# SENSITIVE TRITIUM IN AIR MONITOR

#### Model - 357

## FEATURES:

- STABLE TO 1 µCi/m<sup>3</sup> (0.04 MBq/m<sup>3</sup>) SENSITIVITY
- RACK MOUNT
- FAST RESPONSE
- DUAL 2 LITER ION CHAMBERS, GAMMA COMPENSATED
- NO RESPONSE TO RADON
- ZERO DRIFT BETTER THAN ±1µCi/m<sup>3</sup>
- AC OPERATED
- DIGITAL LOCAL DISPLAY
- OPTIONAL: RS232 OUTPUT; REMOTE READOUT



# **APPLICATION:**

A cost-effective, highly sensitive tritium in air monitor designed for continuous monitoring (room air, stack, hoods, etc).

## **DESCRIPTION:**

Model 357 is a general-purpose tritium in air monitor with dual 2 liter ionization chambers for gamma compensation. Includes everything needed for operation: pump, HEPA filter, flowmeter, local display, and an adjustable single alarm setpoint with audible and visual alarm. A variety of options can be added, including data output, remote display/alarm units, noble gas compensation, wire-grid chambers to reduce plate-out contamination, and more.

## **SENSITIVITY:**

Sensitivity is to 1  $\mu$ Ci/m<sup>3</sup> (0.04 MBq/m<sup>3</sup>).

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## **RADON INTERFERENCE, NOISE RESPONSE:**

A Radon suppression circuit and produces accurate and drift-free readings.

## FAST RESPONSE:

Exceptionally rapid response is due to its unique ability to ignore Radon. The instrument has an electronic time constant.

## FAST WARM UP:

After applying power, "warm up" takes less than 5 minutes.



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# SENSITIVE TRITIUM IN AIR MONITOR

#### Model - 357

#### **SPECIFICATIONS:**

RANGE:	Single range, 1 to 19,999 µCi/m³ or 0.1 to 1,999.9 MBq/m³
DISPLAY:	Digital, 4 ½" digit LED
ACCURACY:	$\pm 10\%$ of reading, $\pm 1 \ \mu Ci/m^3$ , whichever is greater
STABILITY & LONG-TERM DRIFT:	±1 μCi/m <sup>3</sup> of ambient temperature
NOISE:	$\pm 1 \ \mu Ci/m^3$ , 2 sigma, with 20 second time constant
GAMMA COMPENSATION:	Second ion chamber pair of equal volumes, mounted in cruciform pattern, serves to cancel effects of external Gamma fields.
RESPONSE RATE, ELECTRONIC:	two linear time constants, 30 seconds for <80 $\mu$ Ci/m <sup>3;</sup> 3 seconds for >80 $\mu$ Ci/m <sup>3</sup>
WARM-UP TIME:	Less than 5 minutes for high voltage power supplies to stabilize
ALARM SYSTEM:	Single alarm, with set point adjustable from 1 to 1000 $\mu\text{Ci}/m^3$
ION CHAMBER VOLUME:	Measuring: 1600m <sup>3</sup> ; Total Wetted: 2000 cm <sup>3</sup>
ION TRAP:	Kanne Type, coaxial integral
PORTS:	Hose barb fittings for 3/16" I.D. vinyl tubing
ENVIRONMENTAL:	Storage: -40º C to 60º C (-40º F to 140º F) Operating: 0º C to 50º C (32º F to 122º F)
	Humidity: 0-95% RH non-condensing
PHYSICAL CABINET:	19" Rack mount, aluminum extrusions front and rear panels
POWER:	115 VAC or 240 VAC 50/60 Hz
DIMENSIONS:	8.8" (223mm) H x 19.0" (483mm) W x 16.0" (406mm) D
WEIGHT:	40 lbs (18.2 kg)
FLOWMETER:	0-10 lpm adjustable rotameter
DUST FILTER AND PUMP:	High efficiency respirator type cartridge. Long life continuous duty oscillating piston positive displacement pump.
POWER:	115 VAC or 240 VAC 50/60 Hz
DIMENSIONS:	7.0" (178mm) H x 17.0" (432mm) W x 16.0" (406mm) D
WEIGHT:	20 lbs (9.1.4kg)

#### **OPTIONS:**

Remote alarm units	Logarithmic output
Remote meter displays	RS232 output
Tritium gas calibrator	Plate-Out proof wire grid chamber
Calibration resister	4-20 mA output





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