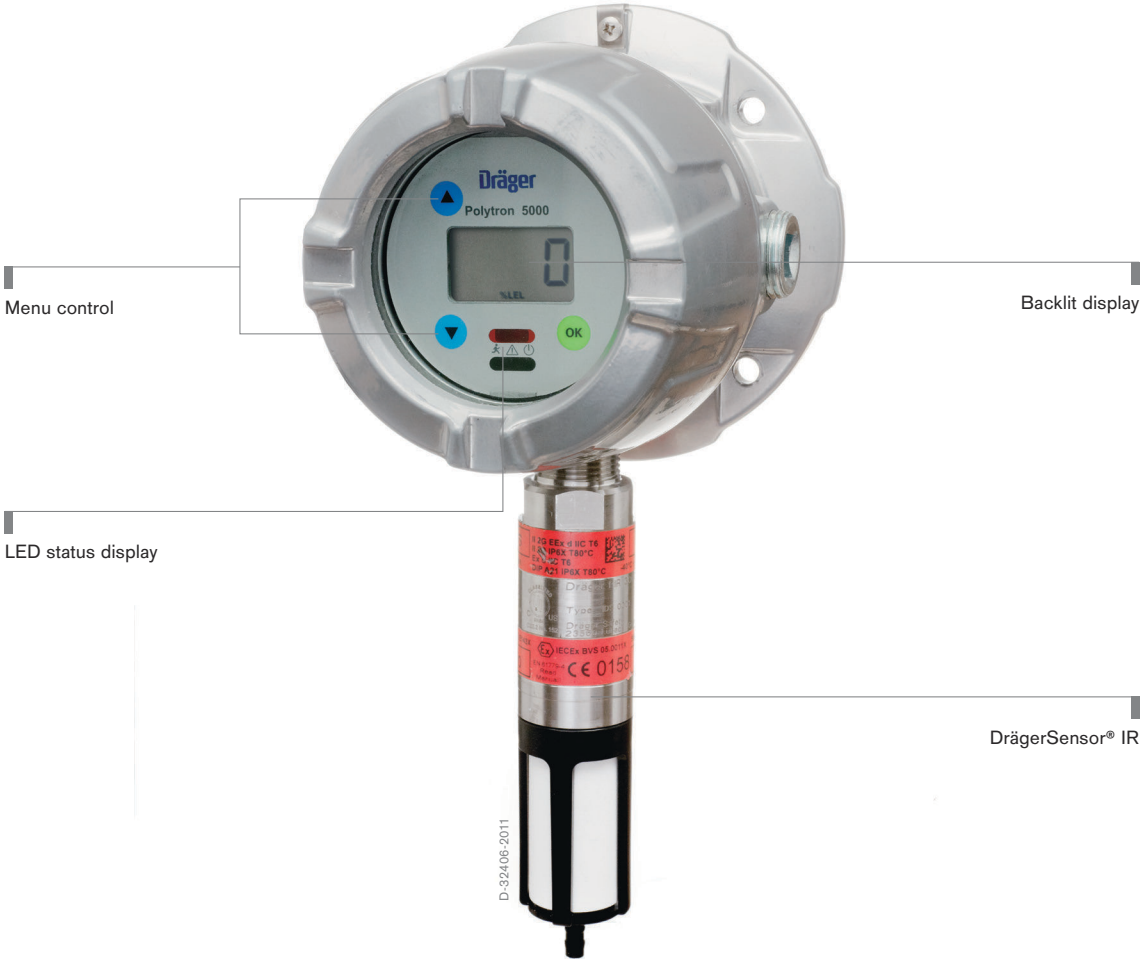
Dräger Polytron® 5310 IR
Detection of flammable gases and vapors

The Dräger Polytron® 5310 IR is a cost effective explosion proof transmitter for the detection of flammable gases in the lower explosion limit (LEL). It uses an infrared DrägerSensor® IR that can be configured for methane, propane, or ethylene. A 3 wire 4 to 20 mA analog output with relays makes it compatible with most control systems.



Dräger. Technology for Life®

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. These benefits provide improved performance with excellent long-term stability and fast response times.

Same design, same operating principle

Polytron 5310 belongs to the Dräger Polytron 5000 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 backlit display shows status information clearly with quick access to functions using a non-intrusive magnetic wand. The gas concentration and measurement unit are displayed during normal operation. Colored LEDs (green, yellow and red) provide additional alarm and status information.

Three relays for controlling external equipment

Upon request, the Dräger Polytron 5310 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 5310 features a Class I, Div. 1 rated explosion proof enclosure made from aluminum 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).

Make the impossible possible with the remote sensor

An available remote sensor condulet housing allows the sensor to be installed up to 30 meters (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.

System Components

D-27777-2009

Dräger REGARD® 3900

The Dräger REGARD® 3900 is a standalone control system for the detection of toxic gases, oxygen levels, 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 single-channel control system for the detection of toxic and Ex hazards and oxygen levels. 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

ST-5685-2006

Splash guard

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

Accessories

D-85345-2013

Duct mount kit

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

D-85363-2013

Magnetic Wand

The magnetic wand is used to access and navigate the menu on the Polytron explosion proof detectors.

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Technical Data

Dräger Polytron® 5310 IR

Type	Explosion proof / flameproof enclosed transmitter (“d”) or combined with increased safety (“d/e”)		
Gases	Flammable gases and vapors		
Measuring range	0 to 100% LEL		
Display	Backlit graphic LCD; 3 Status LEDs (green/yellow/red)		
Electrical data	Signal output analog	Normal operation	4 to 20 mA
		Maintenance	Constant 3.4 mA or 4 mA ±1 mA 1 Hz modulation; (adjustable)
		Fault	< 1.2 mA
	Power supply	10 to 30 V DC, 3-wire	
	Power consumption (max.)	w/o relay, non-remote	95 mA at 24 V
		w/ relay, remote	145 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 aluminum 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 Aluminum	4.9 lbs / 2.2 kg
		w/o docking station SS316 L	8.8 lbs / 4.0 kg
		w/ docking station Aluminum	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	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 T80/130°C Db	
	ATEX	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	
	CE markings	ATEX (Directive 2014/34/EU) Electromagnetic Compatibility (Directive 2014/30/EU) Low Voltage (Directive 2014/35/EU)	
	Performance approval	BVS 15 ATEX G 001 X	

* All docking station versions are only ATEX/IECEx approved