Product Data Sheet

ELECTROCHEMICAL CO-20000 SENSOR (4 SERIES) (P/N:051-1000-000)

• Description

The sensor is designed for the measurement of CO concentration in gas phase. It can be used as the pin to pin replacement of the standard 4 series electrochemical CO sensor.

• Performance Characteristics

Nominal Range: 0~20000 ppm
Maximum Overload: 20000 ppm
Sensitivity(20 ℃) : 0.0175 ± 0.0075 μA/ppm
Response Time (T90): ≤ 30 s
Zero Signal(20 ℃) : < ±0.2 μA
Baseline Shift (- 40 ℃ ~ 50 ℃) : <10 ppm
Resolution: 10 ppm
Linearity: Linear up to 20000 ppm
Bias Voltage: 0 mV

• Environmental

Temperature Range: -40 ℃ ~ 50 ℃
Pressure Range: 1 atm ± 10 %
Humidity Range: 15 % ~ 95 %RH non-condensing

• Life Time

Long Time Output Drift: < 2 % signal/month
Recommended Storage Temp: 10 ℃ ~ 30 ℃
Expected Operating Life: 2 years in clean air
Storage Life: 6 months in original packaging
Warranty: 12 months

• Intrinsic Safety Data

Maximum Current at 20000 ppm CO: < 0.2 mA
Maximum O/C Voltage: 1.3 V
Maximum S/C Current: <1.0 A

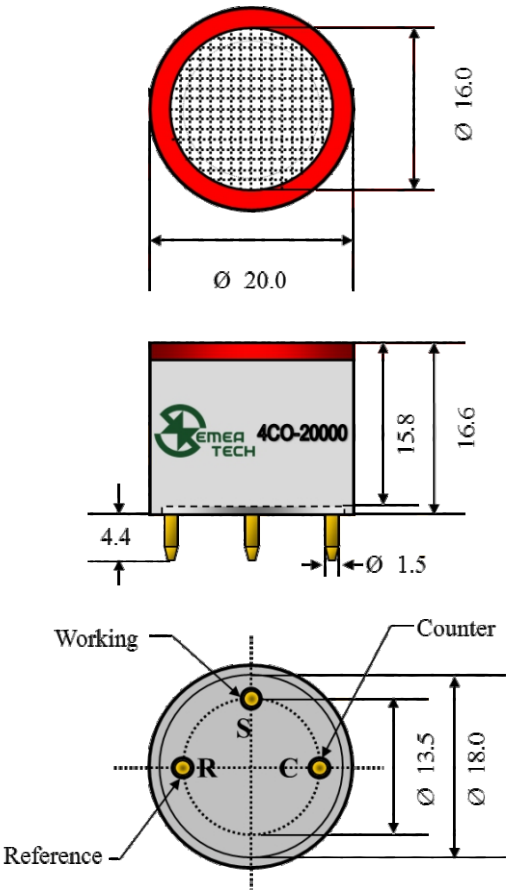
• Physical Characteristics

Housing Material: ABS
Weight (Nominal): 5 g
Orientation: None

• Installation

Output signals from the sensor pins are different. Inappropriate use of the pins in product design will affect the sensor functionality. Exposure to high concentrations of solvent vapors should be avoided under any condition. Mechanical overstress may cause deformation or cracks of the plastic enclosure of the sensor. If the sensor is used in extreme environmental conditions, please contact SemeaTech for more details.

Product Dimensions



All dimensions in mm
All tolerances ±0.10 mm unless otherwise stated

Note

The performance data in this document is conducted by using SemeaTech recommended test circuitry and test environment at 20 ℃, 50 %RH and 1 atm.

Sensor performance varies under different environmental conditions, please contact SemeaTech for more details.

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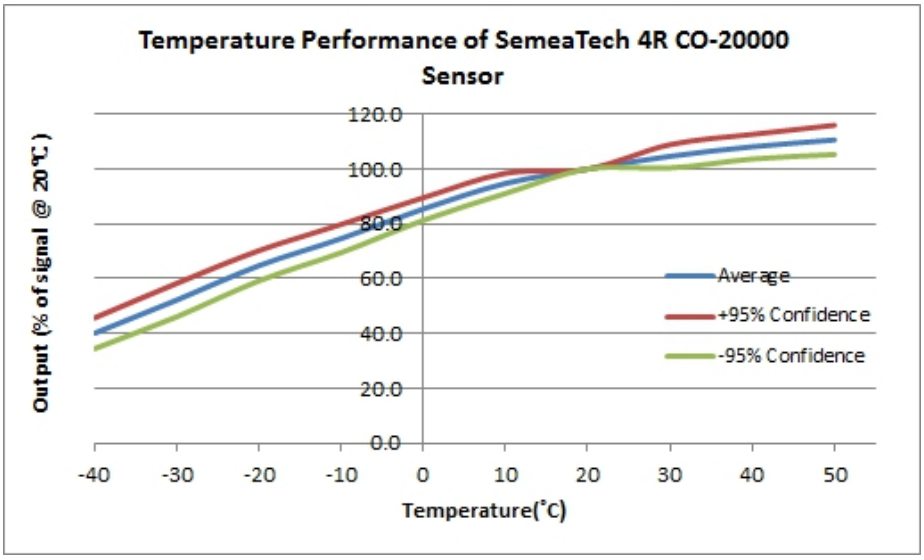
• Cross-Sensitivity Data

Gas	Concentration (ppm)	Output signal (ppm CO equivalent)
Hydrogen Sulfide	15	0
Sulfur Dioxide	5	0
Nitric Oxide	35	-10~0
Nitrogen Dioxide	5	0
Ammonia	50	0
Hydrogen	100	<50
Ethylene	100	<30
Chlorine	10	0
Ethanol	200	0

Note: The cross sensitivity are including but not limited to the above gases. It may also respond to other gases.The data in the table above may vary from different batches of sensors and the changes of test environment. Calibration with cross sensitivity gas is not recommended.

• 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. Please do not open the housing because the electrolyte stored inside is harmful.

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 date 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.

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