

FAST, ULTRA-SENSITIVE PORTAL MONITOR

快速，极灵敏通道门监测器

MODEL ~ PPM-27G

FEATURES: 特点

- FULL DYNAMIC BACKGROUND SUBTRACT
全动态本底补偿
- OUTSTANDING SENSITIVITY TO FISSION PRODUCTS SPECTRUM
对裂变物极其灵敏
- ADVANCED N OF 8 DESIGN
先进设计
- 8 CHANNELS OF COUNTING ELECTRONICS
8路计数电子学
- AUDIO AND VISUAL RADIATION ALARMS
声光报警
- HIGH BACKGROUND ALARM
高本底报警
- LOSS OF SIGNAL LIGHTS
信号消失报警
- FAST FLOW THROUGH OF PEOPLE
快速人流通过
- EASY TO READ ALARM PANEL FOR MOUNTING ON WALL OR PORTAL
壁装式带易读报警显示
- WEATHER RESISTANT PORTAL AND FOOT DECK
CHOICE OF PORTAL FRAMES
防潮，可选脚踏板
- CHOICE OF PORTAL FRAMES
可选门框



Top Left – F-36

Top Right – F-25A

Bottom – Alarm Panel

APPLICATION: 应用

The **PPM-2G** examines people from head to toe for radioactive contamination.

If placed within a passageway, a large throughput can be attained with a minimum amount of supervision.

PPM-2G 从头检查到脚的辐射，如果放置通道内通量大且无需太多监管



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DESCRIPTION: 描述

- A walk-through portal frame and separate table top, (also rack mountable) electronics.
通道门框，独立桌面，（可壁装）电子学
- A cabinet to hold electronics
电子学带机箱
- Optional counting gas bottles
可选计数气瓶
- Nine, fourteen, or twenty-four gas flow radiation detectors (depending upon choice of frame)
根据不同门框可选数量为 9,14,24 流气式探测器
- One motion detector, senses contamination on a person as he crosses the threshold.
人通过门槛时要通过运动传感器和辐射传感器
- Radiation detectors are grouped into eight separate channels. This feature makes it easier to locate and remove contamination and increases sensitivity by lowering the background count per channel.
辐射探测器分组为 8 个独立通道，这种设计易于锁定并移除污染，通过降低每个通道计数来增加灵敏度
- Average background radiation over 20 second interval when unoccupied.
闲置时每 20 秒平均本底辐射计数
- A first-in-first-out shift register updates the background data every 0.2 seconds.
先进先出顺序每 0.2 秒更新本底数据

When the portal is occupied the electronics compare the background plus 1, 1.4, or 2 times the backgrounds standard deviation, to the personnel count.

This comparison is made every 50,100, or 200 milliseconds depending upon the setting of the front panel sample time switch.

The level of confidence (N of 8) can be set for each channel using the eight position switches on the electronics console. Separate alarms are provided for each channel.

当使用中时，电子学将本底加上 1,1.4,2 倍的本底标准偏差与个人计数进行比较。根据前板样品时间设定，每 50,100,200 毫秒进行一次比较。使用电子学控制板上 8 旋钮对每个通道设定置信值，每个通道独立报警。

SPECIFICATIONS: 规格

SENSITIVITY: F-36 &FX-3 - LARGER PORTAL FRAMES:

灵敏度: 大通道门框- F-36 &FX-3

- 40 nCi Cs-137 Beta is detected with 95% confidence in 0.4 sec.
0.4 秒探测 Cs-137 β 40nCi, 置信度 95%
- (Meets DOE & NRC specifications)
符合 DOE 和 NRC 规定



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- NRC requires detection of 1/2 gr. plutonium, 3 mm brass shield, 90% confidence
核管会要求 1/2 gr. 钚, 3 毫米铜屏蔽, 90%置信度
- False alarm rate less than 0.1%,
误报率小于 0.1%
- Detection of 3 gm u-235, 20% enriched, 3 mm brass shield, 50% confidence
3gm 铀-235, 丰度 20%, 3mm 铜屏蔽, 50%置信度
- False alarm rate less than 0.1 %.)
误报警率小于 0.1%

F-25 - LIGHTER PORTAL FRAME:

较轻通道门 F-25

- 80 nCi Cs-137 is detected with 95% confidence in 0.4 sec.
0.4 秒探测 Cs-137 β 80nCi, 置信度 95%

GAS FLOW DETECTORS: PPG-41. **OPTIONAL:** PPG-41T for enhanced Gamma sensitivity.

流气式探测器: PPG-41, 可选 PPG-41T 以增强伽马灵敏度

Sensitivity: 20% of 4 pi Cs-137 Betas & lower energy Betas down to .05 MeV.

灵敏度: 探测 Cs-137 β 为 4π 的 20%, 低能 β 低到 .05MeV

Sensitive area: 400 square centimeters per detector.

灵敏面积: 每个探头 400 平方厘米

Operating Voltage: Typically 1900 V with P-10 gas or 2800 V (optional) with Propane.

工作电压: 典型 1900V, 带 P10 气体或 2800V 带丙烷

Window Thickness: 5 mg/cm (other thicknesses optional).

窗厚度

ELECTRONICS CHASSIS: 电子学

Front Panel Controls: Sigma Multiplier (each channel): 1, 1.4, 2.

N of 8 Alarm Set (each channel): 1, 2, 3, 4, 5, 6, 7, 8.

Sample Time: 50, 100, 200 milliseconds.

Overflow Alarm (for background): 10, 20, 40, 80. Reset push button

Alarm Disable

面板控制: 西格玛倍数 (每个通道) 1, 1.4, 2., 八点报警设定 (每个通道) 1, 2, 3, 4, 5, 6, 7, 8.

采样时间 50, 100, 200 毫秒; 过流量报警 (用于本底) 10, 20, 40, 80

重设按钮, 报警断开

Rear Panel Controls: Power on-off

后板控制: 电源开关



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High Voltage Adjust: 0-2000 V for P-10 or Geiger gas
(0-3000 V for propane optional)

P-10 气体高压调节 0-2000V (丙烷可选 0-3000V)

Front Panel Indicators:

Average Background Display (each channel): Two digits.

N of 8 Display (each channel): one digit.

Contamination Alarm LED (each channel): red.

No Signal Alarm LED (each channel): yellow.

前板指示:

平均本底显示 (每个通道): 两位数

每个通道 8 段数字显示; 污染报警红灯 LED; 信号丢失报警黄色 LED

Rear Panel Indicators:

Power on/off lamp: red High Voltage Meter, 0-2000 volts, (0-3000V optional)

后板指示:

电源开关, 红色高压显示, 0-2000V, 可选 0-3000V

Rear Panel Outputs:

Remote Alarm Output Terminals (each channel plus common bell and lamp)

Switched AC outlet

后板输出:

远程报警输出端口 (每个通道), AC 开关

Common Alarms

Indicating Contamination:

2000 Hz alarm and flashing red beacon.

污染报警:

2000 Hz, 红色闪灯

Power Requirements:

110 V, 60 Hz, 1 A (220 V and 50 Hz optional)

电源要求:

Dimensions:

19"W x 20"D x 11"H

尺寸:

Weight:

45 lbs.

重量:

Shipping Weight:

65 lbs.

运输重量:

ALARM PANEL:

Wall mountable, silhouette with lights indicating location of contamination, plus sonalert and flashing red light.

报警系统:

安装式, 显示污染位置, 加声光报警

GAS FLOW SYSTEM:

Flow meter and micro metering valve are included. Gas tank and pressure regulators are normally supplied by user. Timer and solenoid operated valve is available as an option to further minimize gas usage.

气体流量控制系统:

包括表和微计量阀, 气瓶和压力调节器一般用户提供, 可选择计时器和电磁阀进一步控制气体流量。



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PORTAL FRAME & FOOT DECK: 门径&脚踏板

Frame Option: 门框选择	F-25A	F-36	F-X3
Description: 描述	Lighter Model 轻型	Larger with door 更大且带门	Walk straight through 通道式
Number of Detectors: 探头数目:	9	14	24
Inside Dimensions: 内部尺寸	14"W x 79"H	24"W doorway 21"W clearance x 79.25"H	24W" x 79"H
Outside Dimensions: 外部尺寸:	88"H x 30"W x 28"D	89.25"H x 43.5"W x 57.25"D	88"H x 30"W x 30"D
Flush Mount Height: 顶安装高度	83"	87"	83"
Weight: 重量:	155 lbs.	400 lbs.	350 lbs.
Shipping Weight: 运输重量:	240 lbs.	500 lbs.	450 lbs.



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