

Gas monitoring in industry & environment: Methane, Propane, CO₂ & SF₆

Precise measurement in process gas monitoring through maintenance-free, optical NDIR measuring principle

The measurement of gas concentrations is essential for the protection of personnel and machinery as well as for the monitoring of environmental and process conditions. It is not uncommon for an unintentional leakage of these gases to lead to dangerous situations. Our sensors and transmitters for gas detection support the user in optimal process control and ensure safe environmental conditions.

The detection of the concentration of gases in the air can be realised with different measuring principles. Gas detectors of the ZILA ZMF series rely on the maintenance-free and reliable NDIR measuring method. Non-dispersive infrared absorption (NDIR) uses the absorption of infrared light at different wavelengths to measure gas concentrations, depending on the gas to be measured.

The ZILA ZMF series includes sensors & transmitters for a wide range of industries and applications. Our sensors are designed to be extremely robust & suitable for use in harsh environments.

Customers use our gas measurement technology to monitor processes in which CO₂ is produced or used in a targeted manner, such as combustion processes, cooling and maturing processes, workplace safety and monitoring air quality. In biogas plants, our customers increase safety by systematically measuring the methane concentration. Propane detectors monitor the process gas in refrigeration plants and in industrial welding. In transformer stations, our customers use the SF₆ (sulphur hexafluoride) sensor to monitor the insulating and arc quenching gas in electrical power engineering.



ZMF-100
CO₂



ZMF-20X Serie
CO₂ | SF₆ | C₃H₈ | CH₄



**easy & fast
integration**



**standardised
output signal**



**robust metal
housing**



ATEX



The concentration of gases is measured in the unit PPM (parts per million) and expressed in %Vol. 10,000ppm thus corresponds to 1%Vol. The CO₂ concentration in outdoor air is ~500ppm. For workplaces, the occupational exposure limit (OEL) is the time-weighted average concentration of a substance in the air. The occupational exposure limit is expressed in mg/m³ and ml/m³ (ppm).

Sales and Consulting

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ZMF-100-IR

- ✓ Measurand: CO₂ (carbon dioxide)
- ✓ Measuring principle: optical, NDIR
- ✓ Response time: approx. 30 s
- ✓ Reproducibility: +/- 1%
- ✓ Housing: aluminium (red) IP54
- ✓ Operating voltage: 24 V DC / 100 mA
- ✓ Signal output: 0...10 V or 4...20 mA
- ✓ Gas inlet: by diffusion
- ✓ Weight: approx. 500g

Measuring range

- ✓ 0...3.000 ppm
- ✓ 0...5.000 ppm
- ✓ 0...6.000 ppm
- ✓ 0...10.000 ppm
- ✓ 0...20.000 ppm
- ✓ 0...30.000 ppm
- ✓ 0...50.000 ppm

Further information



data sheets & details:



ZMF-100-IR

ZMF-20X Serie



CO₂
carbon dioxide
ZMF-200e-IR



CH₄
methane
ZMF-201e-IR



C₃H₈
propane
ZMF-202e-IR



SF₆ Sulphurhexafluoride
ZMF-203e-IR

Features

- ✓ Maintenance-free measuring principle NDIR
- ✓ 4...20 mA signal output
- ✓ Robust stainless steel housing
- ✓ Power supply: 12...24 V DC
- ✓ Operating conditions: -40 °C... +60 °C
- ✓ Storage conditions: -40 °C... +85 °C
- ✓ Standard cable length: 1.5 m
- ✓ Relative humidity: 0...95 % non-condensing
- ✓ SIL2 certification
- ✓ ATEX certification (on request)
- ✓ Attractive price-performance ratio

Further information

ZMF-200e-IR	0...5.000 ppm 0...1 % vol 0...2 % vol 0...5 % vol 0...20 % vol 0...100 % vol
ZMF-201e-IR	0...4,4 %vol (100 % LEL) 0...5 % vol 0...100 % vol
ZMF-202e-IR	0...1,7 % vol (100% LEL) 0...2,1 % vol
ZMF-203e-IR	0...1.000 ppm 0...2.000 ppm

datasheet & details



ZMF-200e-IR



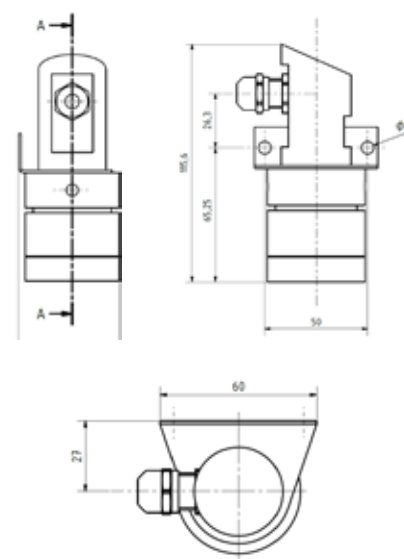
ZMF-201e-IR



ZMF-202e-IR



ZMF-203e-IR



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