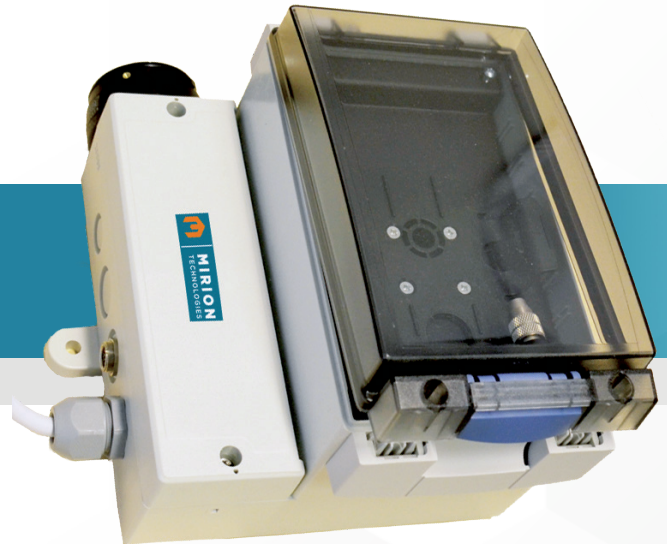




RDS-31

Radiation Monitoring Alarm Box



Nuclear
Power



Homeland
Security
& Defense



Industrial and
Manufacturing



Healthcare



Labs and
Education

OVERVIEW

The RDS-31 Alarm Monitor is intended for stationary or fixed installation in premises where people may be exposed to ionizing radiation.

The RDS-31 advanced survey meter is the main instrument, with one internal GM counter it covers dose rates from 0,01 $\mu\text{Sv/h}$ to 100 mSv/h . The system can be equipped with any GMP-12 series H* (10) probes to increase the upper dose rate level up to 10 Sv/h max.

The RDS-31 meter can be configured for dual display function, thus the results from both the internal and the external detector are then simultaneously shown in the graphic display.

The casing, Fibox type 17/16L3, includes one relay board with potential free changeover contacts for external alarm equipment or driving other external equipment, such as door control units etc.

External alarm equipment and indication/warning lights are usually mounted on top of the casing.

The system is powered by a 230VAC/12 VDC power supply. The internal batteries are used for back-up power supply of the RDS-31 meter in case of mains failures (the external alarm equipment are not backed up).

KEY FEATURES

- Modular and configurable design
- Optional GMP-series dose rate & surface contamination probes
- Area monitoring applications :
 - via LAN using WRM2 data transmission protocol
 - wireless WRM2 solution
- Radioactive waste control
- Control of equipment generating ionizing radiation or workplaces where radiation risk occurs

Health Physics

RDS-31 RADIOLOGICAL CHARACTERISTICS

- Radiation detected: gamma and X-rays, 48keV...3MeV. Alpha & Beta radiation with external probes
- Detectors: one energy-compensated GM tube, energy response according to ambient dose equivalent $H^*(10)$
- Dose rate measurement range: 0.01 $\mu\text{Sv/h}$...0.1 Sv/h or 1 $\mu\text{rem/h}$...10 rem/h
- Dose measurement range: 0.01 μSv ...10 Sv or 1 μrem ...1000 rem
- Resolution: three significant digits or 0.01 $\mu\text{Sv/h}$ on dose rate and 0.01 μSv on dose (1 $\mu\text{rem/h}$ on dose rate and 1 μrem on dose)

MECHANICAL CHARACTERISTICS

- Casing EPDM and Polyurethane, IP 65 /IK 08/07
- Transparent cover for meter's display and alarm
- Size: 235 x 185 x 119 mm (9.3 x 7.3 x 4.7 in)
- Temperature:
 - 25°C...+60°C (-40°F to 140°F), operating temperature
 - 40°C...+70°C (-40°F to 158°F), storage temperature

ELECTRICAL CHARACTERISTICS

Mains supply; fixed/PSU 230 VAC/12 VDC (+ 5 VDC)

Two external relays for detector status (green light normal function) and detector alarm (red light).

Additional functions can be integrated into the relay settings, e.g.

- by alarm (red light) locking the entrance of room with radioactive source
- by OK status (green light) enabling the use of certain equipment



OPTIONAL ACCESSORIES

- Alarm signaling set with Green permanent "Ready" light, Red "Alarm" strobo light and Alarm siren 105 dBA:
 - to be fixed on top of casing (order # 1233-301)
 - wall mounting with power standard cable 10 m (order # 1233-302)
- Binder connector for using external surface contamination probes
- external power supply for the alarm box
- external power supply for the signalling set

COMMUNICATION/DATA TRANSFER



Built-in LAN adapter for external communication.

WRM communication over LAN, each monitor has TCP/IP address and sends dose rate & dose data at set intervals.

The monitor can also be equipped for WRM (Wireless Radiation Monitoring) application by replacing the standard RDS-31 meter with either RDS-31iTx or RDS-31iTxSD model. The applicable frequency range/max. power output are 900 Mhz/100 mW in US and 2,4 GHz/10 mW in Europe.

Measuring range:

RDS-31 iTx 0,01uSv/h to 100 mSv/h

RDS-31iTxSD 10 uSv/h to 10 Sv/h

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