



R-227

| | |
|------------------------------|-----------------------------------|
| Gas | Refrigerant |
| Abbreviation | R-227 |
| Group | HFC |
| Appearance | Colorless Odorless |
| Personal hazards | Displaces oxygen |
| Environmental hazards | Greenhouse gas |
| Operational risks | Interruption of the cold chain |

- 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 the concentration of refrigerant in surrounding air. Refrigerants are generally non-toxic, but can endanger people due to their oxygen-displacing properties. The sensor is used as a leak detector for personal protection and for alarms in refrigeration systems in order not to interrupt the cold chain.

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.

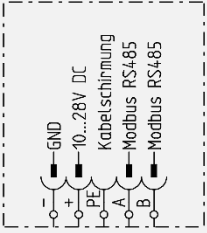
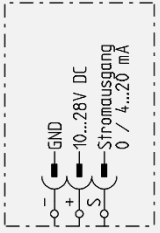
Thanks to bus communication, only one cable is required, which can be continued from sensor to sensor. The ME 1250 Gas Sensor is also available with an analogue output signal of 4...20 mA. The measured gas concentration can thereby be processed by other PLC (Programmable Logic Controllers).

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 | 0...1,000 ppm | other measuring ranges on request |
| Alarm thresholds | Alarm 1: 600 ppm Alarm 2: 800 ppm | recommendation |
| 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-R227-13 | 12IR-R227-13 |
|---------------|---|---|
| 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 |

■ Cross sensitivity

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

■ 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.

■ Related Products

Is your refrigerant not listed? Please contact Müller-Elektronik AG for an individual offer. Our semiconductor and infrared sensors measure almost every refrigerant.