

Microprocessor based gas sensor with 4 – 20 mA / RS 485 output signal for monitoring the ambient air and detecting flammable gases and vapours, toxic gases and oxygen with different sensor elements. The gas sensor is available in the types "Ex dem [ib]" (also to be opened in Zone 1 at any time) and "Ex d" (only to be opened in Zone 2 at any time).

The calibration for types without LCD display is possible via the handheld calibration device. The types with LCD display have a non intrusivemagnetic calibration feature for easy calibration without opening the instrument and declassifying the area. At alarm or faulty of the sensor, the backlight of the LCD display changes from green to red.

Key Features

- ATEX and IEC Ex certifications
- Safety integration level 2 (SIL2)
- Type "Ex dem[ib]" to open in Zone 1 without switching off
- Type "Ex d" with flameproof enclosure
- Continuous monitoring
- Microprocessor with 12 bit converter resolution
- Self diagnostic procedure
- Watch dog switch
- Easy calibration, opening of the housing during operation possible (dem [ib])
- 4 to 20mA proportional output
- Reverse polarity protected
- Overload-proof
- LCD display with status LED (optional), LCD Backlight green/red
- Faulty relay (optional); LCD Backlight changes from green to red
- Alarm relay (optional); LCD Backlight changes from green to red
- Serial bus to controller (optional)



SENSOR WITH ALARM



SENSOR WITHOUT DISPLAY

GENERAL SPECIFICATIONS

ELECTRICAL	
Power supply	16 - 28 VDC, 20 - 29 VAC
Power consumption (at 24 VDC)	90 mA, max. 130 mA
Output	signal 4 to 20 mA proportional on 500
Control unit	Microprocessor with 12 bit converter resolution
Digital filter	Variable average on the sampled values
Internal visual indications	3 LED status, alarm and communication
LCD display (optional)	2*16 digits, 3 status LED, Backlight green/red
Serial output (optional)	Max. 24 VAC/DC, 1 A, LCD Backlight red
Faulty relay output (optional)	Max. 24 VAC/DC, 1 A, LCD Backlight red
SENSOR PERFORMANCE	
Detected gases	Combustible and toxic gases, O ₂
Sensor element	Pellistor, el. chemical, semi-conductor, infrared
Measuring range	LEL, ppm, vol%
Response time t ₉₀	<60 sec. / depending on gas
Stabilisation time	120 sec.
OPERATING ENVIRONMENT	
Humidity	20 to 90 % RH / 40 °C (104 °F)
Operating temperature	-25 °C to + 55 °C (-13 °F to + 131 °F)
Storage temperature	-5 °C to + 30 °C (23 °F to + 86 °F)
Pressure range	800 to 1200 mBar (80 to 120 kPa)
Air velocity	< 6m/sec.
PHYSICAL CHARACTERISTICS	
Enclosure material / color	Metal / Blue
Dimensions	(HxWxD) 200 x 105 x 90 mm (7.87 x 4.13 x 3.54 in.)
Weight (without options)	0.9 kg (2.0 lbs.)
Protection class	IP65
Mounting	Wall mounting (sensor head downwards)
Cable entry	1 x ¾ inch
Wire connection	Screw type, min. 0.25 (24 AWG) max. 2.5 mm ² (14 AWG)
Wire length	Max. working resist. 500 (= wire resistance + controller input resistance)
ATEX / IECEx Approval	0158 II2G EEx dem[ib] IIC T4 (in preparation)
Certificates (in preparation)	Electrical Ex Protection: Ex dem[ib] EN 60079-0, -1, 7, 11, 18
Measuring technical certification:	EN 60079-29-1 for EX-gases EN 50104 for Oxygen EN 50104 for Oxygen\ Functional safety (SIL2): EN 50402 EN 61508-1-3 EN 50271
Warranty	One year on material and workmanship (without sensor)