# PIPE MONITOR

#### Model # PDP-2L

## **FEATURES:**

- SENSITIVE TO < 1 Bg/cm<sup>2</sup>
- FAST TO OVER 100 FT./MIN.
- PORTABLE
- READS ALPHA & BETA-GAMMA SEPARATELY
- OPTIONALLY ALPHA & BETA-GAMMA SEPARATELY & SIMUL-**TANEOUSLY**

**APPLICATION:** To monitor inside surfaces of pipe 1/2" IPS (or larger) schedule 40, 60, or 80 at speeds of more than 1 foot per second.

**DESCRIPTION:** The system consists of a gas flow detector sized to pass through a 1/2" IPS Pipe (0.625 id) plus a 24 foot cable / tubing assembly to a small connection box to accept flow gas from a source which can be immediately adjacent or at a distance. 36 feet of additional tubing is supplied.





PDP-2L Probes (Top), PRS-5 (Bottom)

The detector can accept bias supply from the same distance and deliver a signal to, a PRS-5 Scaler-Ratemeter Pulse Height Analyzer. If desired, longer coax cables can be inserted between connection box and PRS-5 electronics.

The PDP-2L Detector has a 12" long sensitive volume with windows approximating 1/3 of the surface. These windows are of aluminized mylar with total thickness less than .0002" and are transparent to all common alphas and gammas and to all common betas with energies above 20 Key. A screw at the end of the detector opposite to the signal end is available for attachment to a pulling device.

Alpha or Beta-Gamma can be counted separately by setting the toggle switch in the PRS-5 readout to the desired pulse height window. To read Alpha and Beta-Gamma separately and simultaneously: output of the detector could be sent to two PRS-5's at the end of the cable: one set in the alpha window of choice, the other on the desired beta/gamma window.

### SPECIFICATIONS:

**Proportional Gas:** Flow P10. 66% open to Alphas.

Overall length: 14" 66% open to Betas.

Sensitive length: 12" Maximum diameter 0.6".

(95% confidence level) at 1 foot/second: Lower limit of detection:

> 1000 dpm Alpha. 4000 dpm Beta.

Background: (Alpha): Typically 1 cpm unshielded.

(Beta/Gamma): Typically 100 cpm unshielded.

Cable: Single conductor shielded MHV terminated - 24 feet.

Tubina: (for P10 gas) 36 feet.

**Electronics:** Model PRS-5 - 3 channel switch selectable - Scaler/Ratemeter/SCA. Has output for

alarm.

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