

## SABG PROBE

NSN: 6665-01-671-4413  
LMI Part Number: V038820

The RDS Small Area Beta Gamma (SABG) Probe is used for detecting alpha, beta, and gamma radiation. It was designed to be held in the operator's hand while monitoring for alpha/beta/gamma contamination in frisking operations. The probe uses a Geiger-Mueller (GM) pancake tube to provide a 15.5 cm<sup>2</sup> sensitive detection area in a small and lightweight probe. The unit is provided with a detector protective cover, a removable 'clip-on' thin shield for protecting the front face of the probe. An optional aluminum clad lead shield is available for performing radiological detection operations in high background radiation areas.

As a smart probe, the SABG Probe contains a microprocessor and High Voltage circuitry for creating its own high voltage. No high voltage is transferred across the interface cable. When connected to the Base Unit, the display will show the probe's image and radiation measurement. The probe's onboard memory stores the probe type and calibration information.



## FEATURES

- Small hand-held Geiger-Mueller pancake tube detector for alpha, beta, and gamma radiation
- Small, lightweight, and durable probe with a 15.5 cm<sup>2</sup> sensitive detection area
- Removable clip-on protective shield
- Optional aluminum clad lead shield
- Part of the RDS radiation detecting probe family
- Durable, easy to use ergonomic design
- Robust cable connections
- Smart probe functionality means it is independently calibrated and can be used with any Base Unit
- Designed and tested for military ruggedness to meet both military/defense requirements and industrial applications

# SPECIFICATIONS

## Usage

Survey for alpha, beta, and gamma radiation contamination

## Radiological

Detector Type	Geiger-Mueller Pancake Tube
Dose Rate Units	Count Rate - cpm, cps. Count Rate per Unit Area - cpm/cm <sup>2</sup> , cps/cm <sup>2</sup>
Detection	Beta range - 100 keV - 5 MeV
Count Rate Range	0 - 1.5 Mcpm
Window	15.5 cm <sup>2</sup> (2.4 in <sup>2</sup> ) mica, protected by stainless steel screen
Min. Detectable Concentration	100 Bq/cm <sup>2</sup>
Background	(0.25 μSv/hr) 60 cpm with shield, 100 cpm without shield
Efficiency (4π)	C-14 15%, Tc-99 15%, Sr/ Y-90 22% Ru/Rh-106 26%

## Operational

Display	RDS Base Unit
Alarms	Saved in Base Unit memory, ability to set thresholds for Beta channel

## Electrical

Power	Supplied by RDS Base Unit
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## Mechanical

Dimensions	5.4" x 2.7" x 4.7" (14 x 7 x 12 cm)
Probe Housing	Anodized aluminum
Weight	1.04 lb. (0.47 kg)

## Environmental

Operating Temp.	-22° to 122° F (-30° to 50° C)
Storage Temp.	-58° to 140° F (-50° to 60° C)
Relative Humidity	3% - 100%
Ingress Protection	IP67
Cleaning	Decontaminate with mild detergent and water
Salt Fog	Resistant (MIL-STD 810 G, Method 509.5)
Explosive Atmosphere	Intrinsically safe
Immersion	Water & salt water 1 meter deep - 30 min.

## Standards Compliance

CE	CE Compliant, EMC (2014/30/EU), Low Voltage (2014/30/EU)
FCC	FCC Part 15, Sub-part B, Class B
ANSI	ANSI N42.17 and ANSI N42.34
MIL-STD	MIL-STD 461F, MIL-STD 1686C, & MIL-STD 810G

## Ordering Information

V038820	ABG Pancake Probe
V038863	FIDLER Probe
V053633	Alpha-Beta Probe
V038313	Sensitive Gamma Probe
V038429	Base Unit
V038276	Beta-Photon Probe
V039097	Neutron Probe
V041227	Telescoping Probe Handle
V038669	Base Unit to Probe Cable
V062817	Rad-Extender
V041621	Aluminum Clad Lead Shield