Nano Environmental Technology
The Reliable Alternative

Premium Line

NT-NH3-PL100

Electrochemical Ammonia Sensor

Description

The NT-NH3-PL100 is a new electrochemical gas sensor with 3 electrodes for the detection of Ammonia in a variety of gas detection applications. Exhibiting high performance with very stable base line and output signal and excellent selectivity, this compact sensor (20.4 mm diameter) is suitable both for portable and fixed gas detection instruments.

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 costly electrolyte leakage.

This new Premium Line design offers several advantages with respect to the traditional industrial sensor. For example it gives the possibility to use a general OP amplifier instead of the high-cost OP97.

Technical Specifications

Detectable Gas:	Ammonia
Detection Range:	0 – 100 ppm (1)
Maximum Overload:	200 ppm
Output Signal:	40± 12 nA/ppm
Repeatability:	± 10 %
Typical Baseline Range: (pure air)	< ± 10 ppm
Typical Response Time (t_{90}):	< 90 sec
Baseline Shift: (- 30 ~ 40 degree C)	< 15 ppm
Long Term Output Drift:	< 2%/month
Expected Life Time:	> 2 years
Weight:	Approximately 4.5 g

Operating conditions

Operating Temperature:	-30°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 detection range 0-1000 ppm, see NT-NH3-PL1000*

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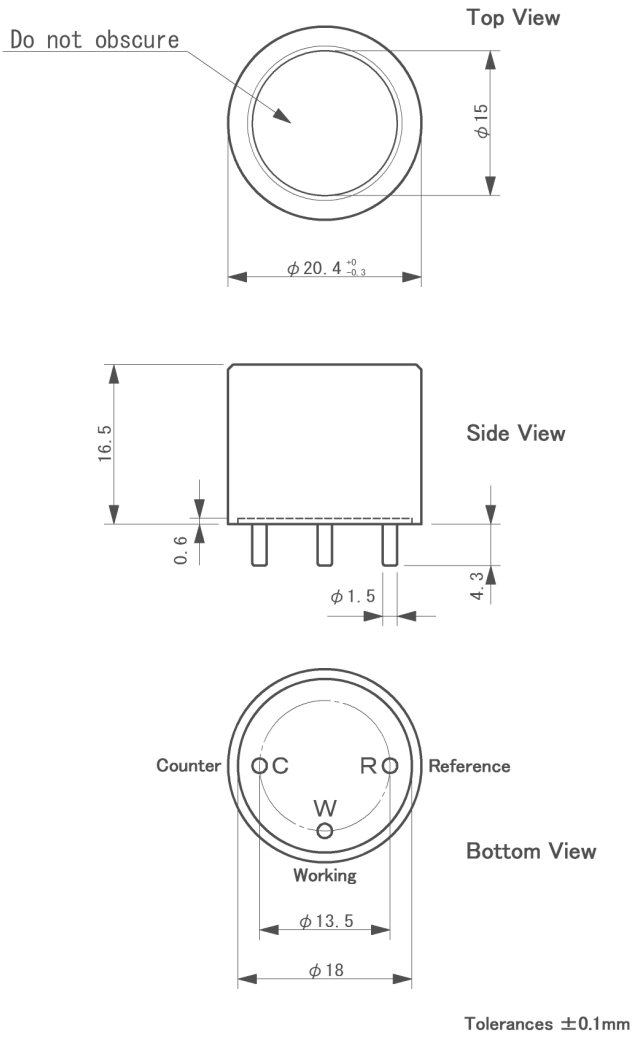
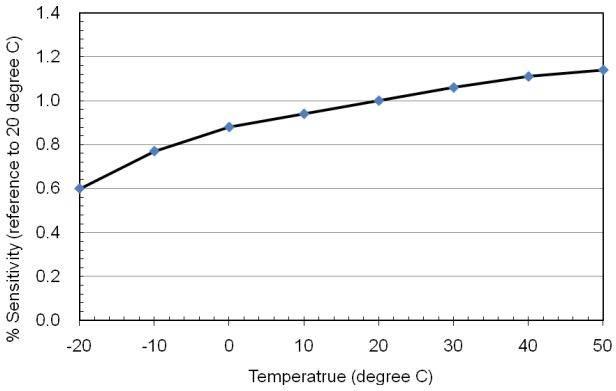
Typical cross sensitivities

Gas	Test Gas Concentration (ppm)	Typical NO2 Concentration Equivalent (ppm)
Ammonia	100	100
Hydrogen Sulfide	10	-1.5 to 0
Sulphur Dioxide	10	-2
Carbon Dioxide	5000	0
Carbon Monoxide	300	0
Hydrogen	1000	0
Nitrogen Dioxide	20	0
Nitric Oxide	30	0
Ethanol	100	0

Dimensions



Temperature Dependency



NH_3 sensor Premium Line Benefits

- Very stable base line and output signal with respect to many other NH_3 sensors on the market.
- The sensor has an excellent gas selectivity. For example, the sensor shows almost no sensitivity to H_2S compared to other industral sensors which often have a high sensitivity to H_2S.
- The performance of NT-NH3-PL100 sensor is not affected by the choise of OP amplifier. So a general OP amplifier can be used without needing of special high-cost apmlifiers.
- The sensor has an excellent mechanical durability. As a result, the sensors can maintain a long stability without the breaking down of wires or electrolyte leakage.

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.