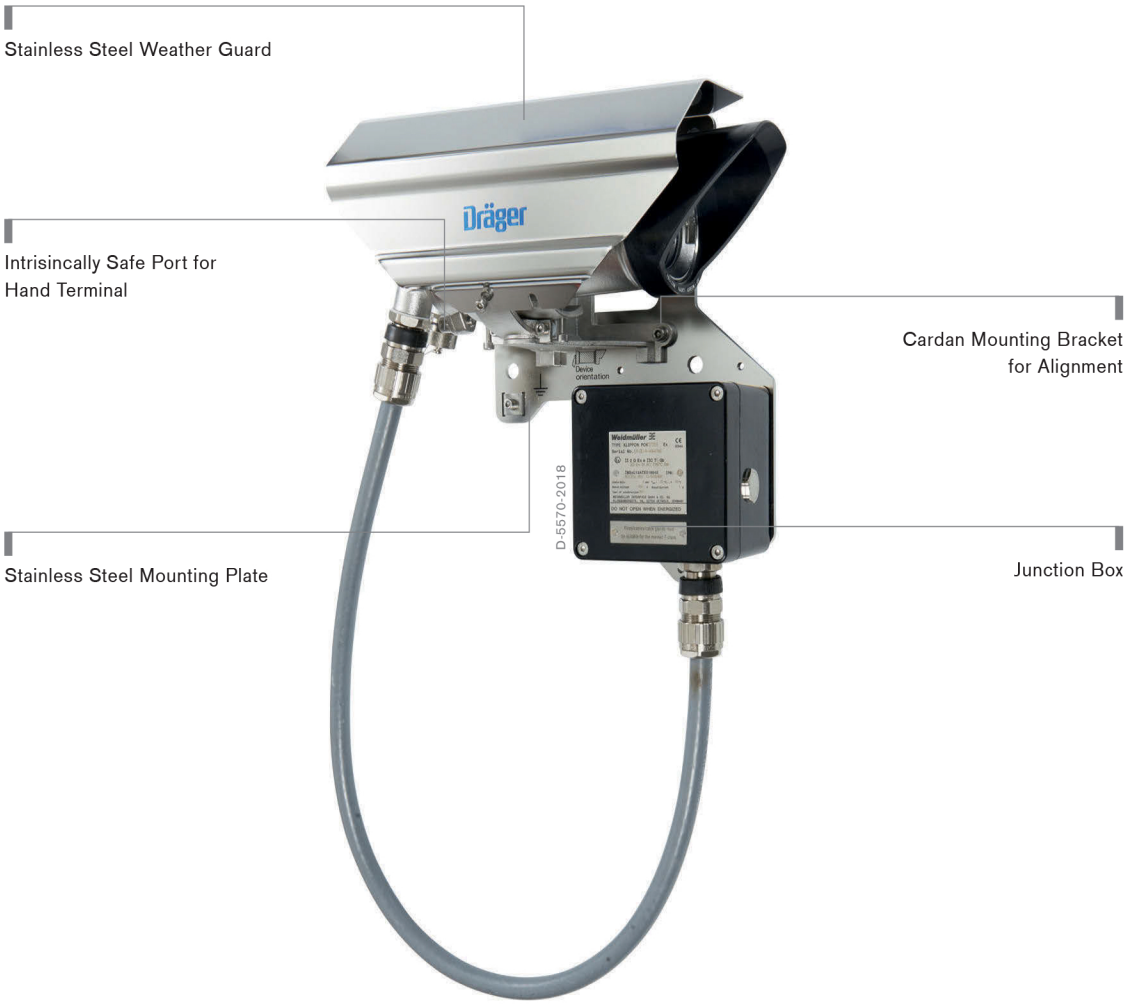
Dräger Pulsar 7000 Series
Detection of flammable gases and vapors

The Dräger Pulsar 7000 Series are stationary open path gas detectors. They detect explosive hydrocarbons in gases. The robust design and the extremely rapid response of the sensor make the Dräger Pulsar 7000 Series a dependable solution for your requirements in the oil and gas industry, as well as the chemical industry.



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Peabody, MA 01960
(978) 532-1330 | etapii.com

Martech Controls
2000 Teall Avenue
Syracuse, NY 13026
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Benefits

Reliable and quick measuring

The Pulsar 7000 Series detects a wide range of gaseous hydrocarbons. These include methane, propane and ethylene. An accumulation of these gases in critical concentration can be measured at a distance of up to 200 metres within two seconds. To do this, the system enters a specific mode with increased frequency. Status LEDs in the transmitter and receiver indicate the operational readiness of the respective device even over a greater distance. The continuous self-monitoring of the Pulsar 7000 series offers additional security. If the signal strength is insufficient, due to dirty optics or other non-operationally critical impairments, a configurable alarm signal will be issued to indicate the need for maintenance. However, the system remains ready for use and can continue to detect gases. In addition to increased operational readiness, there is the benefit of being able to plan maintenance and avoid unexpected downtime. The Pulsar 7000 Series is suitable for safety-related applications up to SIL 2.

Reliable even in adverse weather conditions

With the Pulsar 7000, reliability is not at risk even when the weather is not ideal. For fog, mist, heavy rain or snow, the Pulsar 7000 Series has a mode with increased frame flash rate and light intensity. Thus, increased IR absorption caused by environmental factors is consented for. In addition, the heated optics prevent condensation or ice forming on the lens.

Easy to align, configure and commission

The alignment of the transmitter and receiver and the subsequent commissioning of the system can be easily done by a single person, without the need for an additional telescope or alignment mirror. After an initial rough alignment by eye, the exact alignment of transmitter and receiver is carried out using a handheld terminal. The alignment is displayed either in a coordinate system with target optics or in the form of numeric coordinates. The built-in calibration feature in the Pulsar 7000 Series does not require manual adjustment or test gas. After alignment, an automatic zero point adjustment starts, which completes the commissioning of the system. All parameters are stored and later used to detect misalignments or deposits on the lenses.

On site diagnostics

The handheld terminal can be used for predictive maintenance and on-the-spot troubleshooting. In addition to alignment and zeroing support, the handheld terminal also provides configuration and diagnostic features. Comprehensive diagnostics are possible with the PC software program Dräger PolySoft.

Documented security - protocol and integrated data

An integrated data logger stores the most recent errors, warnings and events. These include, for example, events such as blockages of the signal path, gas alarms, warning signals, or problems with the alignment or with the supply voltage. The data logger is supplemented by an hourly log of the values measured in this time.

Benefits

This includes essential data such as gas reading, signal strength and temperature, which are available for the last ten weeks of operation. Even after that, information is available as a weekly summary of the last ten years of operation.

The right model for any job

The Pulsar 7000 Series offers suitable models for the most diverse applications. The offshore models are equipped with stainless steel junction boxes and cable glands. This makes them particularly robust and able to withstand the harsh environmental conditions. You can use the cross-duct model to detect gas buildup in supply or exhaust ducts. The system is specially designed for shaft installations.

Accessories

D-7364-2016

Weather shield

The weather shield protects the system from adverse weather conditions such as snow and rain. Material: stainless steel 316L (incl. for each transmitter and receiver in the Dräger Pulsar 7000 Series)

D-17784-2017

PIA – Pulsar interface adapter

The Dräger Pulsar Interface Adapter (PIA) is a rugged, weatherproof unit that is certified for use in hazardous areas. The PIA offers two interfaces for communication with the Pulsar 7000 series via an intrinsically safe connection. It can be used in combination with a HART® handheld terminal or with a PC with PolySoft via the IR interface as protocol converter. This allows you to align and calibrate the transmitter and receiver of the Pulsar.

Accessories

ST-977-2001

Handheld terminal

The Dräger handheld terminal is a rugged, weatherproof device approved for use in potentially explosive areas. The terminal serves to align and zero the transmitter and receiver of the Dräger Pulsar, and has basic configuration and diagnostic functions.

ST-3531-2003

AI500 and adapter cable

Comprehensive diagnostic data are available in conjunction with the Dräger Polytron® PC software and a PC in the non-hazardous area via the digital interface AI500 available. Up to four Pulsar systems can be connected.

D-19074-2016

Related Products

D-6806-2016

Dräger REGARD® 7000

The Dräger REGARD® 7000 is a modular and therefore highly expandable analysis 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-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 analog output with relays, it also offers Modbus and Fieldbus making it compatible with most control systems.

Technical Data

Type		Expolsion-proof open-paths gas detector based on infrared absorbation spectroscopy	
Gases		Wide range of hydrocarbons, including the alkane series from methae to hexane, propylene	
Measuring range		Min. 0 to 4 LEL m, max. 0 to 8 LEL m	
Gas category		IEC, NIOSH or PTB; selectable	
Factory calibration		Methane, propane or ethylene, selectable	
Operating range		4 to 60 m, 30 to 120 m or 100 to 200 m (distance between transmitter and receiver)	
Signal output	Analogue	Measuring	4 to 20 mA (source and sink)
		Pre-warning	3.5 mA (eg. dirty lens or misalignment), configurable
		Maintenance	3 mA
		Beam block warning	2 mA
		Faults	< 1 mA
	Digital	HART®7	
Power consumption		< 5 W receiver, < 9 W transmitter	
Operating voltage		18 to 32 VDC (24 VDC nominal)	
Response time t_{90}		< 2 s (under normal operating conditions when using the digital link)	
Skew tolerance		+/- 0.6°	
Ambient conditions	Temperature	-40 to + 60 °C, -40 to +140 °F	
	Pressure	800 to 1,100 hPa	
	Air humidity	0 to 100% rel. humidity, non-condensing	
Housing	Material	Stainless steel AISI 316L “Marine Grade”	
	Protection class	IP66/IP67	
	Dimensions (W x H x D, approx.)	430 x 670 x 170 mm (16.9 x 26.4 x 6.7 in), incl. cable bend with vertical mounting plate	
		735 x 410 x 170 mm (28.9 x 16.2 x 6.7 in), incl. cable bend with horizontal mounting plate	
	Weight (approx.)	9 kg (19.84 lbs), each transmitter and receiver incl. backplate and weather shield	
Approvals	ATEX / IECEx	Ex II 2(1) G Ex db [ia Ga] IIC T6/T5 Gb	
		Ex II 2(1) D Ex tb [ia Da] IIIC T80 °C/T95 °C Db	
		Tamb = -55 °C to +40 °C/+60 °C*	
	Performance approval	EN/IEC 60079-29-4	
		FM Class 6325	
		ANSI/ISA-12.13.04	
	DNV GL	Classes: Temperatur D; Humidity B; Vibration A+C; EMC B; Enclosure D	
	Safety Integrity Level	SIL 2 SC3 Certification by TÜV Nord (EN 61508)	
	UL /CSA	Class I, Div. 1, Groups C, D Class II, Div. 1, Groups E, F, G, H	

* -40 °C for Heavy Duty/Offshore model

HART® is a registered trademark of the HART® Communication Foundation

Ordering Information

Dräger Pulsar 7000 Complete Set	
Pulsar 7000 Short Range 4m-60m (13ft – 196ft) CSA & UL	NA 10340
Pulsar 7000 Medium Range 30m-120m (98ft – 393ft) CSA & UL	NA 10341
Pulsar 7000 Long Range 100m-200m (328ft – 656ft) CSA & UL	NA 10342
Pulsar 7000 Short Range 4m-60m (13ft – 196ft) CSA & UL-Ethylene	NA 10343
Pulsar 7000 Medium Range 30m-120m (98ft – 393ft) CSA & UL-Ethylene	NA 10344

Dräger Pulsar 7000	
Dräger Pulsar 7000 TX S Range CSA & UL	68 51 728
Dräger Pulsar 7000 TX L Range CSA & UL	68 51 729
Dräger Pulsar 7900 RX S Range CSA & UL-Ethylene	68 51 732
Dräger Pulsar 7700 RX S Range CSA & UL	68 51 733
Dräger Pulsar 7700 RX L Range CSA & UL	68 51 734
Both TX & RX will come with a mounting plate and a weather shield.	

Duct Mount	
Dräger Pulsar 7700 Duct Mount CSA & UL Complete (TX & RX)	68 51 739
Dräger Pulsar 7000 Duct Mount TX CSA & UL	68 51 730
Dräger Pulsar 7700 Duct Mount RX CSA & UL	68 51 731

Mounting Parts	
2" / 50mm Pipe mount kit	23 07 003
Pulsar 7000 duct wall mounting plate kit	23 50 450

Communication & Maintenance	
Pulsar Interface Adapter (PIA), single unit	68 51 565
Alignment kit with HHT-Test cards and ball driver with case for standard variant	23 50 325
Alignment kit with HHT- Test cards and ball driver with case for Ethylene variant	23 50 519
AI500 digital interface	23 50 306
Adapter AI500 to HHT or PC	23 50 326
Pulsar PC cable	23 07 021
Lens cleaning fluid LCF01	23 50 291

Calibration Kits	
Gas test sheets for Dräger Pulsar 7900 (Ethylene)	23 50 520
Gas test sheets for Dräger Pulsar 7700 (Methane/Propane)	23 50 521
Gas test sheets for Dräger Pulsar 7700 Duct Mount	23 50 451
Gas cell kit, single pass (Propane)	23 50 514
Gas cell kit, single pass (Methane)	23 50 516
Gas cell kit, single pass (Methane and Propane)	23 50 518

Notes