

FIDLER PROBE

NSN: 6665-01-671-4239
LMI Part Number: V038863

The RDS Field Instrument for the Detection of Low Energy Radiation (FIDLER) Probe is a probe used for low-energy X-ray and gamma radiation detection.

The FIDLER Probe detects and distinguishes between low energy X-rays and gammas. It simultaneously records data over four separate energy windows, by use of a multichannel discriminator. Analysis of this information can enable detection of materials commonly used in weapons of mass destruction. The FIDLER Probe monitors all four of the following energy windows simultaneously. The Base Unit Home screen has the ability to display one or two energy channels at a time.

- Energy Window 1: 13 – 18 keV
- Energy Window 2: 59 – 60 keV
- Energy Window 3: 143 – 220 keV
- Energy Window 4: 13 – 220 keV

As a smart probe, the FIDLER 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

- Large gamma NaI(Tl) scintillator
- Adjustable handle
- Multi-channel discrimination
- Simultaneous detection of 4 channels + display of 2 selectable channels
- Part of the RDS radiation detecting probe family
- Calibration and firmware upgrades via Rad-Extender
- Base Unit to probe cable can be used with any RDS probe
- Durable, easy to use ergonomic design with optional shoulder strap
- Robust cable connections
- Smart probe functionality means it is independently calibrated and can be used with any Base Unit

SPECIFICATIONS

Usage

Survey for low-energy X-ray and gamma radiation

Radiological

Detector Type	Scintillator
Dose Rate Units	Count Rate - cpm, cps
Simultaneous Detection	13-18 keV (L x-rays) 59-60 keV (Am-241) 143-220 keV (U-235) 13-220 keV (gamma)
Scintillation Crystal	Nal (TI), 127 dia. x 1.66 mm thick (5 x 0.063")
Radiation Entrance Window	Beryllium, 127 dia. x 0.254 mm (5 x 0.010")
Photomultiplier Tube	127 mm (5 in.) diameter
Count Rate Range	0 - 1.5 Mcpm

Operational

Display	RDS Base Unit
Alarm	Saved in Base Unit memory, ability to set thresholds for various energy channels

Electrical

Power	Powered by RDS Base Unit through common probe cable
Voltage	+1600 maximum volts Internal, integrally-wired voltage divider

**Mechanical**

Dimensions	11.6" x 7.6" x 17.2 - 26.7" (32 x 19 x 44-68 cm)
Probe Housing	Anodized aluminum
Weight	7.9 lb. (3.60 kg)

Environmental

Operating Temp.	-51° to 125°F (-46° to 51.7°C)
Storage Temp.	-60° to 160°F (-51° to 71°C)
Relative Humidity	Maximum 95% (non-condensing)
Ingress Protection	IP67
Cleaning	Decontaminate with mild detergent and water
Salt Fog	Resistant (MIL-STD 810G, 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

V038863	FIDLER Probe
V038429	Base Unit
V040005	Alpha-Beta Probe
V038313	Sensitive Gamma Probe
V038820	ABG Pancake Probe
V038276	Beta-Photon Probe
V039097	Neutron Probe
V041227	Telescoping Probe Handle
V038669	Base Unit to Probe Cable
V062817	Rad-Extender