

“Nano 3” Low Cost High Performance Carbon Monoxide Sensor

Suitable for domestic carbon monoxide detectors, multivariant fire alarms and other applications

- A high quality, long life, stable, easy mounting and cost-effective solution for detection of highly poisonous carbon monoxide.
- Miniature two electrode electrochemical cell designed for the detection of carbon monoxide in the domestic environment.
- Ideal for all forms of domestic carbon monoxide alarms including self-contained battery powered CO detectors.
- Applications include domestic and industrial carbon monoxide detection, car parks, and fire detectors.
- UL2075 recognized component.

PERFORMANCE	Output Signal	8±3 nA/ppm
	Measurement Range	0-500ppm
	Maximum Overload	5000ppm
	Response Time (T90)	<40 seconds
	Baseline Offset (clean air)	-2ppm to +2ppm
	Zero Shift (-20°C to +52°C)	<+5ppm
	Linearity	±5%
	Repeatability	<5%
	Orientation	All

As received performance, measured at 20 °C, 40% rH

ENVIRONMENTAL	Temperature Range	-20°C to +52°C
	Pressure Range	1 Atmosphere -20% to +10%
	Humidity Range	Continuous: 15% to 90% Intermittent: 0% to 99%
	Recommended Storage Conditions	+10°C to +30°C, 40% rH (shorted)

ELECTRICAL	Bias Voltage	∅ volts
	Offset Voltage	<2mV (Recommended)
	Recommended Load Resistor	330 Ω

LIFETIME	Long term baseline drift	∅ ppm
	Sensitivity drift	< 6% reduction in output per year
	Operating life	10 years

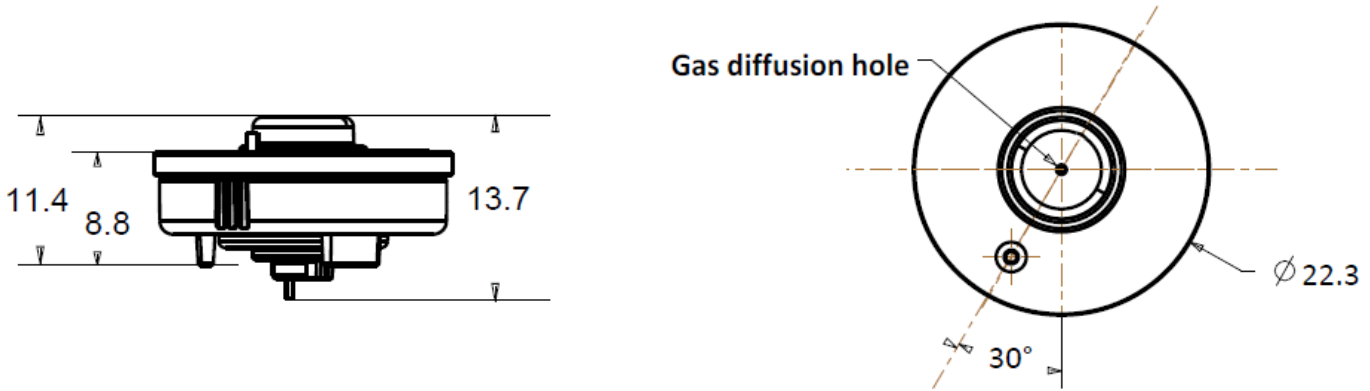
CROSS SENSITIVITY INFORMATION	Gas	Concentration	Exposure Time	Equivalent
		(ppm)	(mins)	Reading (ppm)
	Carbon Monoxide	100	5	100
	Ethanol	2000	20	0
	Ethanol	200	120	0
	HMDS	10	40	0
	Nitric Oxide	50	5	0
	Hydrogen	100	10	<10
	Carbon Dioxide	5000	5	0
	Sulphur Dioxide	50	5	0

Nano 3 sensors are designed to respond to Carbon Monoxide, they will also respond to some degree to various other gases. The table above is not exclusive and other gases not included in the table may still cause a sensor to react. The cross-sensitivity data shown above does not form part of the specification and is supplied for guidance only. Values quoted are typical for the Nano 3, individual cells may show a small degree of variation.

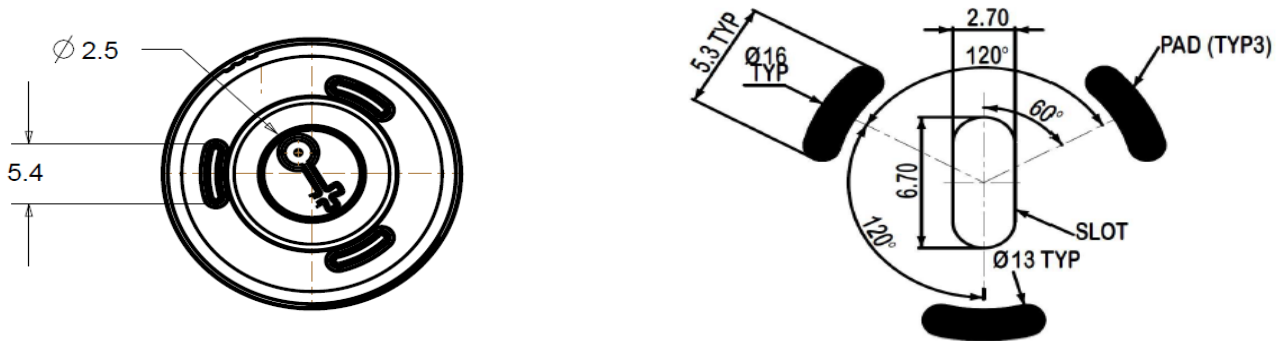
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DIMENSIONS (mm)



RECOMMENDATION PCB FOOTPRINT



Recommended Applied Downforce between cell and PCB contact: 7 +/- 2N

The technology and chemistry involved in the design and manufacture of electrochemical carbon monoxide sensors can fail to meet specification without warning. While Pace Sensors Limited make every effort to ensure the reliability of the sensors, we recommend that all sensors and products incorporating sensors are checked for response to gas before use.

Note: All measurements taken at 25°C at a humidity of between 30% and 50%rH and at atmospheric pressure unless otherwise stated. All measurements made on cells less than 6 months after manufacture.

PACE SENSORS

Note: Specifications are subject to change without notice

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