RDS-31

Multi-Purpose Survey Meter

The RDS-31 Multi-Purpose Survey Meter continues the line of Mirion survey meters offering modern design and approach to radiation monitoring.

FEATURES

- H*(10) ambient dose equivalent dose and dose rate
- Wide range of external alpha, beta and gamma probes for direct connection with the RDS-31 meter
- New ergonomic design
- Large graphic screen, configurable backlight with automatic illumination control
- High impact durable case construction , IP-67 immersion proof
- Internal memory to store measurements
- Flexible histogram functions
- Firmware of instrument upgradable through cable link
- Configurable shortcut functions
- Complies with ANSI N42.33 and IEC 60846 standards

The RDS-31 Multi-purpose Survey Meter is a small handheld, battery operated survey instrument using an energy compensated GM-tube as primary detector. Due to its versatile functions and durability it is suited for a wide range of applications in civil defense, industrial and laboratory use etc.

The RDS-31 meter features excellent ergonomics; lightweight and easy handling, with visual and audible alarms and internal vibrator. The large graphic display with Energy Save Backlight is well visible even in sunny conditions due to the illumination control.

To extend the capabilities of the instrument, external probes from GMP-12/GMP-25/GMP-11-3 series, ABP-150, and the CSP probes SAB-100, SABG-100, SG-1/2R, SX-2R and SN-S can be connected to RDS-31 meter directly through binder connector.

User protection while using external probe by simultaneously measuring instrument dose rate. For example, with SAB-100 probe, RDS-31 concurrently displays alpha and beta contamination measurements in addition to internal detector dose equivalent rate.

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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)
- Display dose rate measurement range: 1 µrem/h - 10 rem/h (0.01 µSv/h - 0.1 Sv/h)
- Dose measurement range: 1 µrem – 1,000 rem (0.01 µSv - 10 Sv)
- Resolution: three significant digits or 1 µrem/h on dose rate and 1 µrem on dose (0.01 µSv/h on dose rate and 0.01 µSv on dose)
- Calibration accuracy: ± 5%, 137Cs , calibration direction and in the calibration field, temperature 68°F (+20 °C)
- Dose rate linearity: ± 15% ± least significant number 5 µrem/h to 10rem/h (0.05 µSv/h...0.1 Sv/h)
- Variation of the response due to photon radiation energy and angle of incidence: (R E,A)
- 71% < RE,A < 160% (48 keV...3 MeV); ± 60°

FUNCTIONAL CHARACTERISTICS

- Two buttons to operate the instrument
- Configurable units: Sv(/h), R(/h), with external detector Gy(/h), cps, cpm, dpm, Bq and Bq/cm2
- Flexible histogram functions (dose rate, dose, diagnostic logging depending on configuration, time stamp, optional location control for mapping and repeating room measurement analysis)
- Additional histogram analyzing capabilities on CSW-31 software
- Real time clock function
- Configurable audible, visual and vibration alarm
- RF-communication and USB-communication with suitable adapter
- 128x64 pixel graphic display with special symbols for alarm, external probe, battery, RF-communication, vibration alarm, chirp, and mute

ELECTRICAL CHARACTERISTICS

- Power supply: 2 AA size batteries (alkaline or NiMH)
- Contacts for external power and charging of NiMH battery
- (charging conditions +5... +35°C)
- Operation time with fresh alkaline batteries more than
- 4 months at background radiation at +23°C, 8 h use/24h
- Operation time with fully charged NiMH batteries more than 1 month at background radiation at +23°C, 8 h use/24h. At higher/lower temperatures the operation will be shorter.

MECHANICAL CHARACTERISTICS

- Case high impact durable plastics reinforced with glass fibre
- Ergonomic design, rubber grip and cushion around the case
- Enclosure class IP67 (IEC 60529), water proof including battery compartment
- Dimensions: 3.93 x 2.63 x 1.29 in (100 x 67 x 33 mm)
- Weight: 0.385 lb without batteries (175 g), with batteries 0.485 lb (220 g)
- Wrist/neck strap
- Belt clip

ENVIRONMENTAL CHARACTERISTICS

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

OPTIONS

- Electrical cradle or mechanical cradle e.g. for easy vehicle installation
- Alarm monitor combinations for fixed/deployable applications
- Coil or straight cable for external probes

LAURUS SYSTEMS

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