

The RAM SURF monitor

Surface Contamination Monitor

The versatile RAM-SURF monitor is a state of the art, portable, highly sensitive meter, designed to instantly detect low level surface contamination on laboratory benches, tops, floors, equipment, clothing, shoes and skin. The built-in GM detector offers extra flexibility for scanning hard-to-reach places. The intrinsic CMOS microprocessor facilitates smooth software control and allows for easy upgrading of the instrument's capacity for measuring a wide range of measurement values.

Features

- Portable, lightweight and compact
- One hand operation
- Stand up base holder
- Large, easy to read, 7- segment, 4 digit LCD display panel
- Ergonomically designed to function using only 3 push-buttons

Functions

- Automatic internal monitor and detector test
- Automatic detector identification
- Low battery alarm
- Overflow Alarm
- Detector failure, overflow and low battery alarms
- Piezo-electric audio element indicates count rate, failure and exceeded thresholds
- LED indicator flash with each incident radiation pulse
- Wide range of measurement - up to 42,000 counts per second
- Dead time correction
- Special averaging function for "smoothing" the readout

The Monitor is available with the following peripherals

RAM-SURF Including counter, detector, base holder, detector tester and cover cap
4-0020-20

RAM-SURF Base holder	A-0110
Counter	4-0020
Detector (GM-10)	3-0020
GM Pancake detector cover cap	A-0060
Set of detector collimators	A-0050
Detector analyzer	A-0070



ROTEM
RADIATION MONITORING EQUIPMENT TECHNOLOGY

Technical Data

Display

LCD readout showing :

- * 4 digits for accurate and easy readout
- * detector failure
- * low battery
- * overflow
- * LED Indicator flash for count rate

Audio Internally mounted piezo-electric element

Measuring Units - CPS or CPM

Power source - One 9 volt cell battery supplying around 50 hours of continuous operation.

- Automatic battery check under full load

Temperature range - Operation: -10 deg C to +50 deg C (15F - 122F)

Storage: -20 deg C to +60 deg C (-5F to 140F)

Humidity range - 40% to 95% RH (non-condensing)

Casing - High impact plastic (ABS)

Dimensions - **Monitor** Width 72 mm (2.8")

Length 114 mm (4.5")

Height 34 mm (1.3")

Detector Width 71 mm (2.8")

Length 270 mm (10.5")

Height 73 mm (2.9")

Weight 630 gr. (1,4lb)

Detector Pancake GM tube (LND 73118 or similar) effective diameter. 1^{3/4}"

Window thickness Mica, 1.5 – 2mg/cm² protected by stainless steel wire meshing

Background 0 -1 cps

Sensitivity (137 Cs) Approx. 5.8 cps/□Sv/h (58 cps/mR/h)

Count rate range 0 to 42,000 cps

Surface sensitivity (in contact):

Isotope	Beta emitting isotopes				Additional radionuclides		
	E _{max} [keV]	2π-Eff. [%]	Sensitivity [cps/Bq/c m ²]	MDL* [Bq/cm ²]	Radio- nuclide	Sensitivity [cps/Bq/c m ²]	MDL* [Bq/cm ²]
¹⁴ C	156	3	0.25	9	^{99m} Tc	0.45	5.5
³⁵ S	167	8	0.65	37	¹²⁵ I	0.04	63
¹⁴⁷ PM	224	15	1.25	2	¹³¹ I	3	0.8
⁹⁹ Tc	290	20	1.75	1.5	²³⁰ Th	1	2.5
⁹⁰ Sr+ ⁹⁰ Y	580+2280	50	8.5	0.3	²⁴¹ Am	1	2.5
³⁶ Cl	714	45	3.5	0.7			
²¹⁰ Pb	1160	50	4	0.6			
³² P	1710	70	5.5	0.5			

MDL - Minimum Detectable level calculations are based on background readings of 1 cps. The confidence level is 99%

ROTEM INDUSTRIES reserves the right to change specifications without advance notice

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