

RDS 30 Radiation Survey Meter



RDS-30 Product Description

The RDS-30 is a Digital Handheld Dose Rate Meter designed for or a wide range of applications involving a possibility for abnormal radiation levels. Compact, lightweight, waterproof, its performance and its user friendly 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 provides sequential alarms for fixed dose rate values (programmable by CSW configuration software via IrDA link) and the possibility to store dose rate events into the histogram memory of the meter. The use of a CSW software is required for downloading the data into a PC via IrDA port.

RDS-30 is microprocessor controlled. The user interface consists of one push button and an easy-to-use menu structure that displays information in 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 in the LCD and a buzzer (dose rate 1, dose rate 2, low battery, defect, dose rate overflow).

FEATURES

- small size and large display
- measurement in $\mu\text{Sv/h}$ or mrem/h
- gamma dose indication
- visual and audible signalling
- 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
- dose measurement
- histogram capability of up to 480 dose rate values with user settable logging interval
- backlit display with six large digits
- display in either $\mu\text{Sv/h}$ or in mrem/h
- built-in self diagnostics

TECHNICAL SPECIFICATIONS:**Physical characteristics**

- radiation detected:
gamma and X-ray from 48 keV to 1.3 MeV
- detector:
energy compensated GM tube compliant to H*(10)
- dose rate measurement range:
from 0.01 μ Sv/h to 100 mSv/h or from 1 μ rem/h to 10 rem/h
- dose rate linearity:
 $\pm 10\% \pm 1$ digit within the range of 0.1 μ Sv/h to 100 mSv/h or 10 μ rem/h to 10 rem/h
- calibration accuracy:
 $\pm 5\%$ of the reading in ¹³⁷Cs exposure, at 3 mSv/h, +20°C (68°F)
- energy response:
 $\pm 30\%$ over the range of 48 keV - 1.3 MeV
- angular response:
 $\pm 25\%$ within $\pm 45\%$ from the calibration direction at 48 keV
- dose measurement range:
from 0.01 μ Sv to 1 Sv or from 1 μ rem 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
- histogram capability of up to 480 dose rate values with user settable logging interval
- backlit display with six large digits
- display in either μ Sv/h or in mrem/h
- built-in self diagnostics

Mechanical characteristics

- case:
rugged plastic, easily decontaminable
- dimensions:
78 x 126 x 32 mm
- weight:
- 170 g without batteries
- 220 g with batteries

Environmental Characteristics

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

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

External interfaces

- Built-in infra-red port (IrDA)

Accessories

- software for parameter setting and histogram readings
- wrist strap
- neck strap

