



## DM70 Digital Dual-Optic High-Performance PIR Module



### Instructions / Instrucciones

P ▲ R ▲ D O X™

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## English

Select the detector's installation site, based on the required coverage and recommended height of 2.1m (7 ft). Avoid proximity to any of the following: reflective surfaces; direct air flow from vents, fans and windows; sources of steam/oil vapor; objects causing temperature changes such as heaters, refrigerators and ovens; and infrared light sources.

If another installation height is called for, move the PCB to the proper installation height indicated on the right side of the PCB. A small adjustment may be required, depending on the protected area. Any PCB adjustments should be followed by a walk-test of the protected area. Walk-testing verifies that the required coverage is in place, as per the lens pattern being used.



**Do not touch the sensor surface as this could result in a detector malfunction. Clean with a soft cloth and pure alcohol if necessary.**

After selecting the detector's location, drill or punch out holes for the screws as described in Figure 2.

### Powering the Motion Detector

Connect the four terminals labeled red, black, green and yellow of each detector to the corresponding terminals on the control panel as shown in Figure 1. Powering the detector initiates a self-testing program for the signal processor and memory. The red and green LED will flash to indicate that the system is fully operational. When the LEDs are no longer flashing, the detector is ready.

### Module Programming

To enter the Module Programming Mode:

1. Press and hold the **[0]** key
2. Enter the **[INSTALLER CODE]**
3. Enter section **[4003]**
4. Enter the detector's 8-digit **[SERIAL NUMBER]**
5. Enter the 3-digit **[SECTION]** you wish to program
6. Turn the desired option on/off or key in the required data

Please note that the serial number is located on the detector's metal shield (refer to Figure 1).

### Single / Dual Edge Processing

Section **[001]:** Option **[1]**

This setting determines the DSP (Digital Signal Processing) operational mode of the detector. Single Edge Processing mode should be used in normal environments with minimal sources of interference. Dual Edge Processing mode provides better false alarm rejection in the case where the detector is placed near sources of interference that can adversely affect the motion detector. Refer to Table 1.

ON = Single Edge (default)  
OFF = Double Edge

### Alarm Indication

Section **[001]:** Option **[2]**

When option **[2]** in section **[001]** is enabled and the detector detects a signal that matches the characteristics of a movement signal and reaches the required accumulated energy level for an alarm, the red LED will turn on for 5 seconds. Refer to Table 1 for more information.

### Movement and Non-Movement Signal Indication

Section **[001]:** Options **[3]** and **[4]**

**Movement Signal Indication:** When option **[3]** in section **[001]** is enabled and the detector detects a signal that matches the characteristics of a movement signal, but does not reach the required energy levels for an alarm, the red LED will flash once indicating the signal was kept in memory.

**Non-Movement Signal Indication:** When option **[4]** in section **[001]** is enabled and the detector detects a non-movement signal, the green LED will flash once indicating the signal was rejected. Refer to Table 1 for more information.

### Tamper Recognition

Section **[001]:** Option **[5]**

When option **[5]** in section **[001]** is enabled and the tamper switch is open (cover removed), the detector will send a tamper message to the control panel. Refer to Table 1 for more information.

### Digital Shield Setting

Section **[002]:** Sensitivity

In Normal Shield mode, the detector is set for normal environments. In High Shield mode, the detector is set for high-risk environments (potential interferences) and therefore provides greatly increased false alarm immunity. However, response time and detector speed may be slower. Refer to Table 1.

**000 = Very Low Shield (Very High Sensitivity) default**

001 = Low Shield (High Sensitivity)

002 = Normal Shield (Normal Sensitivity)

003 = High Shield (Low Sensitivity)

### Pet Immunity

The DM70's two opposed dual element sensors combined with the proprietary Pet Friendly lens greatly decrease false alarms created by pets. In order to generate an alarm, an object must cross the beams created by both the lower and upper sensor (refer to Figure 3). Due to the small height and volume of pets, they will not generate the required signal value normally recognized as an alarm situation.

### Walk-Testing

At 20°C (68°F) you should not be able to cross more than one complete zone (consisting of 2 beams, left and right sensor detecting elements) in the coverage area with any kind of movement. When using higher level digital shield settings, the amount of movement required to generate an alarm is increased. The approximate width of a full beam at 11m (35 ft) from the detector is 1.8m (6 ft). When walk-testing, always move across the detection path, not toward the detector. The installer should test the detectors at least once per year.

### Warranty

**Patents:** One or more of the following US patents may apply: 7046142, 6215399, 6111256, 6104319, 5920259, 5886632, 5721542, 5287111 and RE39406 and other pending patents may apply. Canadian and international patents may also apply. LODIFF® lens: patent #4,787,722 (U.S.). Canadian and International patents may also apply. LODIFF® a registered trademark of Fresnel Technologies Inc.

**Trademarks:** Digiplex EVO is a trademark or registered trademark of Paradox Security Systems (Bahamas) Ltd. or its affiliates in Canada, the United States and/or other countries.

**Certification:** For the latest information on products approvals, such as UL and CE, please visit paradox.com.

**Warranty:** For complete warranty information on this product please refer to the Limited Warranty Statement found on the website paradox.com/terms. Your use of the Paradox product signifies your acceptance of all warranty terms and conditions.

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This device complies with Part 15 Subpart (B) of FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Figure / Figura 1

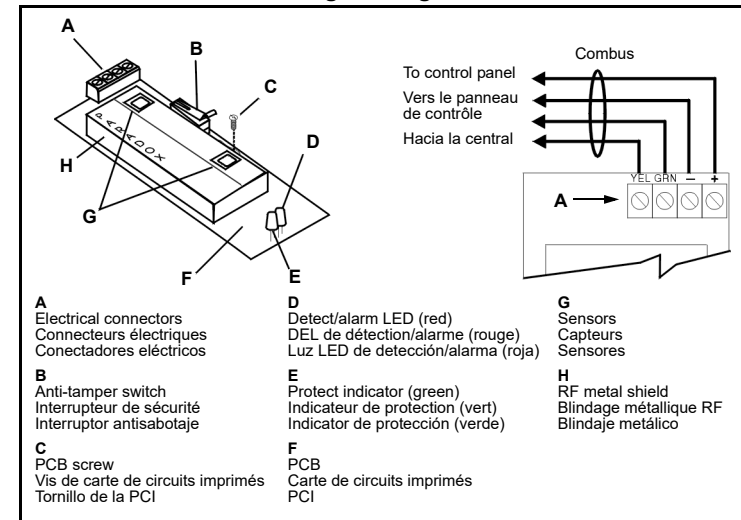


Figure / Figura 2

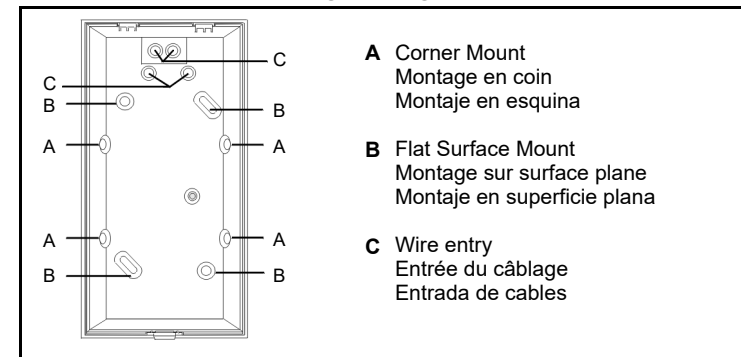
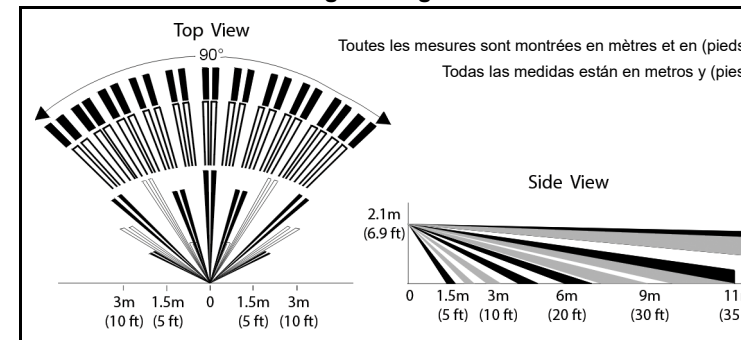


Figure / Figura 3



Technical Specifications	DM70
Infrared sensor type	2 Dual elements
Sensor geometry	Rectangular
Detection speed	0.2m~3.5m/sec. (0.6~11.5 ft/sec.)
Operating temperature	-20°C to +50°C (-4°F to +122°F)
Voltage input	9-16 Vdc
Current consumption	16 mA (typical); 30 mA (maximum)
RFI / EMI rejection	10 V/m
Lens	2nd Generation Fresnel lens
Coverage - 90° viewing angle	11m x 11m (35 ft x 35 ft)
Installation height	2m to 2.7m (7 ft to 9 ft)
Alarm Indicator	Red LED, constant light for 5 sec.
Detect Indicator	Red LED, 0.25 sec.
Protect indicator	Green LED, 0.25 sec. (lights when RFI / EMI rejected)
Alarm output / Tamper switch	Via Communication Network

Table / Tableau / Tabla 1

Section / Sección [001]			
Option/ Opción			
[1]	Single/dual processing ON = Single edge △ OFF = Dual edge	Traitement simple/divisé Activée = traitement simple △ Désactivée = traitement divisé	Procesamiento simple/doble ON = Polaridad simple △ OFF = Polaridad dual
[2]	Alarm indication (red LED illuminates for 5 seconds) ON = Enabled △ OFF = Disabled	Indication d'alarme (la DEL rouge s'allume pendant 5 secondes) Activée = en fonction △ Désactivée = hors fonction	Indicador de alarma (La luz LED roja se ilumina por 5 segs.) ON = Habilitada △ OFF = Deshabilitada
[3]	Movement Signal Indication (red LED will flash) ON = Enabled △ OFF = Disabled	Indication de signal de mouvement (la DEL rouge clignote) Activée = en fonction △ Désactivée = hors fonction	Indicador de señales de movimiento (luz LED verde parpadeará) ON = Habilitada △ OFF = Deshabilitada
[4]	Non-movement signal indication (green LED will flash) ON = Enabled △ OFF = Disabled	Indication de signal de non-mouvement (la DEL verte clignote) Activée = en fonction △ Désactivée = hors fonction	Indicador de señales de no-movimiento (luz LED verde parpadeará) ON = Habilitada △ OFF = Deshabilitada
[5]	Tamper Recognition ON = Enabled OFF = Disabled △	Reconnaissance de sabotage Activée = en fonction Désactivée = hors fonction △	Raonocimiento de Sabotaje ON = Habilitada OFF = Deshabilitada △

△ = Default setting / Réglage par défaut / Valor de fábrica

### Section [002]: Digital Shield Setting

\_/\_/\_ (000 to 003 sensitivity; default:000)

000 = Very low shield (very high sensitivity) △      001 = Low shield (high sensitivity)  
002 = Normal shield (normal sensitivity)              003 = High shield (low sensitivity)

### Section [002] : Réglage de l'algorithme numérique Shiel

\_/\_/\_ (000 à 003 sensibilité; par défaut : 000)

000 = Protection très faible (sensibilité très élevée) △      001 = Protection faible (sensibilité élevée)  
002 = Protection normale (sensibilité normale)              003 = Protection élevée (sensibilité faible)

### Section [002]: Configuración del blindaje digital

\_/\_/\_ (000 a 003 sensibilidad; de fábrica: 000)

000 = Blindaje muy bajo (sensibilidad muy alta) △      001 = Blindaje bajo (alta sensibilidad)  
002 = Blindaje normal    003 = Blindaje superior (sensibilidad baja)

