

# STRAP-ON PIPE RADIATION MONITOR

Model ~ PEMO-7LE

## FEATURES: 特点

- GAMMA DETECTION IN WATER PIPES  
检测水管中  $\gamma$
- INSTALLS ANYTIME ANYWHERE  
随时随地安装
- NO PENETRATION, NO DOWNTIME  
无需穿透管线, 无检修期
- SENSITIVITY INDEPENDANT OF FLOW RATE  
灵敏度不受流量影响
- REAL TIME ALARM  
实时报警
- RATE & INTEGRATED EXPOSURE  
照射量率&综合辐射暴露
- LOCAL READ-OUT  
本地显示单元
- WORKS WELL WITH STANDARD SCADA DATA SYSTEMS  
与标准SCADA数据系统兼容性好



## APPLICATION: 应用

The **PEMO-7LE** is a sensitive and versatile version of the broadly used, TBM-emergency response radiation detector for Water monitoring. It may be used to monitor water in pipes or effluent streams.

PEMO-7LE 是一款用途广泛的灵敏多功能水检测系统, TBM 应急响应探测器, 可用于水管或污水流监测。

## DESCRIPTION: 描述

The **PEMO-7LE** Pipe Monitor assures accurate detection and quick alarm in case of waterborne radioactivity contamination flowing thru one or more pipes.

A constant check with alarm and data record on optionally included computer.

It provides integrated exposure information and can provide hard copy via external printer.

一旦探测到流经水管的水辐射污染物, PEMO-7LE 管道监测器保证精确检测快速报警。

连续检测报警数据功能, 可选带电脑数据录入功能

此仪器提供综合辐射信息, 可通过打印机打印硬拷贝。



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It is a complete system but may be expanded per need.

The **PEMO-7LE** uses a standard NaI(Tl) Detector in T/A's unique Strap-On Style probe to continuously measure any water Gamma emitting Radioactive liquids.

此系统完全一体但可根据需要拓展功能。

PEMO-7LE 使用 TA 公司独特的捆绑式标准 NaI(Tl)探头，连续测量辐射液体发射的水中伽马。

### Optional: 选择

- Data archive & retrieval.  
数据存档与检索
- The water stream is under constant surveillance via a scintillation detector.  
水流在闪烁探测器连续监测下
- The unit is completely self-contained.  
此单元完全一体

## SPECIFICATIONS: 规格

### Sensitivity: 灵敏度

- With 1" x 1" crystal, without the optional shielding: detects 80 $\mu$ R/hr above background in 3 sec at 99% confidence level.  
1" x 1"晶体，无屏蔽情况下3秒内探测到本底以上80 $\mu$ R/hr，置信度99%
- 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.  
灵敏度和响应时间受用户要求和实际情况，如管径，壁厚本底辐射水平和主要被测核素能量影响。
- **For Example:** A system with 3" x 3" NaI detector and 2" of lead shielding has a limit of sensitivity better than 1 X 10<sup>-7</sup>  $\mu$ Ci/cc of Co-60 in 18" diameter pipe with 0.02mR/h background in one hour measurement.  
**例如:** 如果监测器配备3" x 3" NaI探测器和2"厚铅屏其灵敏度优于一小时测到的本底0.02mR/h，管径18" Co-60的测量值，1 X 10<sup>-7</sup>  $\mu$ Ci/cc

### DETECTOR:

**Model PGS-3-** 1" x 1" NaI (TI) crystal scintillation detector probe, sensitive to all Gamma above 100 KeV depending on wall thickness of the pipe.

### 探测器:

**Model PGS-3,** 1" x 1" NaI (TI)晶体闪烁探测器，对100KeV以上伽马灵敏，受管壁厚影响

### Mount Plate:

Blue Color

### 安装板:

蓝色

### Mount Strap:

Orange Color

### 安装带:

橙色



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## ELECTRONICS - Model TBM-3D Programmable Scaler with RS-232 /485.

电子学-TBM-3D, 可通过RS-232 /485编程

<b>Alarm: Settable:</b>	2000 Hz beeper, red LED.
报警: 可设定:	2000赫兹蜂鸣音, 红色LED灯
<b>Response Time:</b>	Settable 0.1 to 100 seconds.
响应时间:	可设定0.1-100秒
<b>Readout:</b>	6 digit LCD for each detector showing: rate and total.
显示:	每个探头6位LCD: 计数率和总计数
<b>Power:</b>	6 AA cells. <b>OPTIONAL</b> AC adapter
电源:	110 VAC to 240 VAC Input 9V DC Output, 0.6 amps
	6节AA电池, 可选择AC适配器;
	110-240伏输入电压, 9V输出, 0.6安培
<b>Flow Rate:</b>	Measurement is independent of flowrate.
流量:	测量不受流量影响
<b>Case:</b>	Sturdy, gasket lined aluminum case.
外壳:	坚固带垫圈铝外箱
<b>Cable:</b>	36" BNC to BNC Cable
缆线:	36" BNC - BNC 缆线
<b>BNC Adapter:</b>	Right Angle
BNC转换头:	右弯
<b>Serial Cable:</b>	16 feet Rj-11 to DB-9 (F)
串口电缆:	16英尺Rj-11接DB-9 (F)
<b>OPTIONAL: Serial to USB:</b>	Adapter Model TU-S9
选项: 串口到USB:	转换头Model TU-S9

### OPTIONAL: 选项

**On-site:** Onsite set-up with users SCADA System

现场: 与用户SCADA系统连接

**PGS-3L \*:** 2" x 2" Na(Tl) Crystal probe

2" x 2" 碘化钠晶体探头

**Shielding:** 0.25" to 3" low- activity-lead around detector.

屏蔽: 探头周围0.25"-3"低活度铅屏蔽

**Power:** AC adapter

电源: AC适配器

**Data:** Data Archive & Retrieval

数据: 数据存档与检索

\* Call factory for more options 更多选择可联系工厂



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## WEIGHT & DIMENSIONS

### Dimensions Electronics:

电子学尺寸:

### Dimensions Detector:

探测器尺寸:

### Detector Assembly Weight:

探测器组件重量:

### Shipping Weight:

邮寄重量:

## 重量和尺寸

3"W x 4"H x 5.3"

1.5" dia x 8" long.

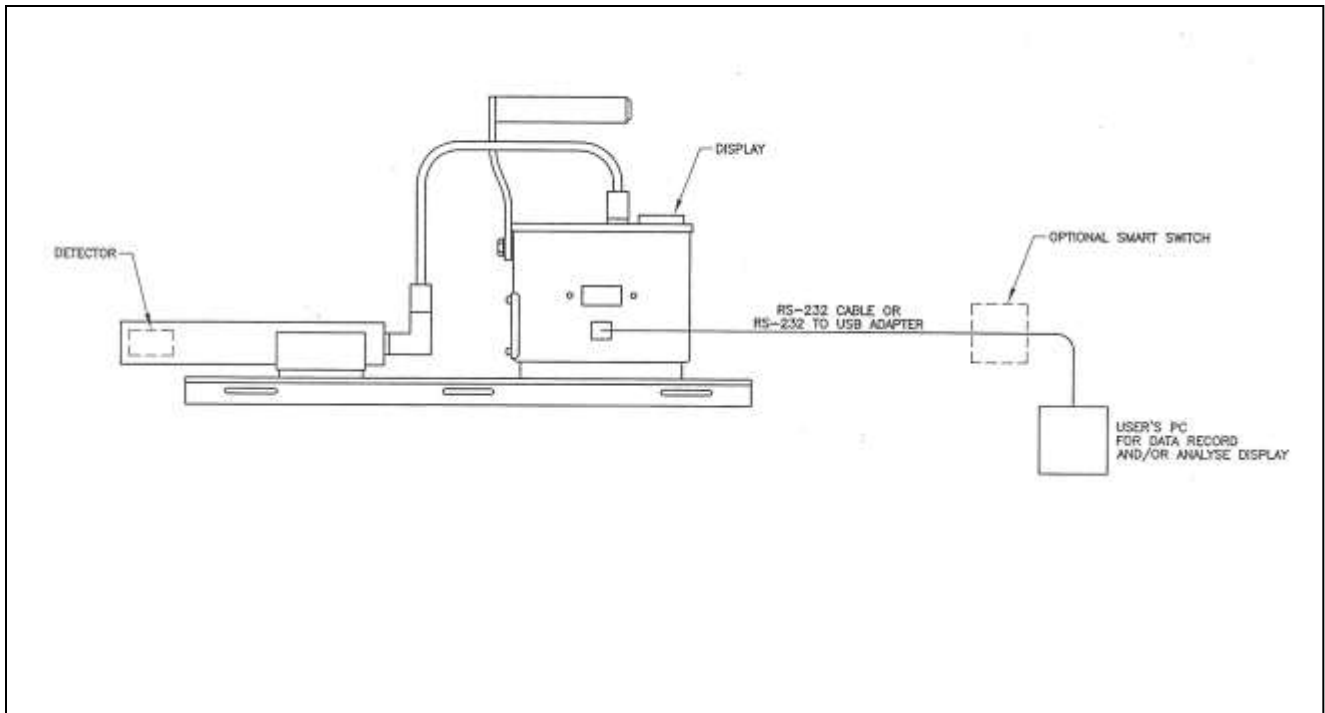
直径1.5" x 8" 长

4 lbs for unshielded system.

不带屏蔽4磅

8 lbs. for complete 1 detector system

单探头系统重8磅



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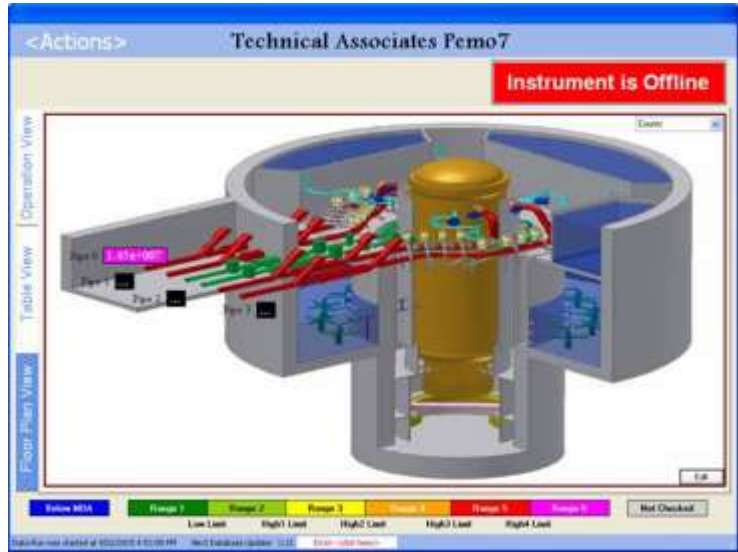
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## OPTIONAL SOFTWARE SCREEN SHOTS



<Actions> Technical Associates Pemo7 Instrument is Offline

Measurable Name    EUs    Units    Counts Per Second    EUs (2 min Average)    EUs (30 min Average)    EUs (8 hr Average)    EUs (24 hr Average)    Limit Level    Loss Of Signal

Pipe 3 Counts	0.000000	counts	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 3 Count Rate	0.000000	cpm	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 3 Dose Rate	0.000000	mR/hr	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 3 Dose	0.000000	mR	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 1 Counts	0.000000	counts	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 1 Count Rate	0.000000	cpm	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 1 Dose Rate	0.000000	mR/hr	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 1 Dose	0.000000	mR	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 2 Counts	0.000000	counts	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 2 Count Rate	0.000000	cpm	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 2 Dose Rate	0.000000	mR/hr	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 2 Dose	0.000000	mR	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 7 Counts	0.000000	counts	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 7 Count Rate	0.000000	cpm	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 7 Dose Rate	0.000000	mR/hr	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 7 Dose	0.000000	mR	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>

Range 1    Range 2    Range 3    Range 4    Range 5    Range 6    Not Checked

<Actions> Technical Associates Pemo7 Instrument is Offline

Measurable Name    EUs    Units    Counts Per Second    EUs (2 min Average)    EUs (30 min Average)    EUs (8 hr Average)    EUs (24 hr Average)    Limit Level    Loss Of Signal

Pipe 3 Counts	0.000000	counts	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 3 Count Rate	0.000000	cpm	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 3 Dose Rate	0.000000	mR/hr	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 3 Dose	0.000000	mR	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 1 Counts	0.000000	counts	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 1 Count Rate	0.000000	cpm	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 1 Dose Rate	0.000000	mR/hr	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 1 Dose	0.000000	mR	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 2 Counts	0.000000	counts	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 2 Count Rate	0.000000	cpm	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 2 Dose Rate	0.000000	mR/hr	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 2 Dose	0.000000	mR	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 7 Counts	0.000000	counts	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 7 Count Rate	0.000000	cpm	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 7 Dose Rate	0.000000	mR/hr	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>
Pipe 7 Dose	0.000000	mR	0.000000	0.000000	0.000000	0.000000	0.000000	0	<input type="checkbox"/>

Range 1    Range 2    Range 3    Range 4    Range 5    Range 6    Not Checked



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