

VMX-100

Outdoor / Indoor Photoelectric Detector



Installation Instructions

1. INTRODUCTION

The VMX-100 is a single beam photoelectric detector for domestic and commercial outdoor/indoor security applications. The device consists of small-size, low profile transmitter and receiver units, installed face-to-face across the protected area.

When powered up, the transmitter sends out an infrared beam directly to the receiver, to maintain the receiver's relay contacts closed. Alignment of the beam is easy (see Section 4) and precise alignment reduces the probability of false alarms. Upon Interruption

of the infrared beam, the receiver's normally closed relay contacts open and the red LED illuminates.

The maximum range between receiver and transmitter is 30 m (100 ft) indoors and 8 m (25 ft) outdoors. Both units have tamper switches with contacts that open upon removal of the front cover.

Operating power is supplied from the alarm system to which the detector is connected.

2. SPECIFICATIONS

Power Supply (TX - RX): 12 ÷ 24 V AC/DC

Rest/Work Consumption: 50 mA (TX+RX)

Case: ABS

Dimensions/ Weight: 110 x 50 x 25 mm / 200 g

Operating Frequency: 850 Hz ±10%

Modulation Frequency: 1000 Hz

Degree of Water/Dust Sealing: IP 45

Infrared Wavelength: 850 nm

Relay Contact Capacity: 0.5 A @ 24 V AC/DC

Infrared Beam Range: 30 m (100 ft) nominal; 8 m (25 ft) outdoors.

Operating Temperatures: -20 to +70° C

Delay Time: 500 ms

3. INSTALLATION

3.1 Mounting Information

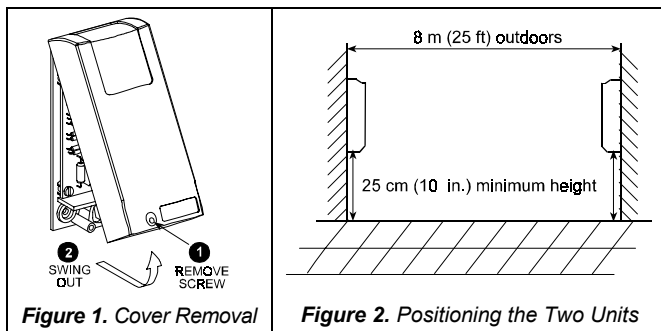


Figure 1. Cover Removal

Figure 2. Positioning the Two Units

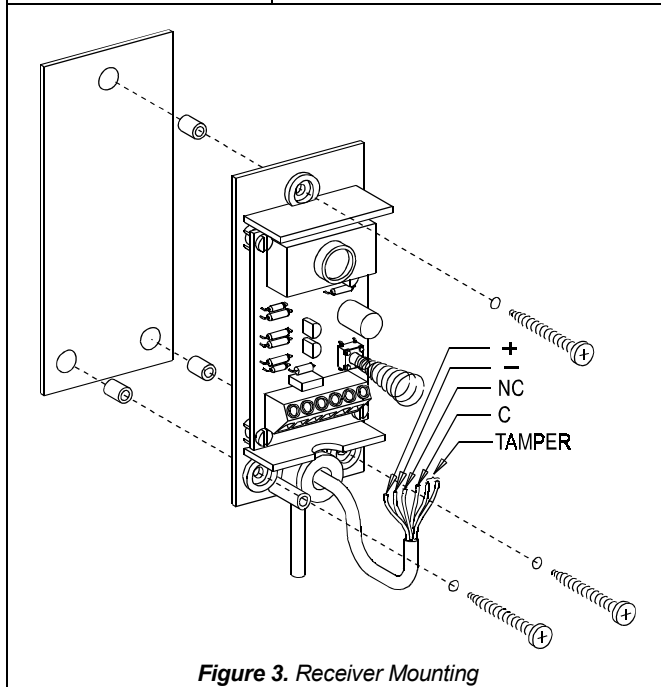


Figure 3. Receiver Mounting

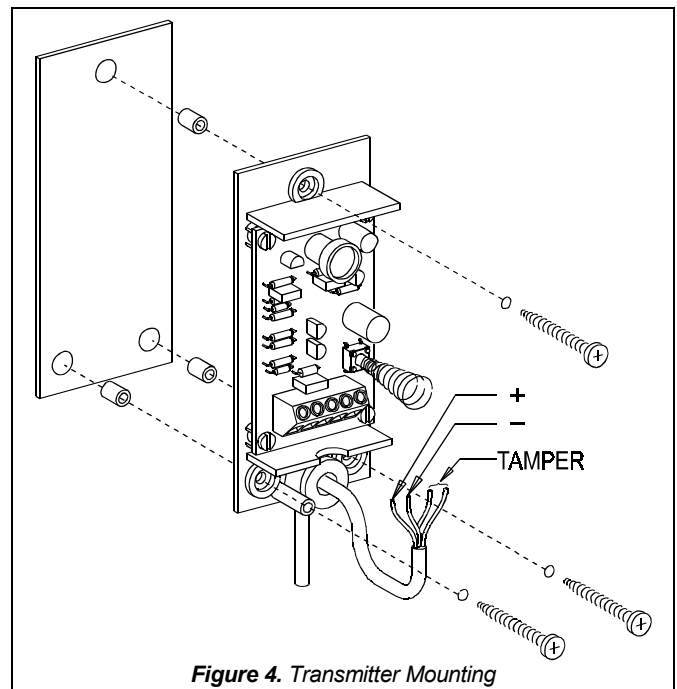


Figure 4. Transmitter Mounting

3.2 Wiring

A. Receiver Terminal Block

Pos.	Function	Description
1	+12 ÷ +24 V AC/DC	Power supply 12 - 24 V AC/DC
2	0 V	Common supply
3	N.C.	Relay contact - normally closed
4	C	Common relay contact
5	Tamper terminal	-
6	Tamper terminal	-

B. Transmitter Terminal Block

Pos.	Function	Description
1	+12 ÷ +24 V AC/DC	Power supply 12 - 24 V AC/DC
2	0 V	Common supply
3	Not Used	-
4	Tamper terminal	-
5	Tamper terminal	-

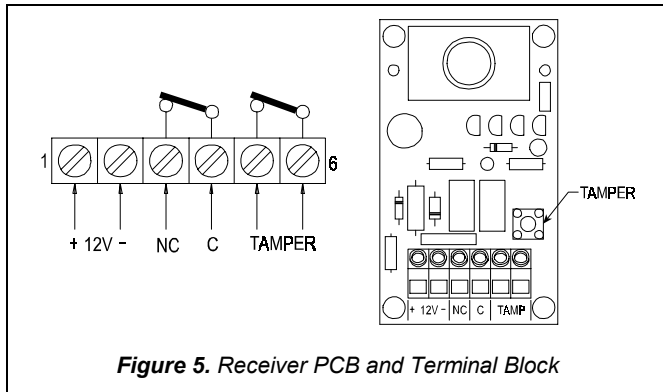


Figure 5. Receiver PCB and Terminal Block

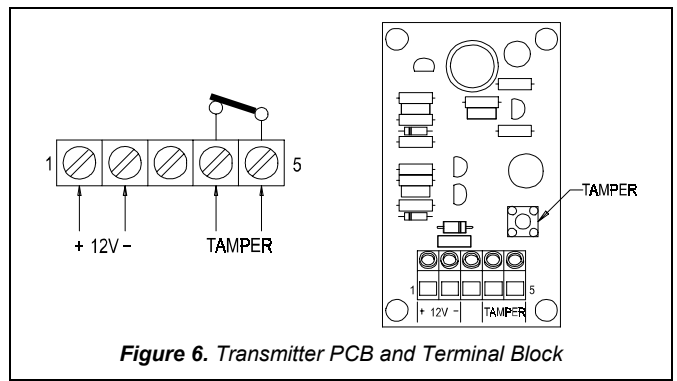
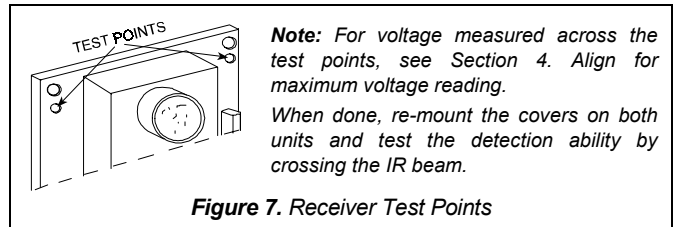


Figure 6. Transmitter PCB and Terminal Block



Note: For voltage measured across the test points, see Section 4. Align for maximum voltage reading. When done, re-mount the covers on both units and test the detection ability by crossing the IR beam.

Figure 7. Receiver Test Points

4. ALIGNMENT

Align the beam using the installation screws on the receiver and transmitter (see Figures 3 and 4).

The alignment is checked by measuring the voltage at the receiver test-point (Figure 7). This value varies in accordance with various parameters, including the distance between the photocells. The higher the voltage value at the test-point, the better the alignment.

The voltage at the test point ranges between 1.4 and 1.6 VDC when the units are up to 14 m (45 ft) apart. Optimum voltage when the units are 30 m (100 ft) apart is 0.5 to 0.6 VDC.

Interruption of the infrared beam causes the normally closed contacts of the receiver's relay to open and the red LED to light.

WARRANTY

Visonic Ltd. and/or its subsidiaries and its affiliates ("the Manufacturer") warrants its products hereinafter referred to as "the Product" or "Products" to be in conformance with its own plans and specifications and to be free of defects in materials and workmanship under normal use and service for a period of twelve months from the date of shipment by the Manufacturer. The Manufacturer's obligations shall be limited within the warranty period, at its option, to repair or replace the product or any part thereof. The Manufacturer shall not be responsible for dismantling and/or reinstallation charges. To exercise the warranty the product must be returned to the Manufacturer freight prepaid and insured.

This warranty does not apply in the following cases: improper installation, misuse, failure to follow installation and operating instructions, alteration, abuse, accident or tampering, and repair by anyone other than the Manufacturer.

This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express or implied, including any warranty of merchantability or fitness for a particular purpose, or otherwise. In no case shall the Manufacturer be liable to anyone for any consequential or incidental damages for breach of this warranty or any other warranties whatsoever, as aforesaid.

This warranty shall not be modified, varied or extended, and the Manufacturer does not authorize any person to act on its behalf in the modification, variation or extension of this warranty. This warranty shall apply to the Product only. All products, accessories or attachments of others used in conjunction with the Product, including batteries, shall be covered solely by their own warranty, if any. The Manufacturer shall not be liable for any damage or loss whatsoever, whether directly, indirectly, incidentally, consequentially or otherwise, caused by the malfunction of the Product due to products, accessories, or attachments of others, including batteries, used in conjunction with the Products.

The Manufacturer does not represent that its Product may not be compromised and/or circumvented, or that the Product will prevent any death, personal and/or bodily injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. User understands that a properly installed and maintained alarm may only reduce the risk of events such as burglary, robbery, and fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no death, personal damage and/or damage to property as a result.

The Manufacturer shall have no liability for any death, personal and/or bodily injury and/or damage to property or other loss whether direct, indirect, incidental, consequential or otherwise, based on a claim that the Product failed to function. However, if the Manufacturer is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, the Manufacturer's maximum liability shall not in any case exceed the purchase price of the Product, which shall be fixed as liquidated damages and not as a penalty, and shall be the complete and exclusive remedy against the Manufacturer.

Warning: The user should follow the installation and operation instructions and among other things test the Product and the whole system at least once a week. For various reasons, including, but not limited to, changes in environmental conditions, electric or electronic disruptions and tampering, the Product may not perform as expected. The user is advised to take all necessary precautions for his/her safety and the protection of his/her property.

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VISONIC LTD. (ISRAEL): P.O.B 22020 TEL-AVIV 61220 ISRAEL. PHONE: (972-3) 645-6789, FAX: (972-3) 645-6788
 VISONIC INC. (U.S.A.): 10 NORTHWOOD DRIVE, BLOOMFIELD CT. 06002-1911. PHONE: (860) 243-0833, (800) 223-0020 FAX: (860) 242-8094
 VISONIC LTD. (UK): UNIT 1, STRATTON PARK, DUNTON LANE, BIGGLESWADE, BEDS. SG18 8QS. PHONE: (01767) 600857 FAX: (01767) 601098
 INTERNET WEB SITE: www.visonic.com

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