

XRT-260

Package Portal Monitor



The TSA package portal monitor, model XRT-260, is a highly reliable system for radiometric protection of special nuclear material (SNM). The XRT-260 (shown) is integrated with an AS&E model 101ZZ X-Ray inspection system.

The package monitor system consists of two pillars which contain the sub-system modules. The pillars are mounted on either side of the conveyor belt. The pillars use lead shielding on the rear and sides of the detectors to reduce the background radiation and increase the ability of the system to detect SNM passing between the pillars. Each pillar contains a radiation detector assembly.

The XRT-260 is powered by a 12 volt power supply mounted in the master pillar. The master pillar also has a portal monitor system controller (TSA's SC-770) which provides both the analog and digital signal processing and drives the external indicators. The power supply, the occupancy module, alarm lights and Sonalert® are also found in the master pillar. The slave pillar contains only a detector.

When the monitor is not occupied, the system will automatically monitor background radiation and periodically update the display on the controller located in the master pillar. When a package interrupts the occupancy module between pillars, the system begins fast count monitoring and will alarm if the count exceeds a pre-determined alarm level. The system will also alarm if the background radiation level exceeds or falls below preset limits.

The remote indicator panel is customarily located near the x-ray system's display for operator convenience. The package monitor can be adapted for use with other x-ray systems, or as a stand alone system with its own conveyor.

TSA's package monitor model XRT-260 is designed to detect special nuclear material (SNM). The gamma monitor is designed to be installed on airport-type x-ray scanners. Items are scanned as the conveyor belt moves them into the x-ray chamber. A special shielding scheme reduces the effects of the x-rays on the radiation detectors to increase gamma sensitivity.