

INTERNAL PIPE MONITOR

Model ~ PDP-2L

FEATURES:

- PORTABLE
- MONITOR INSIDE SURFACES OF PIPE
- SENSITIVE - TO $< 1 \text{ Bq/cm}^2$
- FAST - TO OVER 100 FT./MIN.
- READS ALPHA & BETA-GAMMA SEPARATELY AND SIMULTANEOUSLY
- PROPORTIONAL GAS DETECTOR – P-10

ELECTRONICS: Model PRS-7 Ratemeter/Scaler

- Single Channel Analyzer
- Power: AC & Rechargeable Battery and Charger
- Three Presettable Window Positions
- Switch Selectable; Six Decades
- Computer Interface: Rs-232, **Optional:** USB
- **IP65**



PRS-7 ELECTRONICS

APPLICATION:

Used 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 **PDP-2L** system consists of a proportional gas flow detector (P-10) sized to pass through a 1/2" IPS Pipe (1.27 cm).
- A 24-foot cable / tubing assembly is connected (connection box) to accept flow gas from a source.
- The source can be immediately adjacent to or at a distance of 24 feet.
- 36 feet of additional tubing is supplied.

The detector can accept bias supply up to 24 feet and deliver a signal to, a PRS-7 Scaler-Ratemeter Pulse Height Analyzer. A longer coax cable can be inserted between connection box and PRS-7 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-7 readout to the desired pulse height window.



TECHNICAL ASSOCIATES

7051 ETON AVENUE, CANOGA PARK, CALIFORNIA 91303

PHONE: 818-883-7043 | FAX: 818-883-6103

SALES@TECH-ASSOCIATES.COM | TECH-ASSOCIATES.COM | USNUCLEARCORP.COM

DIVISION OF



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OTCQB-UJLE

INTERNAL PIPE MONITOR

Model ~ PDP-2L

SPECIFICATIONS:

PROBE:

Proportional Gas: Flow P-10. 66% open to Alphas.
Overall length: 14" 66% open to Betas.
Sensitive length: 12" Maximum diameter 0.6".
Lower limit of detection: 95% confidence level at 1 foot/second:
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.

Tubing:

P-10 gas 36 feet.

ELECTRONICS PRS-7:

- **Readout:** 6 digit LCD Rate, 8 digit integrate.
 - **Time Base:** Crystal controlled 1-10,000 seconds, user settable.
 - **Display Modes:** Rate, Integrate.
 - **Range:**
Usable Probes Cover Range: 1uR/hr to 1000 R/hr; 0 to 30,000 Cps; 0.1 mRem/hr to 10 Rem/hr.
 - **Alarm:** 2000 Hz audio tone with audio "mute" switch + RED LIGHT, high current relay.
 - **Single Channel:** **PRS-7**
3 Switch Selectable Windows: 2 preset (resettable) window positions plus one "variable".
 - **Analyzer/Discriminator:** 10-turn, 1000 division pot for each threshold.
10-turn, 1000 division pot for window width.
 - **Detector:**
Mates with T/A Probes, any GM, Proportional or Scintillation - NaI(Tl); BGO, LaBr:
Alpha, Beta, Gamma, Positron, X-Ray, Neutron, Tritium.
 - **Detector Connector:** BNC bulkhead mount (MHV optional).
 - **Detector Bias:** 0-2000V regulated and filtered.
 - **Front Panel Controls:** On-Off Toggle; Alarm-Mute; Rate; Integrate; Reset;
 - **Supply:** High Voltage is adjustable & repeatable with the 10 turn dial.
 - **Settable scale factors allow readout in almost any units.**
 - **Engineering Units:** User can input correct conversion factor and change to any units.
 - **Controls:** Front Panel: On-Off, Alarm-mute, Rate, Integrate, Reset.
 - **Calibration:** Digital input of calibration factor gives high precision adjustment.
 - **Serial Output:** Two-way, RS-232 standard, USB optional.
 - **Construction:** NEMA-4X polycarbonate gasket sealed case with handle:
Rugged / splash-proof.
All plug-in circuit cards.
 - **Computer interface:** RS-232
- OPTIONS:** USB



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OT00B-UCLF

INTERNAL PIPE MONITOR

Model ~ PDP-2L

Output for Digital Printer

POWER:

- **Power:** 105-125 volts, 50-60 Hz (220 V optional)
- **Batteries:** Rechargeable battery pack with AC Charger Adapter
- **Battery Life:** 3-5 days at 8 Hour/day



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