

## ADVANCED SPECTROSCOPIC RADIATION DETECTION PORTALS

- ISOTOPE IDENTIFICATION
- NEUTRONS DETECTION
- DESIGNED TO MEET ANSI 42.38

Totem Plus RMDS Portal for Pedestrians can detect and identify radioactive substances on humans. The portal is designed to monitor individuals after a radiological terrorist event or after a malfunction in a reactor. The system is intended to be used for quick and methodical scanning of a large number of persons, which might be contaminated after mass casualty events.

The RMDS results will determine the need for short term treatment or for long-term follow-up of the patient. Contaminated persons may need further radiotoxological tests or in some cases fast treatment by absorbing substances to remove the contamination from inside the body.

This system is applicable for the Homeland Security needs as well, and can detect and identify smuggling of radioactive materials by pedestrians. The system includes passive detectors only (sensors that do not emit any radiation).

The RMDS Portal series integrates innovative technologies, unique know-how and vast experience in the Radiation Detection and monitoring industry. The portals are primarily intended to be positioned at border crossings, maritime ports, airports, critical facilities and highly populated areas.

## System Features

- Easy to use and maintain by the "nonprofessional" operator
- System output: Audiovisual alarms, Isotope identification, Sources location
- Integrative portal monitor system (Remote internet control & communications)
- Integrated into two pillars with shielded and collimated detectors
- Nal(TI) 3" X 3" detectors for Gamma detection He-3 Neutron detection system

- Isotope identification MCA based
- Automatic spectrum drifts compensation
- Energy range between 25 keV to 3.0 MeV
- Low false alarm rates
- Functional in high background fluctuations
- High sensitivity, reliability and precision

## RMDS

The system is capable of identifying and distinguishing between different radioactive isotopes whether they are detected individually, or in a combination of more than one isotope. Identifying the radiating source's material is crucial for effective system operation, since it reduces drastically the innocent alarm rate. In systems without isotope identification capabilities, radiation alarms often occur while detecting benign sources, such as NORM (Normally Occurring Radioactive Materials) radiation from medical and industrial materials.

The current system allows keeping the alarm threshold at a low level, but nevertheless avoids false alarms. Benign sources (such as NORM) are not ignored, when the system detects such a material, it produces a silent alarm, notifying the operator of the radiation presence, radiating isotope, and the isotope's category (natural/medical/ industrial). The system meets the requirements of Spectroscopy-Based Monitors used for Homeland Security (American National Standard ANSI N42.38).







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