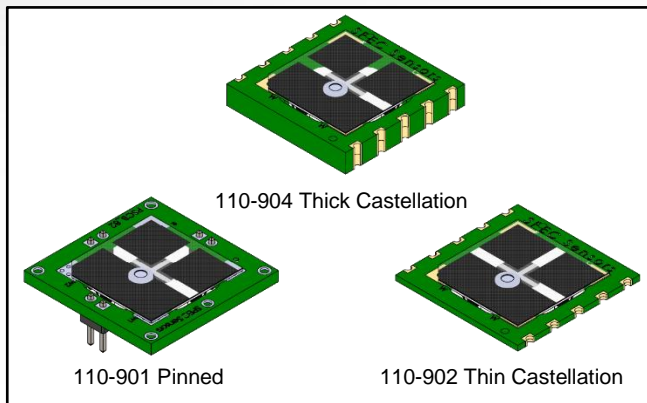
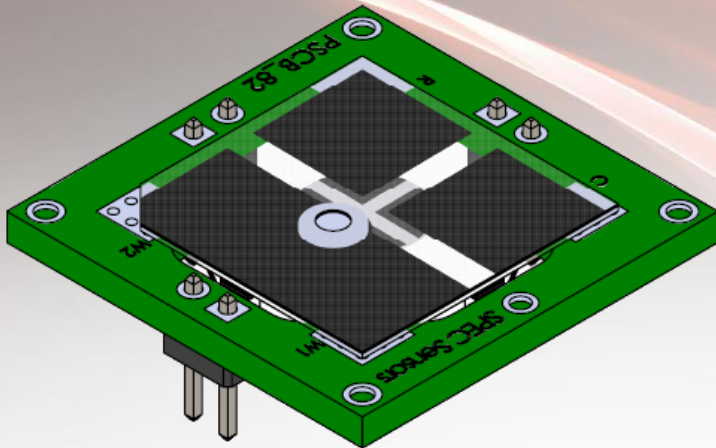


Respiratory Irritant (RESP) Sensor

110-9xx



Interlink Electronics Screen Printed Electrochemical sensor (SPEC Sensor™) revolutionizes the current state of the art, enabling new applications in consumer, medical and industrial safety. Interlink Electronics offer the performance of the best quality electrochemical sensors at a fraction of the price. The 110-9xx family RESP sensors are small and low-profile, facilitating easy integration into wireless, portable, and other IoT solutions. These sensors are ideal for health, environmental, industrial, and residential monitoring, because of their high performance, low cost, and small size. IE'S RESP Sensor are available in three packages (110-901, 110-902, 110-904).

FEATURES

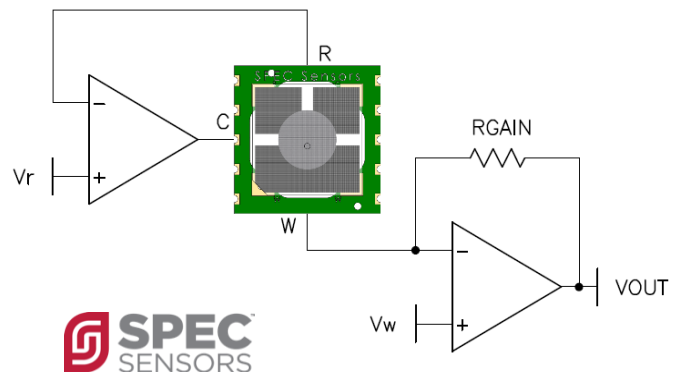
- Small Size & Low Profile
- Improved stability and low ppb sensitivity
- Accurate & Linear Response
- Long Life (10 +years)
- Fast Response
- Detection of respiratory irritant gases:NO2, Ozone, Chlorines, SO2, H2S and odorous gases.
- Ultra-Low Power < 50 uW max
- ROHS Compliant

APPLICATIONS

- Outdoor Air Quality
- Indoor Air Quality
- Weather Stations
- Internet of Things
- Smart Homes
- Leak Detection
- HVAC Ventilation Control
- Telemedicine Equipment

The diagram below shows the basic measuring circuit for the 110-9xx. The sensor generates an electric current which is converted into output voltage (Vout) using a linear circuit like the one shown.

Notes: $V_{bias} = V_w - V_r$

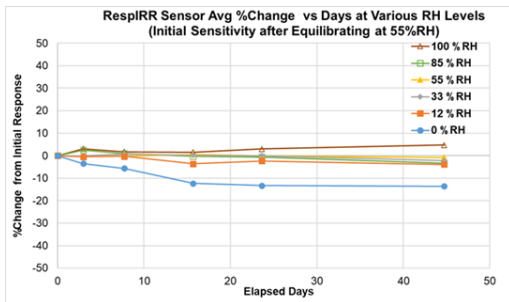


SPECIFICATIONS

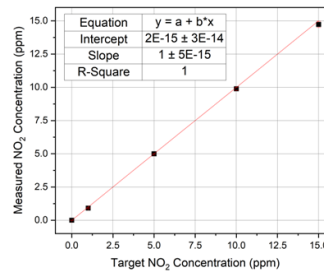
Parameter	Typical Value	Unit	Notes
Measurement Range (calibrated as NO ₂ equivalents)	0 to 20	ppm	1,2,3,5
Lower Detection Limit	0.02	ppm	1,2,5
Resolution	0.01	ppm	1,2,5
Accuracy	± 1	%	1,5
Response Time – T (90)	< 60	seconds	1,5
Sensitivity Range	-50 ± 25	nA/ppm	1,5
Expected Operating Life	10	years	1
Operating Temperature Range	-30 to 55	°C	3,5
Operating Humidity Range	10 to 95	%	3,4,5
Operating Pressure Range	0.8 to 1.2	atm	3
Operating Bias Range	-200	mv	
Power Consumption	10 to 50	uW	2

1. At standard conditions (25 °C, 50% RH, 1 atm), unless otherwise indicated.
2. Depends on circuit design.
3. Recommended operating range. The sensor may be damaged, and warranty voided if operated outside the specified range. For the best optimum accuracy operate sensor at -20 to 40 °C and 15 to 90% RH.
4. Non-condensing.
5. NO₂ equivalents.

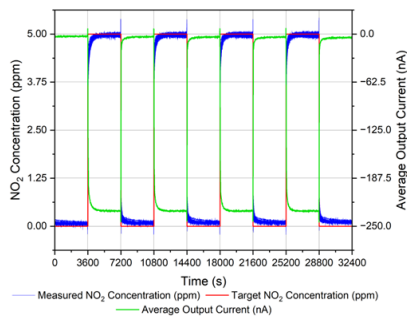
KEY CHARACTERISTICS



Long Term Stability



Linearity



Accuracy

Information furnished by Interlink Electronics is believed to be accurate and reliable "as is". However, no responsibility is assumed by Interlink Electronics for any use of such information, nor for any infringements of patents or other rights of third parties that may result from its use. Specifications subject to change without notice. No license is granted by implication or otherwise under any patent or patent rights of Interlink Electronics. Trademarks and registered trademarks are the property of their respective owners.