

### Engineers' Specifications

The contractor shall provide ceiling mount motion detectors for areas with high ceilings up to 8.6 meters (28ft).

The detector shall be dual technology (PIR and Microwave) and shall employ Anti-Cloak Technology - meaning that when ACT mode is selected, the detector will automatically switch to microwave-only detection, only when specific cases are identified in which the PIR channel is vulnerable:

Case A: When ambient temperature is close to body temperature.

Case B: When the detector identifies a camouflage or cloaking attempt of an intruder.

The detector shall include intelligent digital signal processing that automatically adjusts the alarm threshold and pulse count verification according to actual intruder behaviour and environmental factors.

The detector shall be capable of remote control and diagnostics via two methods:

1. Via a bi-directional infrared remote control unit.
2. Via the upload/download software or LCD keypad of the security system, when the detector is installed as an addressable detector on the security system's bus.

Both methods shall provide the following remote control capabilities:

1. Remote adjustment of the microwave power.
2. Remote control of the detector settings: LEDs on/off and ACT on/off

Both methods shall provide the following remote diagnostic capabilities:

1. Remote reading of the input voltage to the detector.
2. Remote readings of the signal and noise levels from each of the 3 PIR sensors and from the microwave channel
3. Remote trouble indication of the PIR channels, the microwave channel and the input supply

The detector shall employ 3 separate PIR sensors and Fresnel lenses, and an X-band microwave channel. The 3 Fresnel lenses shall be independently adjustable for providing optimal coverage at different installation heights.

Coverage diameter shall be no less than 22m (72') when the detector is installed at heights between 3.7m and 8.6m (12ft to 28ft).

The detector shall include a cover and ceiling tamper.

RFI immunity shall be 40V/m from 10MHz to 1 GHz



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