

The RAM-SURF Meter

Portable Contamination Meter

The versatile RAM-SURF meter 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 external GM detector offers extra flexibility for scanning hard-to-reach places. The intrinsic CMOS microprocessor facilitates smooth software control and allows for measuring a wide range of values.

Features

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

Functions

- Automatic meter and detector test
- Low battery alarm
- Overflow Alarm
- Alarms for detector failure
- Alarms in case of exceeded thresholds.
- Piezoelectric audio element indicates count rate
- LED indicator flashes with each incident radiation pulse
- Wide range of measurements, up to 42,000 counts per second
- Dead time correction
- Special averaging function for "smoothing" the readout



The Meter is available with the following accessories:

RAM-SURF meter including, detector, base holder, detector tester and cover cap	4-0020-20
RAM-SURF meter	4-0020
RAM-SURF Base holder	A-0110
Detector (GM-10)	3-0020-01
GM Pancake detector cover cap	A-0060
Set of detector collimators	A-0050
Check source	A-0070

Technical Data

Display	LCD readout showing : <ul style="list-style-type: none"> ● 4 digits for accurate and easy readout ● detector failure ● low battery ● overflow ● thresholds
LED	Indicator flash for count rate
Audio	Internally mounted piezoelectric element
Measuring Units	Counts/sec.
Power source	One 9 volt battery supplying around a minimum of 50 hours of continuous operation. Automatic battery check under full load
Temperature range	Operation: -10°C to +50°C (15°F - 122°F) Storage: -20°C to +60°C (-5°F to 140°F)
Humidity range	10% to 95% RH (non-condensing)
Casing	High impact plastic (ABS)
Dimensions - Meter	Width 72 mm (2.8") Length 114 mm (4.5") Height 34 mm (1.3")
Detector	Handle: Diam: 38mm (1.5") Length: 270 mm (10.5") Pancake: Diam: 73mm (2.9") Width 46 mm (1.8")
Weight	630 gr (1.4 lb)
Detector	Pancake GM tube (NRC 2006), effective diameter 1.75"
Window thickness	Mica, 1.5 - 2 mg/cm ² protected by a stainless steel wire meshing
Background	0 -1 cps
Sensitivity (¹³⁷Cs)	Approx. 5.8 cps/μSv/h (58 cps/mR/h)
Count rate range	0 to 42,000 cps

Surface sensitivity (in contact):

Beta emitting isotopes					Additional radionuclides		
Isotope	E _{max} [keV]	2π-Eff. [%]	Sensitivity [cps/Bq/cm ²]	MDL* [Bq/cm ²]	Radio-nuclide	Sensitivity [cps/Bq/cm 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	63.0
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			