



SIEDEPAR and SIEDEPAR RS485 CO& NO₂ Detectors

This new range of detectors is designed with a new type of electrochemical sensor with low cost and big performance that allows a useful life of up to 5 years with almost no maintenance.

Specially designed for use in car parks. Two models in two versions are available:

A model for CO detection with a range of 0-300 ppm and a resolution of ± 1 ppm, and a model for NO₂ detection with a 0-20ppm range and a resolution of ± 0.5 ppm, available with a 4-wire RS485 communications format and a 3-wire format, addressable in both cases.

In the detector, calibration and maintenance tasks have been simplified. Algorithms have been created for gain and zero automatic calibration through the use of software, as well as an algorithm and a special hardware that allows verifying sensor sensibility without the need to apply gas.

The composition of its electrolyte is respectful with the environment. Its structural shape cancels the risk of the electrolyte leaking. It does not use up active materials in its electrodes during operation, has a lower sensitivity to interfering gases, long life and good stability and precision.

This new range of detectors is compatible with the new SIEDEPAR control panels in its 3-wire version and with SIEDEGAS control panels in their SIEDEPAR RS485 version with 4 wires.

Compliant with UNE 23.300:1984 (CO) STANDARD
SIEDEPAR CO Certificate LOM 14MOGA3084
SIEDEPAR CO RS485 Certificate LOM 14MOGA3168

Certificate of Conformity from the Ministry of Industry (CO):
SIEDEPAR CO CDM-0080011 (SIEDEPAR) & CDM-0090011 (SIEDEPAR Mini)
SIEDEPAR CO RS485 CDM-0110010 (SIEDEGAS) & CDM-0110011 (SIEDEGAS Mini)

SIEDEPAR and SIEDEPAR RS485 Detectors

Technical characteristics of the CO/NO₂ detector, SIEDEPAR & SIEDEPAR RS485

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|---|---|
| Technology. | Microprocessor and electrochemical sensor. |
| Power supply tension. | 9V to 15V DC. |
| Consumption. | 14mA (standby) 24mA (alarm). |
| Measuring range. | From 0 to 300ppm CO, and 0-20ppm NO ₂ . |
| Resolution. | ±1ppm CO, ±0.5ppm NO ₂ . |
| Repeatability. | ±1% and 3% full scale respectively. |
| Linearity. | Linear throughout its full scale. |
| Calibration gas and recommended concentration. | Precise mixture 150ppm CO + N ₂ 150ml/min. Precise mixture 10ppm NO ₂ + N ₂ 1000ml/min. |
| Sensor useful life. | >5 years in normal working conditions for CO and 3 years for NO ₂ . |
| Relative humidity. | From 5% to 90% RH, without condensation. |
| Atmospheric pressure. | ±10%. |
| Operational temperature. | -10°C to +60°C. |
| T90 response time. | <90 s CO and <30 s NO ₂ . |
| Parallel communication. | 3 wires, own addressable protocol (1 to 16) / 4 wires SIEDEPAR RS485. |
| Protection level. | IP20. |
| Materials. | ABS. |
| Weight (gr) and measurements, diameter/height (mm). | 146, 90 X 42 without base / 90 X 74 with base. |
| Installation height. | 1.8 / 2 m from floor CO and 1 m from floor NO ₂ . |
| Approximate coverage. | 200 m ² CO (following current standards), 100 m ² NO ₂ . |

Standard conditions 20° ± 2°C, 40% ± 10% RH

CROSS SENSITIVITY DATA

| GAS | FORMULA | CONCENTRATION | CO DTR. RESPONSE | NO ₂ DTR. RESPONSE |
|--------------------------|------------------|---------------|------------------|-------------------------------|
| Ammonia | NH ₃ | 25 ppm | 0 ppm | 0 ppm |
| Carbon Dioxide | CO ₂ | 5000 ppm | 0 ppm | 0 ppm |
| Carbon Monoxide | CO | 30 ppm | 30 ppm | 0 ppm |
| Chlorine | Cl ₂ | 1.0 ppm | 0 ppm | 0 ppm |
| Unsaturated Hydrocarbons | - | 1% | 2 ppm | 0 ppm |
| Hydrogen | H ₂ | 100 ppm | 20 ppm | 0 ppm |
| Hydrogen Sulfide | H ₂ S | 10 ppm | 0 ppm | -7 ppm |

The crossed sensitivity values are based on test on a small quantity of detectors. Detectors could show a different behavior depending on environmental conditions or production batch.