

SENSALERT IR

Electrochemical Sensor Datasheet

Carbonyl Sulfide (COS)

OPERATION / DESCRIPTION

The Carbonyl Sulfide (COS) gas detector is a unique design combining intrinsically safe and explosion proof approved standards. This allows for quick and simple field installation of a calibrated sensor module into the gas detector in hazardous locations with power applied.

The Carbonyl Sulfide sensor module retains operating parameters and calibration settings. Once the sensor module is plugged into the SensAlert IR transmitter, the sensor module automatically uploads current information to the control board in the transmitter. Changing to a different type of gas sensor is accomplished by only changing the sensor module board. The existing housing and wiring remains intact.

An industry standard 4-20 mA analog output provides remote alarm, fault and calibration signals. The entire unit utilizes self-diagnostics, identifies problems and continuously transmits status.

The Carbonyl Sulfide sensor can be used in conjunction with the SensAlert IR explosion proof transmitter.

FEATURES

- Compact low cost design
- Intrinsically safe & explosion proof
- Universal control board
- Interchangeable sensor modules for combustible, oxygen and toxic gases
- Temperature compensated sensor
- Stand alone gas detector with 4-20 mA output
- Corrosion resistant 316 stainless steel housing construction
- Long life electrochemical sensors
- Can be coupled with SensAlert IR Transmitter
- Optional heater with closed loop temperature control ensures accuracy in low temperature applications



APPLICATIONS

- | | |
|------------------|------------------------|
| • Petrochemical | • LNG & LPG Processing |
| • Medical | • Waste Water |
| • Semi Conductor | • Water Treatment |
| • Mining | • Chemical |
| • Pulp and Paper | • Automotive |
| • Offshore | • Pharmaceutical |
| • Fertilizer | • Refrigeration |

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Sensalert IR - EC Sensor Specifications

Model:

Carbonyl Sulfide (COS) gas detector

Part Number:

820-9908-01

Range:

0-100 PPM

Detection Method:

Electrochemical

Sampling Method:

Diffusion

Optional sample draw (requires 1 liter per minute sample flow rate)

Output (Analog):

4-20 mA (source type), max. 1000 Ohm load at 24 VDC supply voltage

Output (Digital):

Interactive Interface Available On The Calibration (White) Wire

Construction:

316 Stainless Steel Explosion Proof

Dimensions:

3.5" H x 2.1" W

Accuracy:

+/- 5%

Lower Detectable Limit:

1% of Full Scale (Under Ideal Conditions)

Recommended Minimum Alarm Setting:

10% of Full Scale

Temperature Rating:

Toxic gas sensors temperature range may vary. Please consult with Sensidyne.

Approved Ambient Temperature (Ta): -40°C to +50°C

Operating Voltage:

24 VDC — Operating range: 8 to 32 VDC measured at the detector head

Power Consumption

1.6 Watt Max.

Max. Current Draw:

50 mA (at 24 VDC)

Approvals:

18V-32 VDC

CSA: Class 1, Div 1, Groups B,C,D, T6 (Flameproof Version)

IECEx: Ex d IIB+H2 T4 Gb (Flameproof Version)

10.4-26.34 VDC w/ IS Barrier

CSA: Class 1, Div 1, Groups A,B,C,D,T4 (Intrinsically Safe)

IECEx: Exia IIC T4 Ga (Intrinsically Safe)

Installation Category:

Cat. I, Pollution Degree 2

CURRENT OUTPUT

0.0 mA

0.8 mA

1.2 mA

1.6 mA

2.0 mA

2.2 mA

4-20 mA

4.0 mA

5.6 mA

8.0 mA

12 mA

16 mA

20 mA

>20 mA

STATUS

Unit Fault

Unit warm up

Zero drift fault

Calibration fault

Unit spanning

Unit zeroing

Normal measuring mode

Zero gas level

10% Full Scale

25% Full Scale

50% Full Scale

75% Full Scale

Full scale

Over-range

