



MIRION
TECHNOLOGIES

SURVEY

UltraRadiac™-Plus

Personal Radiation Monitor



FEATURES

- Easy to operate by personnel in firefighting or “HAZMAT” protective gear
- Extremely rugged, metal housing
- Accurate dose measurements with high dose rate protection
- Large, easy-to-read back-lit LCD display
- Audible, visual and vibrating alarms
- Unique “stay time” display shows time remaining for the highest level of individual health and safety
- Configuration by push button or integrated software
- Uses standard AAA batteries; optional rechargeable batteries



DESCRIPTION

When first responders arrive on a scene of an accident, natural disaster, or terrorist attack, identifying the radiological risk is a critical step in the first minutes of characterizing a scene.

The Mirion UltraRadiac-Plus device is the STANDARD in personal radiation monitors for firefighters, law enforcement, HAZMAT teams, paramedics, and others. The URAD-Plus is small, lightweight, and extremely rugged for demanding radiological and extremely hazardous environments.

MANUFACTURED IN THE USA



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RADIOLOGICAL CHARACTERISTICS

Measurement Range:

- Dose rate: 1.0 μ R/h to 200 R/h (0.01 μ Sv/h to 2 Sv/h)
- Cumulative Dose: 0.1 μ R to 999 R (0.001 μ Sv to 999 Sv)

Accuracy:

- Within $\pm 30\%$ of 100 μ R/h (1 μ Sv/h) to 200 R/h (2.0 Sv/h)

Detector:

- Energy compensated GM detector

Energy Range:

- $\pm 40\%$ from 60 keV to 1.5 MeV

Response Time:

- Achieves 90% of final reading in one second; subject to step change from 1 mR/hr (10 μ Sv/h) to 55 mR/h (550 μ Sv/h); updates display every second

Dose Read Out:

- Non-volatile memory will not be erased when read
- Re-zero by push button

Alarms:

- Alarm threshold configurable for dose and dose rate
- Alarm configurable for audible, visual and vibration
- Audible alarm: >85 dB at 30 cm

POWER

Alarms:

- Four AAA (1.5 V) alkaline batteries
- Optional rechargeable NiMH batteries with DC charger to URAD-Plus power connector (check applicable model)

Battery Life:

- 150 hrs (~1 month) continuous monitoring; 1,500 hrs during inactive (sleep) mode
- Low battery indication – 10 hrs of battery life remaining



Custom Designs Upon Request

PHYSICAL CHARACTERISTICS

Dimensions: H: 3.94 x W: 2.62 x D: 1.24 in. (100 x 66 x 31 mm)

Weight: 8.9 oz (252 g) without pouch

Volume: 12.8 in.³ (210 cc)

Case Material: Die cast aluminum in yellow or black

Display:

- LCD: Readable at 3 ft (1 m); with backlight
- Measurement Units: Rem & Sieverts

ENVIRONMENTAL CHARACTERISTICS

- **Operating Temperature:** –22 °F to 141 °F (–30 °C to 61 °C). Vibrating and audible alarms functional to –50 °C
- **Storage/Transport Temperature:** –40 °F to 158 °F (–40 °C to +70 °C)
- **Humidity:** RH 40% to 93% at 95 °F (35 °C)
- **Water Immersion (including salt water):**
 - 3 ft (1 m) for at least 2 hr
- Sand and dust (in wind) resistant
- Fungus resistant
- Vibration and shock resistant
- **Altitude:** 40,000 ft (12,000 m)
- EMI and RFI resistant

Qualification Testing

- Type-tested to meet ANSI-N42.33-2006 requirements
- Derived from military grade AN/UDR-14 / RGU-100 pocket radiac - MIL-STD-810G

OPERATING CHARACTERISTICS

Initialization and Setup:

- Operational in less than 5 seconds; diagnostics and alarms in less than 1 minute; continuous diagnostics for power, circuitry and detector

Data Logging

- Up to 999 data points, downloadable via optical infrared IR cable

MODELS

Legend: R: Rem, S: Sievert, Y: Yellow, B: Black, NC: No Charging Port

Standard Power Version

(Size AAA Alkaline)

- URAD-PLUS-S/Y/NC
- URAD-PLUS-S/B/NC
- URAD-PLUS-R/Y/NC
- URAD-PLUS-R/B/NC

Rechargeable NiMH Version

(Size AAA or Alkaline)

- URAD-PLUS-S/Y
- URAD-PLUS-S/B
- URAD-PLUS-R/Y
- URAD-PLUS-R/B

AVAILABLE OPTIONS

- URAD-PLUS-DCCHARG – DC charger with cigarette lighter connector
- URAD-PLUS-MOUNT – Vehicle mount for URAD-Plus (compatible with optional DC charger)
- IRUSB - IR to USB interface Cable
- EXT-IR - IR to serial (RS-232) interface cable
- FC2B - Portable Field Calibration Verification Unit

