

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.



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. On the contrary, the Dräger Polytron 8900 UGLD is not affected by 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 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. The ultrasound level is immediately displayed and transmitted without the use of difficult to interpret artificial intelligence. Alarms are configured at a specific level above a predetermined background noise level. Additionally, a time delay of up to 30 seconds can be set in the control system.

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 a leak rate of 100 g/sec in a 65 ft radius circle.

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. The expected lifespan of the ultrasonic sensor is more than 10 years.

System Components



D-68006-2016

Dräger REGARD® 7000

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.

Accessories



D-5554-2018

Calibration and bump test kit

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 15 ft.

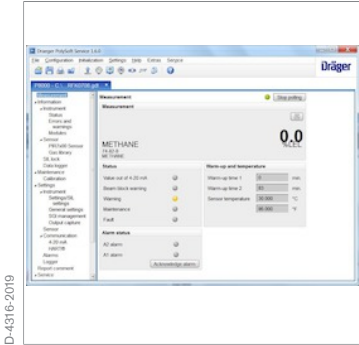


D-13019-2018

Remote sensor

With the EC Sensing Head Remote, the UGLD's sensor can be installed up to 30 metres away from the Polytron 8900 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 sensor can even be repositioned 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 to 20 mA signal. Out in the field, an available non intrusive IR dongle easily connects Polytron® to Polysoft.

Related Products



D-52604-2012

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 a 3 wire 4 to 20 mA analog output with relays, it also offers Modbus and Fieldbus protocol making it compatible with most control systems.



D-14889-2010

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.

Related Products



D-20467-2020

Dräger Pulsar 7000 Series

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.



D-49077-2012

Dräger Flame 5000

In today's industrial workplaces, flame detection is essential for protecting both people and facilities. The Dräger Flame 5000 is an explosion-proof flame detector based on advanced color imaging technology. Each detector operates as a standalone unit and incorporates an integrated closed circuit television (CCTV) system, digital signal processing, and software algorithms to process live video images and interpret the characteristics of a flame.

Technical Data

Dräger Polytron® 8900 UGLD

Type	Explosion proof / flameproof enclosed transmitter ("d") or combined with increased safety ("d/e")			
Gases	Flammable and toxic gases such as hydrogen, methane, ethylene, propane, CO ₂ , nitrogen and hydrogen sulphide			
Measurement ranges	0-100% equivalent to 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 4 mA ±1 mA 1 Hz modulation; (adjustable)	
			Fault	< 1,2 mA
	Digital signal output	HART®		
	Power supply	10 to 30 V DC, 3-wire		
	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 ¼" NPT thread openings or M20 cable gland		
	Dimensions (H x W x D)	11.02" x 5.90" x 5.12" inches		
	Weight, approx.	11 lbs		
Approvals	UL	Class I, Div 1, Groups A, B, C, D; Class I, Zone 1, Group IIC; T-Code T4		
		CSA*	Class I, Div 1, Groups A, B, C, D; Class I, Zone 1, Group IIC; T-Code T4	
			IECEX	Ex db [ia] IIC T4 Gb, -40 ≤ Ta ≤ +40 / +70 °C Ex db eb [ia] IIC T4 Gb, -40 ≤ Ta ≤ +40/ +70°C; "e" version;
	ATEX	II 2G Ex db [ia] IIC T4 Gb, -40 ≤ Ta ≤ +40 / +70 °C		
		II 2G Ex db eb [ia] IIC T4 Gb, -40 ≤ Ta ≤ +40/+70°C; "e" version		
	CE Markings	ATEX (Directive 2014/34/EU)		
		Electromagnetic compatibility (Directive 2014/30/EU)		
		Low voltage (Directive 2014/35/EU)		
Marine approval*	DNV-GL			

Technical Data

SIL 2

Certificate TÜV Süd

* Pending

Ordering Information

Dräger Polytron® 8900 UGLD	Approval code	Part number
Polytron® 8900 UGLD d S 4-20/HART® Relay	ETR 0521	83 28 030
Stainless Steel Ex d Housing with 4-20mA HART® output and 3 Relays		
Accessories		Part 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 103L for Calibration and Bump Test Kit		45 10 058
Pole Mount Kit		45 44 198
Polysoft Basic (one year license)		83 28 600
Polysoft Basic (Subscription – yearly fee)		83 28 601
IR Connection Kit (requires PolySoft)		45 44 197
HART® is a registered trademark of the HART Communication Foundation.		

Notes

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