

The PA-100 Detector

The PA-100 is an alpha detector designed for monitoring of alpha contamination only. The detector does not react to beta or gamma radiation at all. The detector contains a highly efficient air proportional sensor and electronic circuits. The MediSmarts Monitoring channel or RAM DA 2000 monitor supplies power and output is a rate proportional to the radiation contamination. The detector has a low background count rate and is easy to decontaminate. The sensor contains atmospheric cells made of aluminum containing a thin anode wire. The surface of the cell is a membrane of aluminized Mylar, protected by a fine stainless steel wire mesh.



The detector contains a high voltage power supply, calibrated discriminator, linear pulse amplifier, pulse shaper, GM saturation indicator, and detector identifier and malfunction detection circuitry. This configuration minimizes noise, improving sensitivity and stability. The detector also holds a replaceable cartridge filled with hygroscopic silica gel for the reduction of humidity in the sensor.



Specifications

Sensitive area:	100 cm ² (15.5sq.in.)
Window Thickness:	0.85mg/cm ² aluminized window
Probe Efficiency (2 π):	18% (related to ²⁴¹ Am)
Surface Sensitivity:	530cpm/Bq/cm ² *
Accuracy:	\pm 15% of reading (related to ²⁴¹ Am)
Maximum count rate:	3 x 10 ⁶ cpm
Output Signals:	TTL pulses. Detector status: ID, OK, malfunction
Temperature Range:	Operation: -10°C to +50°C (15°F - 122°F) Storage: -20°C to +60°C (-5°F - 140°F)
Humidity Range:	40% to 95% RH (non condensing)
Dimensions:	240mm (9.5") length, 75mm (3") width, 55mm (2.2") height
Weight:	1kg (2.2lbs)
Casing:	Aluminum, splash proof

•When operated with the MediSmarts Monitoring channel or RAM DA monitor, the probe efficiency (2 π), is compensated to 100% by the monitor, so that surface sensitivity, using a large homogeneous ²⁴¹Am source, will be approximately 3000 cpm/Bq/cm².

Ordering Information

Model PA-100

#3-0061

ROTEM INDUSTRIES reserves the right to change specifications without advance notice

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