

PIR + Microwave Motion Detector

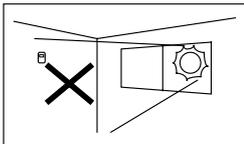
DUOGUARD DP-550

GENERAL

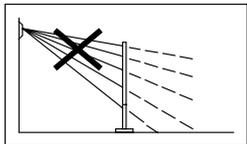
Thank you for choosing IR-TEC dual technology motion detector for your security system. The DP-550 is a compact motion detector that combines a passive infrared (PIR) and a microwave (MW) motion sensor. The alarm signal will be transmitted when both sensors detect the motion at the same time. It provides superior reliability in intrusion detection to your alarm system. A unique ceiling/wall mount bracket is provided for easy adjustment of detection coverage.

INSTALLATION HINTS

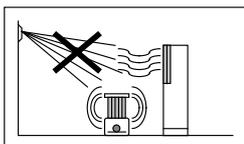
The DP-550 may be either wall or corner mounted by applying different knockouts. The provided mounting bracket can be applied for ceiling or wall mount. Corner mount is recommended for optimum detection.



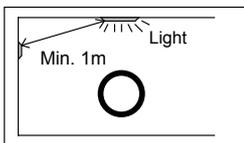
Do not install where the detector is in or facing direct/reflected sunlight, window onto main road to avoid car head light.



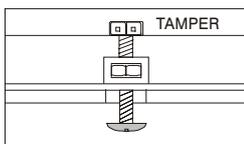
Ensure that there are not any obstructions (plants, screens, furniture etc.) in the field of view which may block the detection.



The detector should not face to the ventilation of HVAC or any equipment that may produce strong temperature change.



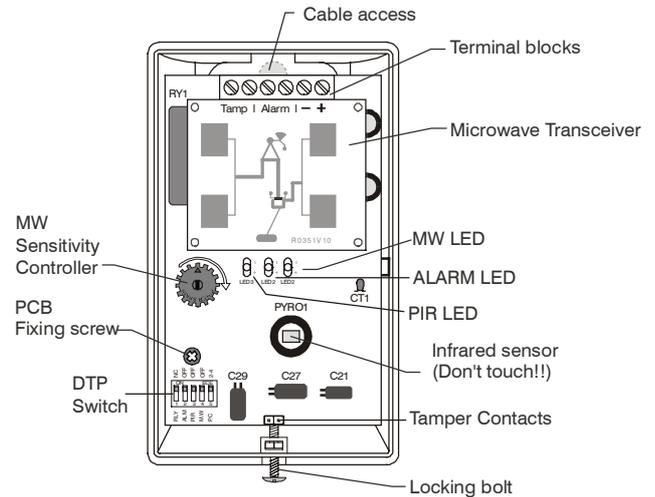
Locate the detector at least 1 meter away from the nearest fluorescent light to avoid interference to MW sensor.



The tamper protection will be activated once release the locking screw of front cover and bottom case.

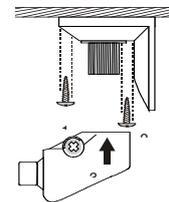
Installation Instructions

DESCRIPTION

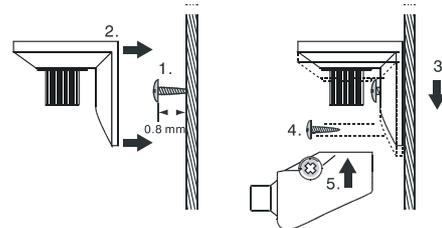


INSTALLATION & WIRING

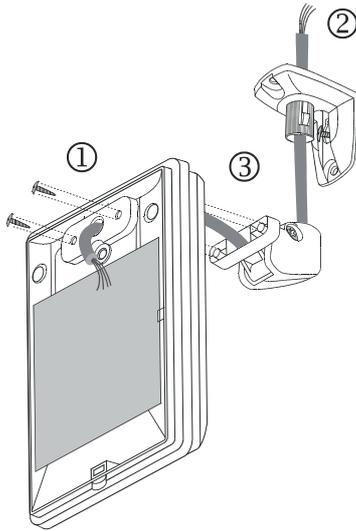
■ Ceiling Mount



■ Wall Mount



⚠ Avoid running the alarm cable along with AC mains cables !!!



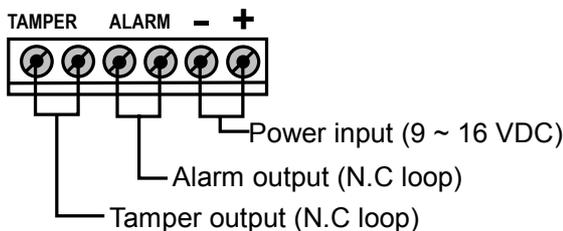
With mounting bracket

1. Mount the base of mounting bracket on the selected position. Lead the cable through the cable access tunnel of mounting bracket.
2. Open the front cover and carefully remove the PCB from the bottom case. Lead the cable into the case and assemble the mounting bracket with it (as shown on previous page).
3. Connect the cable to the corresponding terminals according to the following instructions. Replace the PCB on the bottom case and fix it. Replace the front cover and then walk test can be conducted.

Without mounting bracket

1. Open the front cover and carefully remove the PCB from the bottom case. Select the adequate knockouts and mount the case on the position.
2. Connect the cable to the corresponding terminals according to the following instructions. Replace the PCB on the bottom case and fix it. Replace the front cover and then walk test can be conducted.

Wiring Diagram



- ◆ **TAMPER:** Connect to the tamper protection loop.
- ◆ **ALARM:** Alarm output, connect to the alarm loop of control panel.
- ◆ **-:** Ground of DC power input.
- ◆ **+:** Positive of DC power input.

WALK TEST

It is necessary to carry out a thorough walk test of the detector to ensure that the correct coverage is being achieved. Also to ensure that both PIR & microwave are sensors working to the same detection area.

1. Apply the DC power supply and give approximately 60 seconds for sensor to warm up. After the warm up time expires, walk across the detection zones at normal speed. The red LED will lit when it detects the motion.
2. If microwave sensor is too sensitive (green LED remains on), then carefully adjust of the thumb wheel of MW sensitivity controller in counterclockwise until the detection is satisfactory.

DIP SWITCH FUNCTIONS

There is a 5-pole dip switch on the PCB which controls various functions.

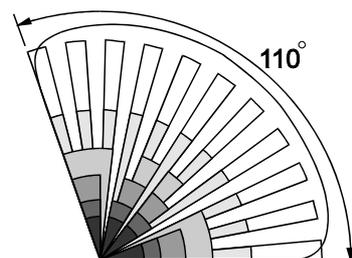
Switch Function	Alarm output	Alarm LED	PIR LED	MW LED	Pulse count
SW #	1	2	3	4	5
ON	NC	ON	ON	ON	2
OFF	NO	OFF	OFF	OFF	4

DETECTION PATTERN

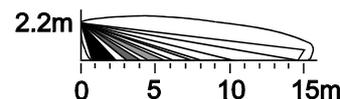
Model: **DP-550**

110°, 15 x 15m at 25°C

Top View



Side View



SPECIFICATIONS

Power supply9 ~ 16 VDC

Current drain24 mA @ 12 VDC

Infrared sensorDual element, pyroelectric

Microwave sensor.....DRO, patch antenna
Alarm period1.5 ~ 2.5 seconds
Alarm outputNC/NO, 30 VDC, 0.2A max.
Tamper protectionNC, screw release activated
Mounting height.....1.8 ~3.6 m
Detectable speed.....0.1~3.0 m/sec.
RFI immunityAv. 20 V/m (10~1,000 MHz)
Temperature-20°C~50°C (-4°F ~ 122°F)
Humidity.....95% RH max.
Dimensions112 x 66 x 45 mm



DP-550 I/M, Eng. 2K1-03 V1.0