MPS-4100

Microwave Protection System

- Variable Separation 3 to 183 m (10 to 600 ft.)
- Horizontal and Vertical Polarization
- Self-Supervising Transmitter Option
- Built-In Lightning Suppression
- Phase Locked Loop Signal Processing
- Simple Mechanical Alignment
- 6 Field-Selectable Modulation Frequencies
- Rugged All Metal Enclosure & Weather Shield
- Wide-Range AGC Circuit
- Simplified Installation
- LED Bar Graph Alignment Aid
- Rear Access to Electronics
- Audio Jack for Troubleshooting

The MPS-4100 Bi-Static Microwave Sensor consists of a Transmitter and a Receiver located up to 183 m (600 ft.) apart. The Transmitter incorporates a Dielectric Resonant Oscillator (DRO) frequency source for increased stability over temperature ranges. The 10 GHz signal is amplitude-modulated at one of six field-selectable frequencies. An invisible pattern of microwave energy is established between the Transmitter and the Receiver.

The Receiver incorporates signal processing with wider dynamic range and minimum susceptibility to interference. Changes in signal amplitude analyzed at the receiver are directly related to the intruder's size, density and speed. The Receiver uses a preamplifier to ensure there is an adequate signal to the processor in situations such as sally ports with transmission through fences where signal loss can be significant.

The MPS-4100 pattern width increases with range. Pattern height varies in conjunction with pattern width. The polarization plane of the antenna can be selected to enhance signal isolation when units are operated in close proximity.

The sturdy metal enclosure is designed with the rain shield and enclosure as one piece, without seams. This design improves water flow paths, eliminates critical ice formation areas, protects the radome and provides a high degree of EMI immunity.

The rear entry of the enclosure enables the installer to easily make adjustments to the unit. The unit incorporates a built-in LED bar graph for alignment and an audio jack for troubleshooting nuisance alarms. The design allows plug-in modular replacement of all parts without changing the alignment.

Both the Transmitter and Receiver have built-in lightning protection on all input and output lines by way of gas discharge tubes and transient bypasses.

The detected alarm signals are sent by the Receiver to the alarm monitoring and control point. Alarm monitoring can be accomplished via relay outputs or an optional compatible multiplex communications interface (StarNeT™ 1000 or MX-5000). All options provide separate annunciation of alarm and tamper conditions. During installation, the transmitter tamper switch can be connected to turn off the output, making the transmitter self-supervising.

MPS-4100 provides reliable detection in a variety of applications.

Senstar Stellar®

MPS-4100 Microwave Protection System

Specifications

Polarization
- Horizontal or Vertical
- Field-selectable

Frequency
- 10.525 GHz or 10.587 GHz

Modulation Frequency
- 6 field-selectable

Approximate 3dB Beamwidth
- Horizontal: 13°
- Vertical: 11°

FCC Certification
- FCC Indentifier: FL9MPS4100

Operating Temperature
- -40°C to +70°C (-40°F to +158°F)

Alarm Output
- Isolated and supervised relay contacts, jumper programmable
- NO/NC contacts with 0.25 ampere rating @ 30 VDC
- Optional copper multiplex interface to:
  - StarNeT 1000
  - MX-5000

Alarm Duration
- Adjustable from 0.5 sec to 2.5 sec

Tamper Alarm Actuation
- Activated by enclosure switch continuous alarm until corrected

Tamper Output
- NO/NC switch contacts with 0.25 ampere rating @ 30 VDC

Audio Assessment
- Audio information is provided with built-in phone jack
- 100 mV RMS typical, 600 ohm

Remote Testing
- Built-in self-test generator simulates actual intrusion signals

Connections
- Removable plug-in terminal blocks Cable Connecting Point
- 1.9 cm (0.75 in.) dia. flexible weather-proof conduit fitting for power and alarm cables

Weatherproofing
- Aluminum enclosure - powder coated
- All openings gasketed and sealed
- Conformal coated circuit boards

Lightning Protection
- Input/Output lines protected by gas discharge arrestors and transorbs (90 volts, 5000 amperes)

Power Requirement
- 12 to 24 VDC
- Can be provided by an uninterruptible power supply

Supply Current Requirement
- Transmitter, 25 mA
- Receiver, 50 mA
- Optional copper communications card, 70 mA

Size
- 20 cm (8 in.) diameter x 23 cm (9 in.) deep

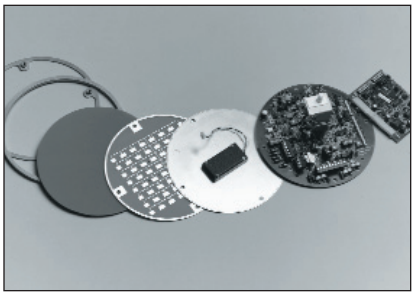
Total Shipping Weight
- 6.6 kg (14.6 lb)

Separation
- 3 m (10 ft.) to 183 m (600 ft.)

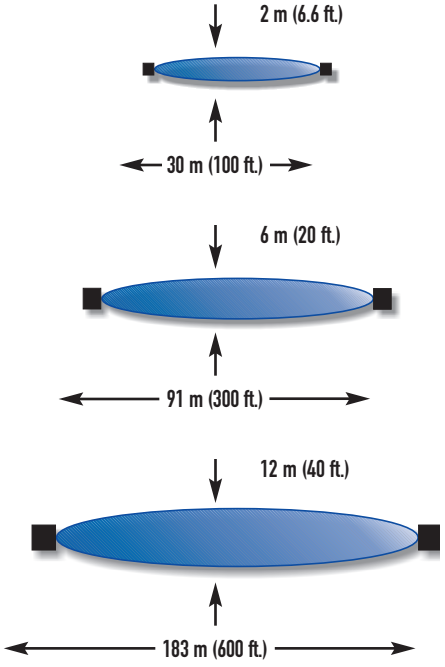
Mounting
- 7.7 cm (3 in.) to 10.2 cm (4 in.) pole required
- Mounting brackets supplied

** Specifications subject to change without prior notice.*

Receiver Modular Components



Typical Coverage Patterns



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