

## ABG PANCAKE PROBE

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

The RDS Alpha-Beta-Gamma (ABG) Pancake 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 ABG Pancake 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 |
|-------|---------------------------|



## 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 |