

CO 500 Satellix

Electrochemical Gas Sensor for Carbon Monoxide



3-electrode sensor with EPROM for industrial safety applications

Class leading stability | Highly selective | Fast response | Very stable baseline

| Performance Characteristics / PSDS | |
|--|---------------------------------|
| Measurement Range | 0 – 500 ppm |
| Maximum Range | 1000 ppm |
| Sensitivity | 80 ± 20 nA/ppm |
| Response Time (T ₉₀) | ≤ 30 s at 2 min gas exposure |
| Baseline (in clean air) | < ± 150 nA |
| Baseline (in clean air) (at midpoint sensitivity) | < ± 2 ppm |
| Lower Detectable Limit (LDL) | 10 ppm |
| Alarm 1 | 30 ppm |
| Linearity | < 5% of full scale |
| Repeatability | < 2% |
| Product Safety Datasheet (PSDS) | acid electrolyte |

| Operating Conditions | |
|---|---|
| Temperature Range | -20°C to +40°C |
| Humidity Range | 15% to 90% r.h. non-condensing |
| Pressure Range | 800 – 1200 hPa |
| Bias Voltage | no |
| Sensor warm-up time (of sensors with short circuit plug) | 5 s |
| Recommended Orientation | sensor front pointing downwards or sideways |

| | |
|---|--|
| Sensorix PN: AN041S11 Compatible to OEM PN: 9602-5400 | |
| Compatible with Satellite XT transmitters according to the "Satellix Compatibility Declaration" Insert short circuit plug (jumper) in S and R (Remove before installation) IMPORTANT NOTE: Connection should be made via PCB sockets only. Soldering to pins will render your warranty void. All dimensions in mm (± 0.2 mm) Weight: ~7.0 g | Dimensions <p>The diagram shows the sensor from three perspectives: a side view with a 'Sensor Label (45x10mm)', a top view of the PCB socket with pins labeled TEMP, GND, C, S, R, and DATA, and a bottom view showing a diameter of 11.8 mm. Dimensions include a total length of 42.0 mm, a bottom section height of 8.8 mm, and a diameter of 18.1 mm including the label.</p> |

| Lifetime | |
|--------------------------------|---------------------------------|
| Long Term Output Drift | < 5% per 6 months |
| Expected Operating Life | > 48 months in air |
| Recommended Storage conditions | 5 – 20°C in sealed container |

Performance and lifetime data are based on conditions at 20°C, 40 ... 60 % r.h. and ambient pressure.

SAFETY NOTE
 This sensor is designed to be used in safety critical applications. The sensor is compatible with the self-test functionality of the Satellite XT Gas Detector Transmitter. In addition to this electrical diagnostic, Sensorix recommends that the function of the sensor is confirmed by exposure to a suitable test gas (bump check) regularly according to national and local regulations. Failure to carry out such tests may jeopardize the safety of people and property.



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| Cross Sensitivity & Filter | |
|-----------------------------|---------------------|
| Gas concentration | Reading after 5 min |
| Ammonia 100 ppm | 0 ppm |
| Carbon Dioxide 5000 ppm | 0 ppm |
| Chlorine 1 ppm | 0 ppm |
| Ethanol 1000 ppm | 0 ppm * |
| Hydrocarbons (saturated) 1% | 0 ppm |
| Hydrogen 1000 ppm | 350 ppm |
| Hydrogen Cyanide 10 ppm | 0 ppm |
| Hydrogen Sulfide 20 ppm | 0 ppm * |
| Isopropanol 600 ppm | 0 ppm * |
| Methanol 1000 ppm | 0 ppm * |
| Nitric Oxide 100 ppm | 25 ppm |
| Nitrogen Dioxide 10 ppm | 0 ppm * |
| Sulphur Dioxide 2 ppm | 0 ppm * |
| Chemical Filter | Yes |

* Cross sensitivity depends upon filter status and will increase when filter is depleted.

Signals below LDL as well as negative readings will be displayed as zero.

IMPORTANT NOTE:

Interference factors may differ from sensor to sensor, with changing ambient conditions and with lifetime. It is not advisable to calibrate with interference gases. This table does not claim to be complete. The sensor may also be sensitive to other gases.

Temperature performance

Temperature dependence is compensated with microprocessor.

Poisoning

Sensorix cells are designed for operation in a wide range of environments and harsh conditions. However, it is important that exposure to high concentrations of solvent vapors is avoided, both during storage, fitting into instruments, and operation. When using sensors with printed circuit boards (PCBs), degreasing agents should be used before the sensor is fitted.

Recycling

At the end of the product's life, do not dispose of any electronic sensor, component, or instrument in the domestic waste, but contact the vendor or Sensorix for disposal instructions. Sensorix will take back sensors for professional recycling.

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Characteristics on this data sheet outline the performance of newly supplied sensors.

