



CO₂

Gas	Carbon Dioxide
Formula	CO ₂
CAS number	124-38-9
Max. workplace concentration	5,000 ppm
Relative density	1.53 ▼
Appearance	Colorless Mostly odorless
Hazards	Respiratory depression

- 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
- Insensitive to other gases
- Insensitive to room temperature and humidity
- No destruction of the measuring cell at high gas concentrations
- Very long service life due to the optical measuring method



The ME1250 Gas Sensor is a remote measuring unit for monitoring gas concentration and is used as a leak detector or for monitoring the maximum workplace concentration.

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.

Thanks 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. The measured gas concentration can thereby be processed by other PLC (Programmable Logic Controllers).

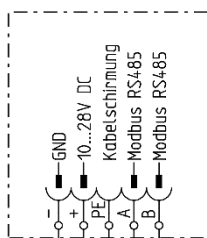
The optional relay module expands the ME 1250 Gas Sensor internally with 3 relays for direct switching of signal transmitters without the use of a control panel.

■ Technical Specifications

Measurement method	Infrared / Optical	
Measuring range	Indoor / Ventilation 0...5,000 ppm	Industry 0...2.5 V%
Alarm thresholds	Alarm 1: 500 ppm Alarm 2: 800 ppm	Alarm 1: 1.0 V% Alarm 2: 2.0 V%
Lifespan in air	10 years	according to cell manufacturer
Break-in period	3 min	according to cell manufacturer
Response time t_{90}	10 sec	
Operating voltage	10...28 VDC	nominal 24 VDC
Ambient temperature	-40...+60 °C	
Humidity	20...98% rF	non-condensing
Mounting height	30 cm above floor	heavier than air 
Casing	<i>Default:</i> Powder-coated aluminum Orange RAL 2004 80 x 125 x 59 mm 500 g	<i>Optional:</i> 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	12IRB-CO2-53	12IR-CO2-53
Measuring range	0...5,000 ppm	0...5,000 ppm
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 mm ² Shielded



Topology	Bus, tree or star topology	Star topology
Power	< 1.2 W	< 1.8 W

■ Optional Measuring Range

Article code	12IRB-CO2-24	12IR-CO2-24
Measuring range	0...2.5 V%	0...2.5 V%
Version	Bus communication	Analogue signal

■ 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

No wearing parts.

■ Measuring Ranges

The carbon dioxide sensor can be equipped with two different measuring cells. The indoor variant is suitable for max. workplace concentration monitoring and ventilation controls. The more robust industrial variant offers higher measuring ranges that can be calibrated up to 5.0 V%. Other measuring ranges on request.

Due to the optical measuring method, the measurement is very selective.