

Portable Radiation Survey Meter with external probes for all types of Radiation

Radiation Detection Division

Health Physics



Features

- ✓ Large, easy to read, illuminated, digital & analog custom made LCD
- ✓ Unique algorithms to achieve fast response and stable readings
- ✓ RS-232 communication port
- ✓ RMV software compatibility
- ✓ Automatic self-test of meter and detector
- ✓ Various types of external detectors
- ✓ Automatic detector identification
- ✓ No need for re-calibration with each detector change
- ✓ Wide range internal gamma detection tubes with Auto ranging
- ✓ Automatic recording of dose accumulation
- ✓ Freeze mode to record highest dose rate
- ✓ Manually set threshold alarm
- ✓ Low battery, overflow and failure alarms
- ✓ Two alarm relay contacts for external interface
- ✓ Can function either as ratemeter or scaler
- ✓ CE marked

RAM DA-3-2000 includes wide range internal detector
RAM DA-2000 without internal detector

Description

RAM DA-3-2000 is a further development of the RAM series, a family of versatile, user friendly meters and detectors designed to give highly reliable alpha, beta, gamma and X-ray measurements. The RAM DA-3 2000, a microprocessor based meter, includes an internal detector with two energy compensated GM tubes; ZP1201 and ZP1313 (Air kerma dose equivalent) or ZP1202 and ZP1314 (Ambient dose equivalent (H*10)) for wide range gamma fields measurement, from 0.5 μ Sv/h to 1 Sv/h (50 μ R/h to 100 R/h).

Meters are available in either Sievert or Roentgen measuring units. The RAM DA-3-2000 provides a straightforward, fast and reliable method to collect and store monitoring data on site for later use. The measurements' data, date and time, are stored in a built-in memory. The stored data records can be downloaded by RMV (ROTEM Meter View) software packages.

The RAM DA-3-2000 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.

RAM DA SERIES Multi-Purpose Survey Meter

The RAM DA-2000 series was developed to solve the challenge 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 3/4" Pancake GM tube.

Sensitivity (¹³⁷Cs):
-350 cpm/ μ Sv/h
(3500 cpm/mR/h)

Measuring Range:
0 to 42,000 cps

SFP-100 Detector



Surface monitoring for Alpha and/or Beta contamination. Very easy to maintain.

Active Area:
100 cm² (15.5 sq. in.)

Detection Limit:
0.3 Bq/cm²

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 ¹²⁵I detection and/or other isotopes.

Energy range: 10 to 80 keV

¹²⁵I 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 : (tcatnoc ni)

¹³¹I: 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, auto ranging analog scaled bar graph 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

The measuring unit and display range are set automatically for each type of detector, and the measuring unit can be also changed manually.

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

Range: to 95% RH (non-condensing)

Humidity Range: Splash-proof plastic case.

Dimensions: Length: 244 mm (9.6")

Width: 142 mm (5.6")

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) Class II, maximum power 1.0 mW

Relays: Two relay contacts: fail alarm, threshold alarm E²EPRM for the meter parameters

Memory: E²EPRM for the meter parameters

Internal Detector (RAM DA-3-2000)

Measuring Range: 0.5 mSv/h to 1 Sv/h (50 mR/h to 100 R/h)

Display Range: 0.01 mSv/h to 1 Sv/h (1 mR/h to 100 R/h)

Accuracy: ±10% of reading

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

***Energy Response:** ±20% over the range of 60 keV to 1.3 MeV

Angular Dependence: ±20% for ±45° of preferred direction

* related to Cs-137

Ordering Info

BAK-1640

BAK-1670

BAK-1660

RAM DA 2000 Rotem Radiation Detection Meter

RAM DA 3-2000 Rotem - (μSv/h) Radiation Detection Meter

RAM DA 3-2000 ROTEM - (mR/h) Radiation Detection Meter

ROTEM INDUSTRIES reserves the right to change specifications without advance notice

ROTEM
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