Gas Sensor ME 1250
Difluorethane $C_2H_4F_2$

IR

Müller-Elektronik AG
Gaswarnanlagen & Wasserqualität

Data Sheet

Version 04/2023, Technical changes reserved

$C_2H_4F_2$

Gas	Difluorethane
Refrigerant	R-142a
Formula	$C_2H_4F_2$
CAS number	75-37-6
Lower Explosive Limit (LEL)	4.0 Vol.-%
Relative density	2.34
Appearance	Colorless Slightly sweet smell
Hazards	Highly flammable

- **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 explosion protection.

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).

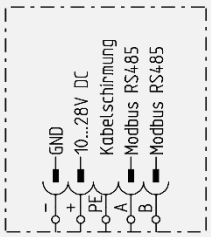
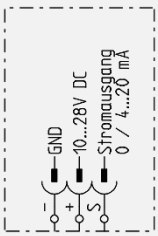
The optional relay module expands the ME 1250 Gas Sensor internally with 3 relays for direct switching of signal transmitters without the use of a control panel.

Alti Ruedelfingerstrass 11
CH-8460 Marthalen
+41 52 633 05 70
info@mueller-elektronik.ch
www.mueller-elektronik.ch

Technical Specifications

Measurement method	Infrared / Optical	
Measuring range	0…100% LEL	other measuring ranges on request
Alarm thresholds	Alarm 1: 20% LEL Alarm 2: 40% LEL	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	*Default:* Powder-coated aluminum Orange RAL 2004 80 x 125 x 59 mm 500 g	*Optional:* 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-C2H4F2-12**	**12IR-C2H4F2-12**
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	< 1.2 W	< 1.8 W

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.

Cross sensitivity

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

Alti Ruedelfingerstrass 11
CH-8460 Marthalen
+41 52 633 05 70
info@mueller-elektronik.ch
www.mueller-elektronik.ch