GUARDIAN™ PM500 SERIES

Rapiscan®

DATASHEET

PEDESTRIAN RADIATION PORTAL MONITOR



KEY FEATURES AND BENEFITS

- Walk-through radiation portal monitor for pedestrians
- ADA accessibility without ramps
- Highly sensitive gamma and neutron detectors
- Wide-lane capability
- Stand-alone and remote monitoring capability

The Guardian PM500 Series of radiation portal monitors effectively screen pedestrian traffic at high-foot-traffic, strategic locations such as airports, train stations, seaports, border crossings, nuclear facilities, and other critical infrastructure.

Designed for indoor or outdoor use, the two-pillar, two-panel Guardian PM500 Series is IP65 rated, protecting the system from the ingress of dust and water. Its modular design simplifies and expedites routine maintenance, minimizing downtime and maximizing the number of people moving through the system.

Customization of the detectors' sensitivity levels allows the operator to adjust these settings to accommodate the needs of the site. This allows the system to effectively detect illicit radionuclides, supporting a near-zero false alarm rate and the steady flow of pedestrian traffic.

SPECIFICATIONS

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- **PM500G:** Gamma radiation detection
- **PM500GN:** Gamma and neutron radiation detection

PHYSICAL SPECIFICATIONS

- **Operating Configuration:** Walk-through pedestrian monitor
- **Pillars:** Primary and auxiliary
- **Standard Pillar Spacing:** ANSI and IEC compliant at 1 meter
- **Number of Gamma Detectors:** 2 (1 per panel)
- **Gamma Detector Size:** 60 in H x 10 in W x 2.5 in D (152.4 cm H x 25.4 cm W x 6.35 cm D)
- **Gamma Detector Volume:** 25 liters each (50 liters total)
- **Neutron Detector Material (GN model only):** LiZnS (Ag)
- **Number of Neutron Detectors (GN model only):** 4 (2 per panel)
- **Neutron Detector Volume (GN model only):** 3.5 liters each (14 liters total)
- **Panel External Dimensions:** 80 in H x 26 in W x 7.3 in D (203 cm H x 66 cm W x 18.4 cm D)
- **Panel Weight (per panel):** 982 lbs (445 kg)

PERFORMANCE SPECIFICATIONS

- **False Alarm Rate:** Typically less than 1 in 10,000 passages

OPERATION

- **Inspection Speed:** 3.9 ft/s (1.2 m/s) typical
- **Throughput:** 1,800 pedestrians per hour
- **Alarms and Alerts:** Visual and audible
- **Power:** 90–240 VAC, 50–60 Hz
- **Communications:** Ethernet

OPERATING ENVIRONMENT

- **Temperature:** -4 °F to 140 °F (-20 °C to 60 °C)
- **Humidity:** 5 to 95% non-condensing
- **Environmental Protection:** IP65

[1]For spectroscopy, please inquire.

SOFTWARE FEATURES

- Local or remote system monitoring
- Multiple system monitoring from a single interface
- NORM discrimination and classification
- Sensitivity level customization
- Recall event using queries
- Real-time State of Health monitoring
- Image capture
- Custom operator input screens

OPTIONAL FEATURES

- Alternative neutron detectors
- Guardian 501: Handheld radionuclide identification device supports secondary inspection—identifying and locating radiological threats
- Additional workstation with computer, monitor, keyboard, and mouse
- Backup Power: Rechargeable lead acid battery

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