GUARDIAN™ VM SPECTROSCOPIC SERIES

Rapiscan®

DATASHEET

SPECTROSCOPIC RADIATION PORTAL MONITORS (SRPMs)



KEY FEATURES AND BENEFITS

- Drive-through spectroscopic radiation portal monitors
- World-class nuclide ID
- Superior gamma and neutron sensitivity
- Automatic inspection operation

Engineered for superior performance, the Guardian Vehicle Monitoring (VM) Spectroscopic Series of radiation portal monitors provides exceptional detection of radionuclides in passenger vehicles, freight trucks, and trains while minimizing false alarms.

These robust SRPMs reliably monitor background radiation and alert security personnel when levels exceed the localized parameters. The modular design simplifies training, operations, and routine maintenance across the Guardian VM Spectroscopic Series. The intuitive software simplifies operations and analysis. Customizable nuclide template libraries refine the SRPM data for exceptional NORM discrimination.

With a false alarm rate of less than 0.01%, the Guardian VM Spectroscopic Series reliably protects ports, border crossings, transportation hubs, critical infrastructure, and other strategic locations from inadvertent or intentional transport of radioactive materials.

SPECIFICATIONS

GUARDIAN™ VM SPECTROSCOPIC SERIES

MODEL-SPECIFIC SPECIFICATIONS

	VM500S	VM1000S
Applications	Passenger Vehicles	Passenger Vehicles, Trucks, & Rail
Gamma Detection Models	VM500SG	VM1000SG
Gamma & Neutron Detection Models	VM500SGN	VM1000SGN
Configurations	1 Left, 1 Right	2 Left, 2 Right (stacked)
Gamma Detector Volume (Total)	8, 12, or 16 liters	16, 24, or 32 liters
Neutron Detection Volume (Total)	14 liters	28 liters

PHYSICAL SPECIFICATIONS

- **Pillars:** Primary and auxiliary
- **Standard Pillar Spacing:** 16.4 ft (5 m) per ANSI N42.38
- **Maximum Allowable Spacing:** 19.7 ft (6 m)
- **Gamma Detector Material:** NaI(Tl), Sodium Iodide
- **Number of Gamma Detectors:** 2, 3, or 4 per panel
- **Gamma Detector Volume:** 2 liters per detector
- **Gamma Detector Size:** 2 in H x 4 in W x 16 in D (5.1 cm H x 10.16 cm W x 40.64 cm D)
- **Neutron Detector Material:** LiZnS (Ag)
- **Number of Neutron Detectors:** 2 per panel
- **Neutron Detector Volume:** 3.5 liters per panel
- **External Panel 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)
- **Weight:** Up to 982 lbs (445 kg) per panel

PERFORMANCE SPECIFICATIONS

- **False Alarm Rate:** Less than 1 in 10,000 passages
- **Radionuclide Library:** ANSI/IEEE N42.38
- **Performance Standards:** ANSI/IEEE N42.35

OPERATION

- **Inspection Speed:** 5 mph (8 km/h) typical
- **Alarms and Alerts:** Visual and audible
- **Communication:** Ethernet

ENVIRONMENT/SAFETY

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

SOFTWARE FEATURES

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

OPTIONAL FEATURES

- Alternate neutron detectors
- Guardian 501: Handheld radionuclide identification device supports secondary inspection—locating radiological threats
- License plate camera captures an image of the license plate, aiding in vehicle identification
- Overview camera provides a side view of the vehicle as it travels through the SRPM
- Backup Power: Rechargeable lead acid battery

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