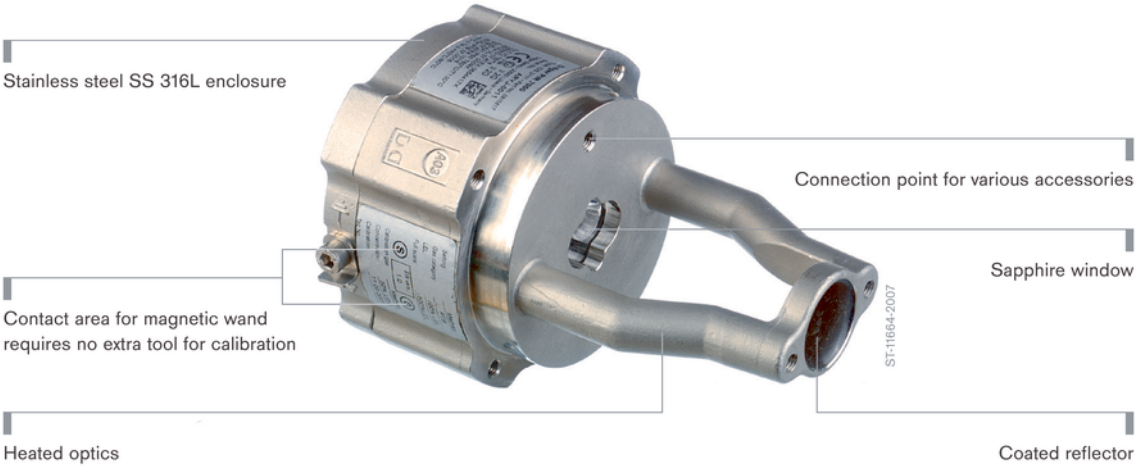
Dräger PIR 7200
Toxic Gas Detection Transmitter

When looking for a carbon dioxide monitor you can trust, consider the Drager PIR 7200. This explosion-proof point gas detection transmitter uses the latest infrared (IR) technology to provide early detection of toxic gas. Designed for a wide variety of industrial environments, the transmitter offers drift-free optics. Due to its robust design and engineering, the PIR 7200 can be operated in harsh industrial environments.



Dräger. Technology for Life®

Benefits

Innovative optical system ensures signal stability

Almost two decades ago, Dräger launched the first fixed infrared gas detector—with more than 100,000 units sold worldwide. The Dräger PIR 7200 builds on that success by incorporating the latest in revolutionary technology.

Based on patented innovations, the Dräger PIR 7200 combines a maximum light collecting design with a 4-beam signal stabilizing system. The total optical system uses no light beam split, simply a set of various reflectors. This double-compensating optical system is very resistant to the accumulation of dirt on the optical services, as well as dust, fog or insects—which are frequently found in the measuring cuvette. Due to its non-imaging construction, the measuring signal is not affected by a partial beam block.

This innovative optical system ensures that the Dräger PIR 7200 fulfills customer requirements in industrial applications for no false alarms, longer service intervals, and a drift-free signal output.

Early leak detection supports fast response

For optimum safety, it is essential to be informed about a potential CO hazard as early as possible. An early and reliable gas alarm allows you to initiate safety measures on site.

To ensure early warning of a gas leak, the Dräger PIR 7200 offers a configurable response mode which lets you choose between “normal” or “high speed” response, subject to the application. By using the “high speed” option, and combining it with the lowest feasible alarm threshold, the Dräger PIR 7200 shortens the reaction time in case of an alarm. Leakages can be detected at the earliest stage of their existence.

Multiple configuration capabilities

The Dräger PIR 7200 offers a maximum number of default settings, but remains fully flexible to meet your needs on an application-by-application basis. Whether you want to reduce or increase measuring ranges, or set up special signals (fault, beam block warning, maintenance)—the configurability of the Dräger PIR 7200 enables you to set up every device exactly to your specific needs and preferences.

Standards-based design ensures high safety and reliability—SIL 2 certified

Years of experience in manufacturing gas detectors using infrared technology have enabled Dräger to continuously enhance product quality. With the Dräger PIR 7200, the entire product—hardware and software—has been developed according to the Functional Safety standard EN 61508.

The International Electrotechnical Commission's (IEC) standard IEC 61508 defines Safety Integrity Level (SIL) using requirements grouped into two broad categories: hardware safety integrity and systematic safety integrity. A device or system must meet the requirements for both categories to achieve a given SIL.

The Dräger PIR 7200 not only fulfills but exceeds SIL 2 requirements.

Benefits

Additional advantages

- Linearized response characteristics for carbon dioxide
- Multiple mounting and configuration capabilities (signals acc. to NAMUR NE 43)
- Precise and stable measurement
- Response of less than 1 second
- Beam block warning in case of dirty optics for preventive maintenance
- Long maintenance intervals
- Extended temperature range of up to +77°C/+170°F
- Double-compensating, non-imaging optics (using 4-beam technology)
- Single cable multi-drop capability using HART® communication
- Conventional 4 to 20 mA analog signal output
- Hermetically sealed SS 316 L enclosure
- No moving parts
- Resistant to shock and vibration up to 4 G
- Continuous self-testing in the context of the IEC/EN 61508 standard
- Developed and manufactured according to the SIL guidelines, SIL 2 certified by TÜV
- Ex approvals for worldwide application: ATEX, IECEx, UL, CSA
- Dust approval for zone 21 and 22
- Typical lifetime greater than 15 years

System Components

Dräger REGARD® 7000

When you need to monitor and analyze a number of various gases and vapors, the Dräger REGARD® 7000 is a modular and highly expandable analysis tool. Suitable for gas warning systems with various levels of complexity and numbers of transmitters, the Dräger REGARD® 7000 is exceptionally reliable and efficient. An additional benefit is the system's backward compatibility with legacy REGARD® controllers.

D-6806-2016

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-11673-2007

Mounting Set

This set lets you mount the transmitter on flat or curved surfaces, is vibration-resistant up to 4 G, and swings 90° in any direction.

Part number: 68 11 648

Accessories

D-12848-2009

Duct Mount Set

Mounting the transmitter directly in the pipes, remaining air-tight even under positive pressure. Optional accessory parts are available for functional checks and remote calibration.

Part number: 68 11 850

ST-11680-2007

Splash Guard

This unit protects the measuring cuvette against dirt and dust, provides quick gas exchange through a “chimney effect”, and has reflective fluorescent strips.

Part number: 68 11 912

ST-11706-2007

Insect Guard

This UV-resistant guard protects against spiders or other insects that might block the gas inlet or outlet apertures of the splash guard.

Part number: 68 11 609

ST-11689-2007

Hydrophobic Filter

This filter protects the measuring cuvette against dirt and dust, and can be combined with other accessory parts.

Part number: 68 11 890

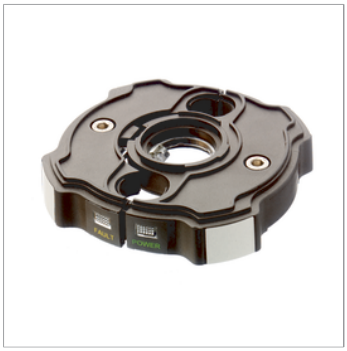
Accessories

ST-11681-2007

Calibration Adapter

Mountable with one hand, this adapter lets you calibrate a transmitter (with mounted splash guard), up to a wind force of 55 mph.

Part number: 68 11 610



ST-11694-2007

Status Indicator

This status indicator continually displays the measuring mode or disruption with a green or yellow light signal, and can be combined with other accessory parts.

Part number: 68 11 920

ST-11699-2007

Flow Cell

Suitable for process applications, this flow cells lets you perform function tests and calibrations of the transmitter during high wind forces and/or high test gas concentrations, and includes a status display.

Part number: 68 11 910

ST-11697-2007

Remote Test Adapter

This adapter lets you remotely perform function tests and calibrations of the transmitter with the usual test gas concentrations, and includes a status display.

Part number: 68 11 930

Accessories

ST-11687-2007

Process Adapter

Constructed of conductible POM, this adapter is designed for sampling and process applications, and provides fast response due to minimum inner volume.

Part number: 68 11 915

D-34526-2009

Dräger Polysoft

Dräger Polysoft is configuration and calibration software for the following stationary gas detection systems: Dräger PIR 7000, Dräger PIR 7200, Dräger Polytron® 8000, and includes status and diagnostic functions.

Part number: 83 23 405

ST-5673-2006

Magnetic Wand

This device enables simple and fast calibration (zero-point and sensitivity) of the transmitter, providing feedback through status lights.

Part number: 45 43 428

Services

D-19072-2016

Dräger Service

When your operation's safety equipment is backed by over 125 years of experience and supported by the same team that engineered it, you can rely on service and rental solutions that are tailored to meet your unique needs. With Dräger's safety solutions, you get complete peace of mind, budget security, and full-service support that you can count on every step of the way. That's the Dräger Service Advantage.

Related Products

ST-11659-2007

Dräger PIR® 7000

Constant monitoring of flammable gases and vapors is essential for a safe workplace. The Dräger PIR® 7000 is an explosion-proof point gas detection transmitter that uses infrared (IR) technology to continuously monitor flammable gases and vapors. With its stainless steel SS 316L enclosure and drift-free optics, this detector is built for the harshest industrial environments, including offshore installations.

ST-3812-2003

Dräger Polytron® 7000

The Dräger Polytron® 7000 gas detector can satisfy all toxic gas and oxygen measurement applications on a single platform. It meets compliance requirements, as well as the high specification requirements of customized solutions.

Technical Data

Dräger PIR 7200		
Type	Explosion-proof gas detection transmitter with infrared sensor technology	
Principle of operation	Temperature-compensated infrared absorption, 4-beam technology	
Gases and ranges	Carbon dioxide (CO_2)	0 to 10 % vol. (default)
		0 to 2,000 ppm ... 30 % vol. (configurable)
Measuring performance (carbon dioxide, 0 to 10 % vol.)	Digital resolution	0.02 % vol.
	Repeatability	≤ ±0.1 % vol.
	Response time $t_{0..90}$	≤ 4 seconds (“normal response”)
		< 1 second (“fast response”)
	Long-term drift	≤ ±0.03 % vol. after 12 months
Electrical data	Output signals	4 to 20 mA, HART®
	Fault signal	≤ 1.2 mA (configurable)
	Beam block warning signal	2 mA (configurable)
	Maintenance signal	3 mA (configurable)
	Power supply	13 to 30 V DC, 3-wire
	Power consumption	5.6 W (typical)
Ambient conditions	Temperature	-40 to +77 °C/-40 to +170 °F (operating)
		-40 to +85 °C/-40 to +180 °F (storage)
	Humidity	0 to 100 %RH
	Pressure	700 to 1,300 hPa / 23.6 to 32.5 inch Hg
Enclosure	Material	Stainless steel SS 316 L
	Connecting thread	M25 or 3/4" NPT
	Weight	2.2 kg (without accessories)
	Dimensions	160 mm x Ø 89 mm / 6.3" x Ø 3.5"
	Ingress protection	IP66 and IP67, NEMA 4X
Approvals	ATEX	II 2G Ex d(e) IIC T6/T4
		II 2D Ex tD A21 IP65 T80 °C/T130 °C
	IECEx	Ex d IIC T6/T4
		Ex tD A21 IP65 T80 °C/T130 °C
	UL (Classified)	Class I, Div. 1, Groups A, B, C, D
		Class II, Div. 1, Groups E, F, G
	CSA (C-US)	Class I, Div. 1, Groups B, C, D
		Class II, Div. 1, Groups E, F, G
	Safety Integrity Level	SIL2 certified by TÜV (EN 61508, EN 50402)
	CE mark: electromagnetic compatibility (directive 89/336/EEC)	

Ordering Information

Dräger PIR 7200	
Dräger PIR 7200 (NPT) HART®	68 11 572
Dräger PIR 7200 (M25) HART®	68 11 570

Accessories	
Mounting Set	68 11 648
Duct Mount Set	68 11 850
Ex E Junction Box	68 11 898

Ordering Information

Splash Guard	68 11 912
Insect Guard	68 11 609
Hydrophobic Filter	68 11 890
Calibration Adapter	68 11 610
Status Indicator	68 11 920
Flow Cell	68 11 910
Bump Test Adapter	68 11 930
Process Adapter	68 11 915
Process Cuvette	68 11 415
Magnetic Wand	45 43 428
USB PC Adapter	68 11 663

Notes

Notes

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CORPORATE HEADQUARTERS
Drägerwerk AG & Co. KGaA
Moislinger Allee 53–55
23558 Lübeck, Germany
www.draeger.com

Customer Service:
USA
+1 800-4DRAGER
(+1 800-437-2437)

CANADA
+1 877-DRAGER1
(+1 877-372-4371)

Technical Service:
USA
+1 800-4DRAGER
(+1 800-437-2437)

Locate your Regional Sales Representative at:
www.draeger.com/contact