THERMAL CONDUCTIVITY NITROGEN SENSOR

NITROTEC TC

Precise · robust · easy to maintain

A thermal-conductivity sensor for high-precision N_2 measurement in both dissolved and gaseous phases. Built in stainless steel, it is ideal for harsh plant conditions and high pressures, covering the range from trace to saturation level.



316L STAINLESS

0-350 ppm	0-20 bar	15 s	IP65
MEASUREMENT RANGE	PRESSURE RANGE	CYCLE TIME	ENCLOSURE

Features & Benefits

Low detection limits

- Very low detection limits in dissolved and gaseous applications.
- Low drift.

Precise

- N_2 concentration is measured continuously.
- Unaffected by other gases present in the environment.

Low maintenance costs

- One single annual maintenance is necessary.
- Resistant to high temperature and cleaning in place (CIP).

Easy calibration

- Simple air calibration process.

Fast response time

- Fast response time of ± 30 sec.

Hygienic & robust

- Hygienic membrane cap.
- Stainless steel construction - harsh chemistry and high pressures.

Applications

BEVERAGE · POWER & STEAM · PHARMACEUTICAL

In-line analysis | Dissolved & gaseous applications | Beverage production | Power-steam industry | Pharmaceutical industry | Easy air calibration

Dimensions

LENGTH	DIAMETER	PROCESS THREAD	SENSOR ADAPTER	WEIGHT
159 mm	Ø 59 mm	M42×1.5	Ø 28 mm	0.6 kg

Technical Specifications

Range DN_2 (@25°C)	**0-350 ppm**	Temp. compensation	**0 to +45 °C**
Range PN_2	**0-20 bar**	Temp. range	**CIP/SIP 120 °C**
Linear flow rate	**150 cm/s**	Pressure range	**0-20 bar**
Cycle time	**15 s**	Weight	**0.6 kg**
Purge gas	**CO_2**	Enclosure	**IP65**
Accuracy	**± 1% of reading***	Wetted materials	**316L SS, PFA**
		Sensor cable	**3 m - 100 m**
		Membrane cap	**Hygienic**

* 1% of the measured value or lowest value, whichever is greater (DN_2 = dissolved N_2 · PN_2 = N_2 partial pressure).

In Practice

The NITROTEC TC measures nitrogen continuously in both dissolved and gaseous phases, from trace levels to saturation across a 0-350 ppm range for dissolved N_2 and partial pressures up to 20 bar. It is designed for the realities of production environments, in-line and real-time analysis in beverage production as well as power-steam and pharmaceutical applications. The 316L stainless steel construction and hygienic membrane cap withstand harsh chemistry, high pressures, and SIP/CIP up to 120 °C.

Maintenance is a single annual service, with a simple air calibration the operator can perform on site, leading to high-precision N_2 measurement without the running costs usually attached to it.

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