

# DUOGUARD

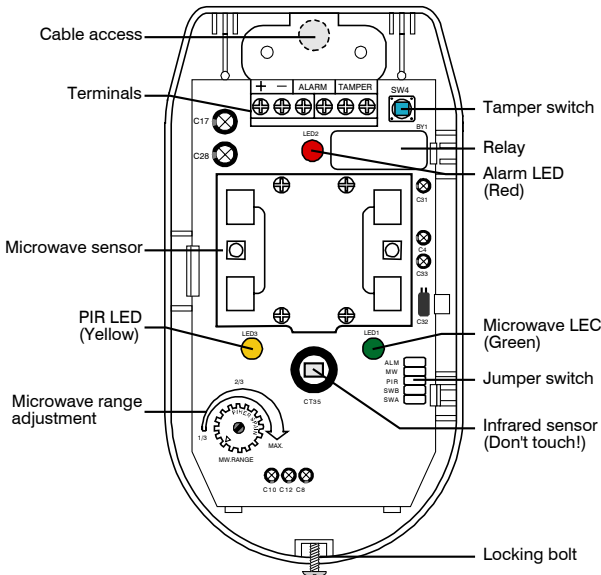
## PIR + Microwave Motion Detector DP-250



## Installation Instructions

### INTERNAL VIEW

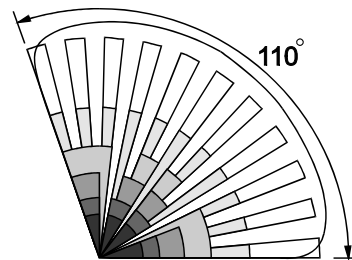
### DETECTION PATTERN



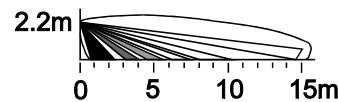
Model: **DP-250**

110°, 15 x 15m at 25°C

Top View



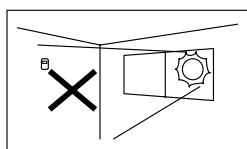
Side View



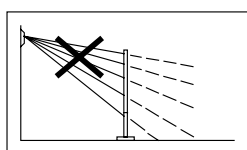
### INSTALLATION HINTS

### INSTALLATION & WIRING

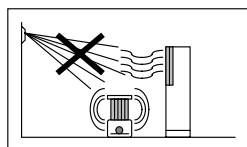
The DUOGUARD may be either wall or corner mounted by applying different knockouts. The MB-95 or MB-99 mounting bracket can be applied for ceiling or wall mount. Corner mount is generally recommended for optimum detection.



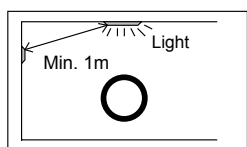
Do not install where the detector is in or facing direct/reflected sunlight, windows onto main roads (car head lights) or strong draughts / heaters.



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.



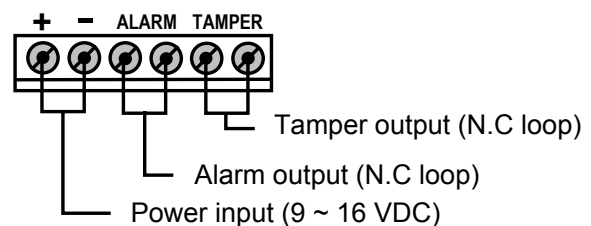
Locate the detector at least 1 meter away from any illumination to avoid possible interference to microwave sensor.

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

#### Installation

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 panel.

## JUMPER SWITCH SETTING

ALM  
MW  
PIR  
SWB  
SWA



(Factory set)

### ALM - Alarm LED Indication

ALM jumper	ON	OFF
Red LED	ON	OFF

### MW - Microwave LED Indication

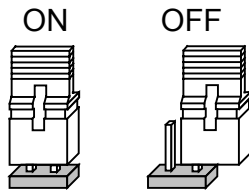
MW. jumper	ON	OFF
Green LED	ON	OFF

### PIR - PIR LED Indication

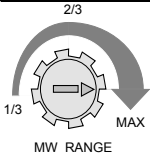
PIR jumper	ON	OFF
Yellow LED	ON	OFF

### 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 disable 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.

## SPECIFICATIONS

- Detection range ..... 15 x15 m at 25°C
- Infrared sensor.....Low noise, dual element
- Microwave sensor..... DRO w/m micro strip antenna
- MW Frequency ..... 10.525 GHz
- MW output power .....6 mW E.I.R.P. peak
- Power supply .....9 ~ 16 VDC (12 VDC nominal)
- Current drain.....30mA at 12 VDC
- Alarm period .....2 ± 0.5 sec.
- Alarm output ..... N.C 30 VDC, 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 (10~1000 MHz)
- Mounting height.....2.0~ 2.4m (wall/corner mounted)  
2.4~ 3.6m (with bracket)
- Mounting bracket..... MB-95 or MB-99 (Optional)
- Temperature ..... -10°C ~ 55°C (14°F ~ 131°F)
- Humidity.....95% RH max.
- Dimensions..... 132 x 72 x 57mm
- Unit weight ..... 110 grams

*To continue improving produc qualityt, IR-TEC reserves the right to change specifications without prior notice.*

*Warning: Changes or modifications this nit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.*

This device complies with Part 15 of the 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.

