

TSA MD134

Mobile Radiation Detection System



The TSA MD134 is designed to automatically scan vehicles or containers without the need for frequent calibration. The system can be stationary to scan vehicles as they drive by or it can be mounted in a vehicle and driven past items to be scanned.

Advanced Operational Features

When the system is powered up, it acquires an initial background count typically within 120 seconds. The TSA MD134 can be put in occupancy mode two different ways, sensor activated or constant. When occupancy is activated the system starts comparing the current count to the most recent background data. Alarm comparisons are made every 200ms. If the count exceeds the alarm level, both audible and visual alarms will be triggered. The system monitors itself and indicates low and high background conditions.

Flexible Detection Options

The TSA MD134 is available in three configurations; Gamma, Neutron or a combination of Gamma and Neutron detection. Gamma provides detection of ionizing radiation and Neutron provides detection of Special Nuclear Materials (SNM) while the combined Gamma and Neutron provides the most powerful detection capabilities for radioactive isotopes even in shielded materials.

Interface Features

The TSA MD134 includes TSA RAVEN™ communications software designed to both capture and view data and video images relating to a radiological detection incident.

Standard Features

- Programmable Detection Parameters
- Audio and Visual Indicators
- Relay Outputs for User Interface
- Universal Power Supply
- Ethernet Connectivity
- Wireless Output Capabilities
- Battery Backup
- Controller Mounting Options
- External Alarm Box
- TSA RAVEN™ Software



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.

Markets

- Aviation
- Critical Infrastructure
- Customs and Border Control



Cut-away view of the TSA MD134 mounted in a van for mobile screening. (Van is not included.)



Controller



Detector

TSA MD134

Specifications

Sensitivity	Gamma: Will detect 1,000g of ²³⁵ U (HEU) or 10g of ²³⁹ Pu in 20 uR/hr background at a passage speed of five mph (8km/h), at a distance of 39 in. (1 m). Neutron*: Will detect less than 200g of plutonium in a shielded container that reduces the gamma flux to 1% of the unshielded gamma flux.
Detectors	Gamma: Two, 48 h x 12 w x 1.5 d in. (121 x 30 x 3.8 cm) organic plastic scintillator detectors per skid; provide approximately 1,728 in ³ (28 liters) of detector volume. Standard Neutron*: Four, 2 in. diameter x 36 in. (5 x 91 cm) He ³ tube. High Sensitivity Neutron*: Eight, 2 in. diameter x 36 in. (5 x 91 cm) He ³ tube.
Alarm Indication	Alarms are indicated on the External Alarm Box and the laptop or PC that is monitoring the system.
Communications	Serial Port and Ethernet
Display	Alphanumeric LCD, 4 lines x 16 characters.
Charging Requirements	90-250, 47-63Hz or 12VDC from host vehicle.
Battery Life	16 hours of continuous operation.
Dimensions	65.5 h x 60 w x 35 d in. (166.5 x 152.5 x 89 cm) per skid.
Weight	500 lbs (227 kg) per skid.
Environmental	-4° to 122° F (-20° to 50°C); designed for sheltered areas.

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

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

Wireless Communications

Survey and Mobile Mode

External Alarm Box

