



Premium Line

NT-NO2-PL30

Electrochemical Nitrogen Dioxide Sensor

Description

The NT-NO2-PL30 is a new electrochemical gas sensor with 3 electrodes for detection of Nitrogen Dioxide (NO₂) in a variety of gas detection applications. Exhibiting high performance with long-term stability, this compact sensor (20.4 mm diameter) is suitable for both portable and fixed gas detection instruments. The NT-NO2-PL30 is particularly suitable for use in fixed monitoring systems measuring NO₂ levels in underground car parks, where long term reliability and low cost are essential requirements.

The porous electrode technology enables accurate gas detection with high sensitivity. The mechanical design of the sensor gives optimum gas diffusion characteristics, and the hermetically sealed enclosure prevents



Technical Specifications

Detectable Gas:	Nitrogen Dioxide
Detection Range:	0 – 30 ppm ⁽¹⁾
Maximum Overload:	150 ppm
Output Signal:	600± 150 nA/ppm ⁽²⁾
Resolution:	0.1 ppm
Repeatability:	± 2 %
Typical Baseline Range: (pure air)	< ± 0.2 ppm
Typical Response Time (t ₉₀):	< 25 sec
Baseline Shift: (- 20 ~ 40 degree C)	< 0.2 ppm
Long Term Output Drift:	< 2%/month
Expected Life Time:	> 3 years
Weight:	Approximately 4.5 g

Operating conditions

Operating Temperature:	-20°C to + 50°C
Operating Humidity:	15 to 90 % RH
Operating Pressure Range:	1atm± 10 %
Recommended Load Resistor:	33 Ohm
Bias Voltage:	Not required
Position Sensitivity:	None
Recommended Storage Temp.:	0-20°C
Storage Life:	Less than 6 months

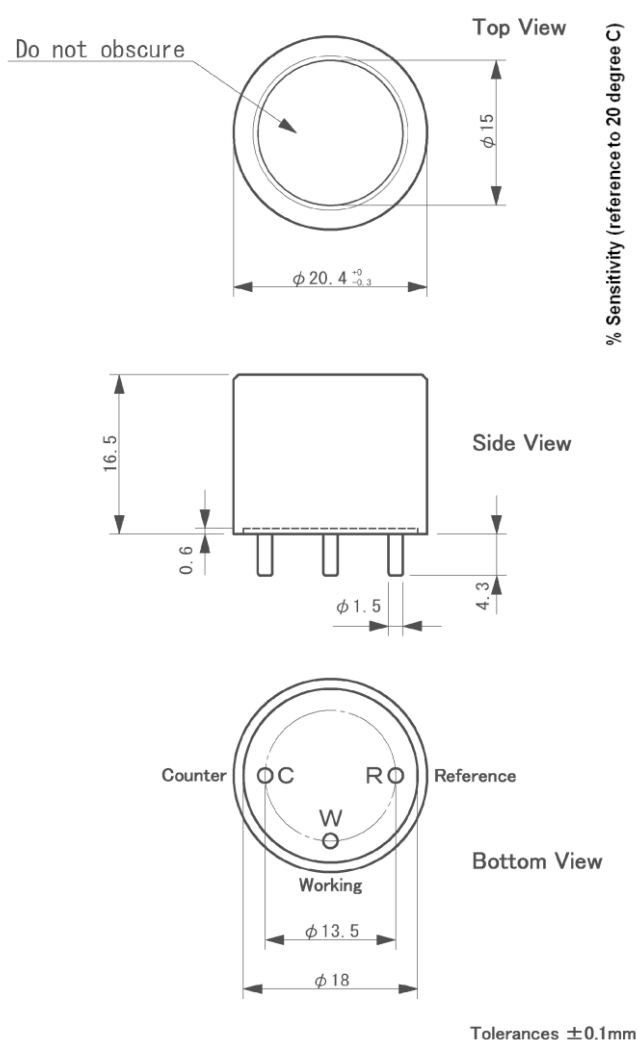
⁽¹⁾ Available also in the special detection range 0-10 ppm, see NT-NO2-PL10

⁽²⁾ The output signal of the NT-NO2 sensor is of opposite polarity to similar sensors such as for CO or H₂S.

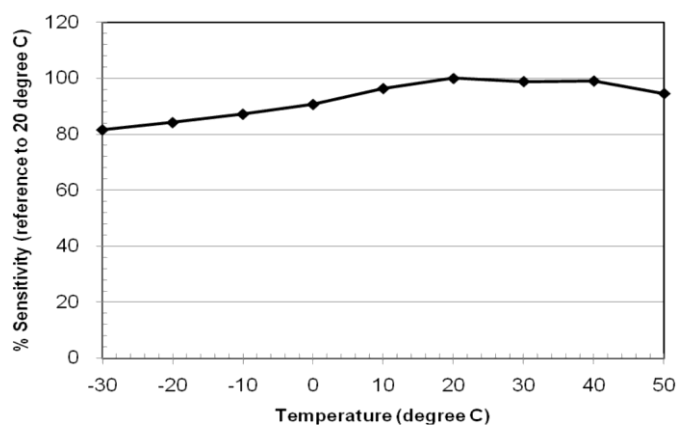
Typical cross sensitivities

Gas	Test Gas Concentration (ppm)	Typical NO ₂ Concentration Equivalent (ppm)
Nitrogen Dioxide	20	20
Hydrogen	1000	0
Carbon Monoxide	300	0
Carbon Dioxide	5000	0
Sulphur Dioxide	20	0
Hydrogen Sulfide	10	-0.7 to 0.3
Nitric Oxide	30	0
Ammonia	100	0
Ethanol	100	0
Chlorine	1	1

Dimensions



Temperature Dependency



NO₂ sensor Premium Line Benefits

- The sensor has an excellent selectivity compared to other industrial sensors on the market. Especially the sensitivity to H₂S is very low.
- The sensor shows a very small temperature dependency.
- The sensor has an excellent mechanical durability. As a result, the sensors can maintain a long stability without the breaking down of wires or the leakage of the electrolyte.

N.E.T. has a policy of continuous development and improvement of its products. As such the specification for the device outlined in the data sheet may be changed without notice.