



Sensor without display



Sensors with LCD display



Red = alarm for fault

Green = in operation

Features

- ATEX and IEC Ex certificates for electrical Ex protection
- ATEX metrical test & SIL2 safety functions 4 – 20 mA, RS485 and relay
- Type “Ex d” with flame-proof enclosure
- Continuous monitoring
- Self-monitoring system
- Easy calibration
- Calibration service by exchanging the sensor head
- Reverse polarity protection
- Overload protection
- LCD display with status LEDs (optional)
- Alarm and fault signal relay (optional)

Technical Data

Power supply	16 – 28Vdc, 20 – 29Vac
Power consumption (at 24Vdc)	90 mA, max. 130 mA
Control unit	Microprocessor with 12 bit converter resolution
Digital filter	Averaging in order to increase the EMC immunity
Visual indications	2 LEDs for operation, alarm and communication
Analog output signal (active)	Proportional, overload and short-circuit proof, load ≤ 500 Ω 4 – 20 mA = measuring range 3,2 < 4 mA = underrange > 20 – 21.6 mA = overrange 2.5 mA = service mode 2 mA = fault Low > 21.8 mA = fault High
Serial interface	Serial data bus
Fault relay (optional)	Max. 30Vac/dc, 1 A
Alarm relay (optional)	Max. 30Vac/dc, 1 A
LCD (optional)	2 x 16 characters, 3 status LEDs, 4 menu operating elements
Sensor data	
Gas type	Combustible gases
Sensor element	Pellistor Infrared
Measuring range	0 – 100 % LEL 0 – 100 % LEL
Response time	t ₉₀ ≤ depending on gas type t ₉₀ ≤ 30 sec
Accuracy	± 1 % of measuring range (CH ₄) ± 1 % below 25% of measuring range
Repeatability	± 2 % of measuring range ± 2 % of measuring range

Design Features

Microprocessor based gas detector with 4 – 20 mA / RS485 Modbus output signal, alarm and fault relays (all SIL2 certified) for monitoring the ambient air to detect combustible gases and vapors within the lower explosive limit (LEL) by means of a catalytic sensor element (pellistor) or an infrared sensor element.

The calibration of detectors without LCD display is carried out via the calibration device Cal ATEX or the PC software PC-ATEX.

Detectors with LCD display have an integrated calibration routine that is started from the outside by a permanent magnet without opening the housing.

In case of an **alarm or failure** the backlight of detectors with LCD display changes from **green to red**.

Application

The detector is used in industrial areas like oil/gas industry, biogas plants, petrochemical industry, power plants etc. in Ex-Zone 2.

The detector is also suitable for commercial areas like gas transfer stations etc.

With the 4 – 20 mA / RS485-ModBus output signal the detector is suitable for connection to the AP gas leak alarm units, as well as to any other controllers or automation devices.

Optionally, the detector is also available with LCD display and relay output.

Ordering Codes (see p. 2)

Stabilization time	300 sec.	900 sec.
Warm-up time	Measuring mode after 120 sec.	Measuring mode after 60 sec.

Environmental Conditions

Humidity	20 to 90% r.H (non-condensing)
Operating temperature	-25 °C to 55 °C reduced measuring operation up to +65 °C)
Storage temperature	-5 °C to +30 °C
Pressure range	800 to 1200 mbar (80 to 120 kPa)
Air velocity	< 6 m/sec.
Case / colour	Die-cast aluminium / light grey RAL 7032
Dimensions (D x H)	95 x 82 mm
Weight	Ca. 1.3 kg
Protection class	IP 54
Mounting	Wall mounting (sensor head downwards)
Cable entry	1 x ¾ in. plastic, ATEX certified
Wire connection	Spring-type terminal, 0.08 to 2.5 mm ² AWG 28 - 12
Wire length	Max. load 500 Ω (= wire resistance + controller input resistance)

ATEX MARKING II2G Ex d IIC T4 Gb, CE 0158

EC-type examination certificate BVS 15 ATEX E 129 X
 Electrical Ex protection:
 Ex demb[ib] EN60079-0, -1, -11, -18 (zone 1)
 Metrological approval (pending)
 EN 60079-29-1 for Ex gases
 Functional safety (SIL2)
 EN 50402
 EN 61508-1, -2, -3
 EN 50271

WARRANTY 1 year on material and workmanship (without the sensor)

Ordering Codes

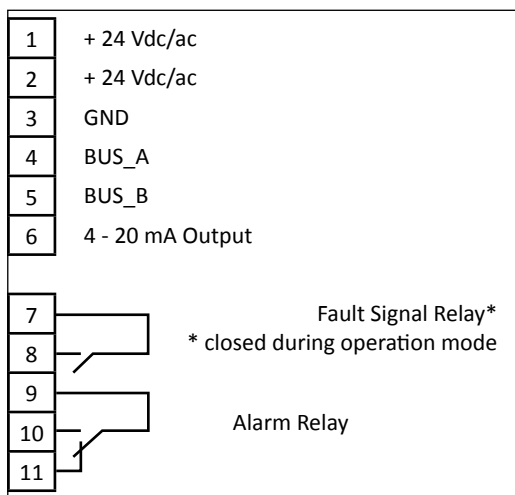
	Gas Type		Sensor Type	Measuring range
ATEX2 MTN	Methane	CH ₄	Pellistor	0-100 % LEL
ATEX2 LPG	LPG Liquefied Petroleum Gas		Pellistor	0-100 % LEL
ATEX2 ACT	Acetylene	C ₂ H ₂	Pellistor	0-100 % LEL
ATEX2 AMM	Ammonia	NH ₃	Pellistor	0-100 % LEL
ATEX2 ETH	Ethylene	C ₂ H ₄	Pellistor	0-100 % LEL
ATEX2 ALC	Ethyl Alcohol	C ₂ H ₅ OH	Pellistor	0-100 % LEL
ATEX2 ECT	Ethyl Acetate	C ₄ H ₈ O ₂	Pellistor	0-100 % LEL
ATEX2 HEX	Hexane	C ₆ H ₁₄	Pellistor	0-100 % LEL
ATEX2 H2	Hydrogen	H ₂	Pellistor	0-100 % LEL
ATEX2 MTL	Methanol	CH ₃ OH	Pellistor	0-100 % LEL
ATEX2 MEK	Methyl Ethyl Ketone	C ₄ H ₈ O	Pellistor	0-100 % LEL
ATEX2 BUT	Butane	C ₄ H ₁₀	Pellistor	0-100 % LEL
ATEX2 CPE	Cyclopentane	C ₅ H ₁₀	Pellistor	0-100 % LEL
ATEX2 PEN	Pentane	C ₅ H ₁₂	Pellistor	0-100 % LEL
ATEX2 IPE	Isopentane	C ₅ H ₁₂	Pellistor	0-100 % LEL
ATEX2 PRO	Propane	C ₃ H ₈	Pellistor	0-100 % LEL
ATEX2 IPA	Isopropyl Alcohol	C ₃ H ₈ O	Pellistor	0-100 % LEL
ATEX2 PAL	Propyl Alcohol	C ₃ H ₈ O	Pellistor	0-100 % LEL
ATEX2 ACE	Acetone	C ₃ H ₆ O	Pellistor	0-100 % LEL
ATEX2 TOL	Toluene	C ₇ H ₈	Pellistor	0-100 % LEL
ATEX2 HEP	n-Heptane	C ₇ H ₁₆	Pellistor	0-100 % LEL
ATEX2 PET	Petrol Vapours		Pellistor	0-100 % LEL
ATEX2 JP8	JP8		Pellistor	0-100 % LEL
ATEX2 MTN	Methane	CH ₄	Infrared	0-100 % LEL
ATEX2 PRO	Propane	C ₃ H ₈	Infrared	0-100 % LEL
ATEX1 XXXX	Sensor head for exchange			
ATEX2 XXXX	Sensor head for exchange			

Options:
Relay-set 2 Relay outputs

LCD Display Display with menu status

Relay-set + LCD Display Display and Relay Pack

Electrical connection



We cannot be held responsible errors in the manual/datasheet and reserve the right to correct any errors and to make product improvements, which may affect the accuracy of the manual/datasheet, without prior notice.