

RAM ION

Portable Ion Chamber Survey Meter



The **RAMION DigiLog** is a battery operated, auto ranging, portable ion chamber survey meter designed for highly stable and accurate measurement of dose rates and integrated dose of gamma, x-ray and beta radiation. The meter covers a measuring range of $1\mu\text{Sv/h}$ - 500 mSv/h (0.1 mR/h to 50 R/h) in the dose rate mode, and $0.01\mu\text{Sv}$ - 10Sv (1uR to 1000 R) in the integrated dose mode. The auto ranging meter utilizes a combination display consisting of a smoothed digital readout for minimum fluctuation and a two-decade analog bar graph for fast response.

The RAM ION DigiLog survey meter combines an ionization chamber vented to atmospheric pressure, and a micro-controller to offer optimal performances and special features. Furthermore it is a compact, one hand-held, lightweight, rugged meter, easy to use and maintain.

The RAM ION DigiLog provides a very straightforward, fast and reliable method of collecting and storing monitoring data on site for later use. The RAM ION DigiLog can read bar code labels that identify measurements location. The measurement's data combined with their locations, data and time are stored in a built in memory. The stored data records can be downloaded by the SMARTS (Survey Mapping Automated Radiation Tracking System) or the RMV (Rotem Meter View) software packages.

The RAM ION DigiLog is ideal for use in nuclear power plants, nuclear medicine, radiography and radiotherapy facilities, life science laboratories, nuclear research centers and in other industrial applications.

FEATURES

- ICRP-51 H* (10) Response also available
- Ion chamber survey meter
- Barcode laser scanner
- Wide measuring range of $1\mu\text{Sv/hr}$ to 500mSv/hr (0.1 mR/hr to 50R/hr)
- Built in memory to store data
- Compact, lightweight and easy-to-use, one hand operation
- Dose rate and accumulated dose measurement
- Display illumination
- Freeze mode to record the highest dose
- User programmable dose rate and accumulated dose alarms Remote PC communication
- Hot Spot detection
- Splash proof keypad
- Multi use including wireless applications
- Low battery, overflow and detector fail alarms

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: 500 cc
chamber wall and cover thickness 300 mg/cm² (tissue equivalent)
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
laser scanner: One 9V Alkaline cell - 6000 operations (built in automatic battery check)

Mechanical Characteristics

meter dimensions: (w x l x h): 10 x 25 x 19 cm (3.9 x 9.8 x 7.5 in)
weight: 1100 g (2.4lb)
casing: high impact ABS

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)



RAM-ION with Optional Integrated
WRM2 Transmitter

