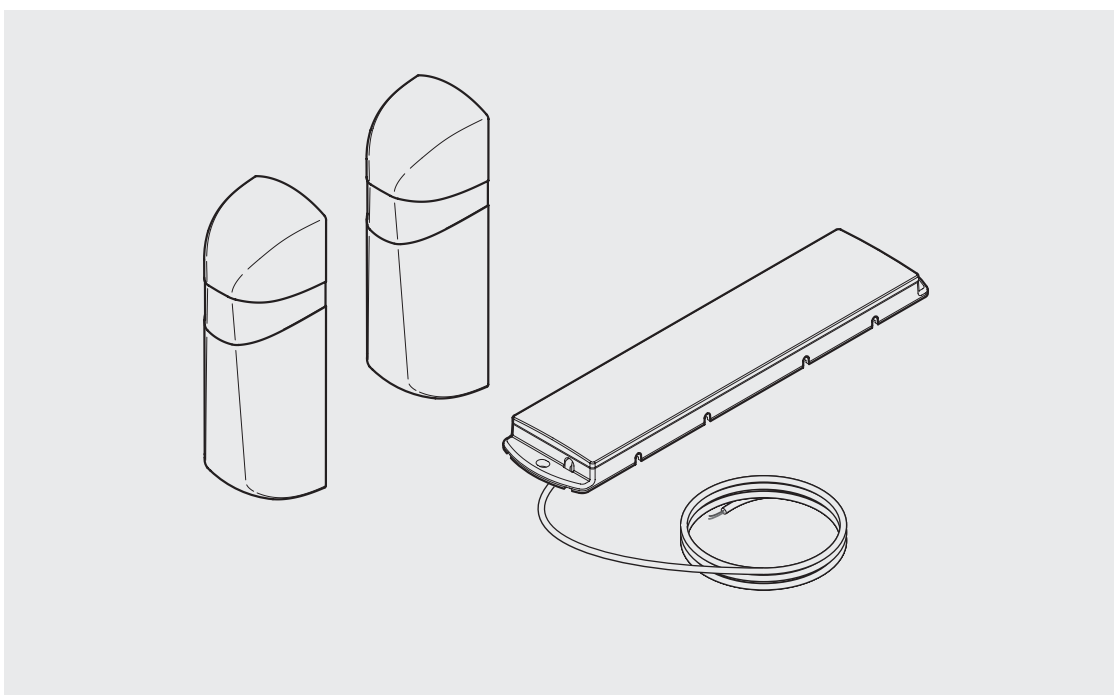


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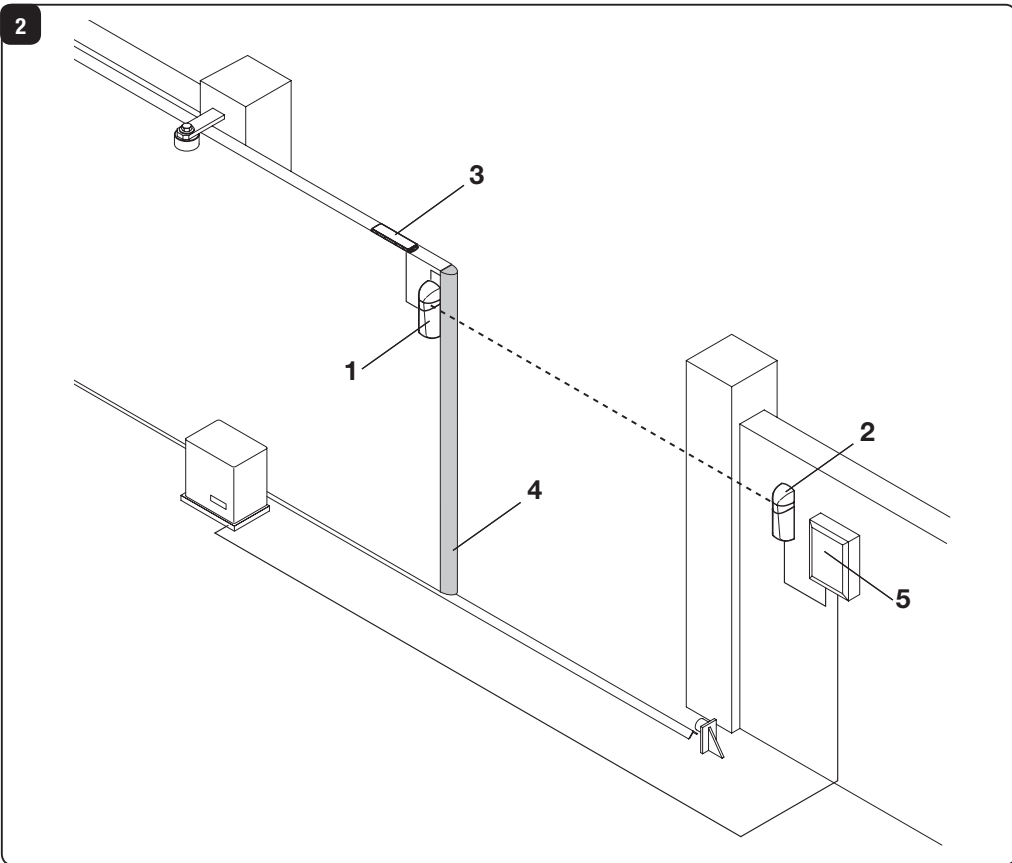
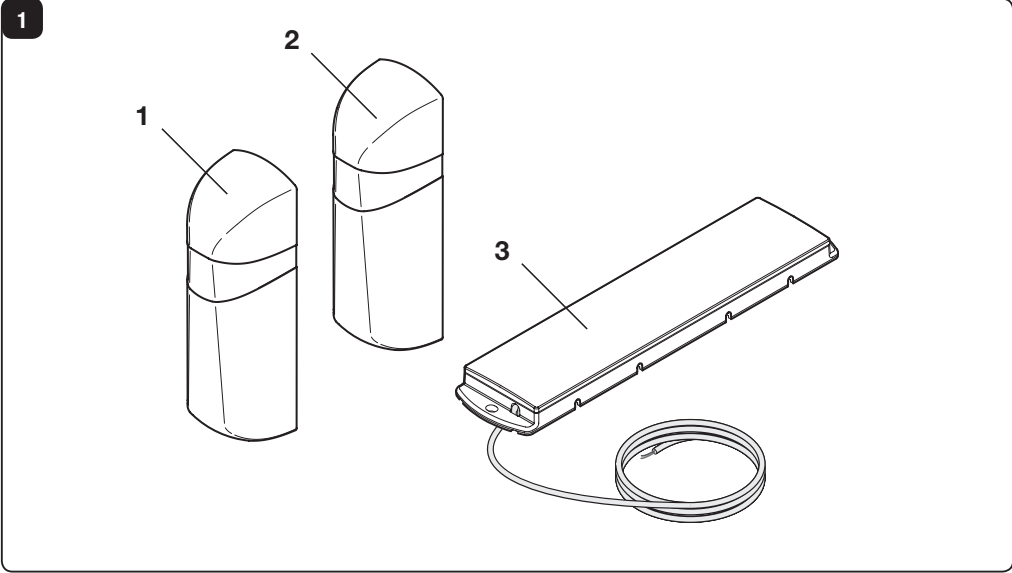


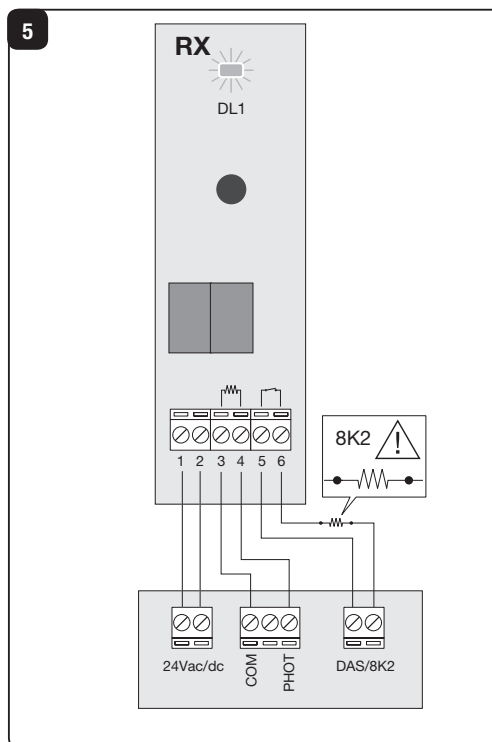
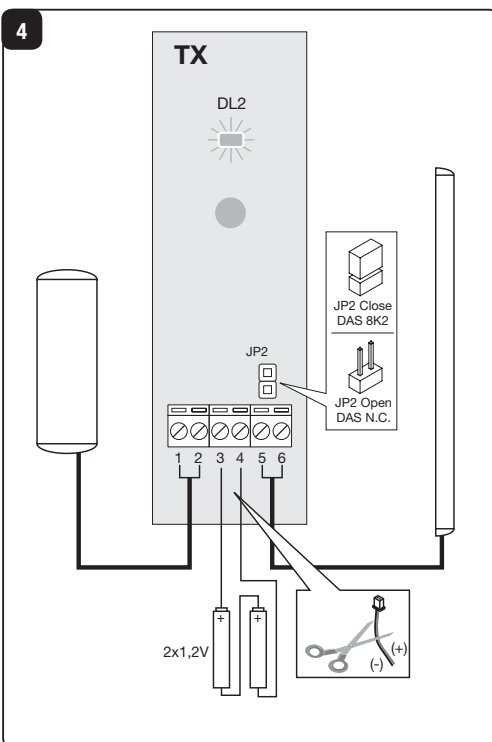
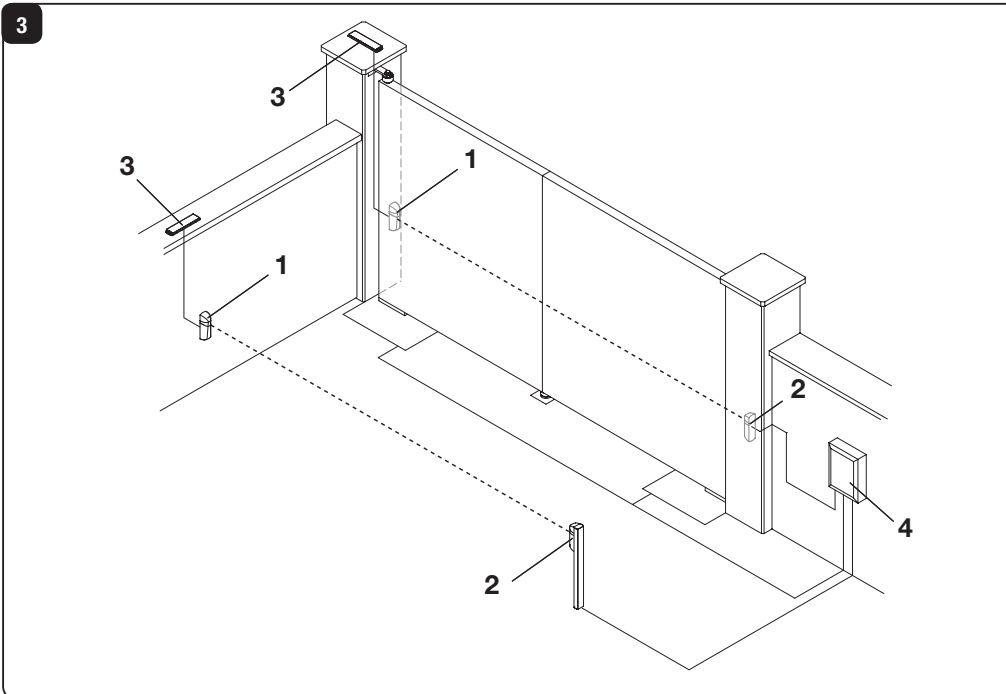
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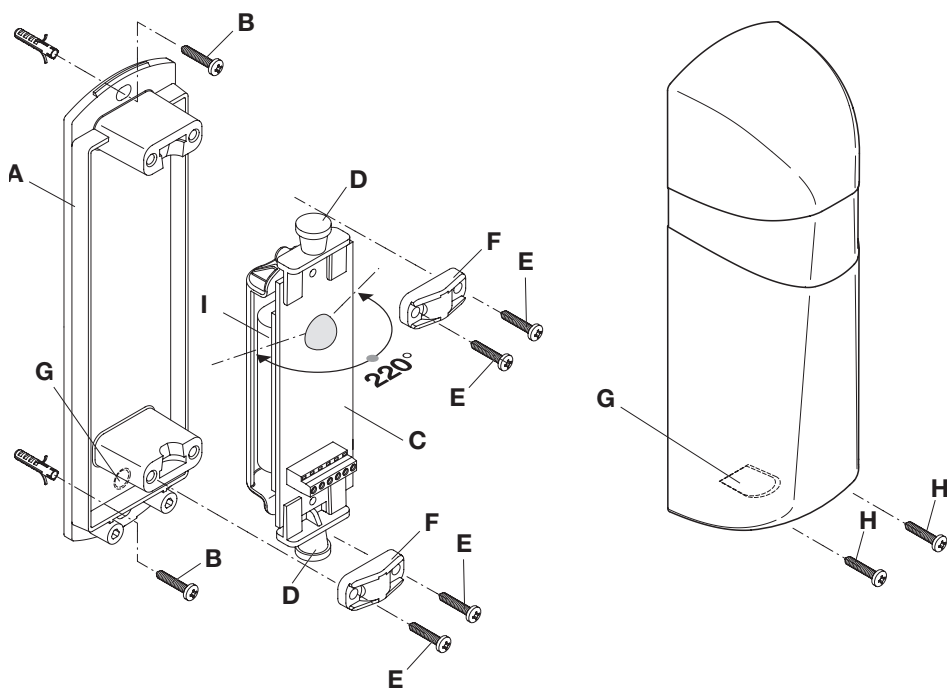
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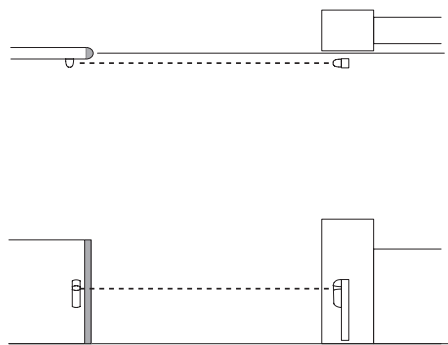




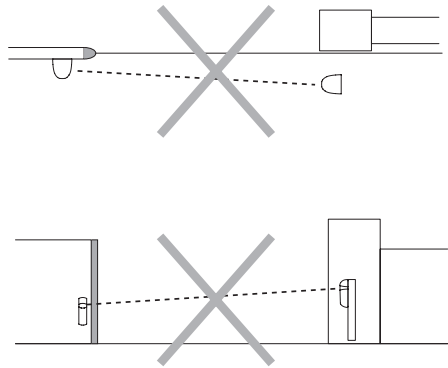
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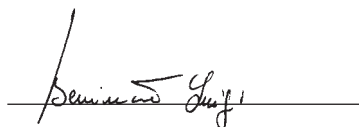


EC declaration of conformity

Manufacturer: **Automatismi Benincà SpA.**
Address: Via Capitello, 45 - 36066 Sandrigo (VI) - Italia

Herewith declares that: fotodetector **PUPILLA B.**
complies with the following relevant provisions:
EMC guidelines: **89/336/CCE, 93/68/CEE**
Low voltage guidelines: **73/23/CEE, 93/68/CEE**

Benincà Luigi, Legal responsible.
Sandrigo, 08/05/2008.



SPECIFICATIONS

PUPILLA B TRANSMITTER

Power supply from 1.8 to 5V	
Battery	2.4V 600 mAh NiMH package of 2 AAA
Max. range in optimal conditions :	30 m
Useful range	20 m
Protection class	IP 44
Operating temperature	-10°C/+50°C
Absorption	0,35 mA at 2.4V
Down battery threshold	2 V

PUPILLA B RECEIVER

Power supply	22÷30Vac or 20÷28Vdc
Protection class	IP 44
Operating temperature	-10°C/+50°C
Absorption	70mA max

SUN SOLAR PANEL

Solar cell	amorphous silicon
Overall dimensions	43x185x12mm
Recharge current	30 mA with 50000 Lux (sun) 10 mA with 20000 Lux (variable weather) 0.5 mA con 2000 (clouds)
Recharge voltage	4.5V
Duration of charge	96h

PUPILLA B

Infrared photodetector with wireless transmitter, orientable at 220°.

DESCRIPTION

The Pupilla B set is composed of (Fig.1):

- 1 Infrared transmitter, orientable at 220°, powered with rechargeable, built-in battery at 2.4V NiMh.
- 2 Infrared receiver, orientable at 220°.
- 3 SUN solar panel. It provides for recharging of the battery for the utmost autonomy of the device.

DIFFERENT USES OF THE DEVICE

The common uses of Pupilla B are described hereunder:

Mobile door/gate leaves

Mounted on mobile doors/gates, this device permits to transmit the status of the safety edge with no need for any complex connection devices. This is the ideal solution for installations in compliance with safety regulations in force.

Key (Fig. 2):

- 1- Pupilla B transmitter, installed on the mobile door/gate leaf and oriented towards the receiver.
- 2- Pupilla B receiver, connected to the control unit. It responds to the contact status of the safety sensitive edge.
- 3- Solar panel, it provides for the recharging of the transmitter battery.
- 4- Safety sensitive edge with NC contact connected to the transmitter.
- 5- Control unit.

Used as normal infrared photocell

It allows to remarkably simplify and reduce the length of underground cables.

Specially useful to complete already existing installations or if the floor cannot be lifted for wiring.

Key (Fig. 3):

- 1- Pupilla B transmitter.
- 2- Pupilla B receiver, connected to the control unit.
- 3- Solar panel. It provides for the recharging of the transmitter battery.
- 4- Control unit.

WIRING

TRANSMITTER (Fig.4)

- 1-2 Input, power supply from solar panel*
1- black (white)
2+ red (brown).
 - 3-4 Input, power supply of built-in battery, 2.4V 3+(red)/4-(black) .
 - 5-6 Input, safety sensitive edge contact.
- JP2 Selection jack of safety edge. Open jack: mechanical safety edge
Closed jack: 8K2 safety edge of the resistive type

The correct operation of the device can be checked through LED DL2. Refer to Table 1.

*** Should the device be installed in not very sunny places, 2 solar panels can be connected in series to power the Pupilla B transmitter.**

RECEIVER (Fig.5)

- 1-2 Input, 20-28VDC or 22-30 VAC power supply. Not polarised input.
- 3-4 Normally Closed contact (N.C.), with powered and aligned photocell.
It opens the contact should an obstacle be present or a power failure occur.
WARNING: Always connect it to the PHOT input of the control unit. This is fundamental for the correct operation of the device for any types of use (photocell or sensitive safety edge).
- 5-6 Normally Closed (N.C.) contact, with safety sensitive edge in rest position.
It opens the contact if an obstacle causes the activation of the safety edge.

The correct operation of the device can be checked through LED DL1. Refer to Table 2.

HOW TO FIT THE PHOTOCELLS (Fig.6)

- A Bottom
- B Fixing screws to wall
- C Printed circuit
- D Support for printed circuit
- E Fixing screws for rotating bloc
- F Rotating bloc
- G Presetting of cable passage
- H Closing screws
- I Battery 2,4V

HOW TO ALIGN THE PHOTOCCELL

Taking Fig. 6 as a reference, loosen screws E so that the printed circuit C can be rotated. Turn the circuit and align the transmitter with the receiver. The correct alignment is shown by the DL1 LED switching up on the receiver. The transmitter sends a beam with narrow angle. A perfect alignment is therefore required on the entire stroke of the gate/door. Fig.7 shows the correct assembly of the device. Fig.8 shows an incorrect assembly.

HOW TO REPLACE THE BATTERY

The transmitter is equipped with a rechargeable battery at 2.4V 600mAh NiMH.

The battery lasts various years according to the conditions of use.

When the DL2 LED starts flashing slowly, this means that the battery is down.

Check the connection to the panel or recharge it with a 2.6V 50mA recharger for at least 10 hours. If the battery stays down, replace it.

Use only original spare parts.

Taking Fig. 6 as a reference:

- remove the screws E and the board C
- the battery is at the back of the board (ref.

l) and it is kept in the correct position by a plastic box

- disconnect the battery and replace it. Reconnect the wire connections
- carry out a new alignment as shown in the paragraph "How to align the photocell"

The batteries are special waste! Disposal of the battery should be in compliance with regulations in force

FINAL TEST

After connecting the control unit, the device should undergo a final test:

- check that indicators related to the safety edge and the photocell are correctly activated in the control unit when the safety sensitive edge is activated or the photocell beam is cut off.
- carry out some trial operations by cutting off the photocell beam and pressing the safety edge. Check the correct operation of the door/gate in all conditions of use.

Tab.1 DIAGNOSTICS OF THE TRANSMITTER		
Conditions of DL2 LED	Description	Notes
Off	Normal operation	
Slow flashing	Battery down	Check the good conditions of the battery and the connection of solar panel
Fast flashing	Error in the safety edge	Check the good conditions of the safety edge and the connection of the contact

Tab.2 DIAGNOSTICS OF THE RECEIVER		
Conditions of DL1 LED	Description	Notes
Off	No signal from transmitter	Check that photocells are correctly aligned
Fixed light	Correct signal from transmitter Correct signal from safety edge	
Fast flashing	Correct transmitter signal / Error of safety edge	Check the good conditions of the safety edge and connections of the contact
1 flashing with interval	Faulty photocell relay	Cut off power supply and replace the receiver
3 flashings with interval	Both relays are faulty	
4 flashings with interval	Circuit off	Check connection

IMPORTANT NOTES

For a correct operation of the device, the instructions hereunder should be strictly followed:

1 The solar panel must be installed in a sunny position, with the transparent panel turned upwards.

2 Check that during the day the panel is not in shadow (trees, buildings, etc).

3 Periodically clean the solar panel from dust and dirt.

4 Better the exposition of the panel, better the performance and reliability of the device.

5 If the system is correctly installed and kept in perfect conditions, it will work for a very long period of time, at the end of which the battery must be replaced due to completion of the maximum number of recharge cycles available.

6 If the device is correctly installed and maintained, safety as per regulations in force will be fulfilled. In any case, the manufacturer shall not be deemed responsible for any damage or injury caused by incorrect installation, incorrect maintenance or improper or incorrect use of the device.