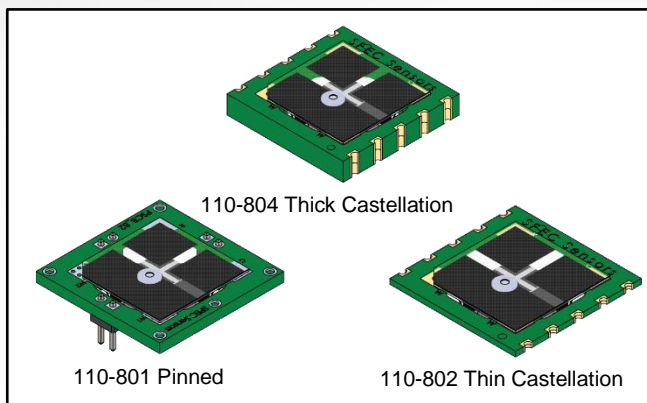
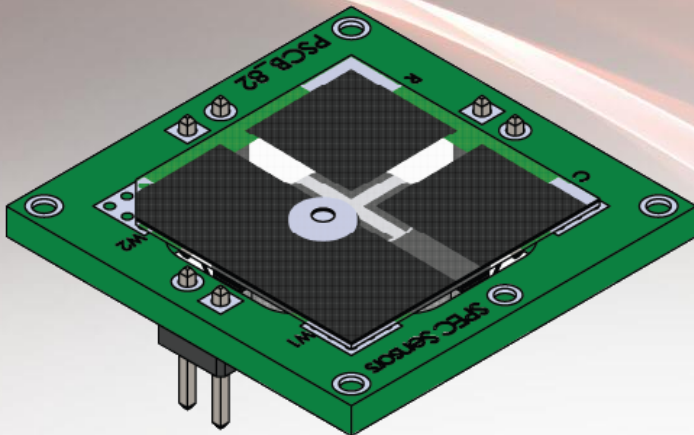


# Indoor Air Quality (IAQ) Sensor

## 110-8xx



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 110-8xx family IAQ 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 IAQ Sensor are available in three packages (110-801, 110-802, 110-804).

### FEATURES

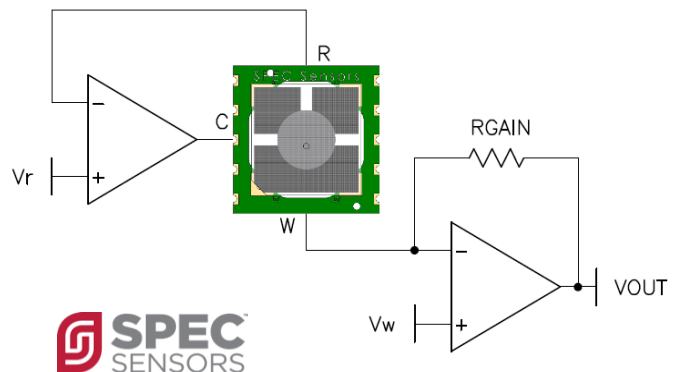
- Small Size & Low Profile (20 x 20 x 3 mm)
- Sensitive in the ppm range
- Not poisoned by sulfides, Chlorides, Ammonia
- Detection of Poor Air Quality gases: Sulfides, Alcohols, Ammonia, Odorous gases, and CO
- Accurate & Linear Response
- Long Life (10 +years)
- 100% Factory Tested
- Fast Response
- Ultra-Low Power < 50 uW max
- ROHS Compliant

### APPLICATIONS

- Outdoor Air Quality
- Indoor Air Quality
- Weather Stations
- Internet of Things
- Smart Homes
- Early Fire Detection
- Leak Detection
- Ventilation Control

The diagram below shows the basic measuring circuit for the 110-8xx. The sensor generates an electric current which is converted into output voltage (Vout) using a linear circuit like the one shown.

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

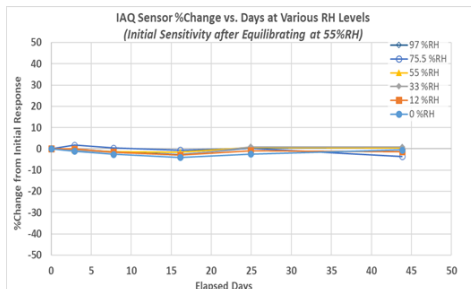


## SPECIFICATIONS

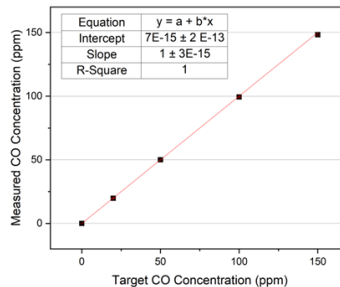
Parameter	Typical Value	Unit	Notes
Measurement Range	0 to 100	ppm	1,2,3,5
Lower Detection Limit	0.2	ppm	1,2,5
Resolution	0.1	ppm	1,2,5
Accuracy	± 0.5	%	1,5
Response Time – T (90)	< 30	seconds	1,5
Sensitivity Range	20 ± 10	nA/ppm	1,5
Expected Operating Life	10	years	1
Operating Temperature Range	-30 to 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	150	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. CO equivalents.

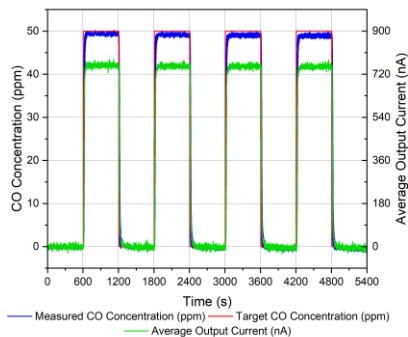
## KEY CHARACTERISTICS



Humidity Effect



Linearity



Accuracy

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