RDS-30

Radiation Survey Meter

Nuclear Power

Homeland Security & Defense

Industrial and Manufacturing

Healthcare

Labs and Education

OVERVIEW

The RDS-30 is a Digital Handheld Dose Rate Meter designed for a wide range of applications involving a possibility for abnormal radiation levels. Compact, lightweight, waterproof, its performance and its friendly user interface make the RDS-30 perfectly suited to radiation survey in field conditions, in nuclear industry and for protection against radiological hazards by personnel, who may be exposed to gamma and/or X-ray radiation in their work.

RDS-30 is microprocessor controlled. The user interface consists of one push button and an easy- to-use menu structure that displays information on the LCD of the meter. The six-digit display shows the dose rate and various messages. Different alarm situations are indicated by a combination of audio-visual effects on the LCD and a buzzer (dose rate , dose, low battery, defect, dose rate overflow).

RDS-30 provides user configurable (with RDS-CSW SW) list of alarm levels for dose and dose rate. Fixed or multilevel alarm options. It is possible to store dose rate values into the histogram memory for later analysis of the readings.

The use of a RDS-CSW software is required for downloading the data into a PC via IrDA port.

KEY FEATURES

- Measurement and display in µSv/h or mrem/h
- Dose measurement indication
- High battery life time (>1 year)
- Compliant to IEC 60846
- Dose rate follow-up by audible signal with frequency proportional to dose rate
- Visual and audible alarm: user settable for dose and dose rate over the whole measurement range
- Histogram capability of up to 480 dose rate values with user settable logging interval
- Backlit display with six large digits
- Display in either µSv/h or in mrem/h
- Built-in self-diagnostics complies with ANSI N42.33 and IEC 60846 standards

Health Physics

RADIOLOGICAL CHARACTERISTICS

- Radiation detected: gamma and X-ray from 48 keV to 3 MeV
- Detector: energy compensated GM tube compliant to H*(10)
- Dose rate measurement range: from 0.01 µSv/h to 100 mSv/h or from 1 µrem/h to 10 rem/h
- Dose rate linearity: ± 10 % ±1 digit within the range of 0.1 µSv/h to 100 mSv/h or 10 µrem/h to 10 rem/h
- Calibration accuracy: ± 5 % of the reading in 137Cs exposure, at 3 mSv/h, +20°C (68°F)
- Energy response: ± 30 % over the range of 48 keV - 3 MeV
- Angular response: ± 25 % within ± 45 % from the calibration direction at 48 keV
- Dose measurement range: from 0.01 µSv to 1 Sv or from 1 µrem to 100 rem

FUNCTIONAL CHARACTERISTICS

- Dose rate follow-up by audible signal with frequency proportional to dose rate
- Visual and audible alarm: user settable for dose and dose rate over the whole measurement range
- Dose measurement (µSv / mrem)
- Histogram capability of up to 480 dose rate values with user settable logging interval
- Backlit display with six large digits
- Display in either µSv/h or in mrem/h (configurable per request)
- Built-in self diagnostics for GM-tube operation, high voltage and battery capacity
- Built-in infra-red port (IrDA)

MECHANICAL CHARACTERISTICS

- Case: rugged plastic, easily de-contaminable
- Dimensions: 78 x 126 x 32 mm
- Weight:
  - 170 g without batteries
  - 220 g with batteries

ELECTRICAL CHARACTERISTICS

- Power supply: 2 alkaline batteries IEC LR6/AA size (recommended)
- Battery life time: at least 2000 hours at normal background with alkaline cells (more than 1 year under normal operation)
- Battery alarm: two-step alarm for low battery voltage
- Electromagnetic compatibility: CE compliant

ENVIRONMENTAL CHARACTERSTICS

- Temperature range : –25 ... +55°C operational (-13... 131°F) –40 ... +70°C storage (-40... 158°F)
- Protection level: IP67 (temporary immersion / floating device)

ACCESSORIES

- RDS-CSW software for parameter setting and histogram readings (can be downloaded free of charge at www.mirion.com, requires an USB-IrDA adapter)
- CSW Configuration SW full version with calibration key
- Wrist strap
- Neck strap

USB-IrDA adapter