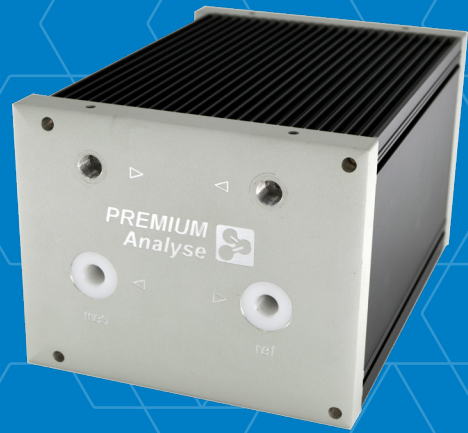




PREMIUM ANALYSE™

DT D - BL2™

195 cc Tritium Detector



Ionization chamber for use in the field or radioprotection, environmental monitoring and process surveillance.

DESCRIPTION

The DT D - BL2 unit is a medium size ionization chamber (195 cc) detector providing a wide measurement range from the kBq/m^3 ($n\text{Ci/m}^3$) to the TBq/m^3 (Ci/m^3).

This complete housing detector which includes the ionization chamber as well as the preamplifier, is adapted for the measurement of all ranges of activity.

The detector is connected to a touchscreen DT ionix 3™ Human Machine Interface that can be installed several hundred meters away from the detector, providing the most advanced features such as graphical data plotting, data extraction via USB, Modbus communication and dry contact outputs.

FEATURES

- ✓ **High performance**
 - Continuous measurement
 - Wide measurement range
 - Response time under 90 seconds
- ✓ **Simple**
 - Maintenance-free
 - Quick and easy commissioning
- ✓ **Reliable**
 - Precise and stable

DT D - BL2™ 195 CC TRITIUM DETECTOR

GENERAL CHARACTERISTICS

- Dimensions: 140 x 111 x 197 mm (W x H x D)
- Weight: 3 kg (6.6 lb)

OPERATING CONDITIONS

- Temperature of use: +0 °C to +40 °C (+32 °F to +104 °F)
- Influence of temperature: 0.3%/°C for a variation of ambient temperature < 3°C/hour
- Humidity: from 5 to 95% relative, no condensation
- Influence of humidity: ± 1% of the measurement from 10 to 90% relative humidity
- Influence of atmospheric pressure: 0.1%/mbar, hence ± 5% of the measurement from 930 to 1030 mbar

IONIZATION CHAMBER

- Material: 304 L stainless steel electropolished
- Volume: 195 cc



PERFORMANCES (For tritium in air)

Configuration	CMP (dynamic γ compensation)	DIF (ex: with SAM HTO)
Measurement range of the electronics	10 kBq/m ³ to 10 TBq/m ³ 0.27 μ Ci/m ³ to 270 Ci/m ³	10 kBq/m ³ to 10 TBq/m ³ 0.27 μ Ci/m ³ to 270 Ci/m ³
Limit of detection of the device (2 σ) = decision threshold	45 kBq/m ³ 1.22 μ Ci/m ³	60 kBq/m ³ 1.62 μ Ci/m ³
Precision	5% of measurement \pm 45 kBq/m ³ \pm 1.22 μ Ci/m ³	5% of measurement \pm 60 kBq/m ³ \pm 1.62 μ Ci/m ³
Variation max	45 kBq/m ³ /year (1.22 μ Ci/m ³ /year)	60 kBq/m ³ /year (1.62 μ Ci/m ³ /year)
Noise (2 σ)	45 kBq/m ³ (1.22 μ Ci/m ³)	60 kBq/m ³ (1.62 μ Ci/m ³)
Response time	< 90 sec at 90% of step	
Nominal flow	1 L/min	
Ionization voltage	160 VDC	

Injection of 1 MBq/m³ (27 μ Ci/m³) tritium in the form of HT, then of 2 MBq/m³ (54 μ Ci/m³) of tritium in the form of HTO. The injection of HT is then stopped and finally the injection of HTO is stopped.



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