



Product Data Sheet

LEL SENSOR 0~100% LEL-D (4-SERIES) (P/N:090-DX00-000)

• Description

The sensor is designed specifically for the measurement of methane concentration in gas phase. It can be used as the pin-to-pin replacement of the standard 4-series LEL sensors.

• Performance Characteristics

Nominal Range: 0~100% LEL

Maximum Overload: 100% LEL

Sensitivity (20°C) : 12.0 ± 2.0 mV/%CH₄

Response Time (T90): < 30 s

Baseline (20°C): $\leq \pm 20$ mV

Resolution: 1% LEL

Linearity: %FSS $\pm 5\%$

Recommended Voltage: 2.5/3.0 ± 0.02 VDC

Operating Current: 62 ± 5 mA

Max Power Consumption: 201 mW

Humidity Drift: < 1% LEL @ 90%RH (25°C)

Temperature Drift: < 3% LEL (-20°C ~ 50°C)

• Environmental

Temperature Range: -30°C ~ 50°C

Pressure Range: 1 atm $\pm 20\%$

Humidity Range: 0% ~ 90%RH non-condensing

• Life Time

Long Term Baseline Drift: < 3% LEL/month

Long Term Sensitivity Drift: < 3.5% output signal/month

20% Sensitivity Drift @ 1000 ppm H₂S for 2.5h

40% Sensitivity Drift @ 1000 ppm HMDS for 2.5h

Recommended Storage Temp: -20°C ~ 40°C

Expected Operating Life: > 2 years in clean air

Warranty: 12 months

• Physical Characteristics

Housing Material: 316L stainless steel

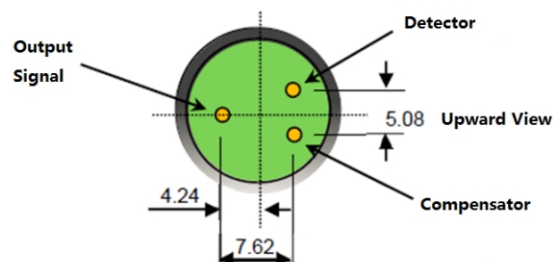
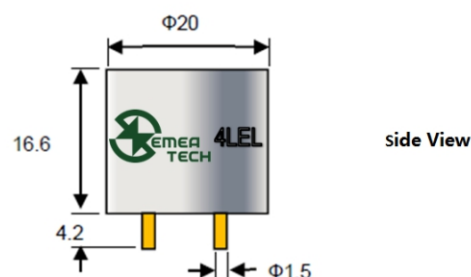
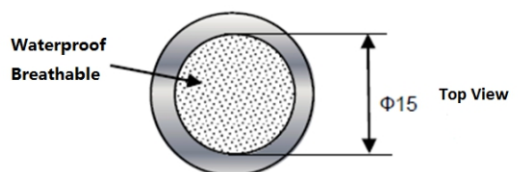
Weight (Nominal): 24 g

Orientation: None

• Installation

Inappropriate use of the pins in product design will affect the sensor functionality. If the sensor is used in extreme environmental conditions, please contact us if you need more details.

Product Dimensions



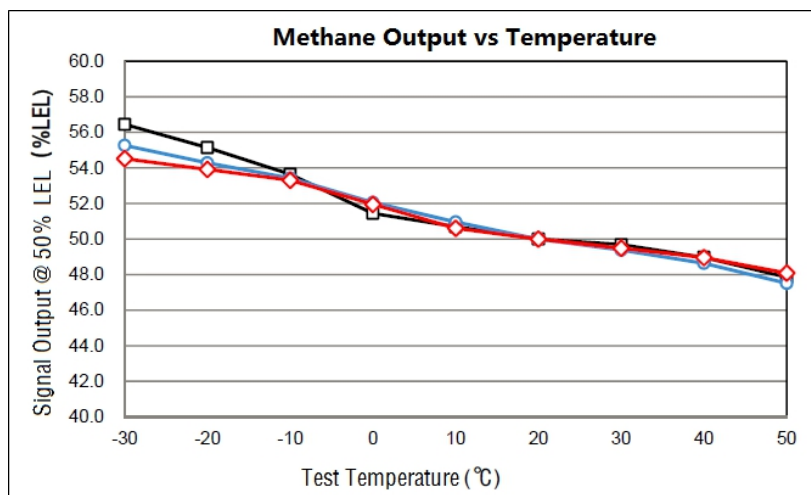
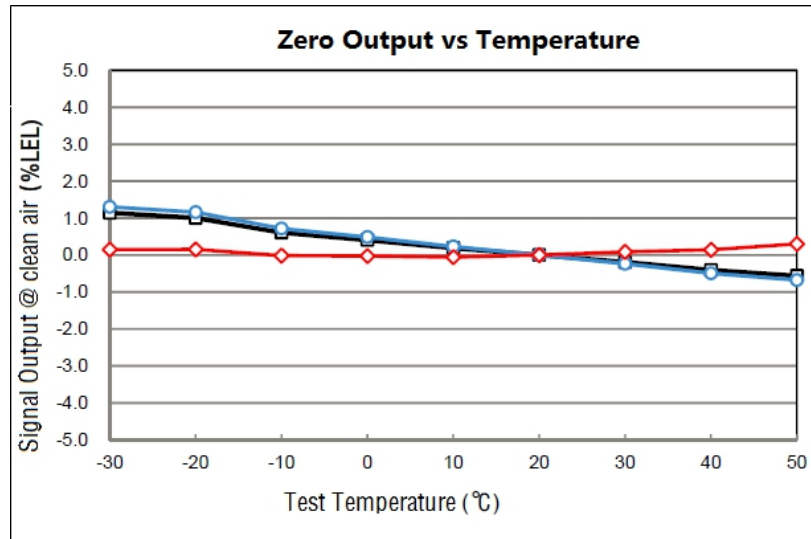
All dimensions in mm

All tolerances ± 0.15 mm unless otherwise stated

Note

The performance data in this document is conducted by using SemeaTech recommended test circuitry and test environment at 20°C, 50%RH, 1 atm, 50% LEL methane and 500 mL/min flow rate.

• Temperature Data



• Safety Note

The sensor is designed to be used in certain instruments for life critical applications. To ensure the sensor functioning per its specifications inside the instrument, it is required to read the instrument user's guide carefully and comply with the calibration procedures by using certified target calibration gas before each use. Failure to do so may cause serious injury and fatality.

It is highly recommended for customers to validate the sensor performance using this document as a reference for their product designs or applications.

This product data sheet is used for reference only.
SemeaTech is committed to provide its customers the most accurate data based on its best knowledge.
SemeaTech does not provide product warranty for failure to use its product in accordance with product specifications described in the data sheet, or other misuse, abuse, negligence to the product.