Gas Sensor ME 1250

Cabon monoxide CO / Nitrogen dioxide NO_2

Combination sensor for petrol and diesel exhaust gases

Müller-Elektronik AG
Gaswarnanlagen & Wasserqualität

Data Sheet

Version 09/2022, Technical changes reserved

CO / NO_2

Gas	Carbon monoxide Nitrogen dioxide
Formula	CO NO_2
CAS number	630-08-0 10102-44-0
Max. workplace concentration	30 ppm 1.5 ppm
Relative density	0.97 2.80
Appearance	Colorless / odorless Colorless / pungent odor
Hazards	Toxic Dizziness

- **Sensor for combined measurement of carbon monoxide and nitrogen dioxide**
- **Automatic zero point calibration**
- **Active noise reduction on the output signal**
- **Linear measurement signal depending on the gas concentration**
- **High response sensitivity with a short response time**
- **Selective and reliable measurement with stable measuring signal and zero point**
- **Temperature compensated measurement**
- **Long service life due to the large activity reserve of the measuring cell**

The ME1250 Gas Sensor is a remote measuring unit for monitoring gas concentration of both carbon monoxide and nitrogen dioxide. These toxic gases are mainly found in the exhaust gas from gasoline engines (carbon monoxide) and diesel engines (nitrogen dioxide). The main areas of application are exhaust gas monitoring in garages, underground car parks, multi-storey car parks, car parks, car silos and car repair shops. The sensor is used to control ventilation and gas safety alarm systems according to local building code requirements.

The microprocessor-controlled electronics of the sensor, adapted to the specific properties of the measuring cell, enable fast and reliable signal processing. The measured gas concentration is transmitted to a gas control panel, which can manage a large number of distributed gas sensors.

Due to bus communication, only one cable is required, which can be continued from sensor to sensor. The ME 1250 Gas Sensor is also available with an analogue output signal of 4…20 mA. In analogue mode, the output signal is limited to the higher of the two readings.

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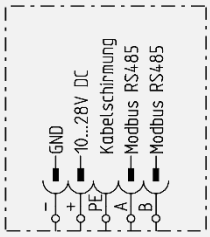
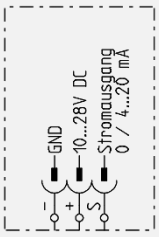
Technical Specifications

Measurement method	Electrochemical	
Measuring range	**CO**: 0…300 ppm **NO_2**: 0…5 ppm	equals 0…150% TOX other measuring ranges on request
Alarm thresholds	Alarm 1 (ventilation): **CO**: 50 ppm, **NO_2**: 0.8 ppm Alarm 2 (evacuation): **CO**: 200 ppm, **NO_2**: 2.0 ppm	recommendation
Lifespan in air	**CO**: up to 3 years **NO_2**: up to 2 years	according to cell manufacturer
Break-in period	4 h	according to cell manufacturer
Response time t_{90}	< 60 sec	
Operating voltage	10…28 VDC	nominal 24 VDC
Ambient temperature	-20…+40 °C	
Humidity	15…90% rF	non-condensing
Mounting height	150 cm above floor	
Casing	ABS plastic Light gray RAL 7035 81 x 121 x 56 mm 250 g	
Cable entry	M20	
EU conformity	CE mark including EMC test	

Versions

Article code	**12BUS-CO/NO2-32**	**1250-CO/NO2-32**
Description	ME 1250 Bus	ME 1250 Analogue
Output signal	Bus communication with Control Panel	Analogue 4…20 mA Load max. 800 Ω at 24V input
Connection	4-core cable U72M 1x4x0.6 mm Shielded 	3-core cable U72M 1x4x0.6 mm or CY 0.5 mm² Shielded 
Topology	Bus, tree or star topology	Star topology
Power	< 0.15 W	< 0.8 W

Special Versions

Article code	**Specifications**
1251-CO/NO2-32	Analogue output signal 0.2…1.0 mA
1252-CO/NO2-32	Analogue output of both readings 2x 0.2-1.0 mA, requires 4-wire cable
1253-CO/NO2-32	Analogue output signal 4…20 mA using 2-wire cable

Accessories

Article code	
1250-REL	Relay module for single sensor
1250-AIR-BOX	Add-on box for ventilation duct
1250-AIR-FLOW	Hose fitting
1250-SUP	Mounting plate for round columns
1250-SCHUTZ	Weather protection

Maintenance

Annual calibration and function check
with calibration gas, carried out by trained staff.

Consumables

Article code	
CELL-CO-M1000	Measuring cell for carbon monoxide red cell 20 mm Lifespan: up to 3 years
CELL-NO2-M5	Measuring cell for nitrogen dioxide blue cell 20 mm Lifespan: up to 2 years

- Exposure above measuring range requires recalibration
- Exposure far above measuring range can destroy the measuring cell

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