MIRION TECHNOLOGIES

PREMIUM ANALYSE

DT D - EXP40™

4 200 cc Tritium Detector

4L ionization chamber for use in the field or radioprotection, environmental monitoring, process control, laboratory and decommissioning surveillance.

FEATURES

- **High performance**
  - Continuous measurement
  - Wide measurement range
  - Response time under 3 minutes
- **Easy to use**
  - Easy maintenance
  - User-friendly interface
  - Quick and easy commissioning
- **Reliable**
  - Precise and stable

DESCRIPTION

The DT D - EXP40 detector is an important-volume ionization chamber (4 200 cc) allowing for the measurement of tritium activities in gases from 2 kBq/m^3 *(54 nCi/m^3)* to 2 GBq/m^3 *(54 mCi/m^3)*.

Compact and high-performance, it combines under one case a 4 200 cc ionization chamber inside its circulation chamber as well as an attached preamplifier.

Usually integrated in M ionix or C ionix - EXX, the DT D - EXP40 can be installed with a reference detector for a dynamic and automatic gamma compensation.

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

DT D - EXP40 | 4 200 CC TRITIUM DETECTOR

GENERAL CHARACTERISTICS

• Dimensions	Ø 224 x 438 mm
• Weight	13 kg
• Installation	to be screwed
• Power-supply	9-36VDC, 300mA
• Power-supply connector	baseplate LEMO ENG. 1B.302.CLL
• CAN connector	baseplate LEMO ENG. 1B.304.CLL
• Gas connexion	DN 25KF coupling
• Radon compensation	dynamic by digital filtration

Delivered with certificate of conformity

IONIZATION CHAMBER

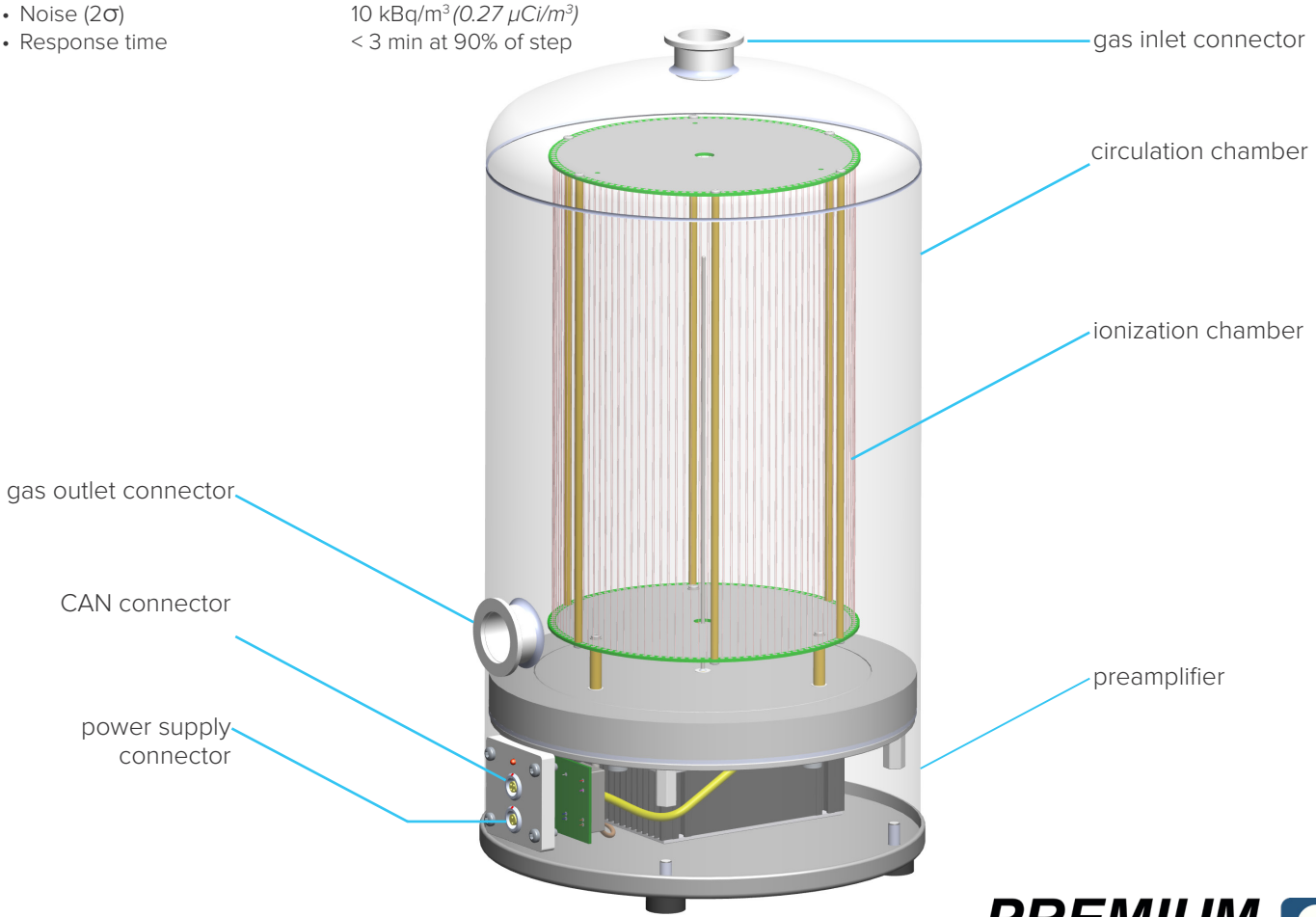
• Material	304L bead blasted stainless steel
• Volume	4 200cc
• Circulation chamber volume	12 000 cc
• Nominal flow rate	15L/min
• Response coefficient	10 200 (Bq/m³)/fA
• Ionization voltage	160 VDC

PERFORMANCES (for tritium)

• Measurement range	2 kBq/m³ to 2 GBq/m³ *(54 nCi/m³ to 54 mCi/m³)*
• Limit of detection (2σ) = decision threshold	10 kBq/m³ *(0.27 µCi/m³)*
• Limit of detection (4σ)	20 kBq/m³ *(0.54 µCi/m³)*
• Precision	5% of measurement ± 10 kBq/m³ *± 0.27 µCi/m³*
• Maximum deviation	10 kBq/m³ / year *(0.27 µCi/m³)*
• Noise (2σ)	10 kBq/m³ *(0.27 µCi/m³)*
• Response time	< 3 min at 90% of step

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 ambiant temperature < 3°C / hour
- Humidity: from 5 to 95% rel.
- Influence of humidity: ± 1 % of measurement from 10 to 90% of relative humidity
- Influence of atmospheric pressure: 0.1 %/mbar, hence ± 5 % of measurement from 930 to 1030 mbar



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PREMIUM Analyse
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