

STRAP-ON PIPE RADIATION MONITOR

Model # PEMO-7

FEATURES:

- INSTALLS ANYTIME ANYWHERE
- NO PENETRATION, NO DOWNTIME
- SENSITIVITY INDEPENDANT OF FLOW RATE
- COMPLETE ETHERNET / INTERNET SYSTEM WITH BUILT-IN SERVER or ETHERNET NODE
- SENSITIVITY $1 \times 10^{-7} \mu\text{Ci/cc Co}^{60}$ in 18" pipe
- REAL TIME ALARM
- RATE and INTEGRATED EXPOSURE

APPLICATION: The **PEMO-7** Pipe Monitor assures accurate detection and quick alarm in case of waterborne radioactivity contamination flowing thru one or more pipes, by means of constant check with alarm and data record on optionally included computer. It provides integrated exposure information and can provide hard copy via external printer. It is a complete system but may be expanded per need with modules of the FM-7 series and/or other Ethernet / Internet devices. The **PEMO-7** is a more sensitive and versatile version of the broadly used, longtime standard FM-5 Water and Air Monitors. It may be used to monitor water in pipes, ducts or effluent streams down to EPA levels.



GENERAL DESCRIPTION: The **PEMO-7** uses standard NaI(Tl) Detector in T/A's unique Strap-On Style Shield to continuously measure any water or airborne gamma emitting Radioactive contaminants, optional data logging with date and time stamp. The water or air stream is under constant surveillance via a scintillation detector. The unit is completely self-contained.

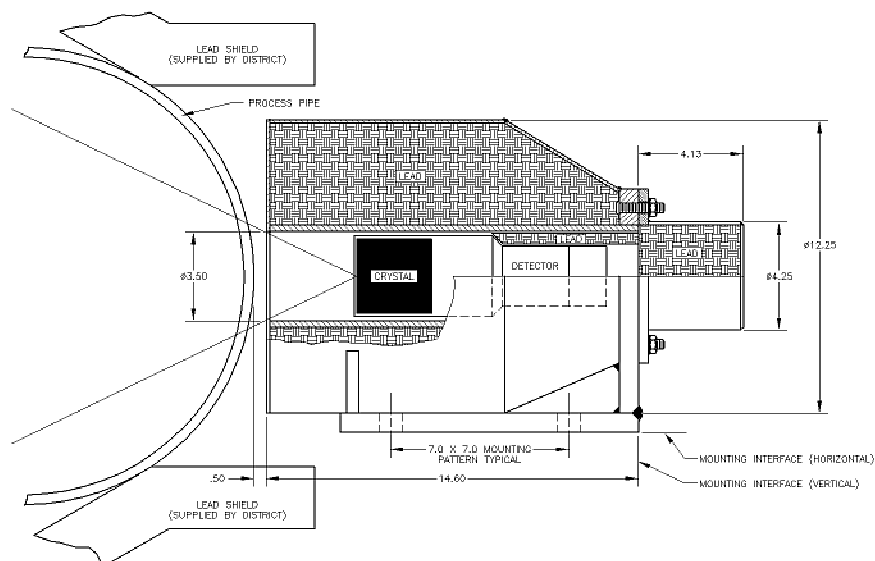


TA **TECHNICAL ASSOCIATES**

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SPECIFICATIONS:

Sensitivity: Sensitivity and response time depend on user's requirements and physical circumstances such as pipe diameter, wall thickness and ambient background radiation level and energy (KeV) of major nuclides of interest. For Example: The standard system with 3" x 3" NaI detector and 2" of lead shielding has a limit of sensitivity better than 1×10^{-7} (Ci/cc of Co-60 in 18" diameter pipe with 0.02mR/h background in one hour measurement.

- Detectors: 3" x 3" NaI (TI) crystal scintillation detector probe, Model PGS-3X3T for (typically one per pipe) sensitivity to all gamma above 100 KeV.
- Electronic Modules: FIL-7DP Programmable Scaler with RS-232 /485.
- Includes:
 - SVR-7 Ethernet Node / Internet Server
 - MGA-5202 Single Channel Analyzer with wide or narrow window capability. plus H.V. Bias Supply.
 - WIN-W Optional Data Logger Software.
- Shielding: 0.25" to 3" low- activity-lead around detector.
- Range: 1×10^{-7} to 1×10^{-4} uCi/cc (or Ci/m³).
- Alarm: Settable. 2000 Hz beeper, red flasher and relay contacts for user.
- Response Time: Settable 1 second to 40 hours.
- Readout: 6 digit LED for each detector showing: concentration rate and total and programmed information.
- Power: 115 V, 50-60 Hz (230 V optional).
- Flow Rate: Measurement is independent of flowrate.
- Case: Electronics rack mounted or housed in enameled steel case.
- Dimensions: Electronics: 17"W x 13"H x 13 1/2" D. See Drawing for Detector assembly dimensions.
- Detector Assembly Weight: 10 lbs for unshielded system, up to 350 lbs for 2" thick lead shielding.
- Shipping Weight: 450 lbs. for complete 1 detector system, including detector light shielding. (weight will vary dependent on shield selection)
- Optional Accessories:
 - MPD-40 Serial Printer for Radiation rate + date + time (computer not required).
 - CP-PEMO Computer and software to record data. Computes release and dose totals for single or multi-channel system.
 - MPP-CP Printer with graphics capability (requires CP-PEMO).

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