

Dräger Polytron® 8200 CAT Detector for flammable gases and vapours

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 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 HART®, Modbus and Fieldbus protocols, making it compatible with most control systems.



Benefits

Fast and stable – the DrägerSensor® Ex

The built-in DrägerSensor® Ex is based on the proven catalytic bead measuring principle. It has excellent long-term stability with outstanding poison resistance. And this is the reason for its durability. Due to the novel gas inlet opening, the sensor responds to gas in only a few seconds. This allows you to react immediately with countermeasures and prevent the development of a flammable atmosphere.

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. Audible 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) and this also facilitates pre-assembly.

Make the impossible possible with the remote sensor

The remote sensor connection housing allows you to install the sensor separately from the transmitter. This allows you to simply place the sensor closer to the gas cloud in hard-to-reach locations. The display remains

Benefits

visible at eye level. Since the sensor is connected via an intrinsically safe connection, no conduit cabling is required. The connection also allows 'hot replacement' of the sensor in the hazardous area.

Data logger

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

System Components



D-6806-2016

Dräger REGARD® 7000

The Dräger REGARD® 7000 is a modular and therefore highly expandable control system for monitoring various gases and vapours. Suitable for gas warning systems with various levels of complexity and numbers of transmitters, the Dräger REGARD® 7000 also features exceptional reliability and efficiency. An additional benefit is the backward compatibility with the REGARD®.



D-1130-2010

Dräger REGARD® 3900 Series

The devices of the Dräger REGARD® 3900 series can be used as standalone controllers. You can configure up to 16 measuring channels. In addition, the modular setup enables you to customise the control units to the demands of your plant. You can also embed further features to existing alarms.

Accessories



D-24487-2020

Remote Calibration Adapter DQ

The Remote Calibration Adapter DQ comes with inner thread to connect the sensor...DQ for calibration or bump-test to check the current sensor's sensitivity in areas of poor access.



D-85372-2013

Remote Calibration Adapter LC

The Remote Calibration Adapter LC comes with inner thread to connect the sensor...LC for calibration or bump-test to check the current sensor's sensitivity in areas of poor access.



D-85369-2013

Splash guard

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

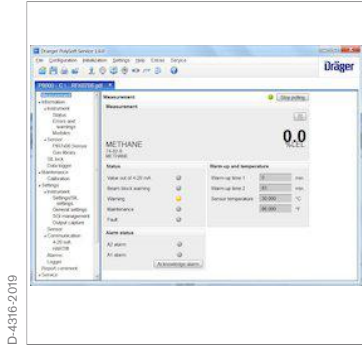


D-85345-2013

Duct mount kit

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

Accessories



Dräger PolySoft software

The optional Dräger PolySoft Windows® software is used for configuration, firmware upgrades, diagnostics, and downloading the Polytron's built in datalogger. All from the comfort of your control room using the digital HART® signal that rides on top of the analog 4 – 20 mA signal. Out in the field, an available non intrusive IR dongle easily connects Polytron® to PolySoft.

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	DQ	0 to 100 % LEL		
	LC	0 to 10 % LEL		
Display	Backlit graphic LCD; 3 Status LEDs (green/yellow/red)			
Performance Characteristics	Accuracy/repeatability	Zero	≤ 1 % LEL	
		Span	≤ 1 % LEL	
		Long-term drift	≤ 3 % LEL after 6 months	
	Response time	T50	< 7 seconds (methane)	
		T90	< 13 seconds (methane)	
	Electrical data	Signal output analogue	Normal operation	4 to 20 mA, 3- or 4-wire, sink or source
Maintenance			Constant 3.4 mA or 4 mA ±1 mA 1 Hz modulation; (adjustable)	
Fault			< 1.2 mA	
Signal output digital		HART® w/ 3- or 4-wire, PROFIBUS® PA, FOUNDATION fieldbus™ H1 and Modbus RTU w/ 4-wire		
Power supply		10 to 30 V DC		
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;		
	CSA	T-Code T6/T4		
		Class I, Div 1, Groups A, B, C, D;		
		Class II, Div 1, Groups E, F, G;		
IECEX	Class I, Zone 1, Group IIC;			
	T-Code T6/T4			
IECEX	4-20-mA HART®	Ex db IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+70 °C; 'd' version		
		Ex db eb IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+70 °C;		

Technical Data

	PROFIBUS® & FF	'e' version; Ex tb IIIC T135 °C Db Ex db ia IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+70 °C; 'd' version Ex db eb ia IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+70 °C;
ATEX	4-20-mA HART®	'e' version; Ex tb IIIC T135 °C Db II 2G Ex db IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+70 °C; 'd' version II 2G Ex db eb IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+70 °C;
	PROFIBUS® & FF	'e' version; II 2D Ex tb IIIC T135 °C Db II 2G Ex db ia IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+70 °C; 'd' version II 2G Ex db eb ia IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+70 °C;
CE markings	ATEX (Directive 2014/34/EU) Electromagnetic Compatibility (Directive 2014/30/EU) Low Voltage (Directive 2014/35/EU)	
Shipping approvals (for DQ sensor only)	DNV GL, ABS, LR, CCS, RMRS	
MED approval (for DQ sensor only)	Certificate No. MEDB0000411	
Performance approval (for DQ sensor only)	Certificate No. BVS 13 ATEX G 001 X	
SIL 2 certified by TUEV Sued	Certificate No. Z10 17 05 53474 023	

* All docking station versions are only ATEX/IECEx approved

Ordering Information

Dräger Polytron® 8200 CAT	Approval Code	Order Number
Dräger Polytron® 8200 CAT DQ d A 4-20/ HART®	XTR 0410	83 44 439
Dräger Polytron® 8200 CAT DQ d A 4-20/ HART® relay	XTR 0411	83 44 440
Dräger Polytron® 8200 CAT DQ d S 4-20/ HART®	XTR 0510	83 44 448
Dräger Polytron® 8200 CAT DQ d S 4-20/ HART® relay	XTR 0511	83 44 449
Dräger Polytron® 8200 CAT DQ e A 4-20/ HART® (incl. Docking Station)	XTR 041I	83 44 457
Dräger Polytron® 8200 CAT DQ e A 4-20/ HART® relay (incl. Docking Station)	XTR 041J	83 44 458

Ordering Information

Dräger Polytron® 8200 CAT DQ e S 4-20/ XTR 051I	83 44 466
HART® (incl. Docking Station)	
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 licence (1 year)	83 28 600
PolySoft licence (subscription)	83 28 601
Splash guard	68 12 510
Weather protection kit Dräger Polytron® 5/6/8xxx	37 02 198
Gassing adapter	PE, Europe PE incl. tubing
	68 06 978 46 09 314
Calibration adapter Viton®	68 10 536
Process adapter (Stainless steel) for DQ	68 12 470
Process adapter (Stainless steel) for LC	68 12 465

HART® is a registered trademark of the HART Communication Foundation.

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.

Windows® is a registered trademark of Microsoft Corporation.