

TRITIUM MONITOR

For Public Release Level

Model ~ STG-4S/D & STG-5ATL

FEATURES:

- ON BOARD MEMORY
- MICRO PROCESSOR TO ESTABLISH UNITS AND PARAMETERS
- USB & ETHERNET DATA PORT
- DIGITAL ACCURACY SENSITIVE TO 10^{-7} $\mu\text{Ci/cc}$
- MEASURES DOSE-RATE & DOSE
- ALARM – VISUAL & AUDIO
- DYNAMIC BACKGROUND GAMMA COMPENSATION
- CAN ACTUATE COMPUTER OR REMOTE CONTROL
- MEASURES TRITIUM AS HTO IN PRESENCE OF OTHER RADIOACTIVE GASES (**STG-5ATL**)
- CLEANS GAS STREAM OF PARTICULATES & IONS



DESCRIPTION:

Technical Associates' **STG-4S/D** and **STG-5ATL** Tritium monitors are sensitive, rugged stack or effluent monitors for detection and measurement of airborne Tritium.

- The subtractive balanced chamber electrometer circuit decreases background effects to negligible levels.
- The deionized and filtered intake reduces to negligible levels spuriousity based on smokes, dusts, and existing ionization in the air.
- Inlet and outlet hoses allow the return of monitored air to source: interiors of fume hoods, exhaust stacks, etc.
- The STG-5ATL will measure airborne Tritium as HTO in concentrations as low as 1×10^{-7} $\mu\text{Ci/cc}$ of air in the presence of other isotopes.

All instruments are calibrated at the factory. Calibration check may be performed in the field with a license exempt microCurie level Beta source.



TECHNICAL ASSOCIATES
OVERHOFF TECHNOLOGY

7051 Eton Ave., Canoga Park, CA 91303
818-883-7043 (Phone) 818-883-6103 (Fax)

tagold@nwc.net

WWW.TECH-ASSOCIATES.COM

Divisions of  US NUCLEAR CORP

TRITIUM MONITOR

For Public Release Level

Model ~ STG-4S/D & STG-5ATL

SPECIFICATIONS:

Ranges:	(No range switching)
STG-4S/D:	Six decade 10^{-7} - 10^{-1} $\mu\text{Ci/cc}$ - Digital-Auto ranging.
STG-5ATL:	Four decade 10^{-7} - 10^{-3} $\mu\text{Ci/cc}$ - Analog-Log Scale
Background:	Essentially eliminated by subtractive balanced chambers.
Smoke, Dust & Ion Elimination:	Filter and deionizer reduce effects to negligible levels.
Circuit:	Electrometer circuit amplifies net difference between a 50 liter Tritium internal chamber and a background chamber of similar size and configuration.
Detector	
STG-4S/D:	Air stream is passed through sample chamber to measure all radioactive gas content; normally as Tritium, optionally as other (e.g. Xenon, Krypton, C^{14}O_2 etc.)
STG-5ATL:	After first chamber, HTO is removed from air stream, which is then passed through second chamber. Reading of difference gives concentration of Tritium as HTO in presence of other isotopes or other compounds.
Calibration:	Can be calibrated internally with Tritium (or HTO) gas, or on a Gamma calibration course; or can be checked at a single point with an external (not provided) Beta source.
Output:	
STG-4S/D:	RS-232 serial output.
STG-5ATL:	Digital output. One count per 1×10^{-7} $\mu\text{Ci/cc}$. Optional 0-5 volt or 4-20 mA
Alarm:	High Level: Red flashing light plus warbling sound System Fault Alarm: White steady light
Remote Alarm:	TTL closure-failure. TTL closure-high level.
Dimensions:	23" wide x 66" high x 36" deep.
Shipping Weight:	635 lbs.
Optional Accessories:	Remote alarm (audible & visual) Model Ral-8 (including 25" of cable). Can be used to 500 feet. 4-20 mA for computer.
Optional Features:	Analog - 1 volt/decade Interconnection to/from port of other gas or particulate monitor. Readout as radioactive gas other than Tritium.



TECHNICAL ASSOCIATES
OVERHOFF TECHNOLOGY

7051 Eton Ave., Canoga Park, CA 91303
818-883-7043 (Phone) 818-883-6103 (Fax)

tagold@nwc.net

WWW.TECH-ASSOCIATES.COM

Divisions of  US NUCLEAR CORP