Premium Line

NT-C2H4-PL100

Electrochemical Ethylene Sensor

Description

The NT-C2H2-PL100 is a new electrochemical gas sensor with 3 electrodes for the detection of Ethylene 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:	Ethylene
Detection Range:	0 – 100 ppm
Maximum overload:	200 ppm
Output Signal:	100 ± 30 nA/ppm
Resolution:	1 ppm
Repeatability:	± 2 %
Typical Baseline Range: (pure air)	-2 ppm to + 5 ppm
Typical Response Time (t_{90}):	< 30 sec
Baseline Shift: (- 20 ~ 40 degree C)	< 5 ppm
Long Term Output Drift:	< 3%/month
Expected Life Time:	> 2 years
Weight:	Approximately 4.5 g

Operating conditions

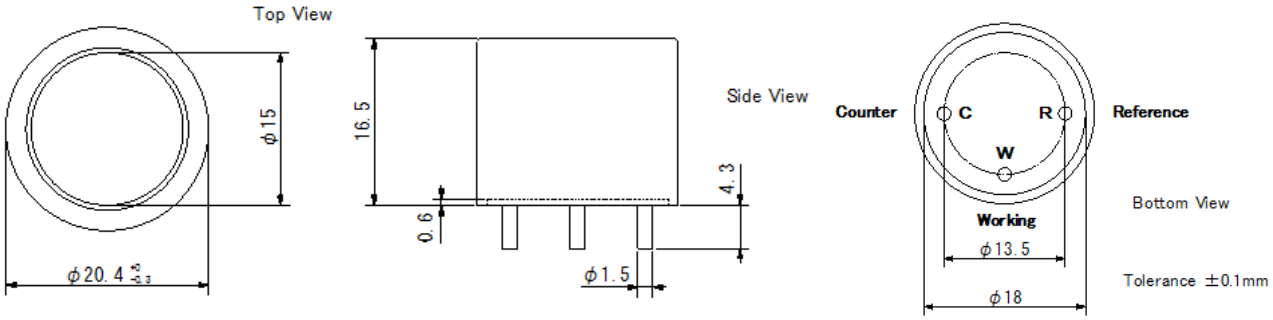
Operating Temperature:	- 20°C to + 50°C
Operating Humidity:	15 to 90 % RH
Operating Pressure Range:	1 atm ± 10 %
Recommended Load Resistor:	10 Ω
Bias Voltage:	Not required
Position Sensitivity:	None
Recommended Storage Temp.:	0-20 °C
Storage Life:	Less than 6 months

Performance data conditions: 20 °C, 50%RH and 1013mBar.

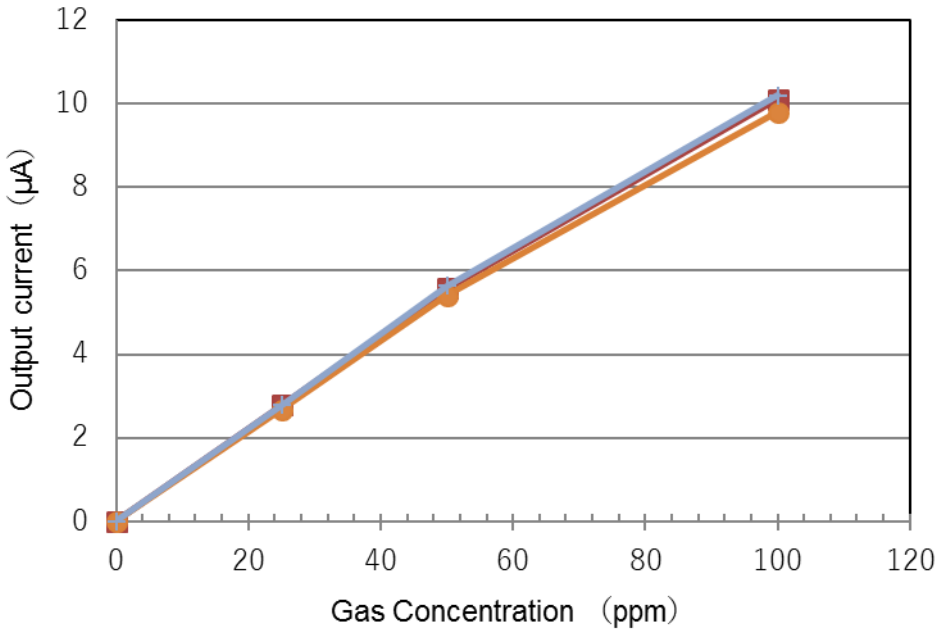
Typical cross sensitivities

Gas	Test Gas Concentration (ppm)	Typical C2H4 Concentration Equivalent (ppm)
Ethylene	10	10
Carbon Monoxide	100	90
Carbon Dioxide	5000	0
Hydrogen	100	50
Nitrogen dioxide	10	-6
Hydrogen Sulfide	10	30
Sulphur Dioxide	10	7
Ammonia	100	0
Ethanol	100	50

Dimensions

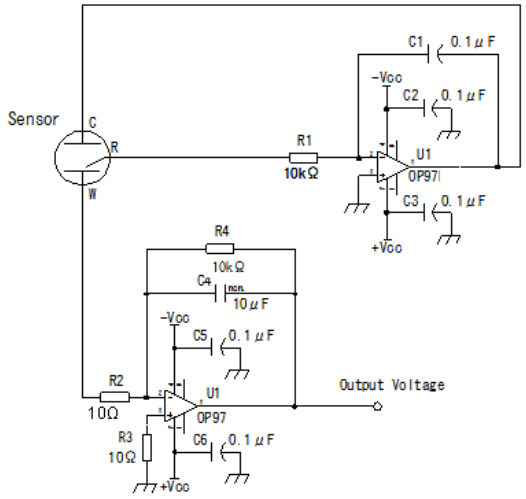


Linearity

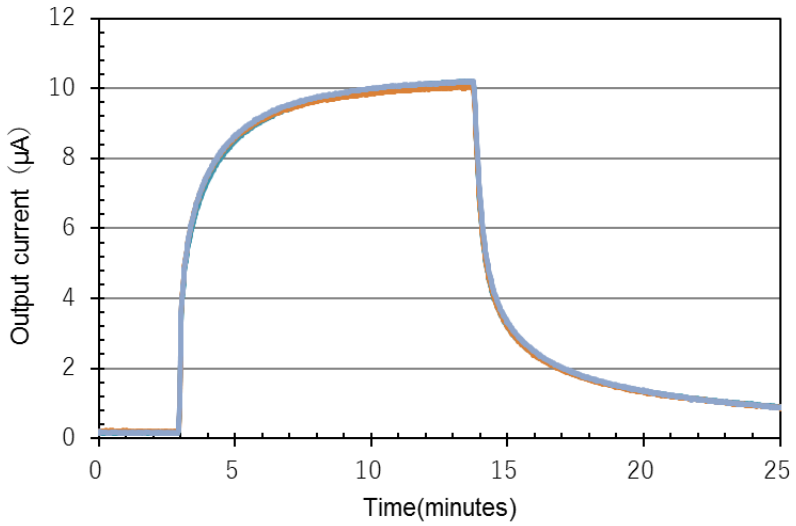


N.E.T. has a policy of continuous development and improvement of its products. As such the specification for the device outlined in the data sheet may be changed without notice.

Basic Operational Circuit



Response time and recovery



Baseline Shaft