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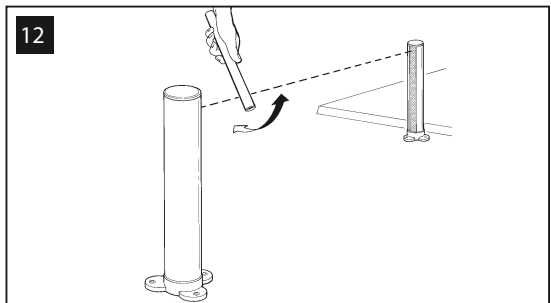
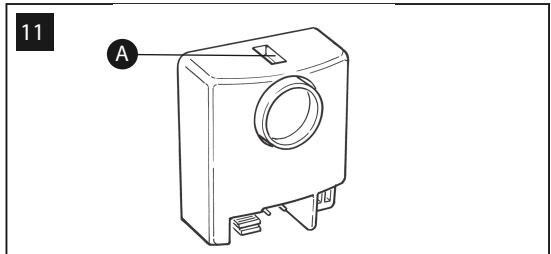
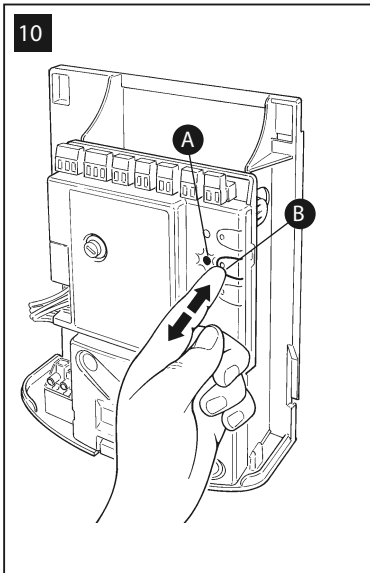
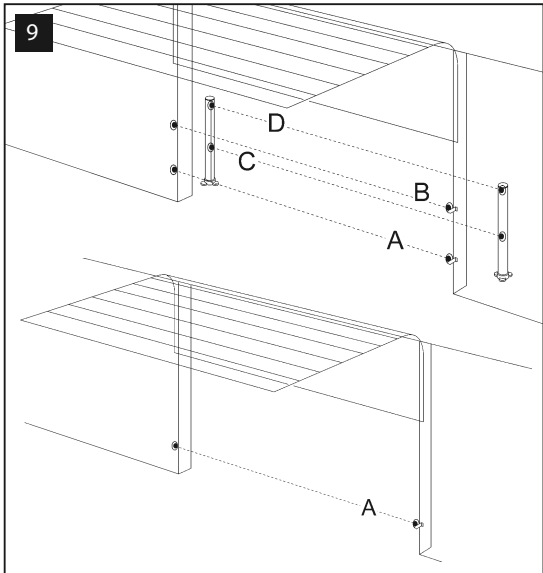
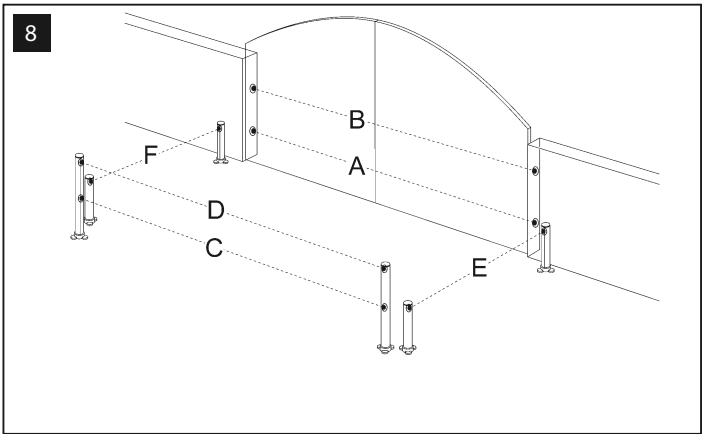
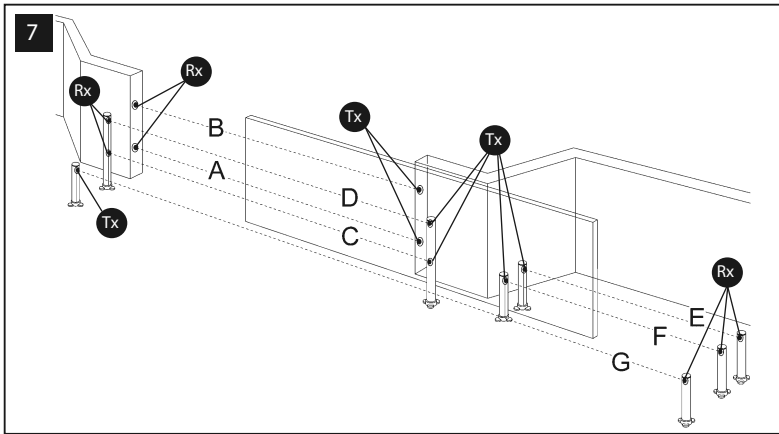
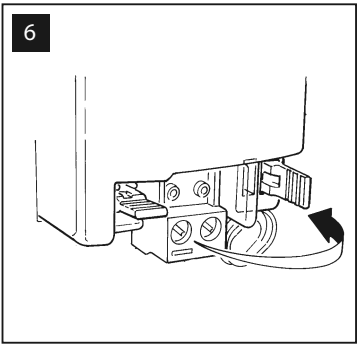
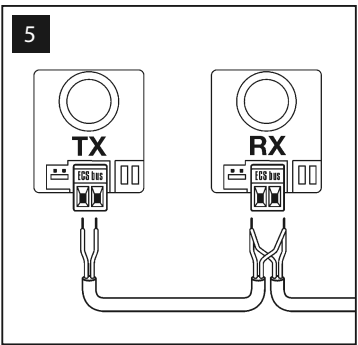
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PT50-PT100
Photocells on post

Installation, instructions and warnings

CE ISO035A00MM 18-01-2011



Warnings

- The installation, testing and set-up of automation devices for doors and gates must be performed by qualified and experienced personnel who must also determine the type of tests required based on the risks involved, and ensure that laws, standards and regulations in force are complied with.
- MHOUSE disclaims responsibility for any damage resulting from improper use of the product; the only use authorized by the manufacturer is the one described in this manual.
- The packaging materials must be disposed of in compliance with the regulations locally in force.
- The post-mounted photocells must not be immersed in water or any other liquid substances. If liquid substances should penetrate inside the device, disconnect the power supply immediately and call MHOUSE customer service; using the device under these conditions could be hazardous.
- Do not place the photocells near heat sources or expose them to open flames; this could damage the device and cause malfunctions, fire hazards or other dangers.

Description and Intended Use

This set of PT50 and PT100 post-mounted photocells is a motion sensor for automatic gates (D-type according to EN 12453 standard) designed to detect obstacles located on the optical axis between the transmitter (TX) and the receiver (RX). PT50 is equipped with a sensitive element located approximately 450 mm from the ground; PT100 is equipped with 2 sensitive elements, the first one at a height of approximately 455 mm and the second at approximately 915 mm from the ground. PT50 and PT100 may only be used in combination with MHOUSE control units featuring ECSBus-type connections.

Installation

Warning: disconnect the power supply to the system before performing any installation operations; if the system is equipped with a PR1 buffer battery, the latter must be disconnected.

- Choose the position of the two elements that make up the photocell (TX post and RX post); observe the following directions:
 - Place the posts on both sides of the area to be protected and as flush with the gate as possible.
 - Make sure that the ground surface is sufficiently compact, enabling the posts to be secured using the screws and anchors provided; if necessary, you can use other suitable anchoring systems.
 - A conduit for the wires must be provided at the intended installation point in the ground.
 - Point the TX transmitter at the RX receiver, with a maximum misalignment of 5°.
- Remove the upper cap [A] by prising it out with a slotted tip screwdriver (Fig.1).
- Remove the glass front [B] by pulling and sliding it upwards (Fig.2).
- Place the base of the post at the point reached by the cable conduit. Mark the drilling points and drill the holes using a hammer drill fitted with an 8 mm bit. Finally, secure the post using the 3 screws [C] shown in Fig.3 and the corresponding anchors supplied.
- Connect the electric cable to the appropriate terminals on the TX and RX units (Fig.4). From an electrical viewpoint, all the TX and RX elements must be connected to each other in parallel (Fig.5) and to the "ECSBus" terminal on the control board. It is not necessary to observe any polarity. To facilitate the above operations you can remove the terminals, make the connections and then reinsert the terminals.
- After testing the operation of the device, insert the glass front by sliding it in from the top, then insert the top cap and press it down hard.

Addressing

To ensure the correct recognition of the photocells by the control unit, the photocells must be addressed by means of suitable jumpers. Addressing not only ensures their correct recognition in the ECSBus, but also serves to assign the detection function. The addressing operation must be performed on both TX and RX (the jumpers must be positioned alike), making sure that there are no other pairs of photocells having the same address.

- If the post-mounted photocell is used to replace a pre-existing one, the jumpers must be set exactly as they were in the old post.
- Any unused jumpers must be stored in their designated compartment for future use (Fig.6).
- Since every automation system has its own individual characteristics, the photocells can be positioned at various points to perform different detection functions. Check Fig.7, Fig.8 and Fig.9 to identify the appropriate locations, and position the jumpers as illustrated in table 1:
SLIDING GATES: see fig. 7
SWING GATES: see fig. 8
GARAGE DOORS: see fig. 9

TABLE 1			
Photocell	Jumper	Photocell	Jumper
A "Bottom" photocell trips when gate is closing		E "Right-hand" photocell trips when gate is opening	
B "Top" photocell trips when gate is closing		F "Left-hand" photocell trips when gate is opening	
C "Bottom" photocell trips when gate is opening and when it is closing		G For "sliding" gates only "Single" photocell covers the entire automation system, tripping when gate is opening and when it is closing	
D "Top" photocell trips when gate is opening and when it is closing			

Note: only photocell "A" can be used on automations with MhouseKit GD1 - GD1N. Note regarding photocell "G": there are normally no restrictions concerning the position of the two elements that make up the photocell (TX-RX). However, when photocell G is used in conjunction with photocell B the elements must be positioned as shown in Fig.7.

Device recognition

If the post-mounted photocell is used to replace a pre-existing one, no recognition procedure needs to be carried out. However, if you add or remove devices connected to the ECS Bus, the recognition procedure has to be carried out. In this case proceed as follows:

- On the control unit, press and hold down button P2 [A] shown in Fig.10 for at least three seconds, then release the button.
- Wait a few seconds until the control unit has completed the device recognition process.
- When the recognition procedure has been completed, the P2 LED [B] shown in Fig.10 will go off. If the LED flashes it means that something is wrong.

Checking the operation of the device

After completing the recognition procedure, check whether the SAFE LED [A] Fig.11 on the photocell (both TX and RX) starts flashing. See table 2 to identify the status of the photocell based on the type of flashing.

TABLE 2		
LED SAFE	Status	Action
Spento	The photocell is either faulty or not powered	Make sure that there is a voltage of approximately 8-12 Vdc on the photocell terminals; if the voltage is correct, the photocell is probably faulty
3 quick flashes and 1 second's pause	Device not recognized by the control unit	Repeat the recognition procedure. Make sure that each pair of photocells has a different address
Very slow flashes	TX transmits regularly, RX receives a very good signal	Normal operation
Slow flashes	RX receives a fairly good signal	Normal operation
Quick flashes	RX receives a poor signal	Normal operation, but check the TX-RX alignment and clean the glass surfaces
Very quick flashes	RX receives a very poor signal	The device is operating at maximum limit for normal operation, check the TX-RX alignment and clean the glass surfaces
Always on	RX does not receive any signal	Check whether the LED on the TX is flashing very slowly. See if there are any obstacles between TX and RX; check the TX-RX alignment

Testing

Warning: after adding or replacing any post-mounted photocells, you need to test the entire automation system anew following the instructions found in the relevant installation manuals under the "Testing and set-up" chapter.

- To check the post-mounted photocells and make sure that there is no interference with other devices, pass a 5 cm diameter, 30 cm long cylinder (Fig.12) on the optical axis, first near TX, then near RX and finally at the mid-point between them and make sure that in all these cases the device is triggered, switching from the active to the alarm status and vice-versa; finally, that it causes the intended action in the control unit, for example, that it causes the reversal of the direction during the closing manoeuvre.

Technical characteristics

PT50 and PT100 are produced by NICE S.p.a. (TV) I, MHOUSE S.r.l. is an affiliate of the Nice S.p.a. group.

Nice S.p.a., in order to improve its products, reserves the right to modify their technical characteristics at any time without prior notice. In any case, the manufacturer guarantees their functionality and fitness for the intended purposes.

Note: all the technical characteristics refer to a temperature of 20°C.

- Type: Post with motion detectors for automatic gate and door openers (type D according to EN 12453) consisting of pairs of "TX" transmitters and "RX" receivers
- Sensitive elements: PT50: No.1, at approx. 450mm from the ground; PT100: No.2, the first at 455mm and the second at 915mm from the ground
- Technology adopted: Optical, by means of direct TX-RX interpolation with a modulated infrared ray
- Detection capacity: Opaque objects located on the optical axis between TX and RX, whose dimensions exceed 50 mm and whose speed is less than 1.6m/s
- TX transmission angle: Approx. 20°
- RX reception angle: Approx. 20°
- Useful range: Up to 10m, with maximum TX-RX misalignment of ± 5° (the device can signal the presence of obstacles even under very adverse weather conditions)
- Power supply/output: The device may only be connected to "ECSBus" networks from which it is supplied with power and sends the output signals.
- Absorbed power: PT50: 1 ECSbus unit; PT100: 2 ECSbus units
- Maximum cable length: Up to 20 m (observe the warnings in the control units regarding minimum gauge and type of cables)
- Addressing capability: Up to 7 detectors with protection function and 2 with opening control function. The automatic synchronization prevents any interference between detectors.
- Ambient operating temperature: -20 ÷ 50°C
- Use in acid, saline or potentially explosive atmosphere: No
- Mounting: On flat ground surface
- Protection class: IP55
- Dimensions / weight (TX and RX): PT50: Ø 70, h 485 / 656g*; PT100: Ø 70, h 945 / 1207g (* for details on the anchoring base see figure 3)

Declaration of Conformity

According to Directive 89/336/EEC Number 160/PT50/GB

Date: 05/02/2003 Revision: 0

The undersigned Lauro Buoro declares that the following product:

Manufacturer's name: NICE S.p.a.

Address: Via Pezza Alta 13, 31046 Z.I. Rustignè - ODERZO - ITALY

Model: PT50; PT100

Meets the essential requirements of Directive 89/336/EEC concerning electromagnetic compatibility.

ODERZO, 05-02-2003

Lauro Buoro (Managing director)