

# The RAM ION Monitor

## Portable Radiation Meter

The **RAM ION 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  $1\mu\text{Sv/h}$  -  $500\text{ mSv/h}$  ( $0.1\text{ mR/h}$  to  $50\text{ R/h}$ ) in the dose rate mode, and  $0.01\mu\text{Sv}$  -  $10\text{Sv}$  ( $1\mu\text{R}$  to  $100\text{ R}$ ) 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 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

- Ion chamber survey meter
- NDT safety providing accurate readings for 60 nanosec X-Ray bursts
- Wide measuring range of  $1\mu\text{Sv/hr}$  to  $500\text{mSv/hr}$  ( $0.1\text{ mR/hr}$  to  $50\text{ R/hr}$ )
- 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

## Technical Data

Measuring Range	1 $\mu$ Sv/hr to 500mSv/hr (0.1 mR/hr to 50R/hr)
Display Range	0.1 $\mu$ Sv/hr to 500mSv/hr (0.01 mR/hr to 50R/hr)
Accuracy	$\pm$ 10% of reading within measuring range
Gamma Energy Dependence ( $^{137}\text{Cs}$ )	Better than $\pm$ 20% at 20keV to 1.3MeV
Angular Dependence ( $^{137}\text{Cs}$ )	Less than $\pm$ 5% (for $\pm$ 120° of front direction)
Ion Chamber Volume	500 cc
Chamber Wall and Cover Thickness	300mg/cm <sup>2</sup> (tissue equivalent)
Window Thickness	7 mg/cm <sup>2</sup>
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)
Power Source	(Built in automatic battery check) <i>meter</i> : two 1.5V C-type Alkaline cells - 100 hours of continuous operation <i>laser scanner</i> : One 9V Alkaline cell - 6000 operations
Display	DigiLog (3 digits and 2 decades of analog bar graph)
Data Logging	347 data records (1415 with extended memory)
Temperature Range	Operation: -10°C to +50°C (15°F - 122°F) Storage: -20°C to +60°C (-5°F - 140°F)
Humidity Range	Up to 95% RH (non condensing)
Dimensions	Width: 10cm (3.9"), length 25cm (9.8"), height 19cm (7.5")
Weight	1100g (2.4lb)
Casing	High impact ABS

## Ordering Information

BAK-1940	RAM ION DIGILOG HR (0.0) - $\mu$ Sv/h Radiation Detection Survey Meter
BAK-1920	RAM ION DIGILOG HR (0.00) - mR/h Radiation Detection Survey Meter
BAK-1950	RAM ION DIGILOG LR (0) - $\mu$ Sv/h Radiation Detection Survey Meter
BAK-1930	RAM ION DIGILOG LR (0.0) - mR/h Radiation Detection Survey Meter
BAK-2010	RAM ION DIGILOG X LR (0) - $\mu$ Sv/h Radiation Detection Survey Meter
BAK-1990	RAM ION DIGILOG X LR (0.0) - mR/h Radiation Detection Survey Meter

HR = High Resolution

LR = Low Resolution

Optional Integrated laser barcode scanner, Class II, 1.0mW (max.)

ROTEM INDUSTRIES reserves the right to change specifications without advance notice

### ROTEM INDUSTRIES LTD.

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