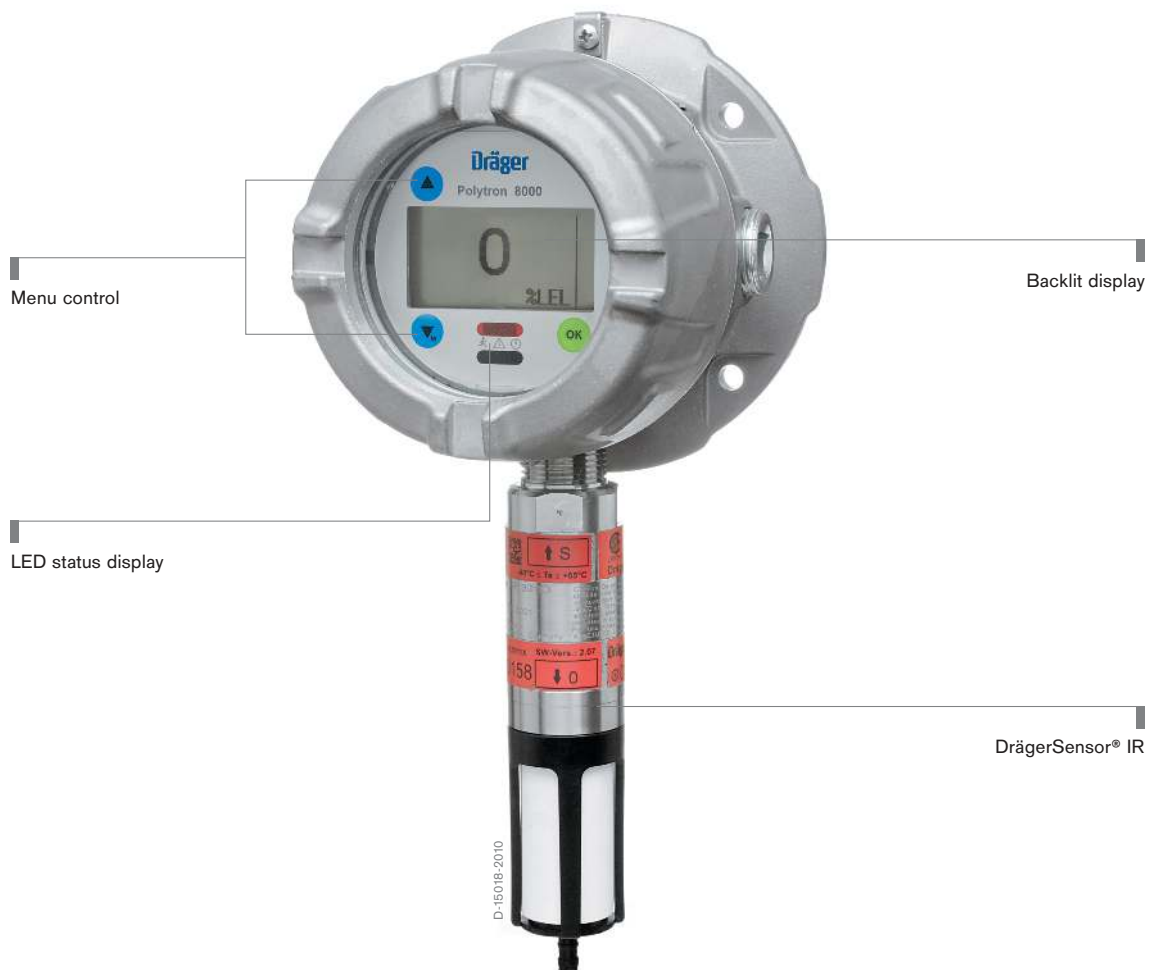


Dräger Polytron® 8310 IR Detection of flammable gases and vapors

The Dräger Polytron® 8310 IR is an advanced explosion proof transmitter for the detection of combustible hydrocarbon 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 analog output with relays, it also offers HART®, 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. 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.

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 unfavorable position.

Benefits

Data logger

The Polytron 8310 has a data logger, which records measuring and event data from the past years. A graph function displays the history of the past 15 minutes on a time/concentration graph.

System Components

D-6806-2016



Dräger REGARD® 7000

The Dräger REGARD® 7000 is a modular and highly expandable control system for monitoring various gases and vapors. Ideal for gas warning systems with various levels of complexity and numbers of transmitters, the Dräger REGARD® 7000 delivers exceptionally reliability and efficiency. An additional benefit is the controller's 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

ST-5665-2006



Weather Guard

The double-walled Weather Guard enclosure is recommended to be used whenever a contamination by salt crust, oil films, resins or similar substances is expected.

Use always in combination with the Splash Guard, suitable for wind speeds up to 27 m/s (10 Beaufort).

ST-5665-2006



Splash guard

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

ST-5683-2006



Calibration adapter

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

D-85345-2013



Duct mount kit

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

Accessories

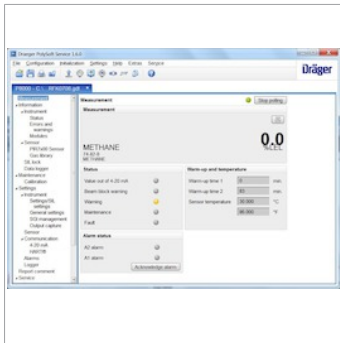
ST-5666-2006



Process adapter

Sampling or process applications with gas inlet and outlet.

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 rides on top of the analog 4 to 20 mA signal. Out in the field, an available non intrusive IR dongle easily connects Polytron® to Polysoft.

D-2950-2018



Remote Sensor Junction Box

The explosion-proof junction box allows remote mounting of CatEx sensor with cabling lengths over 300 feet. A plug and play sensor interface makes installation easy.



Polytron® Calibration Kit

Basic calibration kit with zero gas cylinder and space for a span gas cylinder. Includes all the needed accessories in a convenient carrying case.

Technical Data

Dräger Polytron® 8310 IR

Type	Explosion proof / flameproof enclosed transmitter ("d")			
Gases	Flammable hydrocarbon gases and vapors			
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 analog	Normal operation	4 to 20 mA, 3- or 4-wire, sink or source	
		Maintenance	Constant 3.4 mA (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		
	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, SPDT 5 A @ 230 VAC, 5 A @ 30 VDC		
	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.	11.0" x 5.9" x 5.1" / 280 × 150 × 130 mm		
	Weight, approx.	Aluminium	4.9 lbs / 2.2 kg	
		SS316 L	8.8 lbs / 4.0 kg	
Approvals	UL/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	Ex db IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+65 °C;	
			ATEX	II 2G Ex db IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+70 °C; II 2G Ex db 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		DNV GL, ABS, LR, CCS, RMRS	
	MED approval	Certificate No. MEDB0000411		
	DEKRA Performance approval	Certificate No. BVS 13 ATEX G 001 X		

Ordering Information

Dräger Polytron® 8310 IR	Approval Codes	Order Number
Dräger Polytron® 8310 IR d A 4-20/HART®	XTR 0400	83 44 807
Dräger Polytron® 8310 IR d A 4-20/HART® relay	XTR 0401	83 44 808
Custom Configuration e.g. Modbus, stainless steel at www.draeger.com/polytron		

Accessories	Order Number
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
Process adapter	68 11 330
Weather protection kit Dräger Polytron® 5/6/8xxx	37 02 198
Weather guard	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.

Windows® is a registered trademark of Microsoft Corporation.

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