)	OUT 3 = Open drain (max 10 W = 24 V - 0.4 A) OUT 4 = Dry contact with switching relay (230 VAC - 5 A)
MLAE44 (C)	4 Inputs 4 Outputs	IN 3 = dry contact (COM - IN3) IN 4 = dry contact (COM - IN4) IN 5 = dry contact (COM - IN5) IN 6 = dry contact (COM - IN6)	OUT 3 = Open drain (max 10 W = 24 V - 0.4 A) OUT 4 = Open drain (max 10 W = 24 V - 0.4 A) OUT 5 = Open drain (max 10 W = 24 V - 0.4 A) OUT 6 = Open drain (max 10 W = 24 V - 0.4 A)



3 INSTALLATION

3.1 PRE-INSTALLATION CHECKS

! The installation must be carried out by qualified personnel in compliance with the current legislation, standards and regulations, and with the instructions provided in this manual.

Before proceeding with the product's installation, it is necessary to:

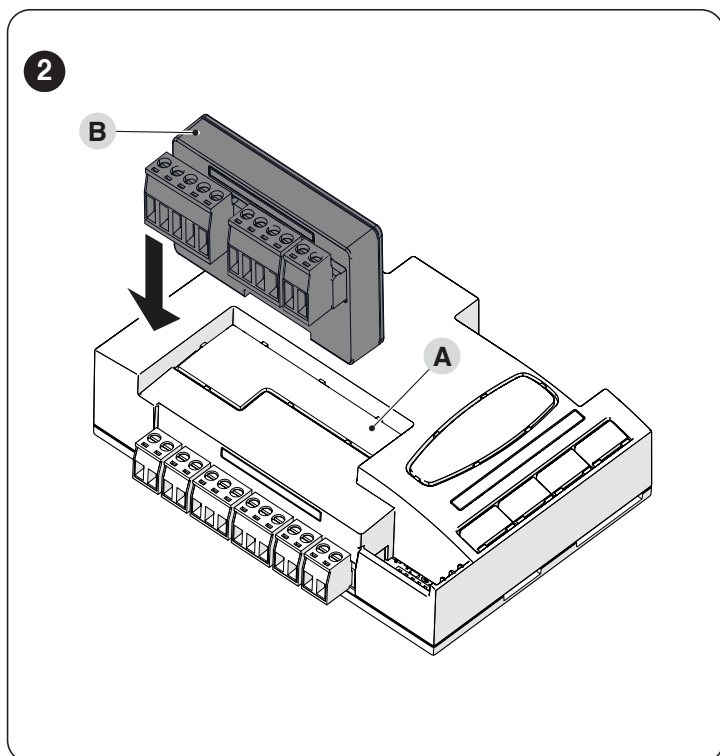
- Check the integrity of the supply
- Check that all the materials are in good working order and suitable for the intended use
- Verify that the characteristics of the control unit are compatible with the expansion module
- Components must never be immersed in water or other liquids.
- Keep the product away from heat sources and open flames and acid, saline or potentially explosive atmospheres; these may damage the product and cause malfunctions or dangerous situations.

3.2 INSTALLING THE MODULE

! Before proceeding with the installation, verify whether the expansion module is compatible with the control unit. (Refer to the product manual)

To install the **MLAE** expansion module:

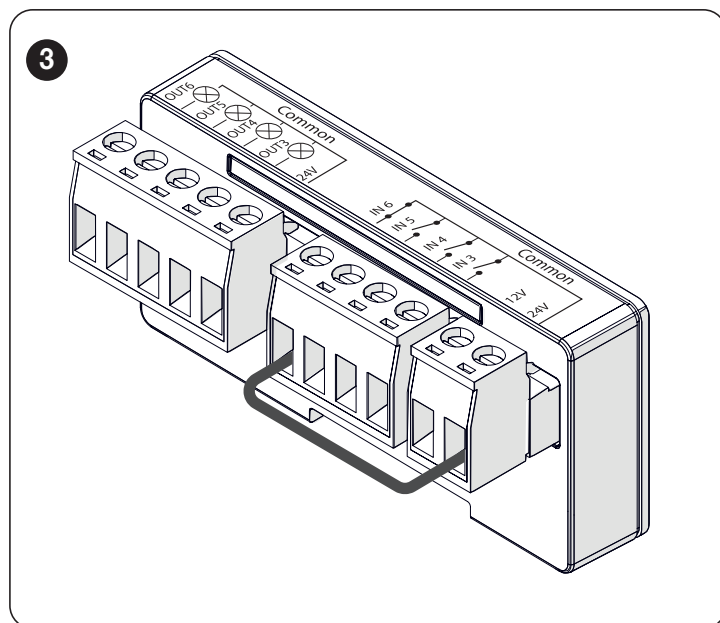
1. Disconnect the control unit from the power supply
2. Remove the pre-detachment element (A)
3. Insert the expansion module (B) into the appropriate housing on the control unit circuit board
4. Connect all the desired inputs and outputs
5. Power the control unit
6. Repeat the learning procedure for the devices as described in the control unit manual



! Verify the electrical consumption of the control unit and of the expansion board. Do not exceed the maximum allowed power (for further information, consult the relative manuals).

3.3 EXTERNAL CONNECTIONS

MLAE 44 is supplied wired. Input "IN6" is configured by default as "Photo" or "Open in emergency mode". These are two safety mechanisms that are normally closed under normal conditions.



4 TESTING AND COMMISSIONING

These are the most important phases of the automation set-up for maximising the system's safety. The testing procedure can also be performed as a periodic check of the automation devices.



Testing and commissioning of the automation must be performed by skilled and qualified personnel, who are responsible for the tests required to verify the solutions adopted according to the risks present, and for ensuring that all legal provisions, standards and regulations are met, in particular all the requirements of the EN 12445 standard, which defines the test methods for checking gate automations.

4.1 TESTING

To run the test:

1. Verify that all the indications appearing in the chapter "GENERAL SAFETY WARNINGS AND PRECAUTIONS" have been strictly observed.
2. Verify that the connected inputs and outputs reflect the desired functions. The expansion module is supplied with the input and output values set by default, depending on the type of application. For further information consult "Table 3" and "Table 4" on page 6.

4.2 COMMISSIONING



Commissioning can only be performed after all testing phases have been successfully completed.



Before commissioning the automation, ensure that the owner is properly informed of all residual risks and hazards.



The gate cannot be commissioned partially or under "temporary" conditions.



For all the above-mentioned documentation, Nice – through its technical assistance service – provides the following: pre-completed forms, instruction manuals and guides.

5 SETTINGS

Refer to the control unit manual for the complete list of available functions.

5.1 DEFAULT VALUES

The expansion module is supplied with the input and output values set by default in the control unit. For certain control unit modules the default values could differ from those listed in **Tables 3 and 4**.

⚠ The expansion module does not memorise the set values: the values are stored in the control unit.

Table 3

"GATE" DEFAULT VALUES								
Description	IN 3	IN 4	IN 5	IN 6	OUT 3	OUT 4	OUT 5	OUT 6
MLAE 21	Open	Close			Gate open (SCA/OGI)			
MLAE 22	Open	Close			Gate open (SCA/OGI)	Presence light		
MLAE 44	Open	Close	Partial open 1	Photo	Gate open (SCA/OGI)	Gate closed	Radio channel 4	PhotoTest

Table 4

"DOOR" DEFAULT VALUES								
Description	IN 3	IN 4	IN 5	IN 6	OUT 3	OUT 4	OUT 5	OUT 6
MLAE 21	Open	Close			One-way traffic light			
MLAE 22	Open	Close			One-way traffic light	Courtesy light		
MLAE 44	Open	Close	Partial open 1	Open in emergency mode	One-way traffic light	Green traffic light	Red traffic light	PhotoTest

5.2 TYPICAL CONNECTIONS

5.2.1 MLAE 21 "GATE" AND "DOOR"

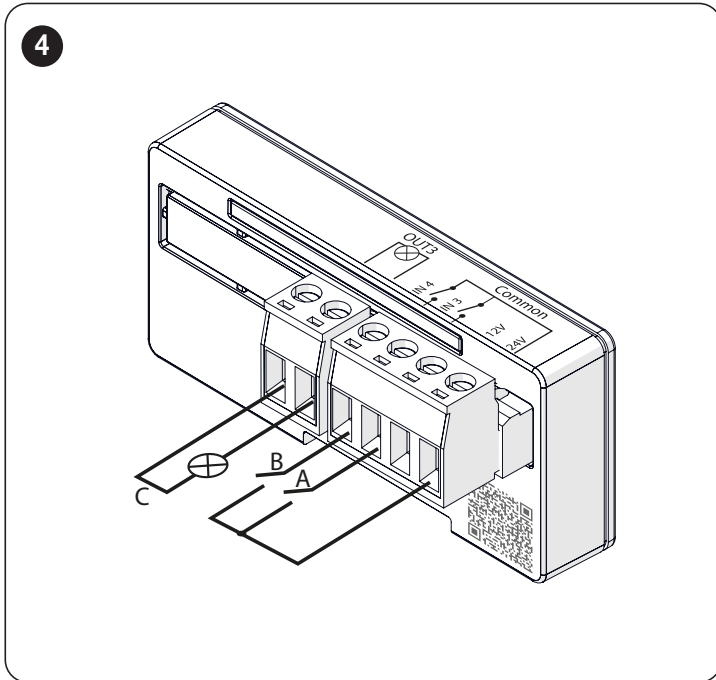


Table 5

DEFAULT VALUES		
ID	GATE	DOOR
A	Open	Open
B	Close	Close
C	SCA/OGI	One-way traffic light

5.2.2 MLAE 22 "GATE" AND "DOOR"

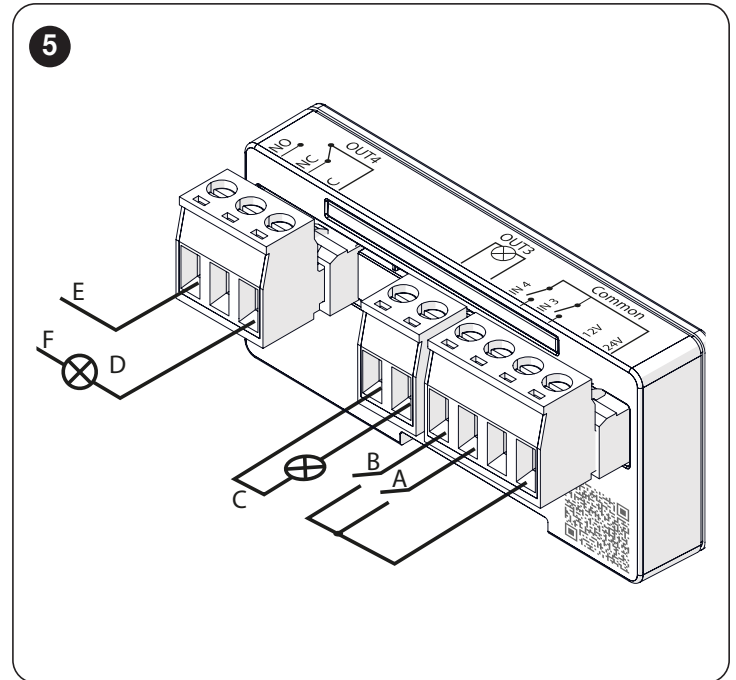


Table 6

DEFAULT VALUES		
ID	GATE	DOOR
A	Open	Open
B	Close	Close
C	SCA/OGI	One-way traffic light
D	Presence light	Courtesy light
E	Live	Live
F	Neutral	Neutral

5.2.3 MLAE 44 "GATE" AND "DOOR"

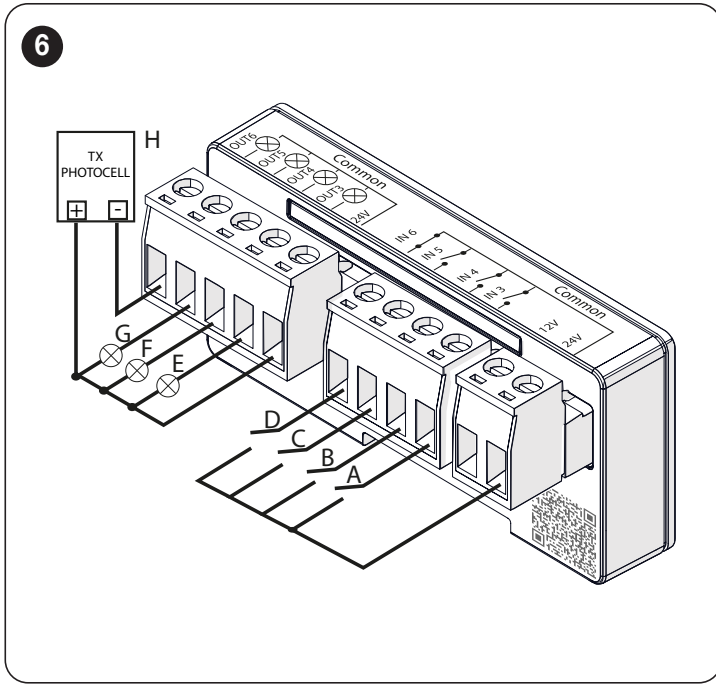


Table 7

DEFAULT VALUES		
ID	GATE	DOOR
A	Open	Open
B	Close	Close
C	Partial open 1	Partial open 1
D	Photo	Open in emergency mode
E	SCA/OGI	One-way traffic light
F	Gate closed	Green traffic light
G	Radio channel 4	Red traffic light
H	Photo Test	Photo Test

6 PRODUCT DISPOSAL

As in installation, also at the end of product lifetime, the disassembly and scrapping operations must be performed by qualified personnel. This product is made of various types of materials, some of which can be recycled while others must be scrapped. Seek information on the recycling and disposal systems envisaged in the local regulations in your area for this product category.



WARNING

Certain parts of the product can contain pollutants or dangerous substances that, if dispersed into the environment, could be detrimental to the environment itself and to human health.



As indicated by the symbol alongside, disposal of this product in domestic waste is strictly prohibited. Separate the waste into categories for disposal, according to the methods set forth in the regulations in force in your area, or return the product to the retailer when purchasing a new equivalent product.



WARNING

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



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