

ES4-O2-25%-HH-01

ES4-O2-25%-HH Oxygen Gas Sensor

EC Sense • Oxygen • Amperometric, 3-electrode

The EC Sense ES4-O2-25%-HH is an electrochemical gas sensor for Oxygen detection, with a 0 – 25% vol. range, 0.2 nA/ppm $\pm$ 0.03 nA/ppm sensitivity and T50 < 5 s, T90 < 10 s response. Standard ABS housing at about 6 g for easy pin soldering and fast integration into conventional gas-detection modules Well suited to industrial safety, leakage detection and emission monitoring, with a designed lifetime of > 3 years.

Specifications

Operating Principle	Amperometric, 3-electrode
Bias Voltage	-400 mV to -600 mV
Range	0 – 25% vol.
Maximum Overload	30% vol.
Resolution	0.01% vol. (16-bit ADC)
Sensitivity	0.2 nA/ppm $\pm$ 0.03 nA/ppm
Response Time	T50 < 5 s, T90 < 10 s
Zero Current	40-60 μ A
Recommended Load	220 Ω
Operating Temp.	-40 °C to +55 °C
Operating Humidity	15-95% RH non-condensing
Operating Pressure	700 to 1200 hPa
Storage Temp.	0 °C to 20 °C (Optimum temp. 4 °C to 6 °C)
Housing	ABS
Weight	< 6 g
Long-Term Drift	< 5 %/year
Expected Lifetime	> 3 years
Zero Drift in Clean Air	< 0.2% vol.
Storage Life	12 months
Warranty	12 months

Key Features

- nA power consumption
- Linear output
- RoHS compliant
- Fast response time
- Small size

Typical Applications

- Industrial Safety
- Medical & Health Care
- Food Industry
- Combustion Control

Calibration & Cross-Sensitivity

Calibrated with Oxygen standard gas. Cross-sensitivity to other gases may exist — see the cross-sensitivity table in the datasheet.