

# ALPHA PARTICULATE AIR MONITOR

## MODEL # FM-7MA2

### FEATURES:

- RUGGED DIFFUSED JUNCTION DETECTOR
- QUICK CHANGE FILTER
- REAL TIME OPERATION
- PROVIDES LOCAL OR REMOTE SAMPLING
- RS-232 OUTPUT TO COMPUTER OR PRINTER



**APPLICATION:** The FM-7MA2 is an ideal instrument to assure safety against airborne Alpha radiation, even in high or varying background situations. With presettable alarm point and built-in RS-232 output to computer or printer. The FM-7MA2 is designed for stand alone operation. The system provides integrated exposure information and has pulse output available. The FM-7MA2 is a complete system but may be expanded according to the needs of the user utilizing the many modules of the FM-7 series.

**DESCRIPTION:** The FM-7MA2 system utilizes a solid state detector and two coordinated single channel analyzer windows. The sample window (PHA allows the user to preset specific energy level for sample (eg. Radium A peak), measuring Pu-239 or other alpha emitters in the presence of significant or changing Radon-Thoron background. The count rate is read on the front panel digital display. These meters have a 6 digit display for both rate and integrated information. The user can select the operating modes: gross count, pulse height analyzing (PHA), or PHA with background subtract (PHA-SUB). The high level alarm trip point is settable over the entire range. When activated, the system provides a flashing red beacon and loud bell for visual and audible warning. An adjustable alarm delay prevents short term transient alarms. The system uses a quick change 47mm filter. The unit may be plumbed to an air pump such as AP-2 or AP-4, hood exhaust or in-house air system. Included with the FM-7MA2 are six feet of plastic tubing, a box of 100 Millipore SM filters and complete users manual.

### ACCESSORIES AND OPTIONS AVAILABLE:

**4-20 mA Process Loop Transmitter.**  
**Remote Alarm**  
**Remote Readout**

### SPECIFICATIONS:

- Detection:** 1% of MPC of Pu-239 can be detected with average Radon-Thoron background.
- Counting Efficiency:** 20 percent of 2 pi with wide window setting and 47mm Pu-239 source in the filter holder.
- Detector:** Solid state detector, cleanable silicon diffused junction with a 490 sq. mm area and a typical alpha resolution of 60 KeV maximum.
- Ranges:** 0.0005 Bq with 1 hour time constant setting equivalent to  $7 \times 10^{-7}$  Bq/m<sup>3</sup> at 70 liter/min air flow.

**TA TECHNICAL ASSOCIATES**

7051 ETON AVENUE, CANOGA PARK, CA 91303  
TELEPHONE: (818)-883-7043 \* FAX: (818) 883-6103  
e-mail: [tagold@nwc.net](mailto:tagold@nwc.net) \* [www.tech-asociates.com](http://www.tech-asociates.com)

# BETA/GAMMA AIR MONITOR

## MODEL # FM-7-ABGN

**SPECIFICATIONS:**

- Response time:** 1 sec. to 10,000 sec.
- Modules and**
- Functions Include: MFT-5A**
- Sample Detector**
- MAC-5**
- Air Flow Control
- MAR-6**
- Alarm Relay and Acknowledge (bell disable)
- MVR-5R**
- Power Supply
- SUB-5**
- Three level energy analyzer
- AIR-5B**
- Air Inlet-Outlet
- MPL-5**
- Process Loop Transmitter (optional)
- FIL-7**
- Digital Process Readout with RS-232 Output
- Filters:** Includes a package of 100 Millipore SM 47mm filters.
- Temperature Range:** 20 to 130 degrees F. (7 to 54 degrees C.)  
Total change in system gain is less than  $\pm 5$ .
- Finish:** Baked enamel, easily cleaned.
- Weight:** 35 lbs.
- Power:** 115V, 60 Hz (230 Volts, 50 Hz optional.)

<b>CONTROLS, FRONT PANEL:</b>	<b>INDICATORS:</b>
Master power switch for all electronics. Power On for pump power and running time register. Bias Voltage Adjust, 0-50 Volts. High Level alarm set pot. Operate / Calibrate button. Alarm Set button, displays alarm setting on meter. Alarm Reset. Bell Disable/Alarm Acknowledge switch Percent subtract pot. Threshold/Discriminator, ten turnpot with 1,000 division dial. Sample window (PHA) always constant above threshold, ten Turn pot with 1,000 division dial. Mode Switch - Gross Count, PHA, PHA-SUB.	Alarm Beacon, rotating. Alarm Bell, fast ringing. 6 digit LED. High Level Alarm Lamp. Low Level, Loss of Signal Lamp. Running Time Meter. Air Flow Rotameter. ``Power On`` Pilot Light for electronics ``Power On`` Light for pump power. Bell Disable / Acknowledge Light.