

# P45 12/24V

## EXTERNAL MINIATURIZED PHOTODEVICE WITH MODULATE LIGHT AND TWO RELAYS (UNI 8612 RULE)

### DESCRIPTION

Compact and reliable external photodevice, made up of a receiver and a transmitter with infrared modulated light.

### Characteristics:

- synchronism circuit, which allows the installation of two couples of transmitters and receivers without any interferences of signals
- maximum selectable range through a jumper
- selectable 12/24V tension of supply

### USE POSSIBILITY

It is employed in the alarm systems, for the protection of doors, gates and any other automating accesses.

### INSTALLATION AND ALIGNMENT:

1) Take down the cover of the photodevices (see figure 1)

2) Effect the connection as shown in fig. 2, paying attention to the tensions polarity in case of direct current or in case of synchronized way of two couples of photocells  
The cables have to be cabled as shortest as possible avoiding they run next to interferences sources (f.e. motors).

- A: cover screw
- B: photodevice cover screw
- C: cover
- D: wall fixing screw
- E: photodevice structure
- F: centering distance part
- G: reinforcement
- H: connecting cable
- L: photodevice
- M: "canalizer" tube

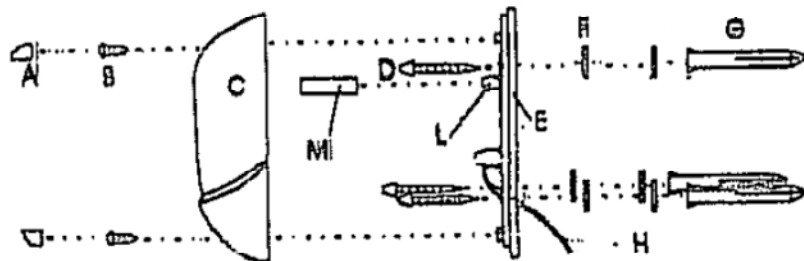


Figure 1 PHOTODEVICE PARTICULARS

### ATTENTION:

TO IMPROVE THE INTERFERENCE IMMUNITY, UTILIZING THE SYNCHRONIZED PHOTODEVICE, IT IS NECESSARY TO GROUND THE PHOTODEVICE AND MOTOR.  
THE GROUNDING HAS TO BE MADE WITH THE SHORTEST CABLES, HAVING A SECTION OF AT LEAST 1.5 MM.

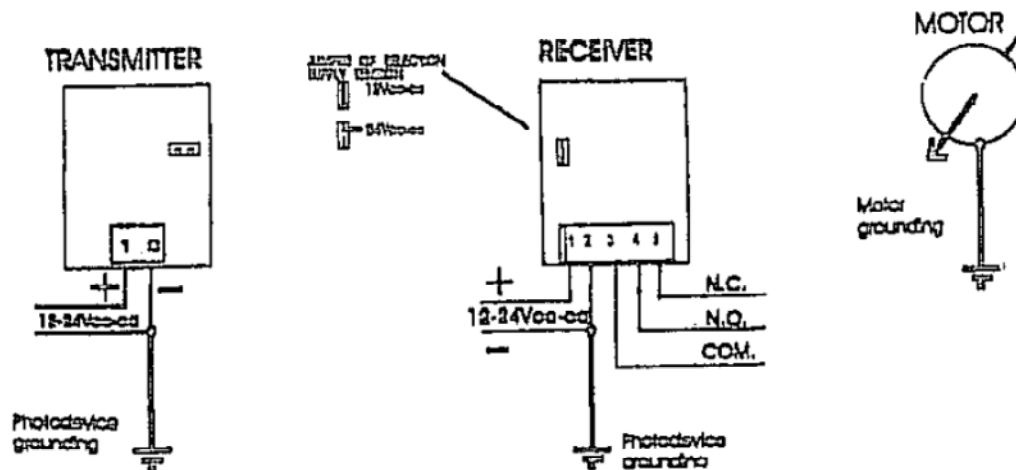


Fig.2 CONNECTIONS

### SYNCHRONIZED WORKING

The synchronized working way is useful to install two couples of photodevices and to avoid that the transmitters and the receivers of others photodevices can interference. These photodevices can be synchronized only if they are supplied with alternate current. Supplying with direct tension the synchronism function is cancelled, even if the jumper is on the "synchronized" position: It is therefore necessary to install the receivers one opposite to the other one (as well the transmitters) to avoid mutual interferences.

To obtain therefore the synchronized working, the photodevices have to be supplied as shown in the figure 3, with 12/24Vac alternate tension, paying attention to the connections; it is necessary to replace the jumper of the transmitter in the "Synchronized" position (see figure 2).

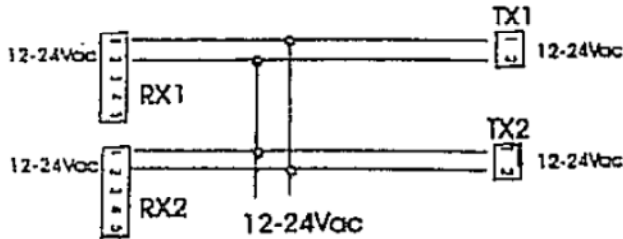


fig.3 SYNCHRONIZED WORKING

3) Connect the relay output contacts on the receiver according to the requirements. The figure 4 shows the relays contacts setup.

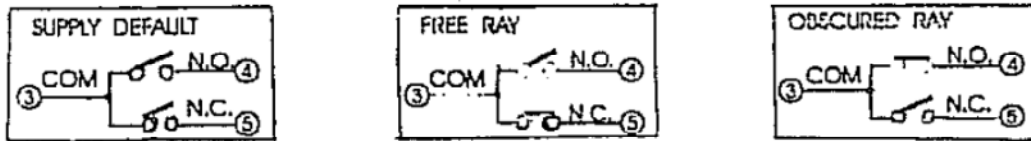


fig.4 RELAY CONTACTS SETUP

4) As shown in the figure 1, fix the photodevice structure E on the wall, using the fixing screws D, the centering distance part F and the reinforcements G. For a correct installation, the transmitter and the receiver have to be installed in frontal position and aligned on the same axle (figure 5); it is necessary to operate on the fixing screws to obtain the best alignment of the transmitter and the receiver.

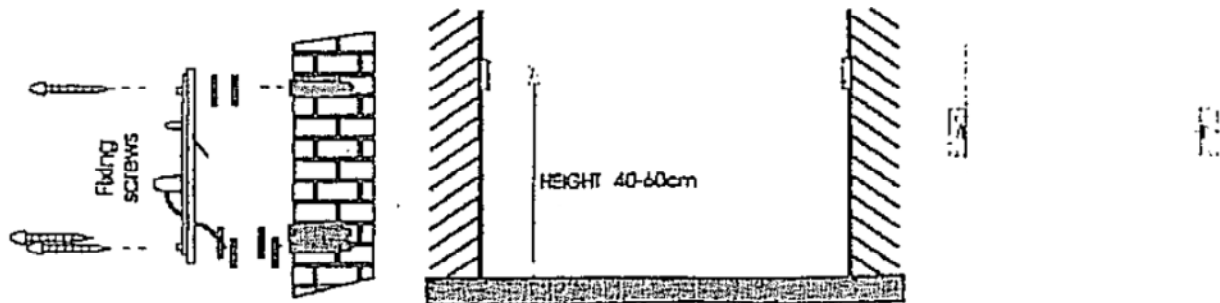


fig.5 WALL FIXING

5) Select the requested range through the transmitter jumper as shown in the figure 2 (not available for the FT 98 ECO version). In the following way:  
 for distances of 5 metres or less: use the minimum range  
 for distances longer than 5 metres: use the maximum range

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6) Select the photodevice supply acting on the tension selection jumper. Choose the 12/24V tension according to the available tension on the control unit.

7) If the distance between the transmitter and the receiver is lower than 4-5 metres, the presence of some reflecting metallic parts next to the transmitter could create interferences to the system. In this case it is necessary to select the "minimum range" and/or insert the "canalizador" tube, of 5mm diameter, on the photodevice F of the receiver (see figure 1). It is necessary to consider that the use of the "canalizador" tube causes a range decreasing of about 30%.

8) Energize the photodevices with the selected tension.

9) Assemble the cover C, using the fixing screws B (see figure 1).

Verify the correct working of the system, cutting more times the Infrared ray through the interposition of an obstacle between the transmitter and the receiver. Then verify the consequent commutation of the relays (see figure 6).

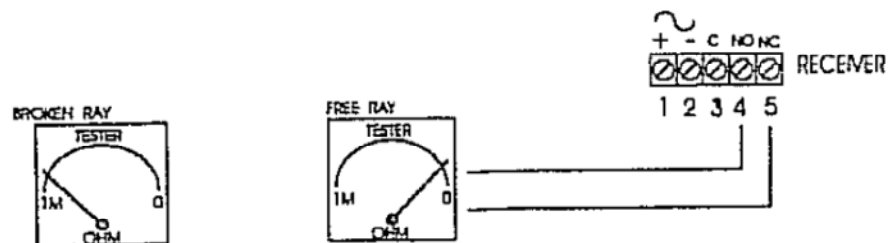


Fig.6 WORKING TEST

10) To adjust eventually the system alignment, take off the cover and operate on the fixing screws D (see point 4 of the preceding page).

### TECHNICALS DATA

Supply tension	24Vdc +/- 20% or 24Vac +/- 20% 12Vdc +/- 15% or 12Vac +/- 15%
FT 98 and FT 98 SINCRO range	20m (10m with jumper selected on lower range)
FT 98 ECO range	10m
Max current of relays output contacts	1A a 24V
Working temperature	-10°C ... +65°C
Current absorption	Transmitter: max 40mA. Receiver: max 40mA
Response time	30msec.
Infrared Impulses frequency	400Hz
Infrared wavelength	950nm

Version	Range selection	Synchronized working	Tension selection
P45	Not present	Not present	present

#### ATTENTION.

In case of rain, fog or dust the photodevice range can decrease.

N.B. This product is adapt only for the open-gate application.

**GUARANTEE** - the manufacturer offers a 12-months guarantee on all products from the manufacture date on each product. The guarantee is only valid for the repair or replacement of parts recognized as being defective by the manufacturer itself, for lack of quality in the materials used or as a consequence of manufacturing faults. The guarantee does not cover damages or defects due to external causes, wrong maintenance practices, overload, normal wear, choice of the wrong product, wrong installation, or any cause for which the manufacturer cannot be held responsible. The guarantee is not valid if the product has been tampered with. The data above are merely indicative. We decline all responsibility for range reductions or non-functionings due to environmental interferences. The responsibility of the manufacturer for damages caused by accidents of any type due to its own defective products is solely the responsibility provided for by the Italian law.