

GM AND PROPORTIONAL PROBES FOR PORTABLE INSTRUMENTS

GM & Proportional Probes:

- P-13** Side-viewing, energy compensated GM Probe with a 30 mg/cm² wall. Energy response is ±40 KeV to 1.25 MeV ±20%. Housed in high impact plastic, which is splashproof and rugged. Dimensions, 1-3/8" dia. x 6" long. **(Figure 1)**
- P-13A** Identical to the P-13 with Beta window and sliding beta shield. **(Figure 1)**
- P-15** Alpha, Beta, Gamma Probe (GM) for rapid checking of laboratory bench and equipment surfaces and for checkout of personnel, the P-15 uses a 1-3/4" mica window diameter, 1.5 mg/cm² pancake tube. Background is normally 50 to 60 counts per minute. Extremely sensitive to β , and alphas with sufficient energy to penetrate window (Betas > 50 KeV). Window is protected by a 79% open, grill to prevent puncture or other damage while presenting minimum absorption to incoming radiation. Detects 5 KeV X-Rays and above. **(Figure 2)**
- P-15A** Same as P-15 with 1/4" lead shielding. **(Figure 2)**
- P-23** Same detector as P6-LB with 3 PIN connector on the probe.
- P-24** Underwater probe uses gamma sensitive GM tube. Constructed of anodized, welded aluminum with O-ring seal compressed by stainless steel bolts. The system has been tested by cycling to 60 feet of water pressure. Lifetime of the detector is approximately 10¹⁰ counts.**(Figure 3)**
- P-28** "Long Arm" Probe consists of 1-3/4" net diameter pancake tube mounted at the end of a 40" wand. For rapid checking of laboratory bench and equipment surfaces, floors and walls. Sensitive to soft betas, from C¹⁴, and to alphas. The 1.5 - 2 mg/cm² window is protected by an easy to decontaminate grill. Wand is balanced and weighs only 23 ounces. The angle of the detector can be adjusted, then locked in place. **(Figure 4)**
- P-28/4** Same as P-28 but includes 4 pancake tubes in head for faster more complete monitoring. **(Figure 5)**
- P-1212** Alpha, Beta Spot Probe, highly directional, small window, small volume GM probe designed for locating and measuring sources of alpha and beta radiation. The tube has a 6 mm dia. x 1.5 mg/cm² mica window. Low background (typically less than 2 cpm) makes it ideal for measurements of low level sources. Dimensions, 13mm dia. x 137mm long. **(Figure 6)**



Figure 1.



Figure 2.



Figure 3.



Figure 4.



Figure 5.



Figure 6.

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GM & Proportional Probes (Continued):

P6-LB

Low Background Probe; end window detects alpha, beta and gamma radiation. It offers low background without loss of alpha or beta sensitivity. The 2 cm dia. x 1.5 mg/cm² mica window is protected by a removable, cleanable grill. The primary use of probe is for locating surface contamination. Dimensions, 30 mm dia. x 110 mm long excluding cord. Operates at 500 Volts. Detects 5 KeV X-Rays and above. **(Figure 7)**

P6-A

Similar to P6-LB but operates at nominal 900 Volts. **(Figure 7)**

PN-13

Energy compensated neutron detector consisting of a BF-3 proportional neutron tube within a 10" low density polyethylene sphere. Detects neutrons from thermal to above 15 MeV. Sensitivity is approximately 120 cpm per mRem/hr. Dimensions, 10" W x 10" D x 12" H including stand and hanger. Close adherence to the ICRP Neutron Response Curve. **(Figure 8)**

PPG-31:

A Flat, Gas Flow Detector. Excellent sensitivity to Beta and/or Alpha Radiation over an area which measures 6" x 9". Can operate as a Proportional or GM counter. It weights 2 1/2lbs. For Proportional Operation the counting gas is typically 90% Argon and 10% Methane (P-10 Gas). Operational voltage of 1100 Volts. Output signal is about 2V.

For GM Operation the counting gas is usually 99.05% helium and 0.95% isobutane. Operational voltage of 1725 Volts. Output signal between 2 and 200V.

For Alpha Only count the Detector is configured as a thin window proportional counter with an operational voltage of 1300 Volts.

Optional one-way inlet and outlet valves allows the detectors to be recharged at intervals for use away from the gas supply.

PPG-41:

Identical to the **PPG-31** except that its sensitivity area is 6" x 15". It weights 3 1/2 lbs.

PPG-31T:

Gas Flow Detector which has three times the Gamma sensitivity of the **PPG-31**. The chamber and interior are tungsten plated. Otherwise similar to the **PPG-31**.

PPG-41T:

Gas Flow Detector which has three times the Gamma sensitivity of the **PPG-41**. The chamber and interior are tungsten plated. Otherwise similar to the **PPG-41**.



Figure 7.



Figure 8.