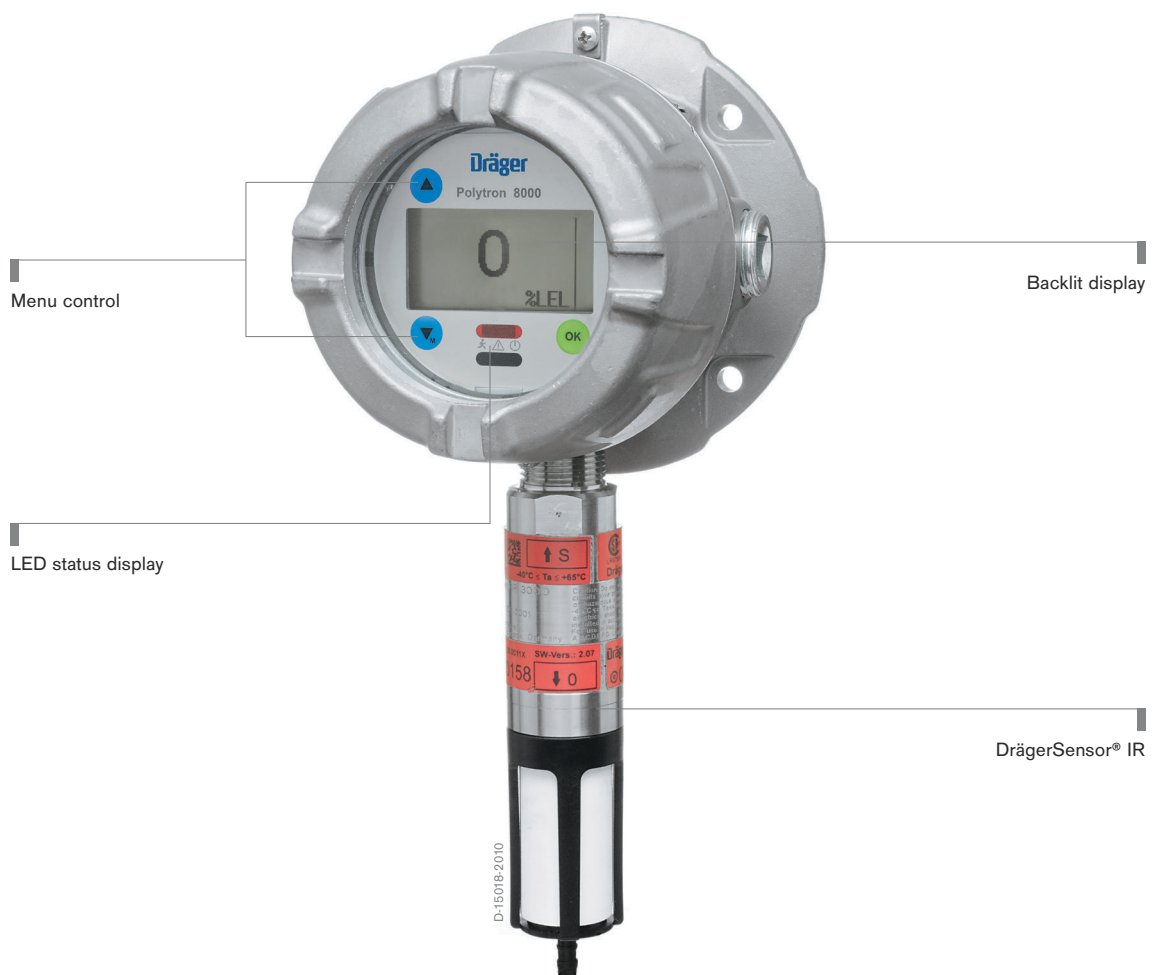


Dräger Polytron® 8310 IR Detection of flammable gases and vapour

The Dräger Polytron® 8310 IR is an advanced explosion proof transmitter for the detection of combustible gases in the lower explosion limit (LEL). It uses an infrared DrägerSensor® IR that can be configured for methane, propane or ethylene. Besides 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

Poison-resistant and fail-safe – the DrägerSensor® IR

DrägerSensor IR is a cost-effective alternative to catalytic bead sensors while offering several benefits: it is poison-resistant against chemicals that can shorten a catalytic bead pellistor's life. Long life optics result in lower maintenance costs compared to pellistors. IR technology is inherently fail-safe, meaning no unrevealed failures. Improved performance with excellent long-term stability and fast response times.

Easy device management via digital communication

The Dräger Polytron 8310 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 8310 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 8310 is operated by means of a magnetic wand over contact surfaces.

Three relays for controlling external equipment

Upon request, the Dräger Polytron 8310 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 8310 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 8310 has a data logger, which records measuring and event data from the past 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



D-15035-2010

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.



ST-5665-2006

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.

Technical Data

Dräger Polytron® 8310 IR

Type	Explosion proof / flameproof enclosed transmitter ("d") or combined with increased safety ("d/e")			
Gases	Flammable gases and vapours			
Measuring range	0 to 100% 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.)	w/o relay, non-remote	145 mA at 24 V	
w/ relay, remote		185 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 65°C (-40 to 149°F) without relay -40 to 65°C (-40 to 149°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 SS316 L		
	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		11.0 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/+65°C; "d" version Ex db e IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+65°C; "e" version; Ex tb IIIC T135°C Db
	PROFIBUS® & FF	Ex db ia IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+65°C; "d" version Ex db e ia IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+65°C; "e" version;

Technical Data

ATEX	4-20-mA HART®	Ex tb IIIC T135°C Db II 2G Ex db IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+65°C; "d" version II 2G Ex db e IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+65°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/+65°C; "d" version II 2G Ex db e ia IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+65°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		DNV GL, ABS
MED approval B		Certificate no. 61549/ 50 – 13 HH
MED approval D		Certificate no. 12031 – 10 HH
Performance approval		Certificate no. BVS 13 ATEX G 001 X
* All docking station versions are only ATEX/IECEX approved		

Ordering Information

Dräger Polytron® 8310 IR

Dräger Polytron® 8310 IR d A 4-20/HART®	83 44 807
Dräger Polytron® 8310 IR d A 4-20/HART® relay	83 44 808
Dräger Polytron® 8310 IR e A 4-20/HART® (incl. Docking Station)	83 44 825
Dräger Polytron® 8310 IR e A 4-20/HART® relay (incl. Docking Station)	83 44 826
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
Process adapter	68 11 330
Splash guard	68 10 796
Protection labyrinth	68 11 135

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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.