



# Perimeter Monitoring System



Nuclear Power



Homeland Security & Defense



Industrial and Manufacturing



Healthcare



Labs and Education

## OVERVIEW

Boundary status monitoring is increasingly important in a post-Fukushima environment. Nuclear power plants and other regulated facilities have to be able to deploy safe, accurate, and efficient means of keeping track of the radiological measurements on the periphery of their sites.

This is where the Mirion Perimeter Monitoring Systems come in. Flexible, easy to operate systems that feature either our DRM-2 area monitors or RDS-31 handheld survey meters, they provide the valuable coverage needed to ensure comprehensive data collection around a nuclear facility.

Able to be fitted with a variety of power sources, from solar to battery to AC, and able to be networked with WRM2 radios and monitored using Mirion's Televue 3000 software, the Mirion Perimeter Monitors provide a powerful tool for keeping up with the changing requirements for site boundary monitoring.

## KEY FEATURES

- Stable, self contained units to compose an effective boundary monitoring system.
- Radiation monitors enclosed in NEMA 4X boxes rated to IP 65.
- Onboard WRM2 radios that readily broadcast to Televue 3000 for live monitoring and mapping.
- Available with an array of power options: solar panels, backup batteries, or AC power.
- DRM-2 version feature dual high and low range GM tubes for a wide range of measurements.
- RDS-31 version available with either GM or SD detector options, which additionally can be fitted with any of a wide array of external probes.
- RDS-31 can also be removed from the enclosure for use as needed as a handheld survey meter.

## RADIOLOGICAL CHARACTERISTICS

### DRM-2

- GM Tube ZP-1301 (or equiv) High Range
- GM Tube ZP-1201 (or equiv) Low Range
- Optional GM Tube ZP-1300 non-energy compensated
- Optional CsI detector
- Optional External Probe (DRM-2E)
- Dose rate measurement range (GM):  
0.5  $\mu$ Sv/hr...9.99 Sv/hr or .05 mR/h...999 R/hr

### RDS-31

- Radiation detected: gamma and X-rays, 48keV...3MeV. Alpha & Beta radiation with external probes
- Detectors (GM): one energy-compensated GM tube, energy response according to ambient dose equivalent H\*(10)
- Detectors (SD): silicon detector, one large area PIN diode, energy response according to ambient dose equivalent H\*(10)
- Dose rate measurement range (GM): 0.01  $\mu$ Sv/h...0.1 Sv/h or 1  $\mu$ rem/h...10 rem/h
- Dose rate measurement range (SD): 10  $\mu$ Sv/h...10 Sv/h or 1 mem/h...1000 rem/h

## FUNCTIONAL CHARACTERISTICS

- WRM2 Wireless, Ethernet, and Cellular communications options.
- Alarm strobe for visible and audible notification of alarms.

### RDS-31

- Configurable units: Sv(h), R(h), with external detector Gy(h), cps, cpm, dpm and Bq
- Flexible histogram functions (dose rate, dose, diagnostic logging depending on configuration, time stamp, optional location control for mapping and repeating room measurement analysis)

## MECHANICAL CHARACTERISTICS

- NEMA 4X Enclosure class IP65.
- Various options for mounting including wall mounting, deployable tripod, atop a post, and more.

## ENVIRONMENTAL CHARACTERISTICS

### DRM-2

- -9°C...+50°C (15°F to 122°F), operating temperature
- -20°C...+60°C (-5°F to 140°F), storage temperature
- Relative humidity: 10% to 95%

### RDS-31

- -25°C...+60°C (-13°F to 140°F), operating temperature
- -40°C...+70°C (-40°F to 158°F), storage temperature
- Relative humidity: up to 85% at +35°C (95 °F)
- Fulfills the RF-immunity levels of applicable standard

## OPTIONS

- Solar panel power source for extended operation when AC power is not an option.
- Battery backup maintains full operation in the event of loss of AC power or poor solar conditions.



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