

Dräger Polytron® 8200 CAT Detection of flammable gases and vapour

The Dräger Polytron® 8200 CAT is an advanced explosion-proof transmitter for the detection of flammable gases in the lower explosion limit (LEL). It uses a catalytic bead DrägerSensor® Ex ... DD that will detect most flammable gases and vapours. In addition to a 3-wire 4 to 20-mA analogue output with relays it also offers Modbus and Fieldbus protocols, making it compatible with most control systems.



Benefits

Fast and stable – the DrägerSensor® Ex ... DD

The latest generation type DD gas sensor is based on the proven catalytic bead principle. Innovative dual active elements result in very good long-term zero stability. Dräger has raised the bar yet again for poison resistance. The resulting long service life provides you with low ownership costs. Measuring performance has also been improved. The innovative gas inlet allows the sensor to respond to gas within a matter of seconds.

Easy device management via digital communication

The Dräger Polytron 8200 is equipped with digital interfaces allowing for quick and easy remote interrogation of the transmitter's state. Integration with existing asset management systems such as PACTware™ is possible via DTM.

In addition to the common HART® communication system, the fieldbus interfaces PROFIBUS® PA, FOUNDATION fieldbus™ H1, and Modbus RTU are also available.

Same design, same operating principle

The Dräger Polytron 8200 belongs to the Polytron 8000 series. All transmitters in this series have the same design and user interface. This allows for uniform operation with reduced training and maintenance requirements.

The large graphic backlit display shows status information clearly and in an easy to use format. The measured gas concentration, selected gas type, and measuring unit are displayed during normal operation. Colored LEDs (green, yellow and red) provide additional alarm and status information.

The Polytron 8200 is operated by means of a magnetic wand over contact surfaces.

Three relays for controlling external equipment

Upon request, the Dräger Polytron 8200 can also be supplied with three integrated relays. This enables you to use it as an independent gas detection system with two arbitrarily adjustable concentration alarms and one fault alarm. Audio alarms, signal lights or similar devices can thus be controlled locally without an additional cable between the transmitter and central controller.

Safe, robust housing for every application

Polytron 8200 features a Class I, Div. 1 rated explosion proof enclosure made from aluminium or stainless steel, making it suitable for a wide range of environmental conditions. A protection type "e" version includes a convenient docking station which allows installation in hazardous atmospheres without running conduit (where approved).

Benefits

Make the impossible possible with the remote sensor

An available remote sensor conduit housing allows the sensor to be installed up to 30 metres (100 feet) away from the Polytron transmitter. The sensor splash guard with integrated tubing nipple permits one person to perform a full calibration of a remote mounted sensor from the transmitter.

Data logger

The Polytron 8200 has a data logger, which records measuring and event data from prior years.

System Components

D-27777-2009



Dräger REGARD® 3900

The Dräger REGARD® 3900 is a standalone, self contained control system for the detection of Toxic, Oxygen and Ex hazards. The control system is fully configurable between 1 and 16 channels, depending upon the type and quantity of input/output boards installed.

ST-335-2004



Dräger REGARD®-1

The Dräger REGARD®-1 is a standalone, self contained single channel control system for the detection of Toxic, Oxygen and Ex hazards. The control system is fully configurable for a single input from either a 4 to 20 mA transmitter or a Dräger Polytron® SE Ex measuring head.

Accessories



Docking station

The docking station is included with all transmitters in the Polytron® 5000 and Polytron® 8000 series for protection type "e", increased safety. This also facilitates pre-assembly.



Splash guard

The Splash guard protects the sensor against splash water and dirt.



Duct mount kit

The duct mount kit enables gas monitoring inside ventilation ducts while keeping the transmitter outside.

Technical Data

Dräger Polytron® 8200 CAT

Type	Explosion proof / flameproof enclosed transmitter ("d") or combined with increased safety ("d/e")			
Gases	Flammable gases and vapours			
Measuring ranges	DD	0 to 100% LEL		
	LC	0 to 10% LEL		
Display	Backlit graphic LCD; 3 Status LEDs (green/yellow/red)			
Electrical data	Signal output analogue	Normal operation	4 to 20 mA	
		Maintenance	Constant 3.4 mA or 4 mA ±1 mA 1 Hz modulation; (adjustable)	
		Fault	< 1.2 mA	
	Signal output digital	HART®, PROFIBUS® PA, FOUNDATION fieldbus™ H1 and Modbus RTU		
	Power supply	10 to 30 V DC, 3-wire		
	Power consumption (max.)	DrägerSensor® Ex ... DD, w/o relay, non-remote	105 mA at 24 V	
		DrägerSensor® Ex ... DD, w/ relay, remote	145 mA at 24 V	
		DrägerSensor® Ex LC, w/o relay, non-remote	130 mA at 24 V	
		DrägerSensor® Ex LC, w/ relay, remote	165 mA at 24 V	
		Relay specification (option)	2 alarm relays and 1 fault relay, single-pole two-way contact 5 A @ 230 VAC, 5 A @ 30 VDC, resistance-bound	
Environmental conditions (see sensor data sheet)	Temperature	-40 to 80°C (-40 to 176°F) without relay -40 to 70°C (-40 to 158°F) with relay		
	Pressure	20.7 to 38.4 inch Hg / 700 to 1,300 mbar		
	Humidity	0 to 100% r. h., non-condensing		
Housing	Transmitter housing	Epoxy coated copper-free aluminium or stainless steel SS316 L		
	Sensor housing	Stainless steel 303		
	Enclosure protection type	NEMA 4X & 7, IP65/66/67		
	Cable entry point	3/4" NPT threaded holes or M20 cable gland		
	Dimensions (H x W x D), approx.	w/o docking station	11.0" x 5.9" x 5.1" / 280 x 150 x 130 mm	
		w/ docking station	11.0" x 7.1" x 7.5" / 280 x 180 x 190 mm	
	Weight, approx.	w/o docking station Aluminium	4.9 lbs / 2.2 kg	
w/o docking station SS316 L		8.8 lbs / 4.0 kg		
w/ docking station Aluminium		7.7 lbs / 3.5 kg		
w/ docking station SS316 L		11.9 lbs / 5.4 kg		

Approvals*

UL	Class I, Div 1, Groups A, B, C, D; Class II, Div 1, Groups E, F, G; Class I, Zone 1, Group IIC; T-Code T6/T4
CSA	Class I, Div 1, Groups A, B, C, D; Class I, Zone 1, Group IIC; T-Code T6/T4 CSA C22.2 No. 152
IECEX	4-20-mA HART® Ex db IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+80°C; "d" version

Technical Data

		Ex db e IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+80°C; "e" version; Ex tb IIIC T80/130°C Db
	PROFIBUS® & FF	Ex db ia IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+80°C; "d" version Ex db e ia IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+80°C; "e" version; Ex tb IIIC T80/130°C Db
ATEX	4-20-mA HART®	II 2G Ex db IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+80°C; "d" version II 2G Ex db e IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+80°C; "e" version II 2D Ex tb IIIC T80/130°C Db
	PROFIBUS® & FF	II 2G Ex db ia IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+80°C; "d" version II 2G Ex db e ia IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+80°C; "e" version II 2D Ex tb IIIC T80/130°C Db
CE markings		ATEX (Directive 2014/34/EU) Electromagnetic Compatibility (Directive 2014/30/EU) Low Voltage (Directive 2014/35/EU)
Shipping approvals (for DD sensor only)		DNV GL, ABS
MED approval B (for DD sensor only)		Certificate no. 61549/ 50 – 13 HH
MED approval D (for DD sensor only)		Certificate no. 12031 – 10 HH
Performance approval (for DD sensor only)		Certificate no. BVS 13 ATEX G 001 X
SIL 2 certified by TUEV Sued		Certificate no. Z10 1207 53474 013
* All docking station versions are only ATEX/IECEX approved		

Ordering Information

Dräger Polytron® 8200 CAT

Dräger Polytron® 8200 CAT DD d A 4-20/HART®	83 44 439
Dräger Polytron® 8200 CAT DD d A 4-20/HART® relay	83 44 440
Dräger Polytron® 8200 CAT DD e A 4-20/HART® (incl. Docking Station)	83 44 457
Dräger Polytron® 8200 CAT DD e A 4-20/HART® relay (incl. Docking Station)	83 44 458
Dräger Polytron® 8xx0 Kit (Custom configuration e. g. stainless steel housing)	83 44 800

Accessories

Magnetic wand	45 44 101
Pipe mount bracket	45 44 198
Duct mount kit	68 12 725
IR Connection Kit Polytron® 5000/8000	45 44 197
PolySoft	83 23 405
PolySoft premium	83 23 411
Splash guard	68 12 510
Gassing adapter	PE incl. tubing 45 09 314

Ordering Information

Calibration adapter Viton®	68 10 536
Process adapter (Stainless steel) for DD	68 12 470
Process adapter (Stainless steel) for LC	68 12 465

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FOUNDATION fieldbus™ is a registered trademark of the Fieldbus Foundation™.

PROFIBUS® is a registered trademark of PROFIBUS and PROFINET International (PI).

PACTware™ is a registered trademark of Pepperl+Fuchs GmbH.

Viton® is a registered trademark of the DuPont company.