Nice

EPMOR

Photocells

EN - Instructions and warnings for installation and use
IT - Istruzioni ed avvertenze per l'installazione e l'uso
FR - Instructions et avertissements pour l'installation et l'utilisation
ES - Instrucciones y advertencias para la instalación y el uso
DE - Installierungs-und Gebrauchsanleitungen und Hinweise
PL - Instrukcje i ostrzeżenia do instalacji i użytkowania
NL - Aanwijzingen en aanbevelingen voor installatie en gebruik
RU - Инструкции и предупреждения по монтажу и эксплуатации
PT - Instruções e advertências para a instalação e utilização

Nice

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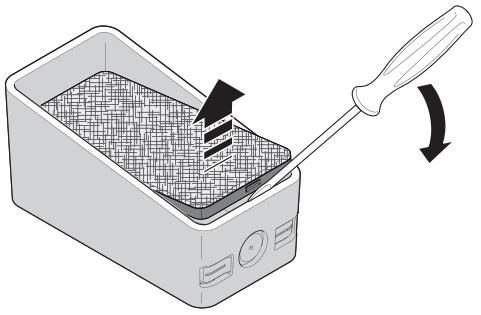

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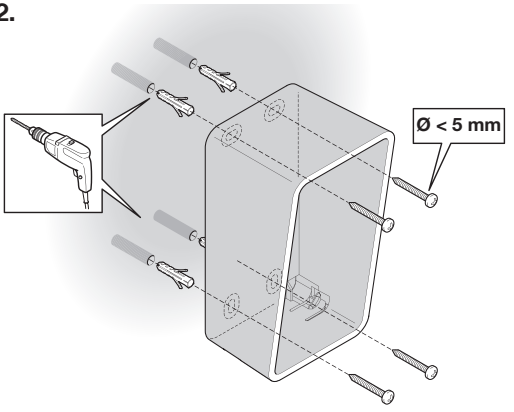

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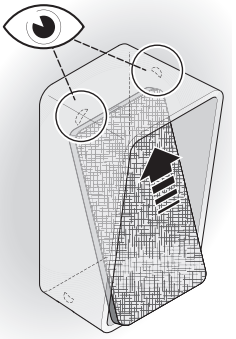

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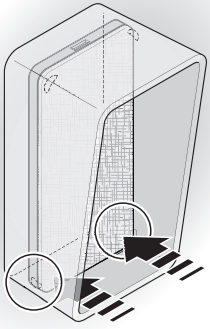

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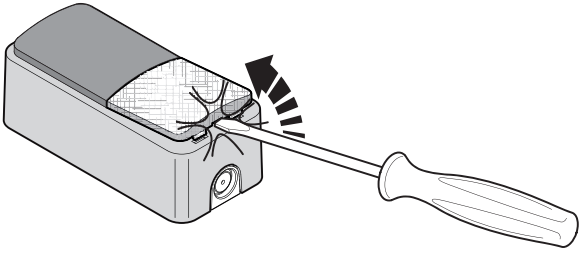

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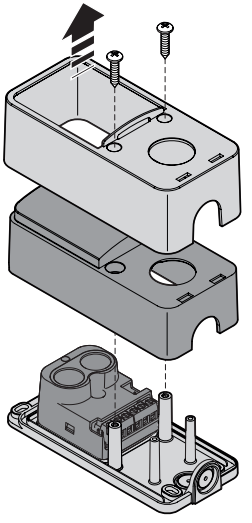

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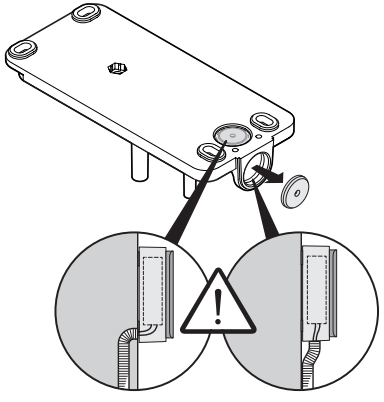

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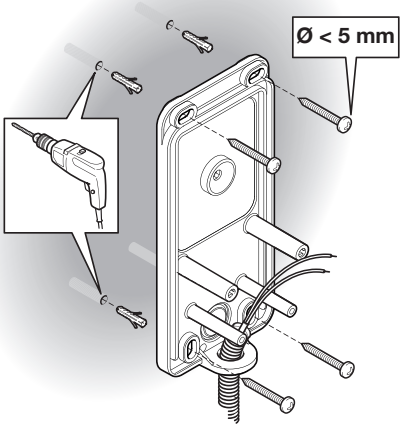

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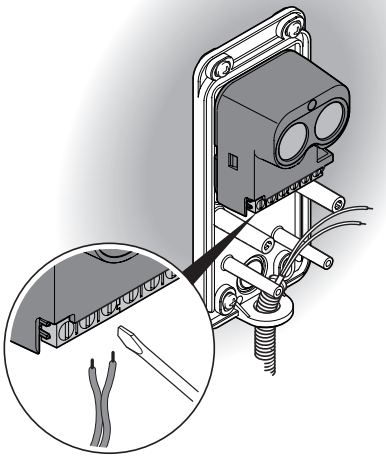

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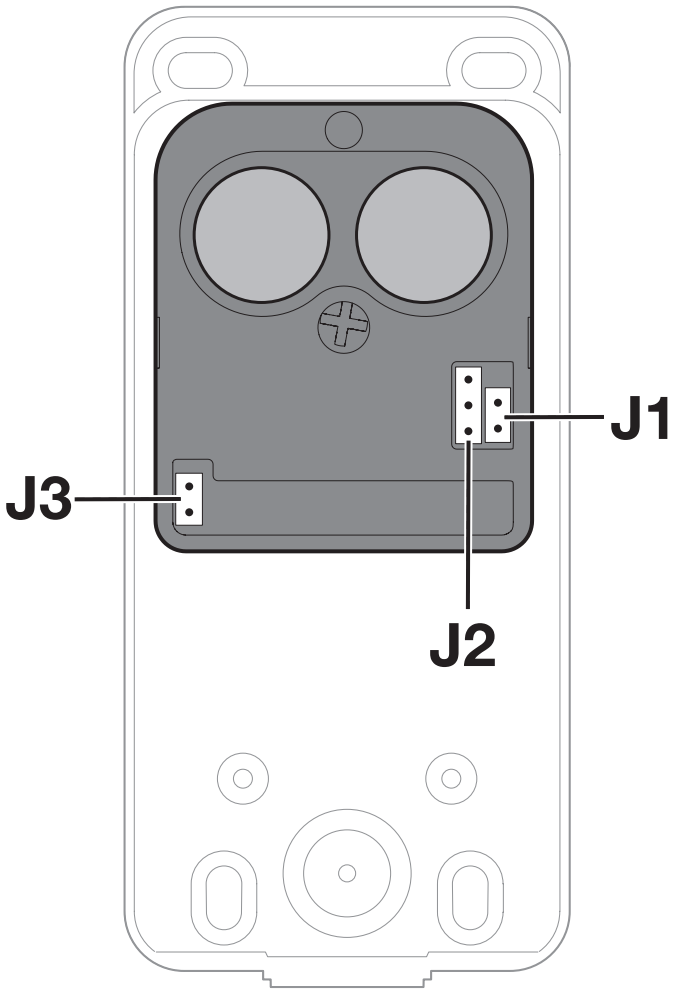

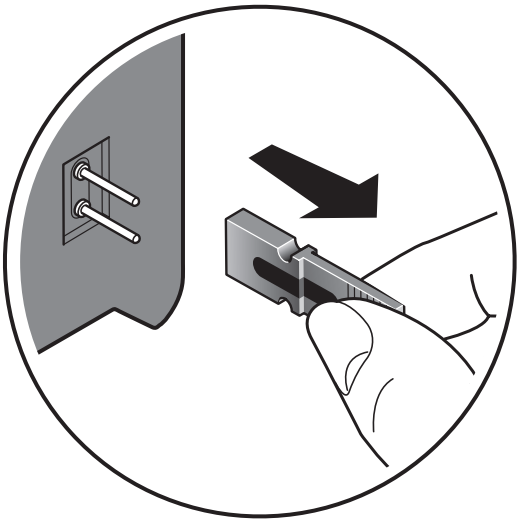

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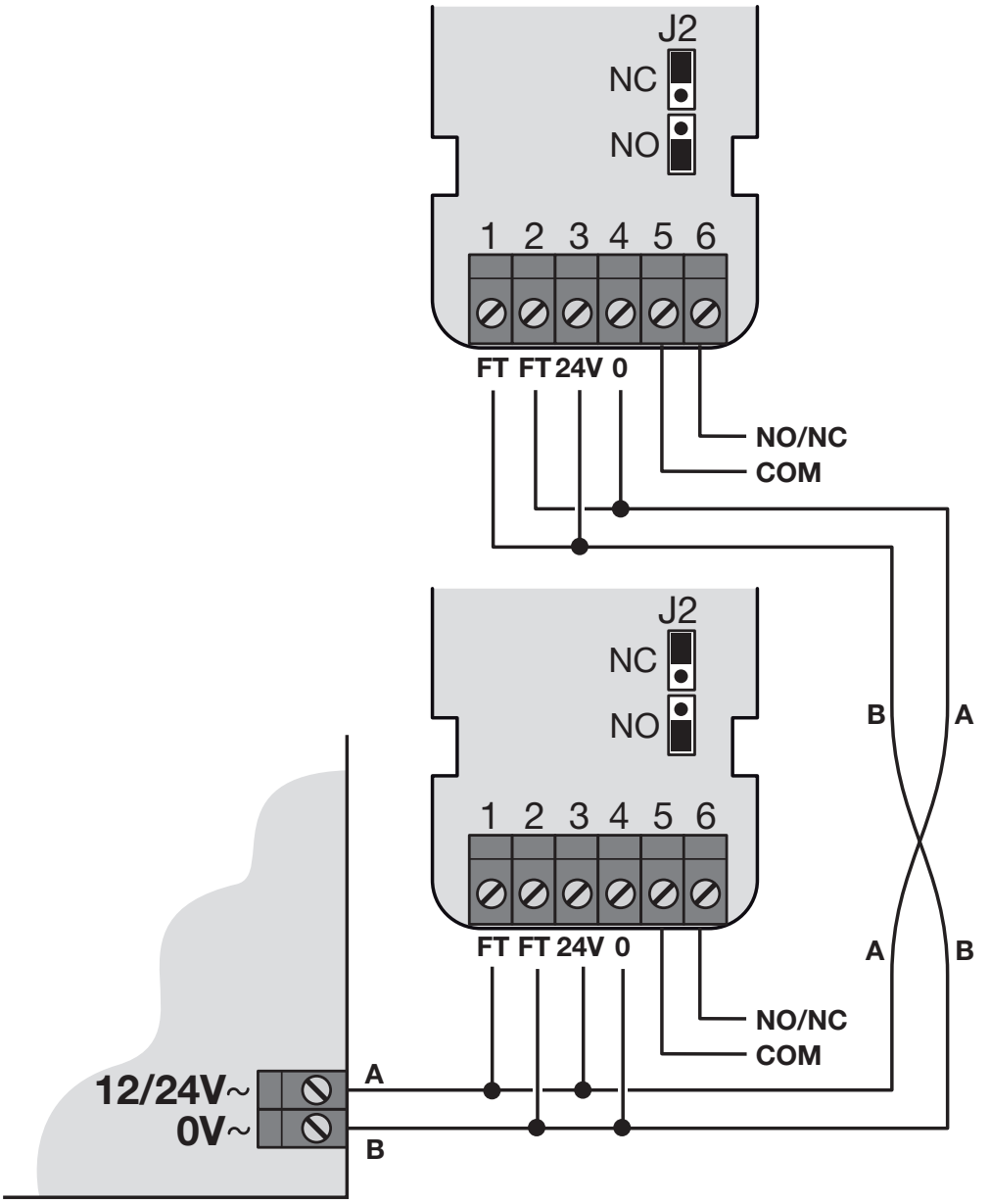
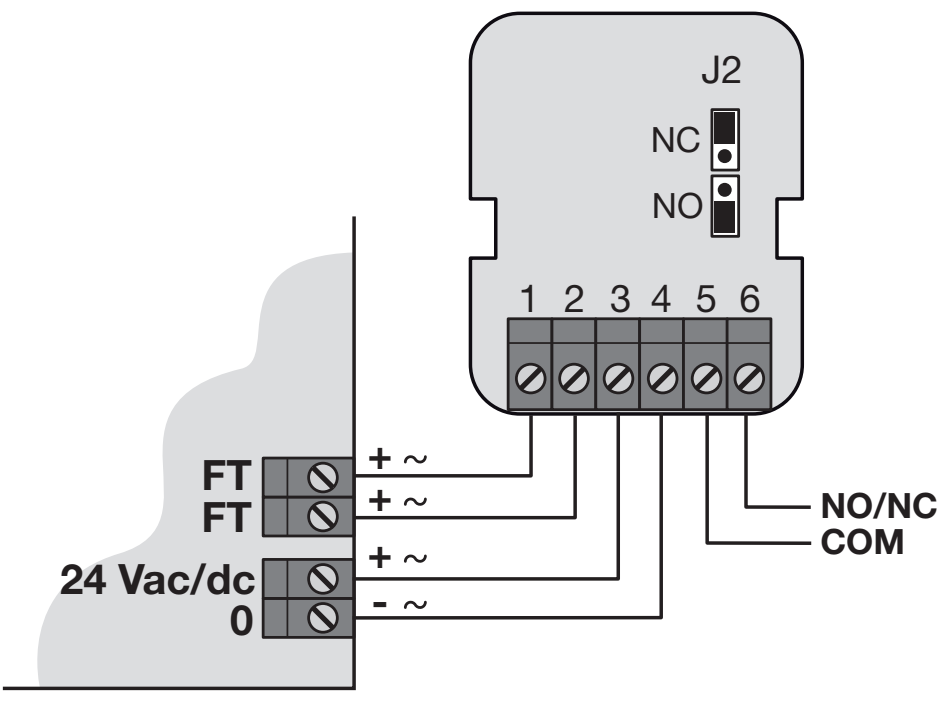
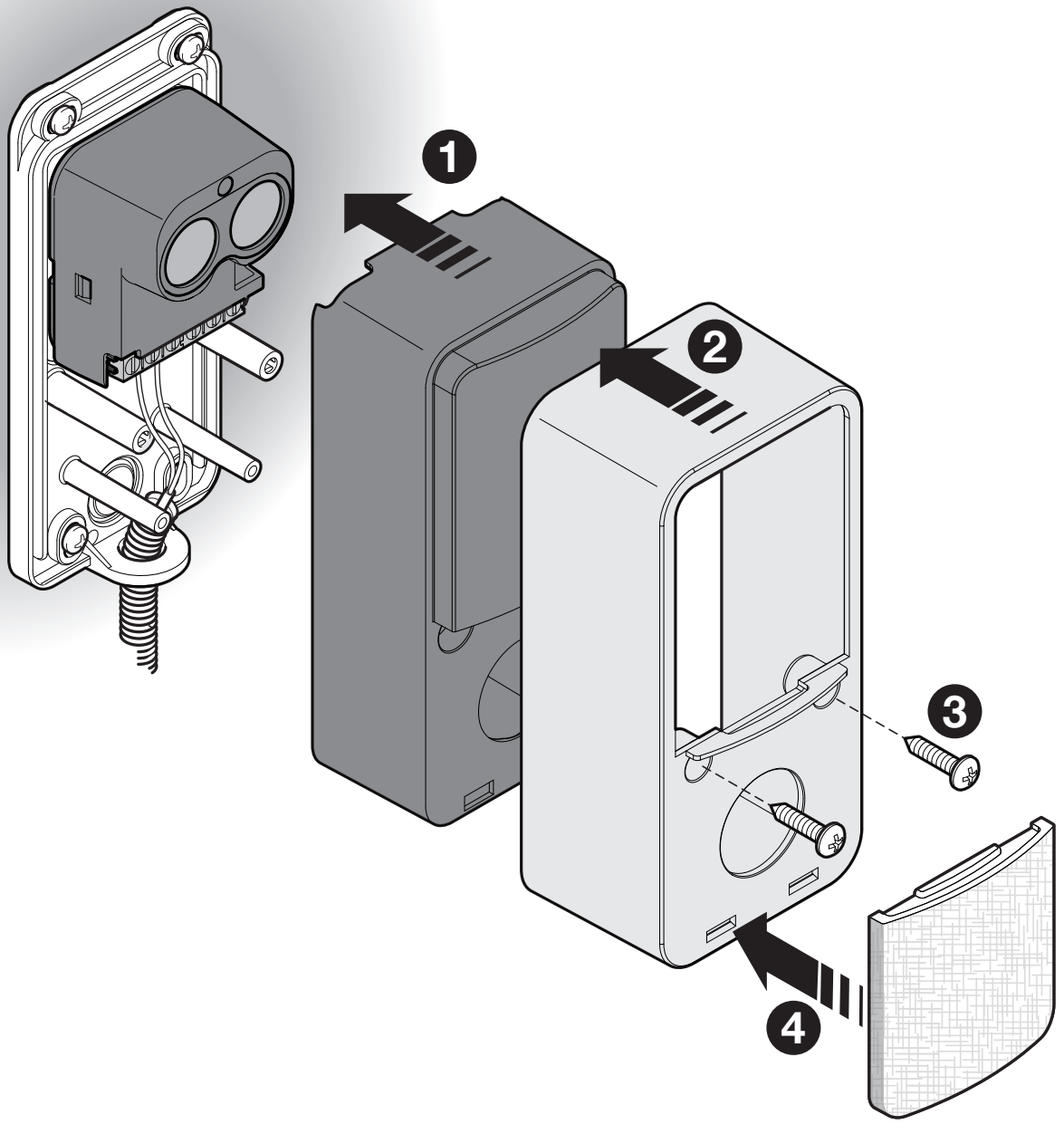

J2
NC
NO
1 2 3 4 5 6
FT FT 24V 0
NO/NC
COM
B
A
A
B
12/24V~
0V~
A
B

4


J2
NC
NO
1 2 3 4 5 6
FT
FT
24 Vac/dc
0
+ ~
+ ~
+ ~
- ~
NO/NC
COM

5



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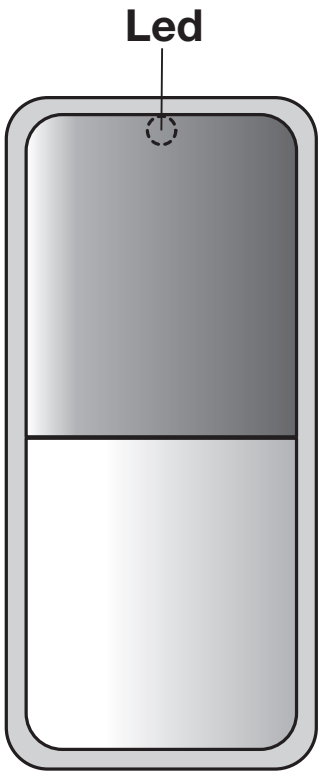

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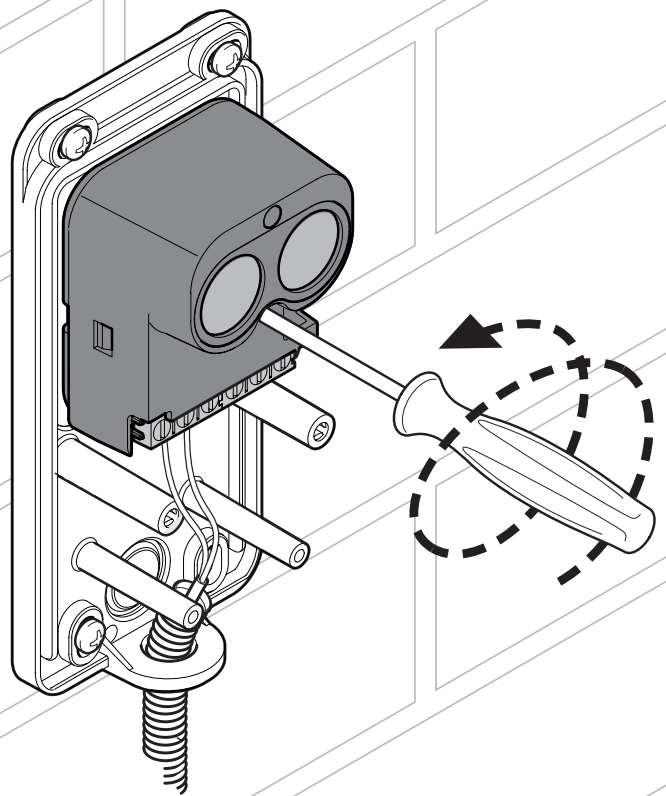

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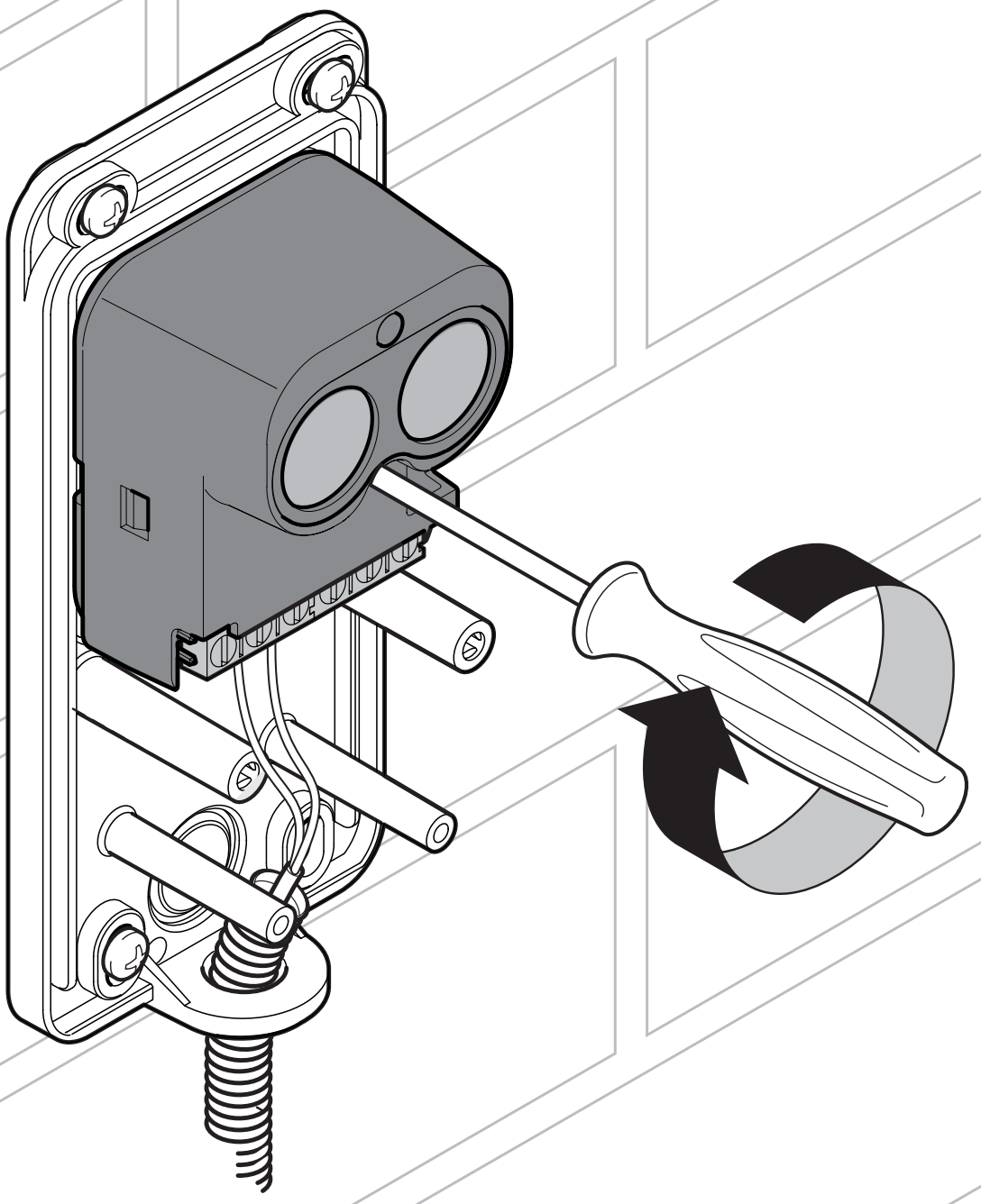

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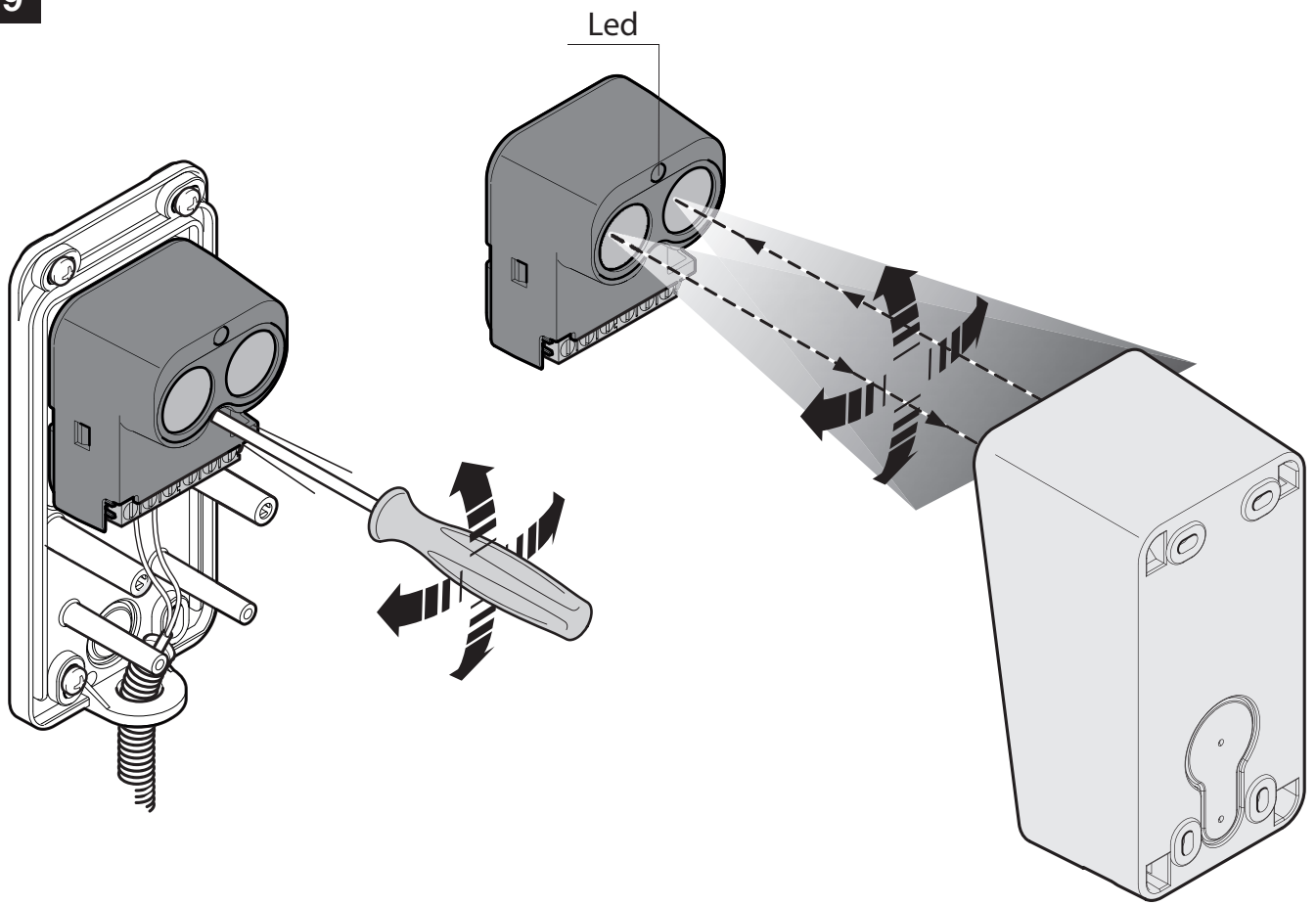

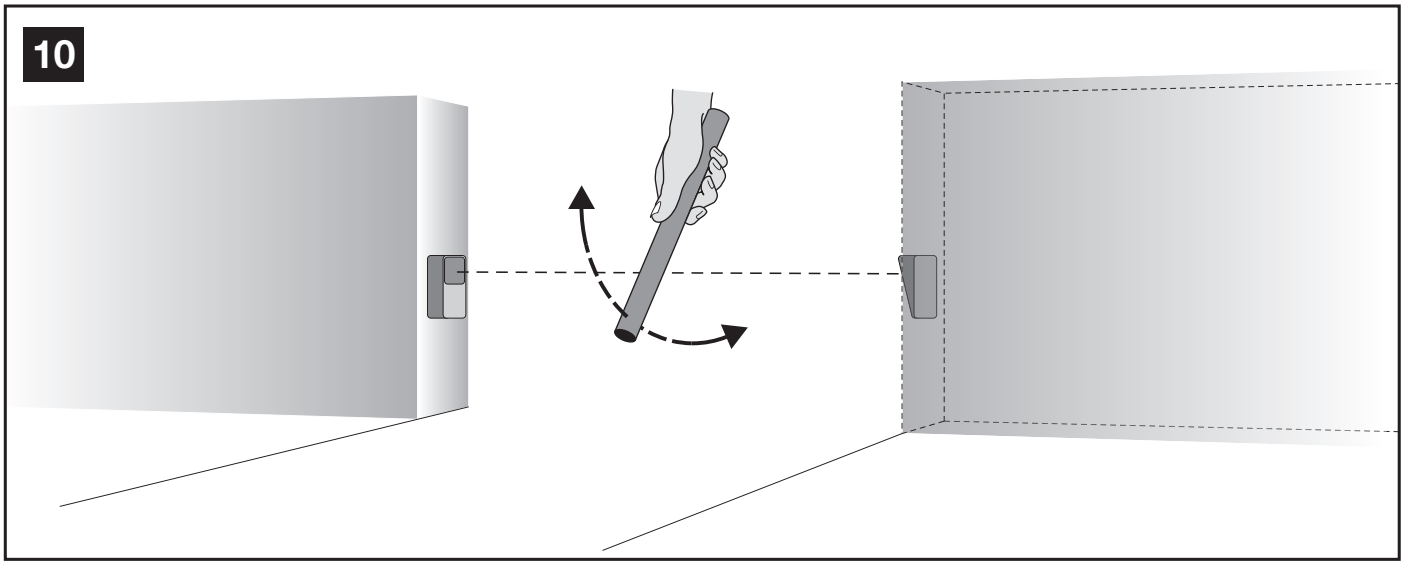
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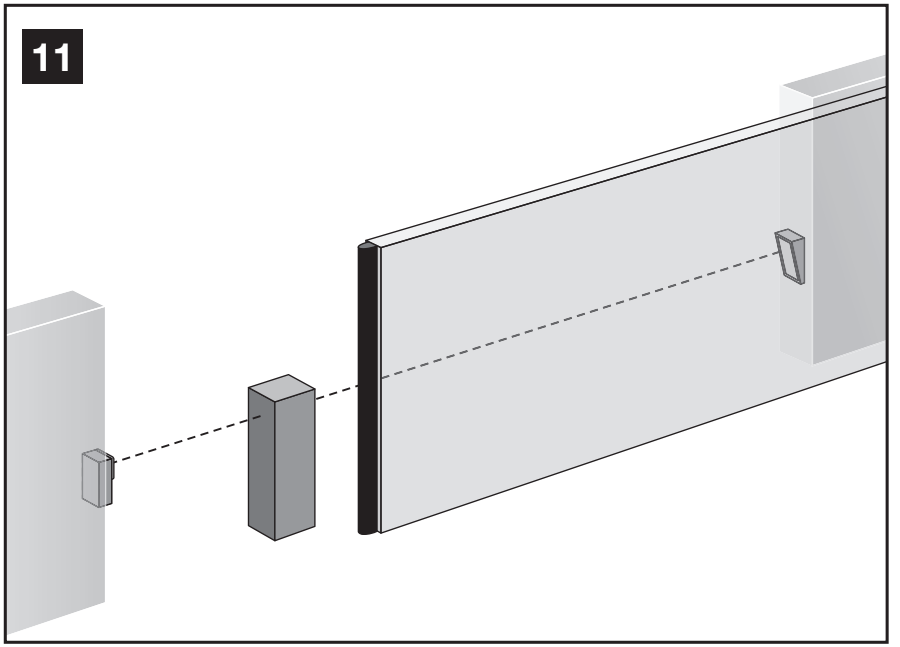
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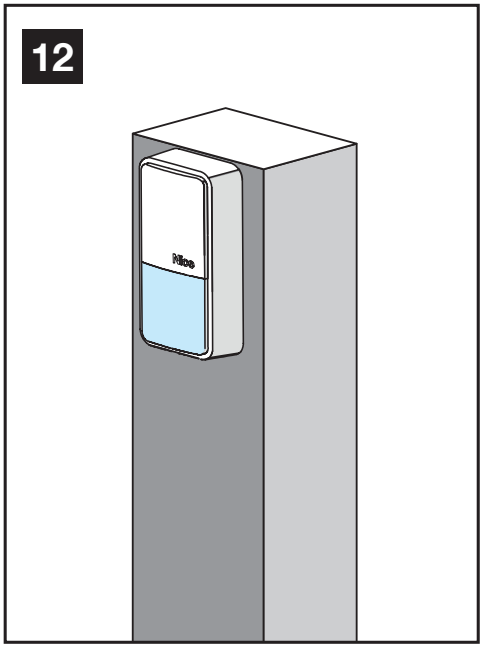
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Nice

ENGLISH

Instructions translated from Italian

1 - Warnings

• CAUTION! IMPORTANT INSTRUCTIONS: for personal safety it is important to read and follow these instructions, and store them in a safe place. In case of doubt, contact Nice Support Service. Incorrect installation is a safety hazard and can lead to faulty operation. • Installation, wiring, programming and maintenance must be performed by qualified technicians, in compliance with the applicable laws, standards, local regulations and these instructions. • Each element of the device must be anchored permanently to a vertical surface, which must be made of sturdy material and must not transmit vibrations to the photocells. **Warning! – The surfaces for anchoring the device and the reflector must lie perfectly parallel to one another; a slight error can be corrected with the orientation system**. • The chosen mounting position must protect the photocell against accidental impact; it must also allow easy access for maintenance. **• If the photocell is mounted on columns, make sure that it is fastened to the outer part supporting the column (see Fig. 12).** • To increase the level of safety against faults, the photocell must be connected to a control unit having the "Phototest" function, using the relevant photocell input (**Fig. 4**). • The product is protected against rain and dust infiltrations, and is suitable for outdoor use but not for particularly salty, acidic or potentially explosive atmospheres. Do not install the equipment in areas subject to flooding or water stagnation. • The power cables must enter the photocell through one of the holes on the lower section of its support and must be inserted from below to prevent water from penetrating inside.

2 - Description and intended use

EPMOR devices are presence sensors for automations of doors, gates, garage doors and similar equipment (Type D according to the EN 12453

standard), via direct interpolation with a relay output. **Any use other than that described is to be considered improper and prohibited!**
EPMOR devices include a receiver-transmitter element (photocell) and a reflector; they are able to detect obstacles along the line of sight between the two elements. It features the “Phototest” function that can increase the level of safety against faults, by verifying whether the device operates correctly, at every manoeuvre.

3 - Installation and electrical connections

⚠ Correct operation can be influenced by several factors: the position of the devices and their closeness to systems lacking interference suppressors; other similar devices may interfere during adverse weather conditions. Do not install the device too close to the ground or near large-size metal objects. The maximum length of any connecting cables must not exceed 20 mm. Contact the Nice technical assistance service in case of malfunctions.

⚠ If the photocell is mounted on columns, make sure that it is fastened to the outer part supporting the column (see Fig. 12).

01. Check that the installation conditions are compatible with the data appearing in Chapters 1 and 7.

02. Shut off power to the automation.

03. Perform the operations shown in **Fig. 1**.

04. Read points “A, B and C” below and only complete the steps that refer to your automation:

A – Opening of the access point to be measured exceeding 4 m: it is necessary to remove jumper **J1** on the board, as indicated in **Fig. 2**.

B – Resolving any interference between multiple pairs of photocells: if two devices are installed close to one another, the transmitter (TX) beam of one device could be captured by the receiver (RX) of the other device and vice-versa, with the risk of no detection occurring. In such case, solve the problem by activating “synchronised operation” and power the photocells with alternating current as shown in **Fig. 3**: power

one photocell with the wires inverted with respect to the other photocell.

C - If the "Phototest" function is not used: jumper **J3** must be inserted as shown in **Fig. 2**.

05. Perform the electrical connections as shown in **Fig. 4**:

- For use as a "**safety device**", connect the cables to terminals 5 and 6 and set jumper J2 to the NC position (**Figs. 3 and 4**);

- For use as a "**control device**", connect the cables to terminals 5 and 6 and set jumper J2 to the NO position (**Figs. 3 and 4**).

06. Perform the testing procedures described in Chapter 4.

07. Close the photocells (**Fig. 5**).

4 - Testing

01. Power the automation and check the status of the led (**Fig. 6**) on the photocell: if it flashes rapidly or remains steady lit, consult **Table 1** for the relevant meaning. If necessary, improve the alignment by carrying out the operations indicated in **Fig. 7, 8**, **9**. **Note** to **Fig. 8** - Point the photocell towards the reflector: optimal alignment will be signalled by the led switching off or flashing very slowly. The procedure can be carried out on the photocell and by aligning the reflector.

02. Check the detection efficiency by blocking the line of sight between the photocell and the reflector using a cylinder (Ø = 5 cm; L = 30 cm): first pass the object near the photocell then near the reflector and, lastly, halfway between the two elements (**Fig. 10**). Make sure that in each case the output switches from "Active" to "Alarm" and vice-versa, and that the automation responds accordingly to the photocell's intervention.

03. Verify correct obstacle detection as envisaged in the EN 12453 standard, using a parallelepiped (700 x 300 x 200 mm) with three faces (one for each dimension) with matt black surface and the remaining faces with glossy reflective surface (**Fig. 11**).

5 - Maintenance

Service the photocells at least every 6 months as follows: **1)** release the gearmotor as described in the user manual to prevent involuntary activation of the automation during maintenance; **2)** check for humidity, oxidation and foreign bodies (insects, etc.) and remove them. In case of doubt, replace the equipment; **3)** clean the housing – especially the lenses and glass panels – with a soft, slightly damp cloth. Do not use detergents containing alcohol, benzene, abrasives or similar cleaning products; these may dull polished surfaces and hinder the operation of the photocells; **4)** run the functional test as described in Chapter 4 - Testing; **5)** the product is designed to work for at least 10 years in normal conditions; we recommend increasing the frequency of maintenance thereafter.

6 - Disposal

This product is an integral part of the automation system and must therefore be disposed of together with it, in the same manner described in the automation's user manual.

7 - Technical specifications

Please note: the technical features refer to an ambient temperature of 20°C. Nice S.p.A. reserves the right to modify its products without altering their intended use and essential functions.

• **Product type**: presence sensor for gate and garage door automation systems (Type D according to the EN 12453 standard) • **Technology adopted**: indirect optical interpolation by means of a photocell and re-

flector, with modulated opto beam • Power supply/output: 12/24 V~/V ⎓ (limits: 10–35 V⎓ and 9–28 V~) • **Maximum power input**: approx. 50 mA • **Angle of the RX detection area**: +/-5° (± 25%) • **Output relay contact**: Max 500 mA and 48 V~/V⎓ • **Electrical life**: over 600,000 cycles AC11 or DC11 • **Response time**: less than 30 ms • **Range**: working range 8 m; maximum range, in optimal conditions, 15 m. The maximum range may drop by 50% in adverse weather conditions (fog, rain, dust, etc.) • **Detection capacity**: opaque objects larger than 50 mm on the line of sight between the photocell and the reflector (maximum speed 1.6 m/s) • **Protection rating**: IP 44 • **Operating temperature**: –20°C to +50°C • **Assembly**: elements facing one another, anchored to two vertical surfaces parallel to one another or to an appropriate column support • **System for adjusting the alignment between the photocell and the reflector**: yes • **Dimensions** (single component): 105 x 50 x 40 h mm • **Weight** (sum of the two components): 83 g

Table 1

Led status (Fig. 7)	Meaning 1	Meaning 2	Output status	Actions to be performed
Always off	Excellent reception	No obstacle	Active	None
Slow flashing	Low reception	No obstacle	Active	Improve alignment between lenses
Quick flash	Poor reception	No obstacle	Active	Clean the lenses / Eliminate any reflective surfaces in the vicinity / Realign the lenses
Always lit	No reception	Obstacle present	Alarm	Remove the obstacle

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