

# RAM ION Meter

Highly Stable and Accurate Beta Gamma Detector  
Pulsed X-ray Detection



Radiation Detection Division Health Physics

Distributor Price List

The **RAM ION** 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  $\mu\text{Sv}$  - 10 Sv (1uR to 999 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** 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** provides a very straightforward, fast and reliable method of collecting and storing monitoring data on site for later use. The **RAM ION** can read bar code labels that identify measurement's 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 **RMV** (Rotem Meter View) software package.

The **RAM ION** 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

- NDT safety providing accurate readings from 5 picosecond X-Ray pulses
- New USB connector providing both power and Communication capabilities
- Wide measuring range of 1  $\mu\text{Sv/hr}$  to 500 mSv/hr (0.1 mR/hr to 50 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



# RAM ION Survey Meter

## Technical Data

<b>Measuring range</b>	1 $\mu$ Sv/hr to 500 mSv/hr (0.1 mR/hr to 50 R/hr)
<b>Display Range</b>	0.1 $\mu$ Sv/hr to 500 mSv/hr (0.01 mR/hr to 50 R/hr)
<b>Accuracy</b>	$\pm$ 10% of reading, within the measuring range
<b>Gamma energy dependence</b>	Better than $\pm$ 20 % at 20 keV to 1.3 MeV (Cs-137)
<b>Beta Energy Dependence</b>	Better that $\pm$ 20% from 200keV
<b>Angular dependence</b>	Less than $\pm$ 5 % (for $\pm$ 120° of front direction)
<b>Ion chamber volume</b>	500 cc
<b>Chamber wall &amp; cover thickness</b>	300 mg/cm <sup>2</sup>
<b>End window thickness</b>	Double layer of Mica 3.1 mg/cm <sup>2</sup>
<b>Response time</b>	2 sec. for readings above 1 mR/h Capable of measuring pulses X-rays from 5 pico sec.
<b>Data logging</b>	380 data records (1415 with extended memory)
<b>Display</b>	DigiLog (3 digits and 2 decades of analog bar graph)
<b>Power source</b>	USB Mini Cable or Two 1.5 Volt C-type cells 100 hours of continuous operation Automatic battery check
<b>Temperature range</b>	Operation: -10°C to +50°C (15°F to 122°F) Storage: -20°C to + 60°C (-5°F to 140°F)
<b>Humidity range</b>	Up to 95% RH (non condensing)
<b>Casing Material</b>	High Impact Splash Proof ABS
<b>Dimensions</b>	Width: 10 cm (3.9") Length: 25 cm (9.8") Height: 19 cm (7.5")
<b>Weight</b>	1100g (2.4lb)

**New** – USB mini connector providing power and Coms

## Ordering Information

BAK-1940	RAM ION DIGILOG <b>HR</b> (0.0) - $\mu$ Sv/h Radiation Detection Survey Meter
BAK-1920	RAM ION DIGILOG <b>HR</b> (0.00) - mR/h Radiation Detection Survey Meter
BAK-1950	RAM ION DIGILOG <b>LR</b> (0) - $\mu$ Sv/h Radiation Detection Survey Meter
BAK-1930	RAM ION DIGILOG <b>LR</b> (0.0) - mR/h Radiation Detection Survey Meter
BAK-2000	RAM ION DIGILOG <b>X HR</b> (0.0) - $\mu$ Sv/h Radiation Detection Survey Meter ( <b>new</b> ) RAM ION DIGILOG <b>X HR</b> (0.00) - mR/h Radiation Detection Survey Meter
BAK-2005	( <b>new</b> )
BAK-2010	RAM ION DIGILOG <b>X LR</b> (0) - $\mu$ Sv/h Radiation Detection Survey Meter
BAK-1990	RAM ION DIGILOG <b>X LR</b> (0.0) - mR/h Radiation Detection Survey Meter

**HR** = High Resolution – 1 or 2 decimal digits (depending on units of measurement)

**LR** = Low Resolution – no or 1 decimal digit (Depending on units..)

**X** = Used to measure pulsed X-rays. Instrument powers up in Dose Mode.

ROTEM INDUSTRIES reserves the right to change specifications without advance notice



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