

# Dräger Polytron Ex



ST-9098-2005

Dräger Polytron Ex is a gas detector for the continuous monitoring of flammable gases and vapours in the ambient air. The transmitter is designed for the harsh industrial environment and uses industry standard 3-wire analog technology. It converts the signal from a catalytic bead sensor to a 4 to 20 mA analog signal that is proportional to the current gas concentration. Dräger Polytron Ex offers two different measuring ranges: 0 to 10 %LEL for an early warning system, and 0 to 100 %LEL as a standard range. For special applications, like monitoring under the ceiling or in areas which are difficult to access, the sensor can be mounted remotely using the sensing head Dräger Polytron SE Ex in combination with the transmitter Dräger Polytron Ex-R.



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Dräger Polytron Ex with Ex-sensor LC M

#### Features and Benefits

- Poison resistant catalytic bead sensor
- Fast and accurate response
- 4 to 20 mA interface
- Dräger Polytron Ex-R for remote sensing head

#### Different versions

The transmitter Dräger Polytron Ex also is available as a remote version. Instead of the Ex-sensor there is a fix installed shielded 3-core-cable coming out the transmitter's bottom side via a cable gland. This is used to connect a remote sensing head Dräger SE Ex PR M or Dräger SE Ex LC M in applications where the sensor is hard to access. The cable length is 10 m.

#### Comprehensive explosion protection

The transmitters Dräger Polytron Ex and Ex-R are certified acc. to the directive 94/9/EC (ATEX 95) and marked by II 2G, indicating that they are suitable to be operated in potentially explosive atmospheres (zone 1 and 2).

#### Intrinsic Safety

Knowingly Dräger designed the Dräger Polytron Ex without implementing the type protection concept of heavy flameproof encapsulation. This means lightweight enclosure and easy installation and maintenance. Parts of the transmitter such as sensor cables and terminals, LC-display and the calibration elements on the front-side are intrinsically safe. No additional zener barrier is necessary.

#### Measuring function for explosion protection

According to the directive 94/9/EC (Annex II, chpt. 1.5.5) Dräger Polytron Ex (measuring range 100 %LEL) is performance approved for 28 flammable gases and vapours (acc. to EN 50054 / 50057 and EN 50271).

#### System solutions

The shock-resistant enclosure (EEx e) is made of conductive, glass-fibre reinforced polyester. Combined with a suitable 4 to 20 mA controller the Dräger Polytron Ex transmitters satisfy the customers' needs for maximum safety and system availability.

## TECHNICAL DATA

Type	Transmitter with catalytic bead sensor	
Gases	Flammable gases and vapours in ambient air	
Measuring range	Depending on Ex-sensor being used: 10 %LEL or 100 %LEL (Lower Explosive Limit)	
Power supply	10 to 30 V DC (nominal 24 V DC), < 2.5 W	
Signal output	Normal operation	4 to 20 mA
	Maintenance signal	2 / 5 mA modulated by approx. 1 Hz
	Fault signal	< 3 mA
Cabling	3-wire, shielded, core cross-section 0.5 to 1.5 mm <sup>2</sup> , outer diameter 7 to 12 mm	
Max. cable length (at 24 V)	2000 m at 3 x 1.5 mm <sup>2</sup> ; 1500 m at 3 x 1.0 mm <sup>2</sup> ; 1000 m at 3 x 0.75 mm <sup>2</sup>	
Response time (at 25 °C)	t <sub>50</sub> < 6 s, t <sub>90</sub> < 15 s (Methane, test chamber procedure acc. to EN 50054 Annex B)	
Ambient conditions	Temperature	- 40 to + 65 °C
	Pressure	700 to 1300 hPa
	Rel. Humidity	0 to 100 % r.H. non condensing
Enclosure	IP 65, glas-fibre reinforced polyester (GRP)	
Dimensions	140 x 190 x 90 mm (W x H x D, incl. Ex-sensor and cable gland)	
Weight	Approx. 1.5 kg	
Approvals	Dräger Polytron Ex	II 2G EEx me [ib] IIC T4, - 40 °C ≤ T <sub>a</sub> ≤ + 65 °C
	Dräger Polytron Ex-R	II 2G EEx me [ib] IIB T4, - 40 °C ≤ T <sub>a</sub> ≤ + 65 °C
	With Ex-Sensor PR M	Performance approved acc. to directive 94/9/EG (ATEX 95), Annex. 2, chpt. 1.5.5, acc. to EN 50054 / 50057 / 50271

## ORDER INFORMATION

Dräger Polytron Ex, without Sensor	83 17 517
Dräger Polytron Ex-R, without remote sensing head	83 17 509
Dräger Ex-Sensor LC M (for measuring range 0 to 10 %LEL)	68 10 350
Dräger Ex-Sensor PR M (for measuring range 0 to 100 %LEL)	68 09 225
Sensing head Dräger SE Ex LC M (remote sensing head, 0 to 10 %LEL)	68 10 486
Sensing head Dräger SE Ex PR M (remote sensing head, 0 to 100 %LEL)	68 09 758
Calibration adapter	68 06 978



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.