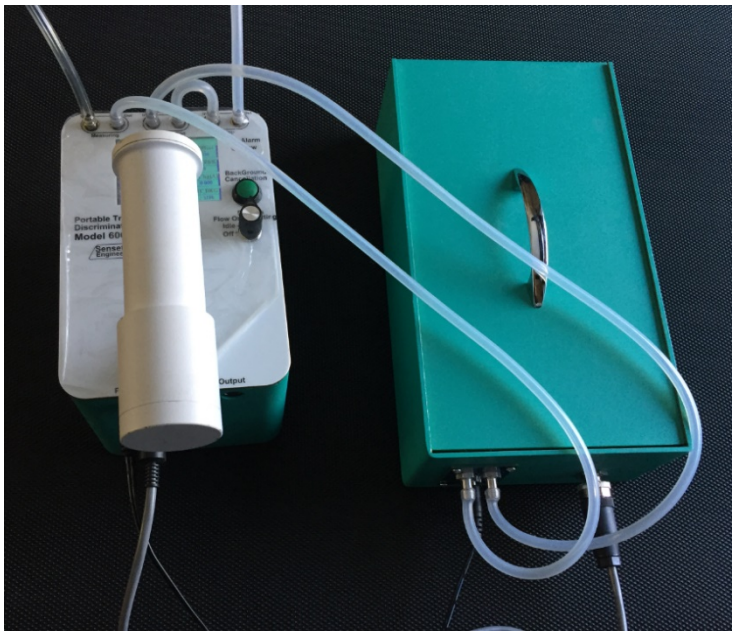
Portable Tritium in Air Discriminating Monitor

Model: 606-651652



606-651652 tritium in air discriminating monitor overview

Application

The 606-651652, Sensetecz Portable Tritium in Air Discriminating Monitor, combines a 606 unit – Sensetecz Tritium in Air Monitor and a 651652 assembly – Sensetecz Dryer & Catalytic Converter Assembly.

606-651652 has all characteristics of 606. Please refer to the 606 datasheet.

(Please insert a link to model 606 datasheet here)

Meanwhile 606-651652 has following extra functions:

- Tritium water and pure elemental tritium readings can be provided
  In 606-651652, 651652 is a Dryer & Catalytic Converter Assembly, which is installed between the outlet of the 606-measuring chamber and the inlet of 606-compensation chamber. Using this assembly, the readings of tritium vapor and pure elemental tritium $^{3}H_{2}$ can be provided.

Overall, within 0°C to 50°C, 606-651652 can provide reliable readings of active levels of Total Tritium (tritium gas+ tritium vapor) in air, HTO Tritium Vapor,Pure Elemental Tritium $^{3}H_{2}$, from 1µci/m³ to 200,000µCi/m³ with full range noble gas compensation and full range gamma compensation. Meanwhile, it can provide gamma activity level readings up to 10R/hr.

Specification- 606-651652

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Performance

- **Sensitivity:** Better than 1µci/m³
- **Measuring range:** 1µci/m³ to 200,000µCi/m^3
- **Accuracy:** 1µci/m³ from 1 to 100 µci/m³, < 1% from 100 to 200,000µCi/m^3
- **HTO & $^3H_2$ discrimination / noble gas compensation:** Whole measuring range with dryer 651 connected
- **Total tritium, tritium water HTO & elemental $^3H_2$ readings:** Extra dryer 651 & catalyst converter tube - model 651652 assembly
- **Flow rate:** Up to 1.5L/Min, KNF long life pump
- **Response time:** < 10S for more than 90% reading
- **Gamma compensation:** Whole measuring range compensation <10µci/m³ at 10mR/hr compensation up to 100mR/hr
- **Gamma measurement:** 0.1mR/Hr to 10R/Hr
- **Zero stability / long time drift:** ±2µci/m^3 per 30 days
- **Temperature drift:** ±2µci/m³ or less, for 0 to 50 °C
- **Noble gas compensation ratio:** > 150:1
- **Radon compensation:** Via software discrimination and elimination
- **Operation:** Real time measuring & alarm control

Structure:

- **Ion chamber:** 4 chambers, 2 for measuring, 2 for compensation. Measuring volume: 330cc compensation volume: 330cc
- **Ion trap:** Yes, built-in for each chamber
- **Ion chamber purging:** Yes, with cartridge heater
- **Display:** 2.8" TFT LCD, touch screen

Output and communication:

- **Linear analog output:** 0.5 to 3.3V for 0 to 2800 µCi/m^3
- **Logarithm output:** 0 to 2.65V for 1 to 200,000 µCi/m^3
- **Communication:** RS232 default
- **Audio and visual alarm:** Low and high alarm, less than 30S
- **Alarm relay output:** Contact output for remote control
- **Data logging:** Yes, all the readings are time-stamped and logged into 512kbytes EEPROM

Power, operational conditions and dimension:

- Power consumption: <130mA powered by 12 VDC external power supply without heater
  <350mA powered by two size-D batteries, 25 hours operation
  <350mA powered by two size-D NiMH rechargeable batteries capacity 10AmpHr, 15 hrs operation
- Warm-up time: no need
- Operational humidity: 95%RH
- Operational temperature: 0°C to 50°C,
  The pump's rated performance might be affected beyond this range
- Dimension: 4.5"(W)X7"(L)x7"(H) for 606
  & 11"(W)X6"(L)X4.5"(H) for 651652
- Weight: 7Kgs