

# PIRAMID XL-MIL & XL-HS

Dual Technology Sensor for High Security Applications



## Overview

The high security version of the **PIRAMID (MIL & HS Versions)** offers enhanced detection capability for slow moving, fast moving and crawling intruders. **PIRAMID XL-HS sensor** offers added masking protection and self-test features.

The **PIRAMID XL** combines PROTECH's proprietary "Stereo Doppler" microwave technology with a dual element passive infrared sensor. The independent sensor modules are "And Gated" and must activate simultaneously to create an overall sensor alarm.

## Applications

**PIRAMID XL MIL & HS** detectors 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 XL-MIL 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).

# 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.
- **Weather Shroud** - Metal hood provides maximum protection from rain, snow, wind, and sun loading.
- **Assorted Protection Patterns** - Interchangeable Fresnel Lens Modules offer tremendous assortment of protection patterns for optimum flexibility.
- ✳ **HS Option PC Board** - Optional factory installed PCB providing anti-masking and self-test features.
- **False Alarm Rate** - 1/unit/year based on signal to noise ratio.
- **Probability of Detection** - Greater than 0.95



Pyramid MIL



Pyramid HS

## TECHNICAL SPECIFICATIONS

Input Voltage	10.5 VDC to 28 VDC
Current Consumption	100 mA at 12 VDC (LEDs off)
RF Power Density	120 uW/cm <sup>2</sup> 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	10.5" x 6.60" x 4.90" (26.04cm x 16.76cm x 12.45cm)
Frequency Bands	10.525 GHz USA; International 10.587 GHz/9.90 GHz/ 9.47 GHz

## ORDERING INFORMATION

SDI-76XL-MIL	50 ft. x 50 ft. (15m x 15m) - Lens H - Dual Technology Sensor
SDI-76XL-HS*	50 ft. x 50 ft. (15m x 15m) - Lens H - Dual w/Anti-Masking*
SDI-77XL-MIL	Dual Technology Sensor, see pattern below
SDI-77XL-HS*	Dual Technology Sensor w/Anti-Masking* see pattern below

## 77XL Lens Options

LENS-D	100 ft. x 10 ft. (30m x 3m) detection pattern, 10 degree PIR FOV
LENS-H20	90 ft. x 20 ft. (27m x 6m) detection pattern, 20 degree PIR FOV
LENS-H40	90 ft. x 40 ft. (27m x 12m) detection pattern, 40 degree PIR FOV
LENS-H	90 ft. x 50 ft. (27m x 15m) detection pattern, 90 degree PIR FOV
*HS Versions	HS Auxiliary PCB Factory installed providing Anti-Masking Feature

## Mounting Options

Sensor comes with PH-6L Bracket

PH-4	1.5" to 4.5" Diameter Pole mount for PIRAMID
PH-4A	4.5" to 8.5" Diameter Pole mount for PIRAMID

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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