



Dräger Polytron® 8900 UGLD Ultrasonic-Gas-Leak- Detector

The Dräger Polytron® 8900 UGLD transmitter is an early warning area monitor for detecting high-pressure gas leaks in outdoor industrial process environments. Thanks to an ultrasonic acoustic sensor, it responds earlier than conventional gas detectors because it registers the sound of leaking gas instead of measuring the concentration of accumulated gas clouds. As gas escapes, leaks are immediately detected in the surrounding area, regardless of the wind direction.

Dräger Polytron® 8900 UGLD



D-10609-2022

Benefits

Ultrasonic sensor technology – the early warning system for gas leaks

Typical gas detection systems used to monitor pressurised gas pipes or containers in industrial environments only detect a gas leak if the gas is in the immediate vicinity of the gas sensor. Environmental influences such as wind can delay or prevent a gas cloud from being detected by gas sensors. However, the Dräger Polytron® 8900 UGLD is not affected by these environmental factors and detects a high-pressure gas leak as soon as gas escapes. Effective early gas leak warnings can prevent unnecessary shutdowns, saving time and money.

A perfect complement to your gas detection system

The Dräger Polytron 8900 extends the Polytron 8000 series family with acoustic gas leak detection. All transmitters in this series have the same design and an identical user interface. A common user interface ensures that little training or maintenance is required for existing users. The Polytron 8900 UGLD perfectly complements existing flame and gas detection systems with reliable early gas leak warnings.

Delivers results that are easy to understand

For an easy interpretation of results, the measured values on the display of the Polytron 8900 UGLD are shown from 0 to 100 percent of the full scale decibel sensitivity range. Also the display can be configured to show directly the range from 55 dB - 109 dB. The ultrasound level is immediately displayed and transmitted and allows for an easy interpretation. Alarms are configured at a specific level above a predetermined background noise level. Additionally, a time delay of up to 60 seconds can be set in the Polytron 8900 UGLD.

Can even detect gas leaks in loud industrial environments

Loud process areas generate noise which is mostly in the audible spectrum. Gas leaks from pressurized vessels above 10 bar generate both audible sound and inaudible ultrasound. Since Polytron 8900 is tuned to measure in the ultrasound spectrum, it can easily identify gas leaks with leak rates from about 1/sec.

Robust design and fully-sealed sensor

The Polytron 8900 UGLD is an explosion-proof transmitter with a sensor housed in a galvanically-isolated, intrinsically-safe enclosure. The sensor is an ultrasonic microphone that is completely sealed in PVCC, making it impervious to water and dirt. It provides reliable readings without the need for an additional environmental protection baffle. Regular calibration is not necessary, but unlike some other UGLDs on the market, calibration is possible and easy with the offered calibration kits. The expected lifespan of the ultrasonic sensor is more than 10 years.

System Components

D-4806-2016



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®.

Accessories

D-5554-2018



Calibration and bump test kit UGLD

Even though the UGLD's sensor does not need to be replaced and does not need regular calibrations, they are still possible. Unlike some other UGLDs on the market, a calibration can be performed using a system similar to that of traditional gas detectors. The kit has room for a standard compressed air cylinder and generates a certified sound level using a sensor adapter. There is an additional adapter for zeroing the sensor. A directional sonic generator uses compressed air to generate sound, which can be used to bump test a specific UGLD from up to five meters away.

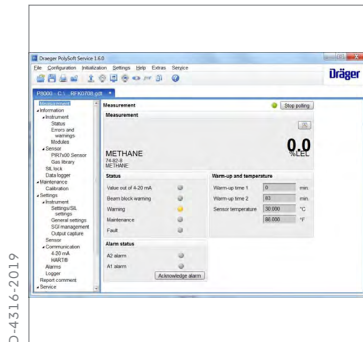
D-13019-2018



Remote Sensor UGLD

With the EC Sensing Head Remote, the sensor can be installed up to 30 metres away from the Polytron in a separate compact housing. The separate sensor housing with included field cable is intrinsically safe, which makes installation considerably easier and more flexible. This means that it is not necessary to search for a suitable cable and the sensor's position can even be adjusted within an Ex zone later on.

Accessories



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 – 20 mA signal. Out in the field, an available non intrusive IR dongle easily connects Polytron® to PolySoft.

Related Products



Dräger Polytron® 8100 EC

The Polytron® 8100 EC is Dräger's top of the line explosion-proof transmitter for the detection of toxic gases or oxygen. It uses a high performance plug and play electrochemical DrägerSensor to detect a specific gas. Besides having a 3-wire 4 to 20 mA analog output with relays, it also offers HART®, Modbus and Fieldbus protocol, making it compatible with most control systems.



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 analogue output with relays, it also offers HART®, Modbus and Fieldbus making it compatible with most control systems.

Related Products

D-20467-2020



Dräger Pulsar 7000 Series

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.

D-6469-2022



Dräger Flame 5000

The Dräger Flame 5000 is an imaging based explosion proof flame detector. This visual flame detection system uses digital image processing and advanced algorithms to process and interpret flame characteristics. This principle offers an extended field of view and fewer false alarms. Each detector is equipped with a colour CCTV camera.

Technical Data

Dräger Polytron® 8900 UGLD

Type	Explosion proof / flameproof enclosed transmitter ("d")	
Gases	Flammable and toxic gases such as hydrogen, methane, ethylene, propane, CO ₂ , nitrogen and hydrogen sulphide	
Measurement ranges	0–100 % or 55–110 dB; typical alarm setting 10 % UGLD signal above background	
Display	Back-lit graphic LCD display; 3 status LEDs (green/yellow/red)	
Sensor Type	PVCC coated piezoelectric microphone with built-in automatic self-test sound generator	
Sensor Performance	Response Time	< 3 sec.
	Minimum Pressure	2 bar (29 psi) Methane
	Coverage Radius	6.5ft–65 ft depending on gas type, leak rate and background noise
	Frequency Range	18 kHz–80 kHz

Electrical data

Analogue signal output	Normal operation	4 to 20 mA
	Maintenance	Constant 3.4 mA or mA ± 1 mA Hz modulation; (adjustable)
	Fault	< 1,2 mA
Digital signal output	HART® del	
Power supply	10 to 30 V DC, 3-wire del	
Power consumption	w/ relay, remote	100 mA at 24 V
Relay specification	Two alarm relays and one error relay, SPDT 5 A @ 230 VAC, 5 A @ 30 VDC	

Environmental conditions (See sensor data sheet)

Temperature	-40 to +70 °C (-40 to 158 °F) with relays
Pressure	700 to 1,300 mbar
Humidity	0 to 100 % relative humidity

Housing

Transmitter housing	Stainless steel SS316L
Sensor housing	Polyamide 6
Housing protection type	NEMA 4X & 7, IP65/66/67
Cable entry	Three ¾" NPT thread openings
Dimensions (H × W × D),	280 x 150 x 130 mm
Weight, approx.	5.0 kg

Technical Data

Approvals

UL	Class I, Div 1, Groups A, B, C, D;
	Class I, Zone 1, Group IIC;
	T-Code T4
CSA	-40 °C ≤ Ta ≤ +70 °C
	Class I, Div 1, Groups A, B, C, D;
	T-Code T4
IECEEx	-40 °C ≤ Ta ≤ +70 °C
	Ex db [ia Ga] IIC T4 Gb,
	-40 °C ≤ Ta ≤ +70 °C
ATEX	Ex db eb [ia Ga] IIC T4 Gb, -40 ≤ Ta ≤ +70°C;
	Variant with "e" Junction Box;
	II 2G Ex db [ia Ga] IIC T4 Gb,
CENELEC	-40 °C ≤ Ta ≤ +70 °C
	II 2G Ex db eb [ia Ga] IIC T4 Gb, -40 ≤ Ta ≤ +70°C;
	Variant with "e" Junction Box;
CENELEC	EN 50724 certification*
CE Markings	ATEX (Directive 2014/34/EU)
	Electromagnetic compatibility (Directive 2014/30/EU)
	Low voltage (Directive 2014/35/EU)
Marine approval	DNV-GL
SIL 2	Certificate TÜV Süd

* Pending

Ordering Information

Dräger Polytron® 8900 UGLD	Approval Code	Order number
Dräger Polytron® 8900 UGLD d S 4-20/HART® Relay Stainless Steel Ex d housing with 4-20 mA HART® output and 3 Relays	ETR 0521	83 28 030

Accessories		Order number
Magnetic Wand		45 44 101
Remote Sensing Head with wall mount kit		83 28 021
Connecting cable with plug for the Remote Sensing Head	5 m	83 23 305
	15 m	83 23 315
	30 m	83 23 330
UGLD Calibration and Bump Test Kit w/o Air Cylinder		83 28 042
Zero Air Gas Cylinder 112L for Calibration and Bump Test Kit		68 13 239
Pole Mount Kit		45 44 198
Weathercap Set A P5/6/8xxx		37 02 198
PolySoft Basic (one year license)		83 28 600
PolySoft Basic (Subscription – yearly fee)		83 28 601
IR Connection Kit (requires PolySoft)		45 44 197

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