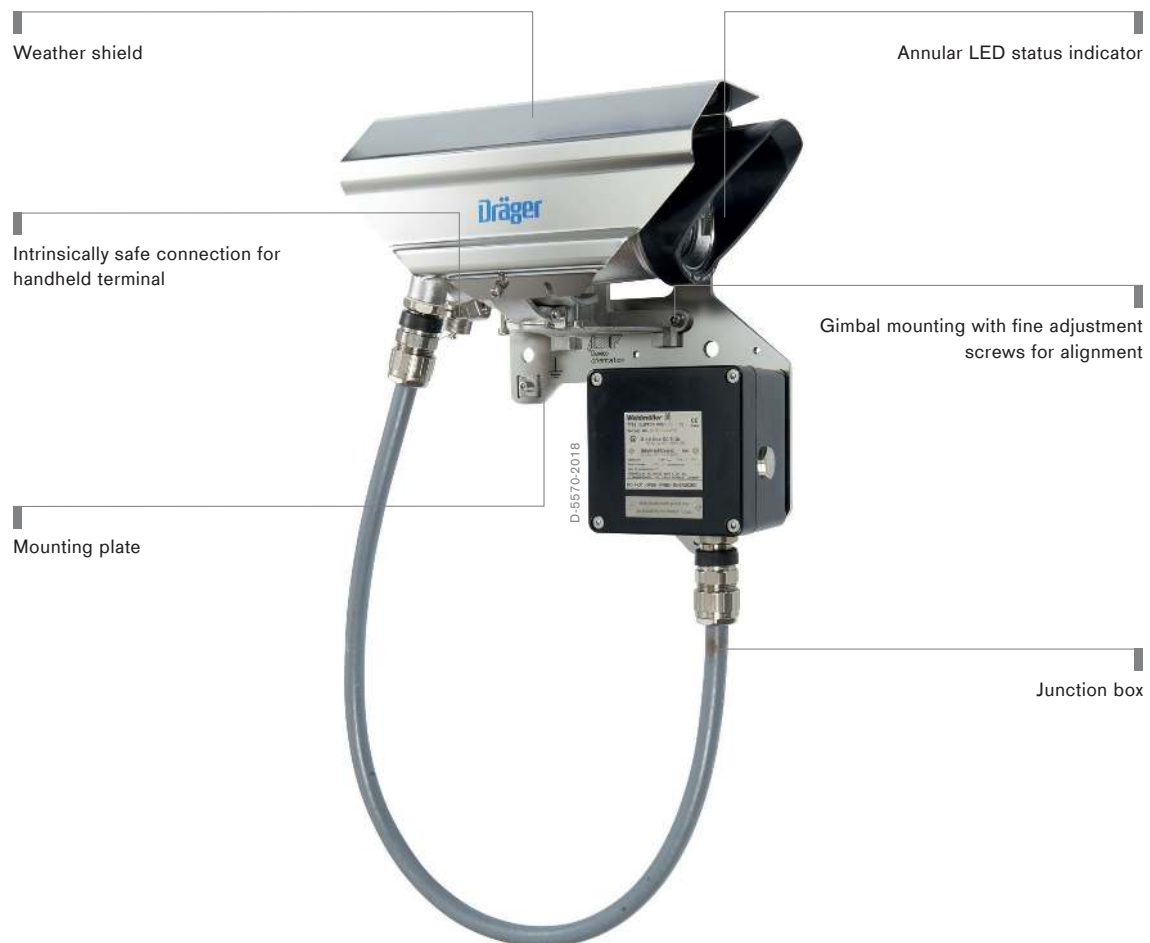


## Dräger Pulsar 7000 Series Detector for flammable gases and vapours

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



## Benefits

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### 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. Status LEDs in the transmitter and receiver indicate the operational readiness of the respective device. The continuous self-monitoring offers additional safety. 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 thus avoid unexpected downtime. The Pulsar 7000 Series is suitable for safety-related applications up to SIL 2.

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### Reliable even in adverse weather conditions

Reliability is guaranteed not just under ideal weather conditions. For fog, mist, heavy rain or snow, the Pulsar 7000 Series has a mode with increased flash rate and light intensity. Thus, increased IR absorption caused by environmental factors is compensated for. In addition, the heated optics prevent condensate or ice from forming on the lens.

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### 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 the fine adjustment screws and 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 with system check starts, which completes the commissioning of the system. All parameters are stored and later used to detect misalignments or deposits on the lenses.

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### On site diagnostics

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

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### 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 and any 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. This includes essential data such as gas reading, signal strength and temperature, which are available

## Benefits

for the last ten weeks of operation. Even after that, information is available as a weekly summary of the last ten years of operation.

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### 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 duct mount model to detect gas buildup in supply or exhaust ducts. The system is specially designed for shaft installations.

## Details



Dräger Pulsar 7000



Dräger Pulsar 7000 Heavy Duty



Dräger Pulsar 7000 Duct Mount

## System Components



D-6806-2016

### 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-39957-2021

### Dräger REGARD® 3000

Monitor various gases and vapours with the modular Dräger REGARD® 3000 control system. Its multi-coloured status light signals the status of your gas detection system. The controller allows you to combine three different modules: Input, Relay and Gateway module. You can connect up to four analogue transmitters and eight relays in combination.

## Accessories



D-17794-2017

### 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

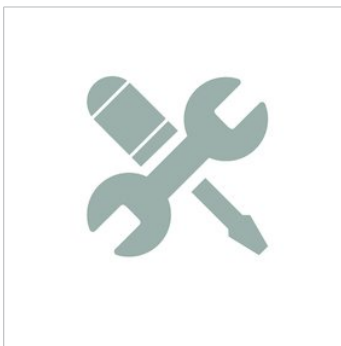


ST-5636-2006

### Communication port extension

The communication port extension brings the intrinsically safe port to a required height. It provides a robust connection between a portable communicator and the Pulsar 7000 and allows access to the unit's functions without the need for scaffolding or wire access equipment.

## Services



D-2331-2016

### Product Service

Our product service provides support with different service packages – in our workshops or directly on your premises. Care, maintenance and servicing are crucial for safety and reliability – but careful maintenance and care are a must, even when it comes to commercial considerations. Preventive checks, ongoing care and use of original replacement parts improve the longevity of your investment.



D-2335-2016

### Training

The Dräger Academy has shared its solid, practical knowledge for over 40 years. We hold more than 2,400 training courses each year, on a range of over 600 topics, with more than 110 authorised trainers. We equip your staff with practical knowledge and ensure that what they learn can be applied effectively, both day-to-day and, more importantly, whenever critical situations occur. We will be pleased to develop a customised training programme for you.

## Related Products



ST-11859-2007

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### 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 SS 316L enclosure and drift-free optics this detector is built for the harshest industrial environments, e.g. offshore installations.

## Technical Data

### Dräger Pulsar 7000 Series

|                     |   |
|---------------------|---|
| Type                | Explosion-proof open-path gas detector based on infrared absorption spectroscopy          |
| Gases               | Wide range of hydrocarbons, including the alkane series from methane 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)        |

### Electrical Data

|                   |   |                    |  |
|-------------------|---|--------------------|--|
| Power consumption | < 5 W receiver, < 9 W transmitter                                     |                    |  |
| Operating voltage | 18 to 32 VDC (24 VDC nominal)   |                    |  |
| Response time t90 | < 2 s (under normal operating conditions when using the digital link) |                    |  |
| Skew tolerance    | +/- 0.6°; +/- 1,6° with Tx S  |                    |  |
| 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   |

### 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, incl. cable bend with vertical mounting plate<br>735 x 410 x 170 mm, incl. cable bend with horizontal mounting plate |
| Weight (approx.)                | 9 kg (19.84 lbs), each transmitter and receiver incl. backplate and weather shield   |

### Environmental 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 |

### Approvals

|                        |  |
|------------------------|--|
| ATEX / IECEx           | Ex II 2(1) G Ex db [ia Ga] IIC T6/T5 Gb<br>Ex II 2(1) D Ex tb [ia Da] IIIC T80 °C/T95 °C Db<br>Tamb* = -55 °C to +40 °C/+60 °C |
| Performance approval   | EN/IEC 60079-29-4<br>FM Class 6325<br>ANSI/ISA-12.13.04  |
| Shipping Approvals     | Det Norske Veritas (DNV)<br>American Bureau of Shipping (ABS)<br>Lloyd's Register (LR)   |
| Safety Integrity Level | SIL 2 SC3 Certification by TÜV Nord (EN 61508)   |

\* -40 °C for Heavy Duty/Offshore model

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

## Ordering Information

### Dräger Pulsar 7000 Serie Ex e

Dräger Pulsar 7000 Tx S Range JB Ex e

68 51 700

## Ordering Information

|   |           |
|---|-----------|
| Dräger Pulsar 7000 Tx L Range JB Ex e                             | 68 51 701 |
| Dräger Pulsar 7700 Rx S Range JB Ex e                             | 68 51 702 |
| Dräger Pulsar 7700 Rx L Range JB Ex e                             | 68 51 703 |
| Dräger Pulsar 7900 Rx S Range JB Ex e                             | 68 51 704 |
| Dräger Pulsar 7000 Tx S Range JB Ex e Ho                          | 68 51 706 |
| Dräger Pulsar 7000 Tx L Range JB Ex e Ho                          | 68 51 707 |
| Dräger Pulsar 7700 Rx S Range JB Ex e Ho                          | 68 51 708 |
| Dräger Pulsar 7900 Rx S Range JB Ex e Ho                          | 68 51 709 |
| <b>Dräger Pulsar 7000 Serie Ex e – Offshore/Heavy Duty</b>        |           |
| Dräger Pulsar 7900 Rx S Range JB Ex e HD                          | 68 51 712 |
| Dräger Pulsar 7000 Tx S Range JB Ex e HD                          | 68 51 718 |
| Dräger Pulsar 7000 Tx L Range JB Ex e HD                          | 68 51 719 |
| Dräger Pulsar 7700 Rx S Range JB Ex e HD                          | 68 51 720 |
| Dräger Pulsar 7700 Rx L Range JB Ex e HD                          | 68 51 721 |
| <b>Dräger Pulsar 7000 Serie Ex e – Duct Mount</b>                 |           |
| Dräger Pulsar 7700 Duct Mount JB Ex e, complete                   | 68 51 716 |
| Dräger Pulsar 7000 Duct Mount Tx JB Ex e                          | 68 51 530 |
| Dräger Pulsar 7700 Duct Mount Rx JB Ex e                          | 68 51 531 |
| <b>Accessories – Mounting</b>                                     |           |
| Kit pole mounting 2" / 50 mm OD                                   | 23 07 003 |
| Kit pole mounting 5.9" / 150 mm OD                                | 23 50 302 |
| Kit mounting plate for duct mounting                              | 23 50 450 |
| <b>Accessories – Commissioning, Maintenance and Configuration</b> |           |
| Dräger PolySoft   | 83 23 405 |
| Pulsar Interface Adapter (PIA)                                    | 68 51 565 |
| Pulsar Interface Adapter Kit for Dräger Pulsar 7700               | 68 51 630 |
| Pulsar Interface Adapter Kit for Dräger Pulsar 7700 Duct Mount    | 68 51 632 |
| Pulsar Interface Adapter Kit for Dräger Pulsar 7900               | 68 51 631 |
| Communication port extension, 5 m                                 | 23 50 322 |
| Communication port extension, 10 m                                | 23 07 113 |
| Kit remote junction box   | 23 50 322 |
| Gas test sheets for Dräger Pulsar 7700                            | 23 50 521 |
| Gas test sheets for Dräger Pulsar 7700 Duct Mount                 | 23 50 451 |
| Gas test sheets for Dräger Pulsar 7900                            | 23 50 520 |
| Attenuator plate AP800  | 23 50 339 |
| Attenuator plate AP810  | 23 07 329 |
| Lens cleaning fluid LCF01   | 23 50 291 |
| Pulsar telescope for alignment                                    | 23 50 505 |
| Test gas cell (Propane)   | 23 50 514 |
| Test gas cell (Methane)   | 23 50 516 |
| Test gas cell (Methane and Propane)                               | 23 50 518 |



## Notes

## Notes

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