

RAM DA-2000 SERIES – MULTI-PURPOSE SURVEY METER

The RAM DA-2000 series was developed to solve the problem of rapid instrument obsolescence. The flexibility and modularity of the RAM DA makes it possible to maintain the highest standards of safety, by using different types of detectors for different applications.

RAM DA-2000 / RAM DA-3 2000



RAM DA-2000 series: Without internal detector
RAM DA-3 2000 series: With wide range internal detector

Applications:

- Nuclear Power Plants, nuclear and medical research centers, H.P. departments, radiology clinics, radiation and environmental protection authorities.

Features:

- Communication to PC Calendar/Clock, Non-volatile memory.
- Two output relay contacts for threshold and failure alarm.
- RMV (Rotem Meter View) compatible.
- Different types of detectors can be connected.
- Automatic detector identification and selection of readout units.
- Freeze mode to record the highest dose rate.
- Manually set alarm threshold.
- Low battery & Overflow alarm.
- Ability to display several units of measurement (cps, cpm, uSv/h, mR/h, counts...).

RAM DA-3 2000 Measuring Range: 0.5 μ Sv/h to 1 Sv/h (50 μ R/h to 100 R/h)

MAIN DETECTORS FOR RAM DA 2000

GM-40 Series (GM-40, GM-41, GM-42)



IRP-51-H*(10) version available

For Gamma Radiation over a very wide range. Based on different types of energy compensated GM tubes. Extended hook-up cable of up to 100 meters can be used.

Measuring Range:

- GM-40: 250 μ Sv/h to 10 Sv/h (25 mR/h to 1000 R/h)
- GM-41: 50 μ Sv/h to 1 Sv/h (5 mR/h to 100 R/h)
- GM-42: 0.5 μ Sv/h to 10 mSv/h (50 μ R/h to 1 R/h)

GM-10 Detector



Efficient surface monitoring of alpha, beta and gamma radiation contamination, based on 1 $\frac{3}{4}$ " Pancake GM tube.

Sensitivity (^{137}Cs):
~350 cpm/ μ Sv/h
(3500 cpm/mR/h)

Measuring Range:
0 to 42,000 cps

PA-100 Detector



Surface monitoring for Alpha contamination. Based on Ionization chamber. Very easy to maintain. 100 cm² (15.5 sq. in.)

Surface Sensitivity:
530 cpm per Bq/cm²

Measuring Range:
0 to 50,000 cps

IC-10 Detector



IRP-51-H*(10) version available

Wide range gamma, x-ray and beta radiation measurement. Based on 0.5 liter atmospheric ionization chamber. Uses special features and advanced technology.

Measuring Range:
1.0 μ Sv/h to 250 mSv/h
(0.1 mR/h to 25 R/h)

PM-10 Detector



Gamma scintillation probe for improved x-ray and low energy gamma radiation detection, based on thin NaI 2" diameter scintillator (2" dia. X 0.04" thickness). S.C.A. can be set within the energy range, optimized for ^{125}I detection and/or other isotopes.

Energy range: 10 to 80 keV

^{125}I surface sensitivity: 440 cpm/Bqcm²

Measuring range: 0 to 50,000 cps

PM-11 Detector



Scintillation probe for high energy gamma radiation detection. NaI 2" x 2" diameter scintillator. Single channel analyzer (SCA) - optional.

Surface Sensitivity (in contact):
 ^{131}I : 320 cpm/Bq/cm²
 ^{99m}Tc : 315 cpm/Bq/cm²

Measuring range: 0 to 50,000 cps

Technical Data

Display LCD readout showing:

- 20-segments, autoranging analog scaled bargraph
- Four digits for accurate and easy readout
- Two digits for identifying type of detector connected
- Operating conditions, including:
 - measuring units
 - freeze, dose, or count modes
 - detector failure, exceeding of threshold, low battery
 - display illumination on/off
 - audible indicator on/off

Measuring units cps, cpm, counts, Sv/h, Sv (R/h, R), other units upon request.
The measuring unit and display range are set automatically for each type of detector, and the measuring unit can be also changed manually.

Power source Three 1.5 V C-type cells

- 150 hours minimum continuous operation with alkaline batteries (excluding display lighting), using internal detector. 100 hours with all other external detectors
- Automatic battery check under full load
- Option: 3 rechargeable C-type cells & charger, or 4.5 VDC external adapter

Temperature range **Operation:** -10°C to +50°C (15°F to 122°F)
Storage: -20°C to +60°C (-5°F to +140°F)

Humidity range 10% to 95% RH (non-condensing)

Casing Splash-proof plastic case

Dimensions Width: 142 mm (5.6")

Length: 244 mm (9.6")

Height: 115 mm (4.5")

Weight 1.5 Kg (3.3 lb) including batteries and internal detectors

Data logging 347 data records (1415 with extended memory)

Communication Serial communication port (RS-232)

Laser scanner Class II, maximum power 1.0 mW

Relays Two relay contacts: fail alarm, threshold alarm

Memory E²EPROM for the meter parameters

Internal Detector (RAM DA-3-2000)

Measuring range 0.5 μSv/h to 1 Sv/h (50 μR/h to 100 R/h)

Display range 0.01 μSv/h to 1 Sv/h (1 μR/h to 100 R/h)

Accuracy ±10% of reading

* **Energy response** ±30% over the range of 50 keV to 1.3 MeV

±20% over the range of 60 keV to 1.3 MeV

Angular dependence ±20% for ±45° of preferred direction

* related to ¹³⁷Cs

Ordering #	RAM DA-2000	2-0030-10
	RAM DA-3-2000	2-0033-10

ROTEM INDUSTRIES reserves the right to change specifications without advance notice

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