

RAD-ION / RI-02

Portable Ion Chamber Survey Meter



FEATURES

- State-of-art modular electronic components
- Compact, lightweight and rugged construction
- Bar-graph Display
- Auto-range capability
- Freeze Mode
- Threshold Alarms
- Posting Mode*
- Beta window with auto switching
- Integrated WRM2 radio module (option)
- Data Storage - 1 Mbyte flash RAM
- Backlit LCD display
- Firmware modification via USB connector
- Intuitive and easy operation
- Offset startup of only 30 seconds
- Calibration and parameter setup via USB
- Calibration Mode
- Integrated Dose mode
- Flip-up and locking handle
- USB connectivity for programming and data transfer
- Easy replacement of Battery and Silica Gel cartridge
- Internal Self Test for detector, HV and low DC supply

*Posting Mode

→ 2.5 mR/h to 99 mR/h = Radiation Area
Displays 'RA' - 3 beeps to alert use

→ 100 mR/h to 999 mR/h = High Radiation Area
Displays 'HRA' 3 beeps to alert user

→ >1000 mR/h = Locked High Radiation Area
Displays 'LHRA' - 3 beeps to alert user

The **RAD-ION / RI-02** is the next generation ion chamber survey meter. This smart meter features accurate dose & rate measurement and programmable modes for alerting the user to posting and transportation survey requirements.

The RI-02 is an air vented ionization chamber, designed for highly stable and accurate measurement of dose rates and integrated dose of gamma, x-ray and beta radiation and covers a measuring range of 0.1 mR/h to 50 R/h (1 μ Sv/h - 500 mSv/h) in the dose rate mode, and 1 μ R to 1000 R (0.01 μ Sv - 10Sv) in the integrated dose mode.

The rounded front of the instrument is designed to improve the angular dependence capabilities of the detector providing a better linear response than previous models.

The RI-02 is a world class solution for use in nuclear power plants, nuclear medicine, radiography, life science, research and other industrial applications.

TECHNICAL SPECIFICATIONS:

Radiological Characteristics

- measuring range: 1 μ Sv/hr to 500mSv/hr (0.1 mR/hr to 50R/hr)
- display range: 0.1 μ Sv/hr to 500mSv/hr (0.01 mR/hr to 50R/hr)
- accuracy: \pm 10% of reading within measuring range
- gamma energy dependence - better than \pm 20% at 20keV to 1.3MeV (related to 137Cs)
- angular dependence - less than \pm 5% (for \pm 120° of front direction, related to 137Cs)
- ion chamber volume: 300 cc
- chamber wall and cover thickness 600 mg/cm²; closed window 1000 mg/cm² (tissue equivalence);
- window thickness: 7 mg/cm²
- response time: 2 sec for readings above 1 mR/h 5 sec for auto-ranging change, from Low Range to High Range (2sec. + 3 additional seconds for auto ranging delay)

Electrical Characteristics

Power Source

- meter: two 1.5V C-type Alkaline cells - >100 hours of continuous operation

Environmental Characteristics

Temperature:

- operation: -10°C to +50°C (15°F to 122°F)
- storage: -20°C to +60°C (-5°F to 140°F)
- relative humidity: 10 to 95% RH (non-condensing)

Mechanical Characteristic

- Weight: 750 grams (1.65 lbs)
- Dimensions: 204 x 120x 134mm (8"x 4.7"x 5.3") w/o handle

Software

- Configuration & Calibration (USB or WRM2)
- Data Download (USB or WRM2)
- Firmware Update (USB)



RI-02 Beta Window

