

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

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|---|---|---|---|--|
| 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*

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| 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

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|---|----------------|---|
| | | 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

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| 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

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|---------------------------------------|------------------------------|
| 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

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| Calibration adapter Viton® | 68 10 536 |
| Process adapter (Stainless steel) for DD | 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.

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