



Indoor Intrusion Detection Systems

PIRAMID HS

Dual Technology Sensor for High Security Applications



Overview

The **PIRAMID HS (High Security)** indoor models of the PIRAMID were developed to satisfy those applications where Ultra High Security is required. The PIRAMID HS offers enhanced detection capability for slow moving, fast moving, and crawling intruders.

Several High Security Features are incorporated into the standard PIRAMID Indoor sensors to satisfy all high-security requirements specified by U.S. government and military agencies. The PIRAMID HS sensors combine PROTECH's proprietary "Stereo Doppler" microwave technology with a dual element passive infrared sensor. The independent sensor modules can be configured for "And Gate" operation whereby both sensor modules must activate simultaneously to create an overall sensor alarm or for "Or Gate" operation whereby either sensor module activating creates an overall sensor alarm.

Applications

The **PIRAMID HS** indoor sensors can be used in various high security applications such as military bases, correctional facilities and nuclear power plants where the highest level of security is required. The PIRAMID HS offers a very high PD (probability of detection) of greater than 0.95 yet, provides a very low NAR/FAR (Nuisance Alarm Rate/False Alarm Rate) e.



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.
- **Fluorescent Filter Module (Optional)** - FF-3 Fluorescent Filter eliminates interference from nearby fluorescent lighting affecting sensor performance.

HS (HIGH SECURITY) FEATURES

- **And Gate/Or Gate Switchable** - Two position switch enables the installer to field adjust whether both technologies must activate simultaneously to initiate a sensor alarm ("And Gate") or whether either technology activating will initiate a sensor alarm ("Or-Gate").
- **Anti-Masking** - Special circuitry that detects an obstruction of the sensor's faceplate.
- **Remote Self-Test** - Enables the sensor to be tested from a remote location in the same manner as if physically walk-tested.
- **Tamper-Proof Mounting** - The heavy-duty swivel-mounting bracket is locked in position from inside a tampered mounting base.

TECHNICAL SPECIFICATIONS

Input Voltage	10 VDC to 28 VDC
Current Consumption	150 mA at 12 VDC (LED's off)
RF Power Density	120 uW/cm ² max. at the face of the unit
Operating Temperature	-40°F to 150°F / -40°C to 65°C
Operating Humidity	0 to 100% relative humidity
Relay Contact Rating	0.1 A / 50 V
Housing Dimensions	6.25" (L) x 5.25" (W) x 3.3625" (H) (16.5cm x 13.3cm x 8.5cm)
Frequency Bands	10.525 GHz USA International Frequencies: 10.587 GHz/9.90 GHz/ 9.47 GHz

ORDERING INFORMATION - COMMERCIAL VERSIONS

SDI-76-M	75 ft. x 75 ft. (22m x 22m)
SDI-76-M-HS1	75 ft. x 75 ft. (22m x 22m)
Note: The HSI version includes FF-3 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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