

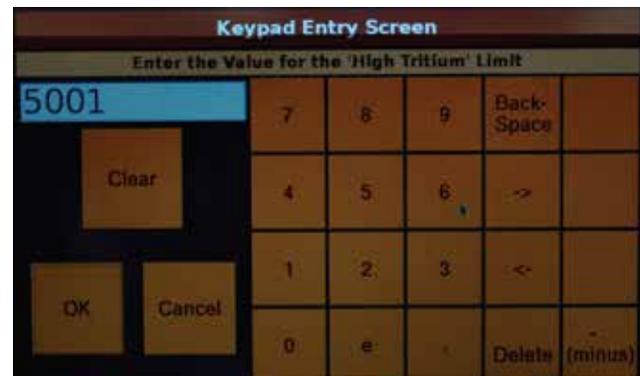


Tritium and C-14 Stack Monitor Triathalon Series

Triathalon CAM-TCI-H3 plus Inorganic C-14 (CO₂)
 Triathalon CAM-TCO-H3 plus Organic C-14
 Triathalon CAM-TC – Multi-Nuclide System

Features

- Sensitive to:
 - » H-3 10⁻⁷ µCi/cc
 - » CO₂ 10⁻⁸ µCi/cc
 - » Organic C-14 10⁻⁷ µCi/cc
- Reads Directly in ci/cc Or Bq/l
- Includes Alarm
- Dynamic Background Compensation
- Can Actuate Remote Controls
- Can Operate in Presence of Other Radioactive Gases (See Chart)
- Cleans Gas Stream of Particulates and Ions
- Micro Processor Operation
- USB and Ethernet Ports
- Digital Accuracy
- Data Archive and Data Retrieval



Application

Triathalon Model CAM-TC Tritium and C14 Stack Monitors are sensitive, rugged stack or effluent monitors designed and built for **Nuclear Power Plants**.

Commercial versions are available for research labs, room air, glove boxes and other applicable uses.



TECHNICAL ASSOCIATES OVERHOFF TECHNOLOGY

7051 ETON AVENUE, CANOGA PARK, CALIFORNIA 91303
 PHONE: 818-883-7043 | FAX: 818-883-6103

SALES@USNUCLEARCORP.COM | TECH-ASSOCIATES.COM | USNUCLEARCORP.COM

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 USNUCLEARCORP
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Tritium and C-14 Stack Monitor Triathalon Series

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Description

- The subtractive balanced chamber electrometer circuit and optional Radon Rejection 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 provide return of monitored air to source: interiors of fume hoods and exhaust stacks, etc.
- All instruments are calibrated at the factory. Calibration check may be performed in the field with a license exempt μ Curie level Beta source.

Airborne Activity	Model	CAM TCO (1)	CAM TCI (1)	CAM TC	CAM 33	CAM 33-4	CAM 33-6	321/421 NPPM (1)
	Chemical Form							
Tritium H3	T ₂ , HTO T ₂ O	YES	YES	YES			YES	YES
Carbon C-14: Inorganic Organic	CO ₂ Various	— YES	YES —	YES OP			OP YES	
Particulate	Alpha							
Particulate	Beta				YES	YES	YES	
Iodine				OP	YES	YES	YES	
Noble Gas: Gross/All Argon Xeon Radon				YES OP OP RX	YES	YES	YES OP OP RX- OP	CURIE-MeV OP OP RX



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Specifications

Measurement Ranges of Optional Detectors	From	4 Decade Model	6 Decade Model
Tritium	10 ⁻⁷	10 ⁻³	10 ⁻¹ uCi/cc
Inorganic C-14	10 ⁻⁸	10 ⁻⁴	10 ⁻² uCi/cc
Organic C-14	10 ⁻⁹	10 ⁻⁵	10 ⁻³ uCi/cc
Alpha particulate	5 x 10 ⁻⁸	10 ⁻⁴	uCi/cc

Electronics

Circuit:

Electrometer circuit amplifies net difference between a 30 liter Tritium internal chamber and a background chamber of similar size and configuration.

Calibration:

Can be calibrated internally with Tritium (or HTO) and CO₂ gas,
OR on a Gamma calibration course;
OR can be checked at a single point with an external (not provided) Beta source.
Organic Carbon Channel can be calibrated with C-14 disk source.

Alarm:

High Level: Red flashing light plus warbling sound
System Fault Alarm: White steady light

Remote Alarm:

3 Relays provided for operators use

Output:

USB Port is standard ethernet port is optional
Optional 0-5 volt or 4-20 mA.

Data-logging:

USB Serial port or on board data logging optional

Background:

Essentially eliminated by subtractive balanced chambers.
Optional: Radon Rejection

Smoke, Dust

and Ion Elimination:

Filter and deionizer reduce effects to negligible levels.

Weight and Dimensions:

Dimensions:

23" W x 66" H x 36" D

Shipping Weight:

635 lbs.

Optional:

Alarm:

Interconnection to / from port of other gas or particulate monitors
Remote Alarm (audio and visual) (Model RDX-8) includes 25" of cable.
Can be used to 500 feet. 4-20 mA for computer.



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