

Specification-610 tritium in air area monitor

Performance:

- Sensitivity: Better than $0.2\mu\text{Ci}/\text{m}^3$
- Accuracy: $1\mu\text{Ci}/\text{m}^3$ from 1 to $100\mu\text{Ci}/\text{m}^3$,
< 3% from 100 to $1\text{Ci}/\text{m}^3$
- Measuring range: Full measuring range $0.2\mu\text{Ci}/\text{m}^3$ to $1\text{Ci}/\text{m}^3$
- Compensation range: Full measuring range $0.2\mu\text{Ci}/\text{m}^3$ to $1\mu\text{Ci}/\text{m}^3$
- Flow Rate: 0 to 25L/min, without tubing
- Response time: < 10S
- Gamma measurement: 0.1mR/Hour to 10R/Hour
- Zero Stability: Better than $2\mu\text{Ci}/\text{m}^3$ from 0 to 50 °C
- Stability with long term: <±3% per 24 hrs and <±10% per 30 days
- Gamma compensation: < $10\mu\text{Ci}/\text{m}^3$ at 10mR; <10% within 20mR/HR
- Tritium Discrimination: Elemental tritium in air, HTO & T₂O discrimination via Silicon Gel Dryer and software computation
- Noble Gas Cancellation: Full Measuring range, Passive Silica gel drier is placed on the front panel, flowing air samples between measuring chambers and compensation chambers
- Radon Compensation: Software discrimination and elimination
- Background Cancellation: Noble gas compensation ratio: > 150:1. Gamma compensation: < $10\mu\text{Ci}/\text{m}^3$ at 10mR/Hr, <10% within 20mR/HR

Construction:

- Ion Chambers: 4 ion chambers,
2 for measuring and 2 for compensation,
500mL for each chamber
- Ion Chamber Volume: 1L: measuring, 1L: compensation

- Ion Trap: Yes, built-in for each chamber
- Gas Ports: 3/8" OD stainless steel push to connect
- Gas Filter: Built in, replaceable
- Ion Chamber Purging: Yes, via cartridge heater for ion chamber decontamination and condensation prevention
- Control Panel Display: 7 Inch TFT LCD touch screen for numerical and graphical mode
LED for digital data and rate bar graph
- Digits LED Display: 0.56" LED display both for tritium and Gamma
- Measuring location: Multiple in sequence or assigned location

Output and communication:

- Communication: RS232, RS485, Ethernet TCP Modbus
- Analog Output: 4-20mA and 0.5-2.5Vdc
- Audio and Visual Alarm: Low and high alarm within 30 seconds
- Data Logging: Yes, frequency varies from 1s to 1hr, user settable

Power, operational conditions and dimension:

- Power Supply: 220/110VAC @ 50/60HZ
- Power Consumption: < 1A
- Warm-up time: no need
- Operational Humidity: 95%RH
- Operational Temperature: 0 to 50 °C
- Dimension: W21.5"x H41.5" x D22.5" or customized
- Weight: 75 Kgs