

ALPHA & BETA PARTICULATE AIR MONITOR

α & β 粒子空气监测器

Model FM-9-MA2 ~ Alpha ~~~ Model FM-9-MAB2 ~ Alpha & Beta

#FM-9-MA2~ α , #FM-9-MAB2~ α & β

FEATURES: 特点

- TWO OPTIONS ~ ALPHA ONLY OR ALPHA & BETA
- 两个选择~ α 或 α & β
- RUGGED SOLID STATE SILICON DETECTOR
- 耐用固态硅探头
- QUICK CHANGE FILTER
- 快速更换过滤器
- REAL TIME OPERATION
- 实时工作
- REAL TIME ALARM
- 实时报警
- LOW FLOW ALARM
- 低流报警
- PROVIDES LOCAL OR REMOTE SAMPLING
- 提供本地或远程取样
- USB PORTS (4)
- USB接口 (4)
- OPTIONS: 选项
 - REMOTE ALARM
远程报警
 - REMOTE READOUT
远程读数
 - CART MOUNTED
车载



APPLICATION: 应用

Technical Associates **FM-9 Air Monitor Series** assures safety against airborne radioactivity contamination by means of constant check with alarm and record capability. It provides integrated exposure information with an optional hard copy via external computer.

TA公司FM-9空气监测系列针对气溶胶辐射污染，进行连续检测报警记录以确保安全，通过外接电脑进行硬拷贝，提供综合辐射暴露信息。

This Air Monitor Series is a complete system and may be expanded per need with modules of the **FM-9** series.

The **FM-9 Air Monitor Series** is **sensitive and versatile**.

空气监测系列是完全一体化系统，可根据需要通过FM-9系列模块进行功能拓展。



TECHNICAL ASSOCIATES

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It may be used to monitor stack effluent down to EPA levels as well as hoods, glove box or workplace air.

此型号可监测烟道排放物，可达到环保部门标准，还可以用于排烟罩，手套箱或工作间空气监测

DESCRIPTION: 描述:

- The **FM-9-MA2** and **FM-9-MAB2 Air Monitors** utilize a solid state detector and two coordinated single channel analyzer windows.
- **FM-9-MA2** 和 **FM-9-MAB2** 空气监测器使用固体探测器，两个一致的单道分析窗
- Utilizing two coordinated single channel analyzers the electronics will reject Radon pulses.
- 使用两个一致的单道能量分析仪，电子学将抑制氡脉冲。
- The sample window (PHA) allows the user to preset specific energy level for sample (eg. The "Radium A" peak), measuring Pu-239 or other Alpha emitters in the presence of significant or changing Radon-Thoron background.
- 当在大量或不断变化的氡-钍本底情况下测量Pu-239或其它 α 发射物时，样品窗允许用户预设具体样品能量值（例如：氡-A 峰值）
- The count rate is shown on the front panel color monitor display both rate and integrated information.
- 彩色前板显示器显示计数率和综合信息。
- The user can select the operating modes: gross count, pulse height analyzing (PHA), or PHA with background subtract (PHA-SUB).
- 用户可选择操作模式：总计数，脉冲高度分析，或本底扣除脉冲高度分析（PHA-SUB）
- The high level alarm trip point is settable over the entire range.
- 高水平报警可整个量程内设定
 - ✓ When activated, the system provides an on screen red alert and an audible alarm warning.
 - ✓ 报警激活后，系统显示屏提供红色报警和声音警报。
 - ✓ An adjustable alarm delay prevents short term transient alarms.
 - ✓ 可调节报警延时预防瞬时报警
- The system uses a quick change 47mm filter.
- 系统使用快速更换47mm过滤器
- The unit comes with an AP-3V air pump or may be plumbed to hood exhaust or in-house air system.
- 系统自带AP-3V空气泵，或连接到排风罩/室内空气排放系统。
- Included with the **FM-9-Air Monitor Series**:

Quiet Green Turtle Air Pump	User's Manual
静音绿龟气泵	用户手册
Six feet plastic tubing	A box of 100 Filters
6英尺塑料管	一盒100只装滤网
- 包括FM-9-Air监测系列:



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SPECIFICATIONS:特点

Detection: 探测	1% of MPC of Pu-239 can be detected with average Radon-Thoron background. 在一般氡钍本底环境下, 可以探测到最大允许浓度的1%的Pu-239
Counting Efficiency: 计数效率	24% of 2 pi with wide window setting for Pu-239 source in the filter holder. 过滤网托上的Pu-239源宽窗设定下2 π 为24%。
Detector: 探测器:	Solid state detector, cleanable silicon with a 490 sq. mm area and a typical Alpha resolution of 60 KeV maximum. 固体探测器, 490平方毫米的可清洗硅, 典型60KeV α 分辨率
Sensitivity: 灵敏度:	7×10^{-7} Bq/m ³ at 70 liter/min air flow with 1 hour reading. 70升/分钟空气流量1小时读数为 7×10^{-7} Bq/m ³
Response time: 响应时间:	1 sec. to 40 hours. 1秒到40小时
Readout: 读数:	7" Color LCD monitor built-in user data display. 内置7寸彩色LCD显示用户数据
	<ul style="list-style-type: none">• Concentration浓度• Total Activity on Filter 过滤器上总活度 User Settable Units: (cps, Bq, μCi, Bq/m³, μCi/l, DAC, DAC-hr etc.) 用户可设定单位:• Raw Counts原始计数• Flow Status样品流状态• Alarms报警 User Settable.用户设定• System Status系统状态• Alert Change Filter Due to High Activity Build Up – Range Typically Set at 500 kBq or 13.5μCi User Settable. 高污染累计更换滤网警报-通常设定在500 kBq 或 13.5μCi, 或用户设定• Air Flow Rate Accessible via Display• 显示器显示空气流量
Alarm: 报警:	On screen red light alert; audible alarm 显示屏上红灯报警, 声音报警
Pump: 泵:	Quiet Green Turtle Pump – AP-3V included. 115V 60Hz 2Amps. Optional: 220 V 50-60 Hz. 静音绿龟泵-AP-3V, 115V 60Hz 2Amps, 或选择220 V 50-60 Hz.
Flow Rate: 流量:	Normally set at 55 liters/min. 正常设定在55升/分钟



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Mass Flow Meter:	Real-Time air flow rate-data feeds directly into data analyzer software and Onboard computer for highest concentration accuracy eliminating need for manual adjustment of High and Low Flow Rates.
流量表:	实时流量—数据直接反馈到数据分析软件和机载电脑, 无需手动调节高/低流量读出最好精度。
Filters:	Pack of 100 47mm filters included.
过滤器:	包括一包100片装47mm过滤网
Temperature Range:	20 to 130 degrees F. (-7 to 54 degrees C.) Total change in system gain is less than $\pm 5\%$
温度范围:	20-130华氏度 (7-54摄氏度), 系统增益变化小于 $\pm 5\%$
Finish:	Baked enamel, easily cleaned.
表面处理:	烤漆, 容易清理

ELECTRONIC MODULES INCLUDE: 电子学模块包括

MV-5.12.24:	Electronics Power Supply – Accepts both 120V or 220V 电子学电源-可以用120V或220V
MFT-5A:	Sample Holder & Detector 样品托&探头
SUB-5:	Three level energy analyzer 三层能量分析 (三个能量窗)
MAC-9:	Air Control; Low Flow Alarm; Flowmeter 气流控制, 低流报警, 流量计
FM-9:	On Board computer with color monitor 带彩显机载电脑
Pump Power:	115V, 60 Hz (220 Volts, 50 Hz optional.)
泵电源:	115V, 60 Hz (可选220 V, 50 Hz.)



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WEIGHT & DIMENSIONS:

Weight: 35 lbs.

重量:

Dimensions:

尺寸:

Electronics Assembly &
Internal Detector: 20"W x 13"H x 18" D.

电子学组件&内置探头:

Pump assembly: 8"W x 8"H x 14"D.

泵组件:

OPTIONS:选项

Remote Alarm 远程报警

Remote Readout 远程读数

Cart Mounted 车载

Oil-Less Green Turtle Pump

DESCRIPTION 描述	FM-9-MA2 & FM-9-MAB2
Read-Out Units 读出单位	User Settable 用户设定
Measures 测量	Airborne Concentration 气载浓度
Smart System 智能系统	Calculations by On Board Computer Easy On Board Data Display & Archive Retrieval 机载电脑计算 数据显示&存档检索
Special Feature 特殊功能	Electronic Mass Flowmeter 电子质量流量计



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CONTROLS & FUNCTIONS 控制&功能	INDICATORS: 指示器
<ul style="list-style-type: none">➤ Master Power Switch For All Electronics.➤ 电子学主电源开关➤ Detector Bias Voltage, 50 Volts.➤ 探头偏压, 50v➤ High Level Alarm Set.➤ 高限报警设置➤ Operate / Calibrate Modes.➤ 工作/标定模式➤ Alarm Set, Displays Mode.➤ 报警设定, 显示模式➤ Alarm Acknowledge Button➤ 报警确认按钮➤ Percent Subtract Function.➤ 减百分数功能➤ Threshold / Discriminator, Ten Turn-pot with 1,000 Division Dial.➤ 阈值, 10转带1,000刻度➤ Sample Window (PHA) Always Constant Above Threshold➤ 样品窗(脉冲高度分析) 阈值无漂移➤ Ten Turn Pot With 1,000 Division Dial.➤ 10转1,000刻度点➤ Mode Switch - Gross Count, PHA, PHA-SUB.➤ 模式开关-总计数, 脉冲高度分析, 扣除本底脉冲高度分析	<ul style="list-style-type: none">➤ On Screen High Alarm➤ 屏显高浓度报警➤ Audio Alarm Warning➤ 语音报警➤ Loss of Signal On Screen➤ 屏幕信号丢失报警➤ Running Time Record.➤ 运行时间记录➤ Mass Air Flowmeter➤ 空气流量计➤ Low Air Flow Alert➤ 低流报警➤ ``Power On`` Light for Electronics➤ 电子学“电源开”指示灯



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