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TSA PM700

PEDESTRIAN RADIATION PORTAL MONITOR

AUTOMATED WALK-THROUGH INSPECTION

HIGH SENSITIVITY

GAMMA AND NEUTRON RADIATION DETECTION

PROVEN IN HUNDREDS OF DEPLOYMENTS WORLDWIDE

MARKETS

- Aviation
- Critical Infrastructure
- Customs and Border Control
- Defense
- Nuclear Facilities
- Ports

THE RAPISCAN TSA PM700 IS A HIGH SENSITIVITY PORTAL MONITOR FOR PEDESTRIAN RADIATION INSPECTION APPLICATIONS.

It is ideal for screening people at airports, border crossings, seaports, critical infrastructure and nuclear facilities. People are automatically inspected as they walk between the pillars of the monitor. The TSA PM700 is a standalone device with all the features and capabilities required for effective radiation inspection.

DESIGN

The two pillars of the TSA PM700 house the radiation detectors and electronics, including the system controller and occupancy sensors. Operating parameters are easily input with the touchpad on the controller. Power and data cables between the pillars are contained in overhead conduits. A rechargeable backup battery supports 8 hours of operation if the main AC power fails. A light indicates a tamper or fault condition.

OPERATION

The TSA PM700 continuously measures the background radiation and signals background alarm conditions. When the occupancy sensors detect a person approaching the monitor, it automatically switches to inspection mode. Radiation alarms are signaled with a flashing light and loud sound. The IP65 rating enables operation in a wide range of environments.

RADIATION DETECTION PERFORMANCE

The TSA PM700 is available with PVT gamma radiation detectors and optional B10 or He-3 neutron detectors. Radiation detection performance meets the requirements of ANSI N42.35 and IEC 62244. SNM detection capability complies with ASTM C1169 for detecting HEU and Pu-239.

REMOTE OVERSIGHT

The TSA PM700 is compatible with Rapiscan remote oversight devices, which enable the radiation inspection operation to be overseen from a remote facility. The TSA AM270 local alarm box signals alarms in a nearby guard booth. The TSA RAVEN™ digital oversight system stores and displays inspection data and CCTV images obtained via a wired or wireless network.

TSA RAVEN™ (Radiation Alarm and Video Event Notification) communications software is used remotely to assist response personnel in the field to pinpoint radioactive sources. RAVEN can monitor multiple detectors and aid in managing individual detector activity.

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PHYSICAL SPECIFICATIONS

Operating Configuration	Walk-through pedestrian monitor
Pillars	Master and slave pillar
Standard Pillar Spacing	35in (88.9cm)
Overhead Crossover	2 plastic conduits for power and data cables
Radiation Detectors	Four gamma radiation detectors (2/pillar)
Gamma Detector Material	Polyvinyltoluene (PVT) plastic scintillator
Gamma Detector Size	35in H x 10in W x 1.5in D (88.9cm x 25.4cm x 4cm)
Gamma Detector Volume	34.4 liters total detector volume
Pillar External Dimensions	84in H x 26in W x 8in D (203cm x 66cm x 20cm)
Pillar Weight	400 lbs (182kg)

PERFORMANCE SPECIFICATIONS

Gamma Radiation Detection	Meets ANSI N42.35 and IEC 62244
SNM Detection	3g HEU or 0.08g Pu239 per ASTM C1169 Cat III
False Alarm Rate	Typically less than 1 in 1,000 passages

OPERATION

Inspection Mode	Walk through
Inspection Speed	3.9ft/s (1.2m/s) nominal
Occupancy Sensors	IR and radar sensors
Radiation Alarms	Flashing light and audible alarm
Tamper/Fault Alarm	Amber light
Main Power	90-240VAC, 50-60Hz
Backup Power	Rechargeable lead acid battery for 8 hr operation
Ports	RS232, Ethernet

ENVIRONMENT/SAFETY

Temperature	-20°C to 50°C
Humidity	5 to 95% non-condensing
Environmental Protection	IP65
Standards	CE

OPTIONS

Optional Gamma Detectors	Larger gamma detectors for higher sensitivity
Neutron Detectors	2 B10 detectors (1/pillar)
Optional Neutron Detectors	4 He-3 detectors (2/pillar)
Overhead Neutron Detector	1 B10 or 2 He3 detector in overhead structure
Neutron Detection	Meets ANSI N42.35 and IEC 62244
SNM Detection	100g Pu239 per ASTM C1169 Cat NII
Overhead Crossover	Box structure
Optional Pillar Spacing	Different spacing for specific applications
Remote Oversight	TSA AM270 local alarm box, TSA RAVEN™, RTDC
Remote Access	Serial Port

STANDARD FEATURES

- Gamma Radiation Detection
- Standard Pillar Separation
- Overhead Conduits

DEFINITIONS

- Gamma Detection - For the detection of ionizing radiation.
- Neutron Detection - Typically used to detect Special Nuclear Materials (SNM).
- Gamma and Neutron Detection - For full spectrum detection capabilities.

OPTIONS

- Neutron Radiation Detection
- Large Gamma Detectors
- Box Crossover
- Different Pillar Separation
- Remote Oversight
- Serial port

**For neutron detection please contact your sales representative to determine availabilty and quantity of He3 tubes.*

**ASTM Standard C 1236 and 1169 are available for purchase from The American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428 (610) 832-9585*

With continual development of our products Rapiscan Systems reserves the right to amend specifications without notice. Product pictures are for general reference. Please note that due to US laws and regulations, not all Rapiscan products are available for sale in all countries without restriction. Please contact your Rapiscan Systems sales representative for more information.

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