

DUOGUARD

PIR+MW Dual Tech Detector



DP-250

OVERVIEW

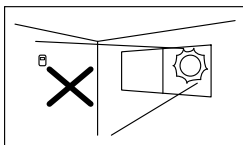
The DP-250 is a dual technology motion detector which combines a passive infrared (PIR) and a microwave (MW) sensor with an AND logic signal processor in an aesthetically pleasant housing design.

This intrusion detector will report an alarm signal only when both PIR and microwave sensors detect the intrusion at the same time. Thus, it can provide better detection reliability than single technology detector.

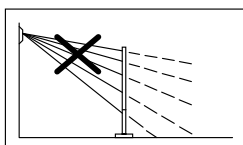
To further ensure detection reliability, a pulse count selector can be enabled to count the signal pulse of PIR sensor before verifying as an intrusion. As microwave signal could penetrate certain partition material, therefore the sensitivity can be adjusted by potentiometer. The DP-250 can detect the area up to 15 m long and 110° wide.

INSTALLATION HINTS

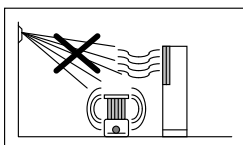
The DUOGUARD may be either wall or corner mounted by applying different knockouts. The MB-100 mounting bracket can be applied for ceiling or wall mount. Corner mount is generally recommended for optimum detection.



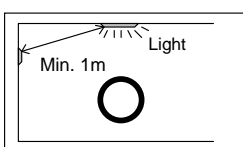
Do not install where the detector is in or facing direct/reflected sunlight, windows onto main roads (car head lights) or strong draughts / heaters.



Ensure that there are not any obstructions (plants, screens, furniture etc.) in the field of view which may cause incorrect cover/operation of the detector



Avoid locating the detector in areas which contain equipment that may change the environment temperature rapidly.

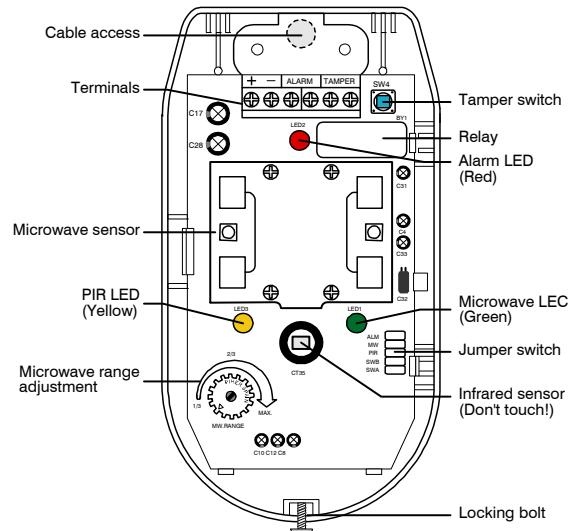


Locate the detector at least 1 meter away from any illumination to avoid possible interference to microwave sensor.

⚠️ Avoid running alarm wiring close to mains cables !!!

Installation Instructions

INTERNAL VIEW

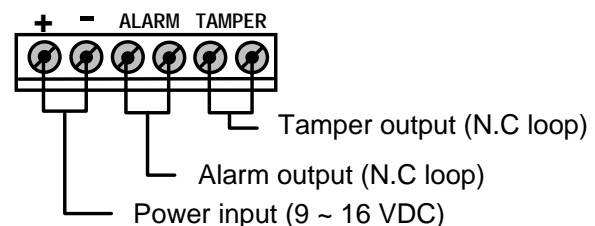


INSTALLATION & WIRING

Installation

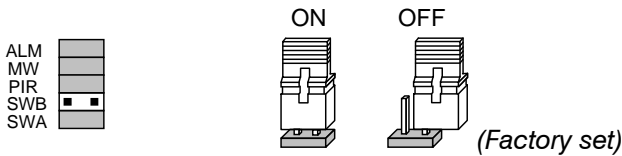
1. Open the front cover by loosening the locking bolt at the bottom of the case.
2. Remove the printed circuit board from the base of the unit, by bending the P.C.B clips gently upwards (handle printed circuit board with care).
3. Punch out the required knockouts and mount the unit base to the wall, corner or bracket.
4. Lead the cable through the access hole and then refit the printed circuit board.
5. Connect the wires to the respective terminals according to the wiring instructions.
6. Replace the front cover after completing the wiring and carry out a through walk test.

Wiring



⚠️ TAMPER terminals should be connected to the 24 hours N.C supervised loop of control pane

JUMPER SWITCH SETTING



ALM - Alarm LED Indication

ALM jumper	ON	OFF
Red LED	ON	OFF

MW - Microwave LED Indication

MW. jumper	ON	OFF
Green LED	ON	OFF

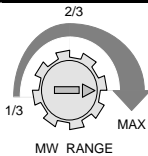
PIR - PIR LED Indication

PIR jumper	ON	OFF
Yellow LED	ON	OFF

SWA, SWB - Pulse count selection


Pulse Count	1	2	3
SWA jumper	ON	OFF	OFF
SWB jumper	OFF	ON	OFF

WALK TEST & ADJUSTMENT



It is necessary to carry out a thorough walk test of the detector to ensure that the correct coverage is being achieved and no over spill of the microwave is occurring. Also to ensure that both PIR & microwave are working to the same detection area.

The PIR range sensitivity is not adjustable. Accurate setting of the microwave is achieved by careful adjustment of the microwave range controller on the front of the PCB, next to the PIR detector, the range is increased by turning the pre-set in clockwise direction. When you are satisfied with your setting, all of the LEDs may be disabled from jumper switch (please retain for future walk testing).

 Regular walk testing must be carried out, as part of your routine maintenance visits or at least once a year.)

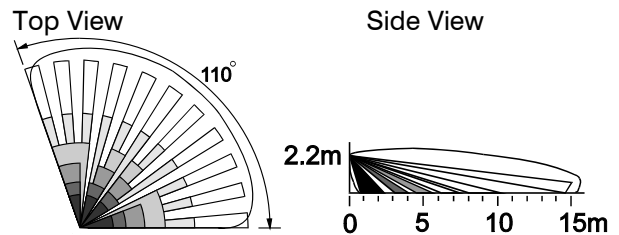
MOTION SIGNAL DISCRETION

The MSD (Motion Signal Discretion) circuit recognizes the difference between motion and non-motion signals. Alarm output is only generated when motion is detected by infrared & microwave sensor and analyzed by the MSD circuit. MSD circuit ensures supreme reliability even when environmental conditions are severe.

PULSE COUNT

The PIR sensor of DP-250 features with selectable pulse count which reduces the possibility of false alarm caused by environmental and power line interference. The pulse count can be set to count 1 (pulse count disabled), 2 or 3 pulses via ON and OFF combinations of SWA and SWB jumper pins.

DETECTION PATTERN



SPECIFICATIONS

Power supply	9~16VDC (12VDC nominal)
Current drain	30mA @ 12VDC
Infrared sensor	Dual element, low noise
Microwave sensor	DRO w/m micro strip antenna
MW output power	6mW E.I.R.P. peak
Detection range	15 x 15m @ 25°C
Mounting height	2.0~2.4m (wall/corner mounted) 2.4~3.6m (with bracket)
Alarm period	2 ± 0.5 sec.
Alarm output	N.C 30VDC, 0.2A max.
Alarm output LED	Red, can be disabled
MW sensor LED	Green, can be disabled
PIR sensor LED	Yellow, can be disabled
Pulse count	1/2/3 selectable
Tamper protection	N.C cover open activates
RFI immunity	Ave. 20V/m (10~1000MHz)
Temperature	-10°C~55°C (14°F ~ 131°F)
Humidity	Max. 95% RH
Dimensions	132 x 72 x 57mm

To continue improving product quality, IR-TEC reserves the right to change specifications without prior notice.

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