

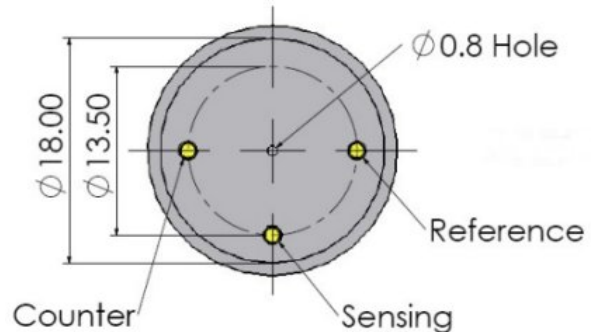
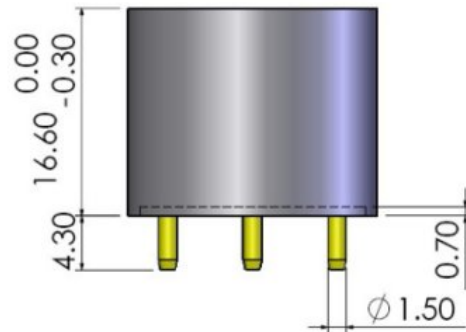
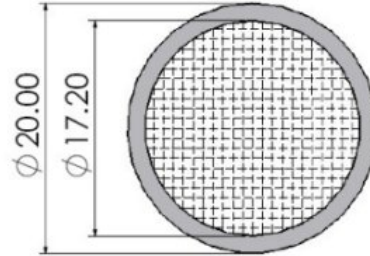
e2v

EC410 Electrochemical Sensor Oxygen



OUTLINE (Dimensions in millimetres)

Tolerances ± 0.15 mm unless stated.



PERFORMANCE

Range	0 - 30% O ₂
Over-range.....	100% O ₂
Resolution.....	0.1% O ₂
Expected lifetime (see note 1)	>36 months
Output signal in 20.9% O ₂	300 – 400 μ A
Output signal in N ₂	40 μ A
Linearity	see Fig. 3 (as predicted - inverse log response)
Response time (T ₉₀)	<15 s
Temperature range	-20 to +55 °C
Temperature coefficient (see Fig 1)	<0.5% signal/°C
Pressure range	90 - 110 kPa (nominal)
Pressure coefficient	0.07% typical signal per kPa change
Humidity range.....	15 - 95% RH (non-condensing)
Long-term output drift	<2% change in output per month
Operating circuit (see note 2).....	see Electrochemical Sensors Application Note 5

NOTES

1. The sensor lifetime is **not** limited by the mass of a sacrificial anode.
2. This sensor requires a negative bias of -600 mV between the working and reference electrodes.

PHYSICAL CHARACTERISTICS

Label colour	silver
Weight.....	6 g
Dimensions	see outline
Shelf life	6 months

Important Note

Do not solder to the connector pins as this may damage the sensor and thereby invalidate the warranty.

Details on recommended connector pins can be found in the Frequently Asked Questions within the Gas Sensor section of the e2v website.

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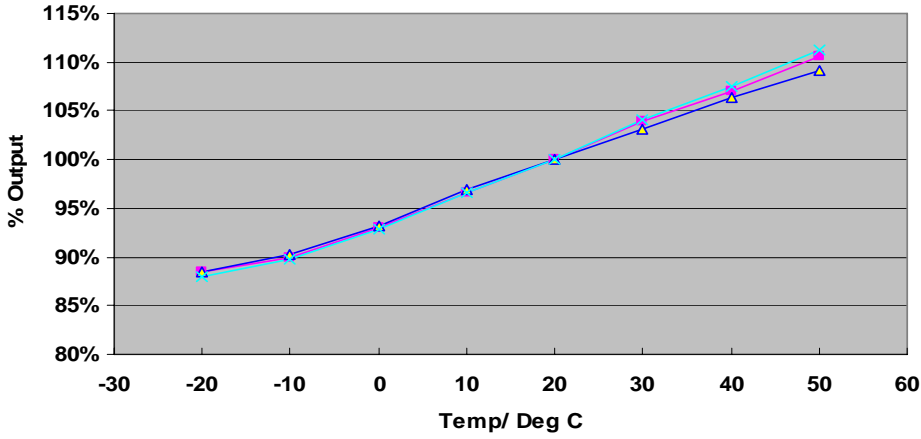


Fig. 1 – EC410 % Sensor Response (c.f. 20 °C) versus Ambient Temperature

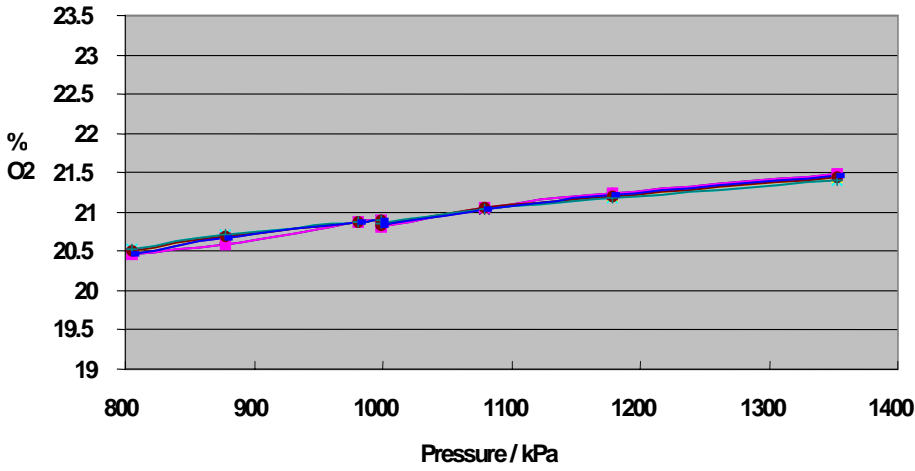


Fig. 2 – EC410 % Oxygen versus Pressure

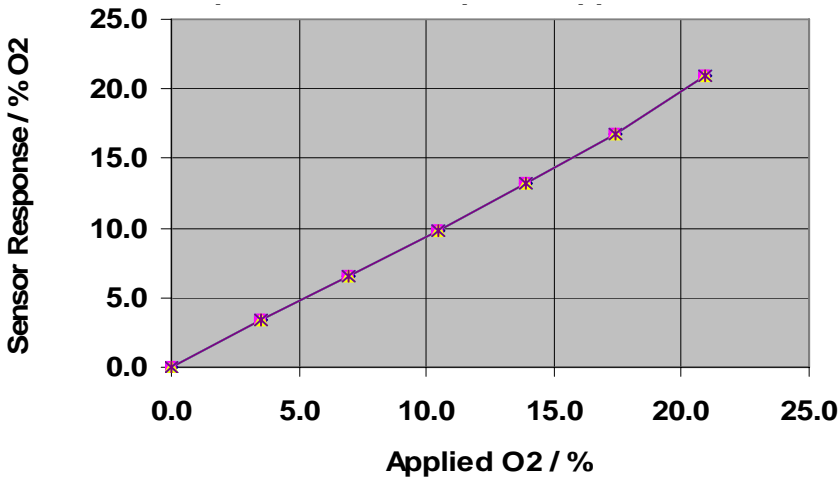


Fig. 3 – Oxygen Sensor Linearity Test – Sensor Response versus Applied Oxygen