MODEL 357RM

LOW COST MONITOR FOR DETECTION AND MEASUREMENT OF AIR BORNE TRITIUM

The model 357 tritium monitor is stable to 1 μCi/m3. (1 S.D.)

Only OTC tritium monitors are designed and built to distinguish tritium against natural radon background. Instruments that do not have this feature will exhibit a noisy zero response even if the electronics is claimed to be stable.

With radon rejection, the Model 357 ignores radon and is, therefore, fast, sensitive and accurate. Once adjusted, it is long-term zero stable and, due to special electrometer design, its span calibration is permanently stable.

These monitors are simplified versions of OTC 300 series monitors which have been in continuous service for twenty years. They come in rack mount configuration and are also suited for table top use.

The only maintenance required for Model 357 is periodic service of the pump and replacement of the dust filter.

The sensitivity and noise level of Model 357 is superior to current competitive instrumentation by an order of magnitude.

OPTIONAL EQUIPMENT AVAILABLE

Remote Alarm Units
Remote Meter Displays
Tritium Gas Calibrator
Calibration Resistor
RS232 Output
Logarithmic Output
4-20mA Output
Plate-Out proof wire grid chamber
TECHNICAL SPECIFICATIONS

MEASUREMENT
Tritium in Air Concentration

RANGE
1 – 19,999 µCi/m³

DISPLAY
Digital Meter, 4½” digit LED

ACCURACY
±10 % of reading, ±1 µCi/m³, whichever is greater

STABILITY AND DRIFT LONG TERM
±1 µCi/m³, ambient temperature

NOISE
±1 µCi/m³, 2 sigma, with 20 second time constant

GAMMA COMPENSATION
second ionization chamber of equal volume, coaxially mounted, serves to cancel effects of external gamma fields

RESPONSE RATE ELECTRONICS
two linear time constants 20 seconds for measurements below approximately 80 µCi/m³
3 seconds for measurements above 80 µCi/m³

ALARM SYSTEM
single alarm, with set point adjustable from 1 to 1,000 µCi/m³

INDICATORS
acoustic signaler, red LED

IONIZATION CHAMBER
VOLUME
measuring: 1,600 cm³
total wetted: 2,000 cm³

ION TRAP
Kanne Type, coaxial integral

PORTS
hose barb fittings for 3/16" I.D. vinyl tubing

FLOWMETER
0-10 LPM adjustable rotameter

DUST FILTER AND PUMP
High efficiency respirator type cartridge. Long life continuous duty oscillating piston positive displacement pump

ENVIRONMENTAL
Storage Temperature: -40° C to +60° C
Operating Temperature: 0° C to +50° C
Humidity: 0 to 95 % RH non-condensing

POWER
115 VAC or 240VAC, 50/60 Hz

PHYSICAL CABINET
19” rack mount, frame constructed of aluminum extrusions, front and rear panel are 1/8” thick aluminum. Covers are aluminum sheet.

DIMENSIONS
8.8” [223mm] H x 19.0” [483mm] W x 16.0” [406mm] D

WEIGHT
40 lbs. [18.2Kg]

OPTIONS
Plate-out proof chamber design
Choice of one additional output; RS232 Serial Data, 4-20mA or logarithmic Output
## PARTS LIST FOR MODEL 357 TRITIUM MONITOR

<table>
<thead>
<tr>
<th>Qty Req’d</th>
<th>Part No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>VCO-201-E1</td>
<td>120VAC Pump or</td>
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<td>VCO301-P2</td>
<td>240VAC Pump</td>
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<td>Digital Panel Meter, 240VAC</td>
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<td>Transformer for High Voltage Power Supply</td>
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