Dräger PEX 3000
Detection of flammable gases and vapours

The transmitter Dräger PEX 3000 detects flammable gases and vapours in concentrations below their lower explosive limit (100 %LEL). It increases the explosion protection of your plant. Its catalytic bead sensor provides a long-term stable measuring signal and responds to gas within a few seconds.

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Benefits

Six variants of transmitters

You can choose between two measuring ranges (0 ... 100 or 0 ... 10 %LEL) and two different junction box sizes. The larger junction box provides optional horizontal or vertical cable entry. Where the application asks for the sensor to be mounted remote from the junction box then it is possible to use the remote cable assembly combined with the sensing head of type Polytron SE Ex.

Simple installation

The three core screened cable from the control system terminates within the junction box of the Dräger PEX 3000 by means of three Ex-approved spring terminals. The sensor connects to three different Ex-approved spring terminals. Ex-approved spring terminals are not selfloosening and are inherently more reliable then standard screw terminals, therefore self-loosening is no longer an issue!

One-man Calibration

Owing to the state-of-the-art design of the Dräger PEX 3000 it is possible to open the Ex e junction box in the hazardous area to perform maintenance and calibration. Using the two internal push buttons and the internal seven segment digital display you can perform many different activities including one-man calibration. No additional hardware is required, e.g. a hand held terminal.

Explosion Protection

The Dräger PEX 3000 is approved according to the EU-Directive 2014/34/EU to be operated at ambient temperatures ranging from -40 up to +65 °C. This applies to both explosive gas atmospheres and explosive dust atmospheres (Zones 1, 2, 21, and 22).

Low gas concentrations

For applications where it is necessary to detect low concentrations then the transmitters Dräger PEX 3000 type XTR 0010 or XTR 0011 with their special low-drift LC sensor are very suitable. These transmitters reliably detect gas leaks of concentrations up to 10 %LEL.

The catalytic bead sensor

The DQ sensor is based on the well-known catalytic bead technology from Dräger and is designed and manufactured by Dräger for long term stability and resistance against sensor poisons. Furthermore, the DQ sensor uses an innovative non-sintered disc gas inlet therefore the reaction time towards the target gas in now only a few seconds. This fast speed of detection allows for countermeasures to be initiated earlier, therefore guarding against the formation of an explosive atmosphere.

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System Components

D-1008B-2018

Catalytic Bead DrägerSensor®

The DrägerSensor® ... DQ detects flammable gases and vapours such as hydrogen. Due to the double-detector compensation method, the catalytic sensor is particularly long-term stable. The wire mesh at the gas inlet serves as a flame barrier. So it ensures explosion protection at the same time short response time.

ST-5647-2006

Dräger REGARD® 2400 and REGARD® 2410

Dräger REGARD® 2400 and 2410 are flexible small control units for detection of toxic gases and oxygen as well as combustible gases and vapours. Combined with the Dräger transmitters or sensing heads Dräger REGARD® 2400 or 2410 forms a low-maintenance gas detection system for reliable protection.

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

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®.

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Related Products

D-13692-2010

Dräger Polytron® SE Ex

The Dräger Polytron® SE Ex ... DQ sensing heads are gas detectors for the continuous monitoring of flammable gases and vapours in the ambient air. Measurement is based on the heat of reaction principle where a chemical reaction takes place in a catalytic bead (also known as a pellistor) inside the sensor.

D-32407-2011

Dräger Polytron® 5200 CAT

The Dräger Polytron® 5200 CAT is a cost-effective explosion-proof transmitter for the detection of flammable gases in the lower explosion limit (LEL). It uses a catalytic bead DrägerSensor® Ex ... DQ that will detect most flammable gases and vapours. A 3-wire 4 to 20 mA analogue output with relays makes it compatible with most control systems.

D-15042-2010

Dräger Polytron® 8200 CAT

The Dräger Polytron® 8200 CAT is an advanced explosion-proof transmitter for the detection of flammable gases in the lower explosion limit (LEL). It uses a catalytic bead DrägerSensor® Ex ... DQ that will detect most flammable gases and vapours. In addition to a 3-wire 4 to 20-mA analogue output with relays it also offers Modbus and Fieldbus protocols, making it compatible with most control systems.

D-11951-2016

Dräger PointGard 2200

The Dräger PointGard 2200 series is a self-contained gas detection system for the continuous area monitoring of flammable gases and vapours in ambient air. PointGard 2200's rugged, water-resistant housing comes complete with a horn and strobes, a built-in power supply, and reliable DrägerSensor®.

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Technical Data

Gases and vapours	Flammable gases and vapours in the ambient air such as acetone, acetylene, ammonia, benzene, 1.3-butadiene, n-butane, n-butyl acetate, diethyl ether, dimethyl ether, ethanol, ethyl acetate, ethylene (ethene), ethylene oxide, n-hexane, hydrogen, methane, methanol, methyl ethyl ketone (MEK), methyl methacrylate, nnonane, n-octane, n-pentane, petrol 065/095, propane, i-propanol, propylene (propene), propylene oxide, toluene and o-xylene	
Measuring range	Typ XTR 0000, XTR 0001	0 to 99 %LEL
	Typ XTR 0010, XTR 0011	0 to 9.9 %LEL
	Typ XTR 0090, XTR 0091 with measuring head SE Ex PR / HT ... DQ	0 to 99 %LEL
	Typ XTR 0090, XTR 0091 with measuring head SE Ex LC ... DQ	0 to 9.9 %LEL
Power supply	12 to 30 V d.c. (nominal 24 V d.c.), max. 110 mA at 24 V	
max. cable length (at 24 V, 250 Ohms)	2,400 m at 3 x 1.5 mm^2, 1,600 m at 3 x 1.0 mm^2, 1,200 m at 3 x 0.75 mm^2	
Signal output	Normal operation	4 to 20 mA
	Maintenance	3.4 mA
	Fault condition	< 1.2 mA
Response time (at 25 °C, methane)	Typ XTR 0000, XTR 0001	t50: 3 ... 5 s,
		t90: 8 ... 10 s
	Typ XTR 0010, XTR 0011	t50: < 9 s,
		t90: < 20 s
Ambient conditions	Temperature	-40 to +65 °C (see below)
	Pressure	700 to 1,300 hPa
	Humidity	5 to 95 % r. H.
Enclosure material	glass fiber reinforced polyester (GRP)	
Enclosure protection	IP 66	
Dimensions (W x H x D)	Typ XTR 00x0	ca. 80 x 145 x 55 mm
	Typ XTR 00x1	ca. 110 x 145 x 55 mm
Weight	ca. 600 g (Typ XTR 0090, XTR 0091: ca. 450 g)	
Expected sensor lifetime	typical > 3 years	
Device description acc. to 2014/34/EU	Typ XTR 0000, XTR 0001, XTR 0010 oder XTR 0011	II 2G Ex db eb IIC T6/T5/T4 Gb
		II 2D Ex tb IIIC T80/95/130 °C Db IP6X
		-40 °C ≤ Ta ≤ +40/55/65 °C
	Typ XTR 0090 oder XTR 0091	II 2G Ex db eb IIC T6 Gb
		II 2D Ex tb IIIC T80 °C Db IP6X
		-40 °C ≤ Ta ≤ +65 °C
Performance approval	acc. to EN 60079-29-1 for the a.m. gases and vapours (100 %LEL variants only)	
Funktional Safety (100 %LEL variants only)	Average probability of failure on demand (TP = 1 year)	PFD = 5,56E-04
	Safe failure fraction (HFT = 0, Type B)	SFF = 90,4 %

Ordering Information

PEX 3000, Type XTR 0000, small housing, 0 to 100 %LEL	83 18 280
PEX 3000, Type XTR 0001, medium-sized housing, 0 ... 100 %LEL	83 18 360
PEX 3000, Type XTR 0010, small housing, 0 ... 10 %LEL	83 18 290
PEX 3000, Type XTR 0011, medium-sized housing, 0 ... 10 %LEL	83 18 370
PEX 3000, Type XTR 0090, small housing, remote transmitter without sensor	83 18 380

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Ordering Information

PEX 3000, Type XTR 0091, medium-sized housing, remote transmitter without sensor	83 18 390
Dust filter for DrägerSensor PR M DQ (PE-disks, 10 pieces)	68 10 537
Calibration adapter (PE)	68 06 978
Process adapter (stainless steel) for PEX 3000 XTR 0000, XTR 0001	68 12 470
Process adapter (stainless steel) for PEX 3000 XTR 0010, XTR 0011	68 12 465

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