



**20** twenty years  
of advanced solutions for gas detection

Gas Sensing Elements  
Proudly 100% Developed and Manufactured in Italy

# NT-02-SLI3

## Safety Line Electrochemical Oxygen Sensor

DS4479 rev.2 dated 15/12/2021



### Key Features

The NT-02-SLI3 is a new electrochemical gas sensor with 2 electrodes (plus one location pin) for the detection of Oxygen in industrial as well as commercial applications. The NT-02-SLI3 exhibits high linearity, long-term stability and very fast response time in a very cost effective package.

The warranted lifetime is 3 years from the date of purchase. The expected lifetime is 5 years. The sensor has industry accepted dimensions ( $\varnothing$  20.4 mm) and pin-out footprint, making the sensor compatible with a variety of commercially available fixed and portable gas detection systems and detection heads.

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.

### NET Safety Line Electrochemical Cells

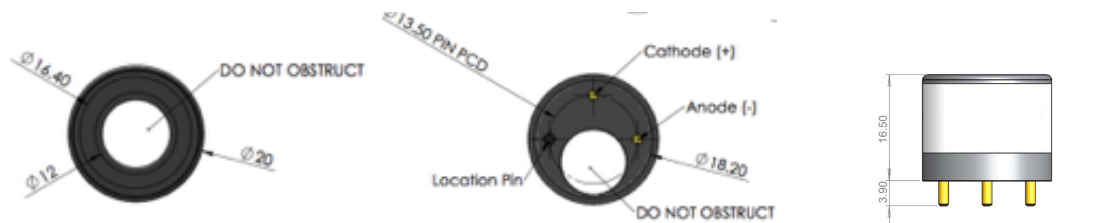
Our SAFETY LINE sensors are selected by N.E.T. and manufactured, on OEM basis, by the companies leading in the field, such as DD Scientific Ltd and Alphasense.

Extremely cost-effective, this sensor range includes solutions for Oxygen (O<sub>2</sub>) depletion plus Carbon Monoxide (CO) and Nitrogen dioxide (NO<sub>2</sub>) detection for light industrial,

residential or building automation applications along with car park ventilation according to EN 50545-1.

F14 and SLI1000 are tested and approved by TÜV Rheinland (Certificate no. S 459 2014 C2) and are UL2075 recognized components.

### Mechanical specifications



All dimensions are in mm with a tolerance of  $\pm 0.15$  mm unless stated otherwise

## Product specifications

Technical Specifications	Detectable Gas	Oxygen
	Detection Range	0 – 25% vol
	Maximum Overload	30% vol
	Output Signal	0.07 ± 0.02 mA
	Typical Baseline Range (pure air)	< 0.3% O <sub>2</sub>
	Typical Response Time (t <sub>90</sub> )	< 5 s
	Long Term Output Drift	<5% per year
	Weight:	Approximately 4.5 g
Operating conditions	Operating Temperature	-30 °C to + 50 °C
	Operating Humidity	15 to 95 % RH
	Operating Pressure Range	800 to 1200 mbar
	Recommended Load Resistor	100 Ω
	Bias Voltage	Not required
	Recommended Storage Temperature	0-20 °C
	Storage Life	< 6 months
	Warranty	3 years
	Expected Life Time	5 years
Intrinsic Safety Data	Maximum current in normal operation (pure O <sub>2</sub> )	0.3 mA
	Maximum o/c Voltage (10 to 100% O <sub>2</sub> )	0,9 V
	Maximum s/c Current (10 to 100% O <sub>2</sub> )	0,5 A

## Cross sensitivities

Toxic gases at TLV levels will have no cross-sensitivity effect on NT-O3-SLI3 oxygen sensors. At very high levels (i.e. percent levels), highly oxidising gases (e.g. ozone, chlorine) will interfere to the extent of their oxygen equivalent, but most other commonly occurring gases will have no effect.

## Warranty and warning

Use within specified conditions.

Sensor characteristics must be measured in clean air without noise gases.

Electrode pins must be correctly connected. Wrong connection does not allow correct functions.

Do not apply voltage directly to electrode pins.

Do not bend pins.

Do not solder to electrode pins directly. Use exclusive sockets.

Do not use contact grease on electrode pins.

Do not put excess strength on electrode pins.

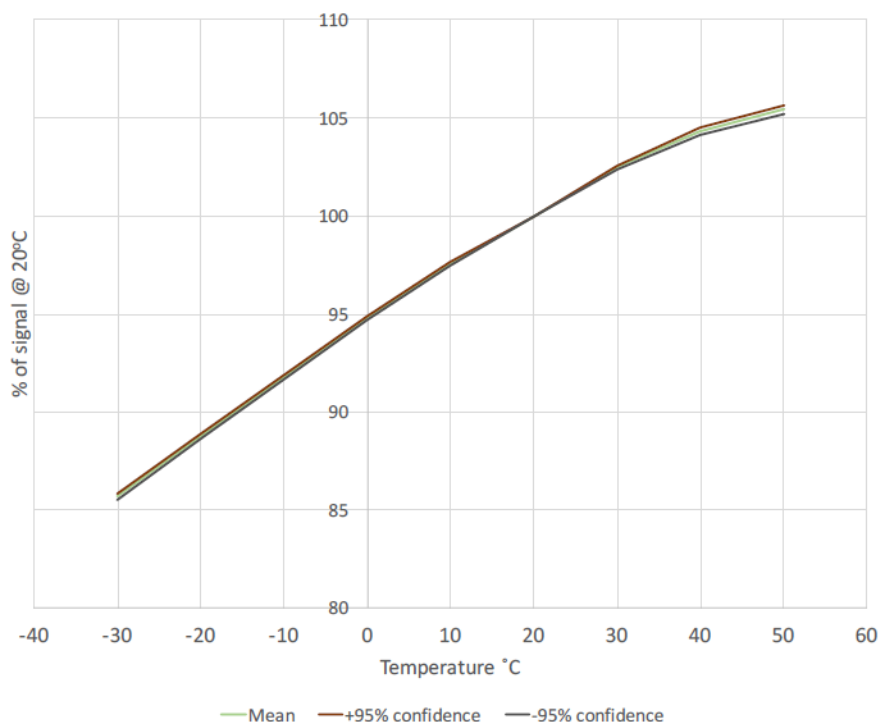
If sensor housing is damaged or scratched, do not use sensor.

Do not blow organic solvents, paints, chemical agents, oils, or high concentration gases onto sensor.

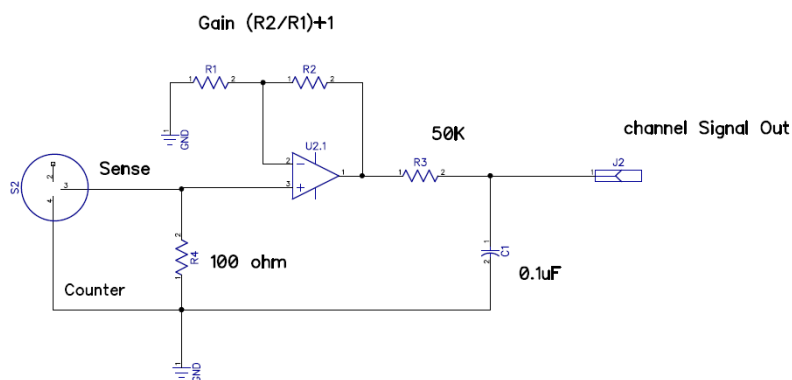
Do not disassemble or change any parts.

If sensor is used under irregular atmosphere, contact us for assistance.

## Temperature dependency



## Recommended Circuit Diagram



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. In case of modification of the product, N.E.T. disclaims all liability.

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