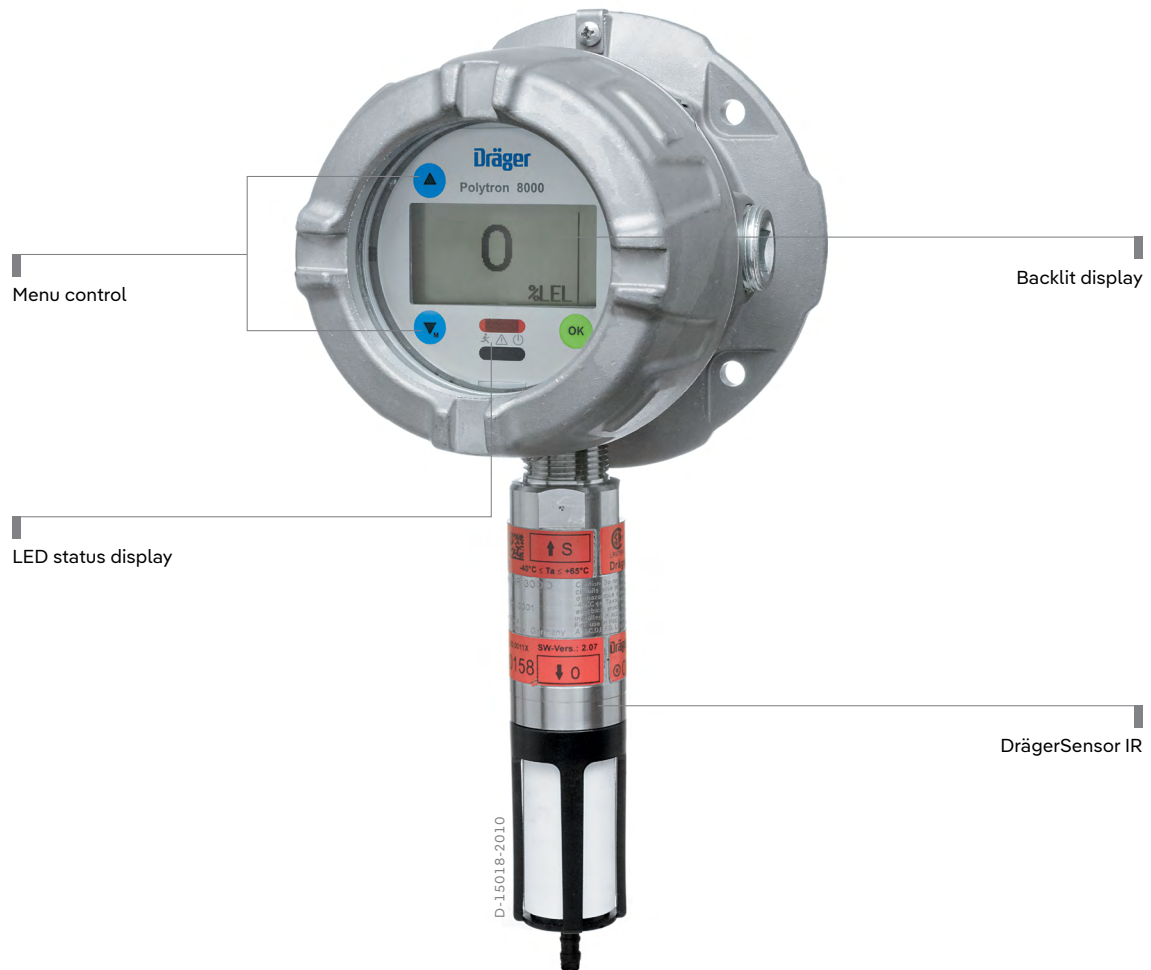




Dräger Polytron 8310 IR Detector for flammable gases and vapours

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

Dräger Polytron 8310 IR



Benefits

Poison-resistant and fail-safe – the DrägerSensor IR

The 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 sensor's life. Long life optics result in lower maintenance costs compared to pellistors used in catalytic bead sensors. 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 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. 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 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) 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 device electronics. This 'external' installation makes it easier to use if the sensor has to be installed in a difficult to access or unfavourable position. The sensor splash guard with integrated tubing nipple enables one person to perform the 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-1501-2022



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-3967-2025



Dräger REGARD 3000 plus

The Dräger REGARD 3000 plus is a flexible control system that reliably monitors hazardous areas in your gas detection system and triggers alarms. Its modular design adapts to different system sizes and can be configured centrally or locally. A user-friendly dashboard and clear alarms provide transparency and safety.

Accessories

ST-5665-2006



Weather guard DrägerSensor IR

Double-walled enclosure to prevent dirt deposits, e.g. salt crust. Improves resistance to extreme weather conditions.

Order No.: 6811135

Accessories

ST-5685-2006



Splash guard

The splash guard protects the sensor against splashes of water and dirt.

ST-5683-2006



Calibration Adapter DrägerSensor IR

Transmitter calibration (with mounted splash guard), up to wind force 10 Bft, fitted as standard.

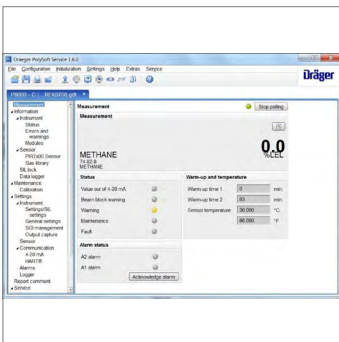
ST-5666-2006



Process adapter DrägerSensor IR

Sampling or process applications, with gas inlet and gas outlet.
Order No.: 6811330

D-4316-2019



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 is modulated 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 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)			
Performance Characteristics	Accuracy/repeatability	Sensitivity	± 2 % LEL	
	Response time	T90	30 seconds (with splash guard)	
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 and Modbus RTU w/ 4-wire		
	Power supply	10 to 30 V DC		
	Relay specification (option)			
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	Powder coated copper-free aluminium or stainless steel 316 L		
	Sensor housing	Stainless steel 316 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)	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		

Technical Data

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	
IECEX	CSA C22.2 No. 152	
	4-20-mA HART®	Ex db IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+65$ °C; 'd' version Ex db eb IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+65$ °C; 'e' version; Ex tb IIIC T135 °C Db
	PROFIBUS®	Ex db ia IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+70$ °C; 'd' version Ex db eb ia IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+70$ °C; 'e' version; Ex tb IIIC T135 °C Db
ATEX	4-20-mA HART®	II 2G Ex db IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+70$ °C; 'd' version II 2G Ex db eb IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+70$ °C; 'e' version II 2D Ex tb IIIC T135 °C Db
	PROFIBUS®	II 2G Ex db ia IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+70$ °C; 'd' version II 2G Ex db eb ia IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+70$ °C; 'e' version II 2D Ex tb IIIC T135 °C Db
INMETRO	4-20-mA HART	Ex db IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+65$ °C; 'd' version Ex db eb IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+65$ °C; 'e' version Ex tb IIIC T80 °C/T130 °C Db
	PROFIBUS® & Modbus	Ex db ia IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+65$ °C; 'd' version Ex db eb ia IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+65$ °C; 'e' version; Ex tb IIIC T135 °C Db
KCs	4-20-mA HART	Ex db IIC T6/T4 Gb, 'd' version Ex db eb IIC T6/T4 Gb, 'e' version Ex tb IIIC T80 °C/T130 °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, LR, CCS	
MED approval	Certificate No. MEDB0000411	
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

	Approval Codes	Order Number
Dräger Polytron 8310 IR d A 4-20/HART®	XTR 0400	8344807
Dräger Polytron 8310 IR d A 4-20/HART® relay	XTR 0401	8344808
Dräger Polytron 8310 IR e A 4-20/HART® (incl. Docking Station)	XTR 040I	8344825
Dräger Polytron 8310 IR e A 4-20/HART® relay (incl. Docking Station)	XTR 040J	8344826
Dräger Polytron 8xx0 Kit (Custom configuration e. g. stainless steel housing)		8344800

Accessories

	Order Number
Magnetic wand	4544101
Pipe mount bracket	4544198
IR Connection Kit Polytron 5000/8000	4544197
PolySoft licence (1 year)	8328600
PolySoft licence (subscription)	8328601
Process adapter	6811330
Weather protection kit Dräger Polytron® 5/6/8xxx	3702198
Weather guard	6811135

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

Windows® is a registered trademark of Microsoft Corporation.

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