



# Dräger Polytron® 5700 IR

## Detection of flammable gases and vapors

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The Dräger Polytron® 5700 IR is a cost effective explosion proof transmitter for the detection of flammable 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. A 3 wire 4 to 20 mA analog output with optional relays makes it compatible with most control systems.

# Dräger Polytron® 5700 IR



# Benefits

## Efficient, stable and robust – the Dräger PIR 7000

The Dräger PIR 7000 is efficient, stable and robust. With its stainless steel SS 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.

## Choose a target gas with the smart gas library

Polytron® 5700 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. The measuring range can be freely adjusted between 0 – 350 ppm and 0 – 100 % LEL enabling a wide variety of applications. No need to consult the factory when applications change.

## Same design, same operating principle

The Dräger Polytron® 5700 belongs to the 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 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® 5700 is operated by means of a magnetic wand over contact surfaces.

## Three relays for controlling external equipment

Upon request, the Dräger Polytron® 5700 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® 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. The included splash guard features a chimney effect that actively draws ambient air inside enabling gases to be detected in under 10 seconds.

## Make the impossible possible with the remote sensor

A remote explosion proof junction allows installation of the sensor up to 100' away from the transmitter in difficult to access areas. A convenient flow cell allows for remote bump testing or calibration from the Polytron® display by using permanently attached tubing that takes the calibration gas to the sensor..

## 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 customize the control units to the demands of your plant. You can also embed further features to existing alarms.

## Accessories



D-85345-2013

### Duct mount kit

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



D-16965-2014

### Cuvette SGR

Sampling or process applications, fast response behavior through minimum inner volume, material: Stainless steel.

## Accessories



ST-11698-2007

### 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 or for remote sensor installations.



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.



D-85362-2013

### Pole Mounting Kit

Attach Polytron® 5000/8000 series to a pole or pipe using clamps (not included)



### 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.

## Accessories



ST-11681-2007

### Calibration Adapter PIR 7000

Fits over the splash guard. Allows bump testing or calibration with span gas without having to remove the splash guard. Not included in calibration kit.



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.

## Related Products



D-14983-2010

### Dräger Polytron® 8700 IR

The Dräger Polytron® 8700 IR is an advanced explosion proof transmitter for the detection of hydrocarbon gases in the lower explosion limit (LEL) and ppm. 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 analog output with relays, it also offers HART®, Modbus and Fieldbus making it compatible with most control systems.

# Technical Data

## Dräger Polytron® 5700 IR

Type	Explosion proof / flameproof enclosed transmitter ("d")	
Gases	Flammable hydrocarbon gases and vapors	
Measuring ranges	Methane, propane, ethylene	0 to 20 ... 100 % LEL
	250+ tested substances	0 to 350 ppm ... 100 % LEL
	Methane	0 to 100 % vol.
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	300 mA at 24 V
	w/ relay, remote	350 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 80 °C (-40 to 176 °F) without relay -40 to 70 °C (-40 to 158 °F) with relay- -50 to 85 °C (-122 to 185 °F) remote sensor
Pressure	23.6 to 38.4 inch Hg / 800 to 1,200 mbar
Humidity	5 to 95% r. h., non-condensing

## Housing

Transmitter housing	Epoxy coated copper-free aluminum or stainless steel SS316 L	
Sensor housing	Stainless steel 303	
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 x 150 x 130 mm	
Weight, approx.	Aluminum	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 II, Div 1, Groups E, F, G; Class I, Zone 1, Group IIC; T-Code T6/T4	
IECEX	Ex db IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+70 °C;	
ATEX	II 2G Ex db 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)	
Performance approval	BVS 15 ATEX G 001 X	

# Ordering Information

Dräger Polytron® 5700 IR	Order No.
Dräger Polytron® 5700 IR 334 d A	8344220
Dräger Polytron® 5700 IR 334 d A relay	8344221
Dräger Polytron® 5700 IR 340 d A	8344240
Dräger Polytron® 5700 IR 340 d A relay	8344241
Dräger Polytron® 5700 IR 334 d S	8344222
Dräger Polytron® 8xx Custom Configuration Kit e.g. St. Steel &	8344500
<b>Accessories</b>	
Magnetic wand	4544101
Pipe mount bracket	4544198
Duct mount kit	6812300
Flow Cell for PIR 7000	6811490
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 license (1 year)	6828 00
PolySoft license (subscription)	6828601
PolySoft Premium license (1 year)	8328639
PolySoft Premium license (subscription)	8328640
Process cuvette for PIR 7x00, POM (Polyoxymethylene)	6811915
Process cuvette for PIR 7x00, stainless steel	6811415
Process cuvette for PIR 7x00, stainless steel	6811415
Aluminum junction box for remote sensor 'd'	4544099
Stainless steel junction box for remote sensor 'd'	4544098

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Corporate Headquarters  
 Drägerwerk AG & Co. KGaA  
 Moisinger Allee 53–55  
 23558 Lübeck, Germany

[www.draeger.com](http://www.draeger.com)

USA  
 Draeger, Inc.  
 7256 S. Sam Houston Parkway W.,  
 Suite 100  
 Houston, TX 77085  
 ☎ 1 800 4DRAGER  
 (1 800 437 2437)

Canada  
 Draeger Safety Canada, Ltd.  
 2425 Skymark Ave., Unit 1  
 Mississauga, Ontario L4W 4Y6  
 ☎ 1 877 DRAGER1  
 (1 877 372 4371)



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