

rad-D™

Portable Radiation Monitor



SNM DETECTOR FOR CONTAINER AND CONVEYOR BELT PACKAGE INSPECTION

The **rad-D** is a fixed-position radiation detector that is used to monitor doorways, driveways, or loading docks. It can inspect packages or luggage on conveyor belts; and it can be integrated with an X-ray machine or a metal detector to increase the kinds of dangers detected. The rad-D can also be easily connected to an existing security system – to add radiation to the other types of alarms. The rad-D is small. It can be attached to walls, light poles, conveyer belts, or X-ray machines. And because it is small, it doesn't affect the how of vehicles or pedestrians under inspection. Other, similar devices need large, fixed areas and concrete footings to mount their systems and require traffic (vehicles or people) to be forced through a fixed inspection corridor. A rad-D system can include up to four detectors – operating simultaneously, each up to 150' away from the display electronics. The rad-D is designed to integrate into existing security networks, using either a serial communications link or a Bluetooth wireless link that can communicate with a PC up to 300 feet away. With four detectors, an operator can monitor four different doorways (or driveways, or conveyor belts, etc.) anywhere in your facility. When the rad-D alarms, it can trigger active responses such as blockades or halting conveyor belts. There are two different types of rad-D detectors available: Gamma, or Neutron. The standard radiation detector searches for gamma and X-ray radiation and can be configured as either omnidirectional or uni-directional to ensure that the unit is triggered only

Flexibility, functionality, and affordability make the rad-D a practical solution for use in:

- **Airport, rail and bus terminal security**
- **Shipping and receiving points / conveyor operations**
- **Security check-points in key government and commercial facilities**
- **Border check-points recreational events, convention centers**

by what is directly in front of it, not by what is in the next traffic lane or on a parallel conveyor belt. The other type, a neutron detector, is an important tool to detect the transport of illicit nuclear weapons. Many users configure a standard radiation detector and a neutron detector to cover the full spectrum of radiation. Like the mini rad-D, the rad-D is designed to be extremely easy to use and understand. It provides the operator with an easy-to-interpret single digit read out of a "1" to a "9" to show the strength of the detected radiation. The rad-D also shows the actual count of photons or neutrons. It automatically calibrates itself to the natural background radiation environment to maximize its detection sensitivity.



FEATURES

- 24/7 operation
- No maintenance required
- Easy to use - no special training required
- High sensitivity
- Calibrates out background radiation to minimize false alarms
- Rapid operation (under 1 second) to allow complete inspections of all packages on a conveyor belt system
- Transportable using the exclusive LAURUS Systems universal bracket system



Specifications

Function	Gamma Gamma/Neutron detection
Detector	Gamma: 2" X 3" (51 x 76 mm) NaI; doped with Thallium Neutron: 253 Cylindrical He3
Energy Range	40 keV to 3000 keV (gamma)
Power	Regular 120VAC
Response Time	< 1 second
Display	"1" through "9" LED readout Counts Per Second (gamma)
Notification	Audio/LED – 3 μ R/h (.03 uS/h) above background
Audible Alarm	92+ dBA at 24 inches (61 cm)
Calibration	Automatic
Calibration Biasing	16-position switch; allows manual setting for operation in high-radiation environments
Versions	Shielded version available for use with X-Ray scanning machines
Size	Detector: 5" Dia, 17.5" length (13 x 45 cm) Control Unit: 6.75" x 4.2" x 3" (17 x 11 x 8 cm)
Weight	Detector: 27.5 lb (12,5 kg) Control Unit: 1.5 lb (.7 kg)
Environment	-10 $^{\circ}$ F - 122 $^{\circ}$ F (-23 $^{\circ}$ - 50 $^{\circ}$ C)

About D-Tect Systems

Founded in 2001, D-tect Systems is focused exclusively on combating the urgent threat from radiological, chemical and other hazardous substances. Applying 32 years of expertise in radiation physics, spectral identification and advanced sensor technology, D-tect Systems is a division of VPI Engineering and all our products are manufactured and assembled in the USA. Our mission is to provide homeland defense and other services with the most powerful, affordable, and deployable detection and identification solutions available.

