



Dräger Polytron 5700 IR Detector for flammable gases and vapours

The Dräger Polytron 5700 IR is a cost effective explosion-proof transmitter for the detection of flammable gases in the lower explosive limit (LEL). It uses a high performance infrared Dräger PIR 7000 sensor that will quickly detect most common hydrocarbon gases. A 3-wire 4 to 20-mA analogue output with relays makes it compatible with most control systems.

Dräger Polytron 5700 IR



Benefits

Efficient, stable and robust – The Dräger PIR 7000

With its stainless steel 316L enclosure and drift-free optics, the Dräger PIR 7000 is built to withstand the harshest industrial environments, offshore installations for example. The unique double compensated 4 beam measuring system makes the sensor resistant to dust or dirt deposits on the optical surfaces, environmental or ageing effects and long term drift. In combination with the Polytron 5700 it offers a gas library with up to 100 gases providing a high degree of application flexibility. Each of the listed gases can be picked from a menu and automatically cross-calibrated with a standard calibration gas such as methane or propane. No need to consult the factory when applications change.

Same design, same operating principles

Polytron 5700 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. Coloured LEDs (green, yellow and red) provide additional alarm and status information.

Three relays for controlling external equipment

The Dräger Polytron 5700 can also be supplied with three integrated relays upon request. This enables you to use it as an independent gas detection system with two 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 5700 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) 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 transmitter. This allows you to simply place the sensor closer to the gas cloud in hard-to-reach locations. The display remains visible at eye level. A special calibration flow cell accessory enables one person to perform a full calibration of a remote mounted sensor from the transmitter.

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-11679-2007



Splash guard

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

D-85346-2013



Duct mount kit

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

D-16965-2014



Process cuvette SGR

For sampling and in-line applications – reduces the inner volume of the measuring cuvette, thus providing a faster speed of response under flow conditions – made of stainless steel.

ST-11695-2007



Flow cell

Function test/calibration of the transmitter in high wind forces and/ or high test gas concentration, including status display, suitable for process applications.

Related Products

D-14983-2010



Dräger Polytron 8700 IR

The Dräger Polytron 8700 IR is an advanced explosion proof transmitter for the detection of combustible gases in the lower explosion limit (LEL). It uses a high performance infrared Dräger PIR 7000 sensor, which will quickly detect most common hydrocarbon gases. Besides a 3 wire 4 to 20 mA analogue output with relays, it also offers HART®, Modbus and Fieldbus making it compatible with most control systems.

ST-11659-2007



Dräger PIR 7000

The Dräger PIR 7000 is an explosion proof point infrared gas detector for continuous monitoring of flammable gases and vapours. With its stainless steel 316L enclosure and drift-free optics this detector is built for the harshest industrial environments, e.g. offshore installations.

Technical Data

Dräger Polytron 5700 IR

Type	Explosion-proof / flameproof enclosed transmitter ("d") or combined with increased safety ("d/e")			
Gases	Flammable gases and vapours			
Measuring ranges	Methane, propane, ethylene		0 to 20 ... 100 % LEL	
	Methane		0 to 100 vol. %	
	Further substances and measuring ranges upon request			
Display	Backlit 4 digit LCD; 3 Status LEDs (green/yellow/red)			
Performance Characteristics	Accuracy/repeatability	Sensitivity	≤ ± 1 % LEL	
		Long term drift	≤ ± 1 % LEL after 12 month	
	Response time	T90	4 seconds (w/o splash guard)	
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	
	Power supply	10 to 30 V DC, 3-wire		
	Power consumption (max.)	w/o relay, non-remote	300-mA at 24 V	
		w/ relay, remote	350-mA at 24 V	
	Relay specification (optional)	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 77 °C (-40 to 170 °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 % RH, non-condensing		
Housing	Transmitter housing	Epoxy coated copper-free aluminum 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 threads 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.	Aluminium w/o docking station	8.6 lbs / 3.9 kg	
Stainless steel 316 L w/o docking station		12.6 lbs / 5.7 kg		
Aluminium w/ docking station		11.5 lbs / 5.2 kg		
Stainless steel 316 L w/ docking station		15.7 lbs / 7.1 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 B, C, D;
	Class II, Div 1, Groups E, F, G;
	Class I, Zone 1, Group IIC;
	T-Code T6/T4 CSA C22.2 No. 152
IECEX	Ex db IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+80$ °C; 'd' version
	Ex db eb IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+80$ °C; 'e' version
	Ex tb IIIC T80 °C/130 °C Db
ATEX	II 2G Ex db IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+80$ °C; 'd' version
	II 2G Ex db eb IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+80$ °C; 'e' version
	II 2D Ex tb IIIC T80 °C/130 °C Db
CE markings	ATEX (Directive 2014/34/EU)
	Electromagnetic Compatibility (Directive 2014/30/EU)
	Low Voltage (Directive 2014/35/EU)
INMETRO	Ex db IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+80$ °C; 'd' version
	Ex db eb IIC T6/T4 Gb, $-40 \leq Ta \leq +40/+80$ °C; 'e' version
	Ex tb IIIC T80 °C/T130 °C Db
KCs	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
Performance approval	TÜV 19 ATEX 8435X
* All docking station versions are ATEX/IECEX approved	

Ordering Information

Dräger Polytron 5700 IR (incl. splash guard and status indicator)	Approval Code	Order Number
Dräger Polytron 5700 IR 334 d A	ITR 0210	8344220
Dräger Polytron 5700 IR 334 d A relay	ITR 0211	8344221
Dräger Polytron 5700 IR 334 d S	ITR 0310	8344222
Dräger Polytron 5700 IR 340 d A	ITR 0220	8344240
Dräger Polytron 5700 IR 340 d A relay	ITR 0221	8344241
Polytron 5xx0 Kit (Custom configuration e.g. stainless steel housing)		8344500

Accessories	Order Number
Magnetic wand	4544101
Pipe mount bracket	4544198
Duct mount kit	6812300
Duct mount kit Flow Cell for PIR 7x00	6811945
Duct mount kit Bump Test Adapter for PIR 7x00	6811990
Status indicator for PIR 7000	6811625
Splash guard for PIR 7000	6811911
Flow Cell for PIR 7000	8323405
Bump Test Adapter for PIR 7000	6811630
Insect guard for PIR 7x00	6811609
Hydrophobic filter for PIR 7x00	6811890
Calibration adapter for PIR 7x00	6811610
PolySoft licence (1 year)	6828600
PolySoft licence (subscription)	6828601
PolySoft Premium licence (1 year)	8328639
PolySoft Premium licence (subscription)	8328640
Process cuvette for PIR 7x00, POM (Polyoxymethylene)	6811915
Process cuvette for PIR 7x00, stainless steel	6811415
Process cuvette for PIR 7x00, SGR	6813219
Aluminium junction box for remote sensor 'd'	4544099
Stainless steel junction box for remote sensor 'd'	4544098
Spacer	6812617
Dräger PIR 7000334 for remote sensor 'e' variant	6811825
Dräger PIR 7000340 for remote sensor 'e' variant	6811819

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