



Indoor Intrusion Detection Systems

PIRAMID

Dual Technology Sensor for Medium and High Security Applications



Overview

The PIRAMID indoor intrusion sensor combines Stereo Doppler Microwave and Passive Infrared technologies whereby both technologies must activate simultaneously to create an alarm. The Stereo Doppler Microwave portion activates upon the *movement* of an intruder and the Passive Infrared portion activates on the *change in infrared radiation* caused by the intruder.

Applications

The PIRAMID indoor sensor was designed to satisfy high level and medium level security requirements as well as environmentally challenging applications. Using the unique combination of Stereo Doppler Microwave and Passive infrared increases detection sensitivity while providing unequalled false-alarm-free performance.

FEATURES

- **Stereo Doppler Microwave Sensor** - Two receiving channels with the ability to eliminate vibration and periodically moving objects as sources of false alarms.
- **Dual Element Infrared Sensor** - Ignores normal temperature variations yet very responsive to rapid infrared changes created by an intruder.
- **Microprocessor Controlled** - Proprietary integrated circuit design provides enhanced digital signal processing for both microwave and passive infrared technologies.
- **Balanced Temperature Compensations** - Stereo Doppler Microwave and Passive Infrared automatically adjust detection parameters to compensate for losses in range that occur at elevated temperatures.
- **Stereo Doppler Supervision** - Self-checking circuitry ensure proper performance is maintained.
- **Master LED** - Displayed on the face of the unit indicating the alarm relay status.
- **Analytic LEDs** - Alarm and environmental caution LEDs for Stereo Doppler Microwave and Passive Infrared portions are displayed on the face of the sensor. An internal switch can disable analytic LEDs.
- **Metal Housing** - Rugged and durable; offers maximum protection against RFI and EMI interference.
- **Assorted Protection Patterns** - Interchangeable Fresnel Lens Modules offer tremendous assortment of protection patterns for optimum flexibility.
- **Fluorescent Filter Module (Optional)** - FF-3 Fluorescent Filter eliminates interference from nearby fluorescent lighting affecting sensor performance.

TECHNICAL SPECIFICATIONS

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|-----------------------|---|
| Input Voltage | 10.5 VDC to 28 VDC |
| Current Consumption | 100 mA at 12 VDC (LEDs off) |
| RF Power Density | 120 uW/cm ² max. at the face of the unit |
| Operating Temperature | -40°F to 158°F / -40°C to 70°C |
| Operating Humidity | 0 to 100% relative humidity |
| Relay Contact Rating | 100 mA / 50 V |
| Housing Dimensions | 6.70" x 5.25" x 3.5" (15.88cm x 13.34cm x 8.890cm) |
| Frequency Bands | 10.525 GHz USA; International 10.587 GHz/9.0 GHz/9.47 GHz |

ORDERING INFORMATION - COMMERCIAL VERSIONS

| | |
|----------|-----------------------------|
| SDI-76-A | 75 ft. x 75 ft. (22m x 22m) |
| SDI-77-D | 100 ft. x 10 ft. (30m x 3m) |

ORDERING INFORMATION - HIGH SECURITY VERSIONS

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|---|-----------------------------|
| SDI-76-H | 50 ft. x 50 ft. (15m x 15m) |
| SDI-76-G | 50 ft. x 50 ft. (15m x 15m) |
| SDI-77-D | 100 ft. x 10 ft. (30m x 3m) |
| FF-3 (Optional Fluorescent Filter Module) | |



For the purpose of continuously improving the quality and performance of its products, Protech reserves the right to change the above specifications without notice.

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