

# Neutron REM Area Monitoring System

**Model: FM-9-REM**

## Specifications:

### Electronic Modules Include:

|                            |  |
|----------------------------|--|
| <b>MV-5.12.24:</b>         | Power Supply   |
| <b>MAC-9:</b>              | Air Control Timer; Low Flow Alarm Flowmeter                              |
| <b>FM-9:</b>               | On Board computer with color monitor                                     |
| <b>M<math>\mu</math>P:</b> | Imbedded processor   |
| <b>Readout:</b>            | 7" Color LCD monitor built-in for digital and graphic user data display. |
| <b>Power:</b>              | 110-220 AC (Optional 230 AC)   |

|                  |  |
|------------------|--|
| <b>Range:</b>    | 5 decades 0.1 mRem to 10 Rem/h.  |
| <b>Accuracy:</b> | $\pm 10\%$ of decade. $\pm 1$ count.   |
| <b>Controls:</b> | High Level Alarm Set                      High Voltage Adjust (internal)<br>Intermediate Level Alarm Set      Power On-Off Switch<br>Alarm Reset Push Button |

**Time Constant:** Varies inversely with count rate.

**Output:** RS-232 - User Settable.

**Detector:** Moderated proportional BF3 neutron tube. Supplied with 8 ft. cable.

**Detector Response:** Neutrons from thermal to > 100 Mev. Energy matched by LASL designed moderating sphere to ICRP tissue response curve from thermal to above 7 MeV.

**Energy Dependence:** Closely follows true REM curve from thermal to above 7 Mev.  
Sensitive to >100 Mev.

**Environmental Temperature:** Operating range between -30°C and 65°C; 0-95% humidity non-condensing.

**Data Processing:** Counts energy compensated pulses to give direct mRem/hr  
(or other presettable unit e.g.  $\mu$  Sv/h.) RS-232 output.

**High Level Alarm:** Activated when count rate exceeds set point.  
High-level red light on front panel goes on in addition to Beeper.  
(Latching or Unlatching)

**Intermediate Level Alarm:** Level settable below High Level Alarm to warn of unusual RAD level before alarm level is reached.

Amber light on front panel goes on in addition to sonalert. (Not latching)

**Anti-Saturation:** Circuitry prevents readings from falling below full scale in over-range conditions.

**Line Operation:** 105-125V (or 200-240 V), 50-60 Hz.

### Weight and Dimensions:

**Dimensions:** Electronics: 120" W x 13" H x 18" D (50 cm x 33 cm x 45 cm).  
Probe: 10" round by 16" H.

**Weight:** Console: 20 lbs.

Probe: 20 lbs.

**Mounting:** Electronics are normally furnished in FM-9 case but can be furnished uncased with mounting bars for rack or Nema 4 (hostile environment) cabinet.



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