PH1

photocells

Installation instructions and warnings
Istruzioni ed avvertenze per l'installazione
Instructions et avertissements pour l'installation
Anweisungen und Hinweise für die Installation
Instrucciones y advertencias para la instalación
Installatievoorschriften en waarschuwingen

IST 130 4862 Rev. 01

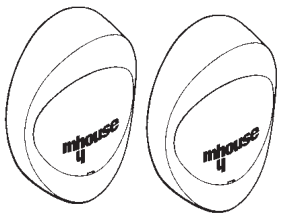


Fig. 1

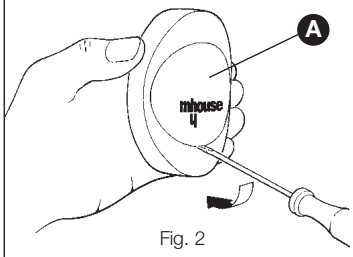


Fig. 2

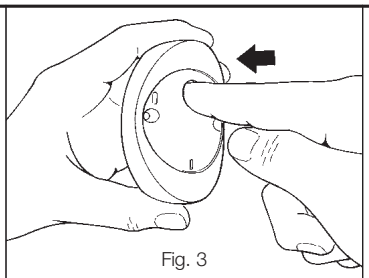


Fig. 3

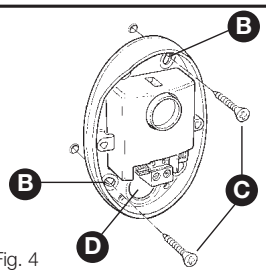
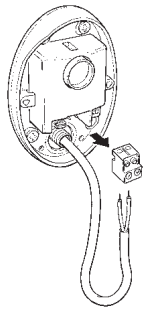


Fig. 4



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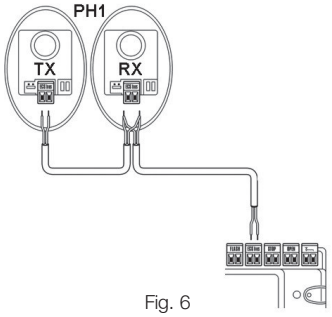
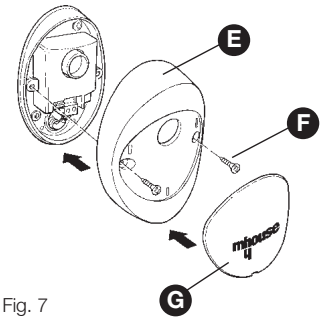


Fig. 6



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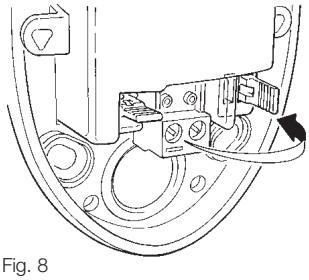

Fig. 8

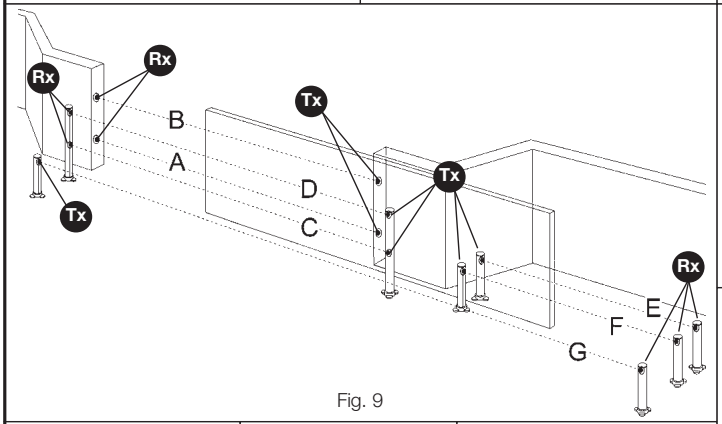

Fig. 9

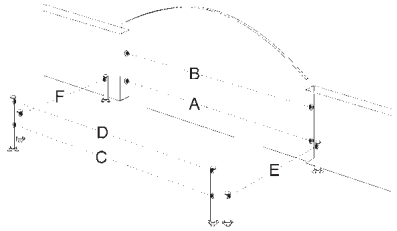

Fig. 10

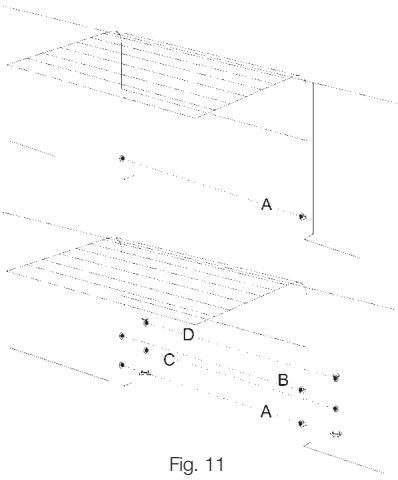

Fig. 11

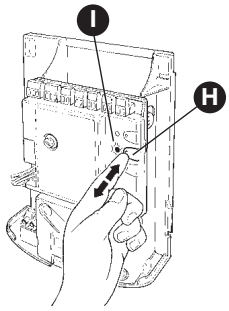

Fig. 12

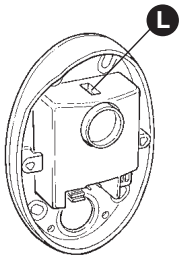

Fig. 13

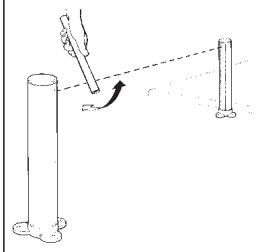

Fig. 14

GB Declaration of Conformity
According to Directive 89/336/EEC
Number 160/PH1/GB
Date: 05/02/2003 Revision: 1
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: PH1
Meets the essential requirements of Directive 89/336/EEC concerning electromagnetic compatibility.

I Dichiarazione di conformità
Secondo la Direttiva 89/336/CEE
Numero 160/PH1/I
Data: 05/02/2003 Revisione: 1
Il sottoscritto Lauro Buoro, dichiara che il prodotto:
Nome produttore: NICE S.p.a.
Indirizzo: Via Pezza Alta 13, 31046 Z.I. Rustignè - ODERZO - ITALY
Modello: PH1
Soddisfa i requisiti essenziali della Direttiva 89/336/CEE sulla compatibilità elettromagnetica.

F Déclaration de conformité
Selon la Directive 89/336/CEE
Numéro 160/PH1/F
Date: 05/02/2003 Révision: 1
Je, soussigné Lauro Buoro, déclare que le produit:
Nom producteur: NICE S.p.a.
Adresse: Via Pezza Alta 13, 31046 Z.I. Rustignè - ODERZO - ITALY
Modèle: PH1
Est conforme aux conditions essentielles requises par la Directive 89/336/CEE sur la compatibilité électromagnétique.

D Konformitätserklärung
Nach EWG-Richtlinie 89/336
Nr. 160/PH1/D
Datum: 05/02/2003 Revision: 1
Der Unterzeichnete Lauro Buoro erklärt, dass das Produkt:
Herstellername: NICE S.p.a.
Adresse: Via Pezza Alta 13, 31046 Z.I. Rustignè - ODERZO- ITALY
Modell: PH1
Den wichtigsten Anforderungen der EWG-Richtline 89/336 bezüglich der elektromagnetischen Verträglichkeit entspricht.

E Declaración de conformidad
Según la Directiva 89/336/CEE
Número 160/PH1/E
Fecha: 05/02/2003 Revisión: 1
El suscrito, Lauro Buoro, declara que el producto:
Nombre fabricante: NICE S.p.a.
Dirección: Via Pezza Alta 13, 31046 Z.I. Rustignè - ODERZO - ITALIA
Modelo: PH1
Satisface los requisitos generales de la Directiva 89/336/CEE en materia de compatibilidad electromagnética.

NL Verklaring van overeenstemming
Volgens Richtlijn 89/336/CEE
Nummer 160/PH1/NL
Datum: 05/02/2003 Revisie: 1
Ondergetekende Lauro Buoro verklaart dat het artikel:
Naam fabrikant: NICE S.p.a.
Adres: Via Pezza Alta 13, 31046 Z.I. Rustignè - ODERZO - ITALY
Model: PH1
Voldoet aan de wezenlijke vereisten van de Richtlijn 89/336/CEE voor de elektromagnetische compabiliteit.

ODERZO, 05/02/2003

Lauro Buoro
(Amministratore Delegato)

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Pair of “PH1” photocells

GB

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 photocell 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 install the photocells near heat sources or expose them to open flames; this could damage the device and cause malfunctions, fire hazards or dangers.

Description and intended use
This set of PH1 wall-mounted photocells (Fig.1) 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). The set 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.
Observe the following directions when selecting the installation position of the two elements that make up the photocell (TX and RX):
- Place them at a height of 40-60 cm from the ground, on both sides of the area to be protected and as flush with the gate as possible (the offset must not exceed 15 cm.).
- The point of installation must be provided with a conduit for the wires.
- Point the TX transmitter at the RX receiver, with a maximum misalignment of 5°.

1. Remove the glass front **[A]** shown in Fig.2 by prising it out at the bottom with a slotted tip screwdriver.
2. Press the lens with your finger in order to separate the two shells (Fig.3).
3. Position the photocell at the point reached by the cable conduit **[D]**.
4. On the back element, pierce two of the four holes **[B]** shown in Fig.4 using a screwdriver, then mark the drilling points using the back element as reference.
5. Drill the holes in the wall using a hammer drill fitted with a 5 mm bit and insert the 5 mm anchors in the wall.
6. Fasten the back element with the screws **[C]** as shown in Fig.4, make sure that the hole in the back **[D]** Fig.4 matches the outlet of the cable conduit from the wall.
7. Connect the electric cable to the appropriate terminals on the TX and RX units (Fig.5). Electrically, TX and RX must be connected to each other in parallel (Fig.6) and to the blue terminal on the control board. It is not necessary to observe any polarity.
8. Fasten the cover shell **[E]** shown in Fig.7 using the two screws **[F]** Fig.7 and a Phillips screwdriver. Finally, insert the glass front **[G]** Fig.7 pressing it down gently.

Addressing
To ensure the correct recognition of the photocells by the control unit, the photocells must be addressed by means of 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 photocell is used to replace a pre-existing one, the jumpers must be set exactly as they were in the old photocell.
- Any unused jumpers must be stored in their designated compartment for future use (Fig.8).
- Since every automation system has its own individual characteristics, the photocells can be positioned at various points to perform different detection functions. Check Fig.9, Fig.10 and Fig.11 to identify the appropriate locations, and position the jumpers as illustrated in table 1.

SLIDING GATE: MhouseKit **SL1** (Fig.9)
SWING GATE: MhouseKit **WU2**; **WK2**; **WG2** (Fig.10)
GARAGE: MhouseKit **GD1**; **GD2** (Fig.11)
Note: only photocell “A” can be used on automations with MhouseKit **GD1**.

Table 1

Photocell	Jumpers	Photocell	Jumpers
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 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 the Fig.9.

Device recognition
If the 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:
1. On the control unit, press and hold down button P2 **[H]** shown in Fig.12 for at least three seconds, then release the button.
2. Wait a few seconds until the control unit has completed the device recognition process
3. When the recognition procedure has been completed, the P2 LED **[I]** shown in Fig.12 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 **[L]** Fig.13 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
Off	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 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 photocells and make sure that there is no interference with other devices, pass a 5 cm diameter, 30 cm long cylinder (Fig.14) 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
PH1 is 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.

PH1 photocells
Type: Motion detector for automatic gate and door openers (type D according to EN 12453) consisting of a “TX” transmitter and an “RX” receiver
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: 1 ECSBus unit
Maximum cable length: Up to 20 m (observe the warnings 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: Vertical, wall-mounted
Protection class: IP55
Dimensions / weight: 95 x 65 h 25mm / 65 g