

Dräger Polytron® 7000 Detection of toxic gases and oxygen

The Dräger Polytron® 7000 is a gas detector that can satisfy many toxic and oxygen gas measurement applications on a single platform. It meets the requirements of the compliance market as well as the high specification requirements of customised solutions.

Large Display

34 x 62 mm, 64 x 128 pixel 1.3" x 2.4"

Quick Lock mechanism

One half turn – locked

Simple 3 button operation and navigation

Graphics, icons and real text descriptions

Polytron Docking station

Durable GRP housing



ST-3812-2003

Benefits

Easy operation

Dräger developed the simple and structured software menu of the Polytron 7000 in collaboration with its customers. The big graphic display shows status information with the help of icons and plain text, and guides the user through calibration and configuration.

Communication interfaces

The wide range of outputs, 4 to 20 mA, HART®, LON, PROFIBUS® or FOUNDATION Fieldbus™, enables the use of the Polytron 7000 on either a control system from the Dräger Regard family, or third party control systems. The modular design allows for the subsequent retrofit onto any of the mentioned interfaces.

Remote Sensor

With the Polytron 7000 remote sensor adaptor and lead it is possible to mount the sensor up to 30 metres from the polytron 7000 transmitter. This enables the user to read and operate the transmitter from a safe area, or detect toxic gasses and oxygen levels in difficult to reach areas, whilst still being able to view and configure the Polytron 7000 from a convenient location. A duct mount kit enables the remote sensor to be mounted direct in elevated pipe work.

Relay module

The Dräger Polytron 7000 can be equipped with a relay module. With two gas alarm relays, and one fault alarm relay, the transmitter can either be used as a stand alone gas detector with no need for a controller; or alarm devices can be activated locally saving costs in cabling to and from a controller. The analogue signal can still be transmitted back to a controller if desired. (Not suitable for use in hazardous areas)

Intelligent sensors

The Dräger Polytron 7000 can detect over 100 different gases. DrägerSensors are specifically designed for the demands of 24 hours per day, 365 days per year operation. The large DrägerSensor size gives them their renowned long life. The built-in sensor data memory containing all the relevant gas and calibration information, together with on board temperature and pressure compensation gives the DrägerSensor its unsurpassed measurement performance. This also allows the Polytron 7000 to accept pre-calibrated sensors, with minimal operator intervention, the Dräger Polytron 7000 is a virtually maintenance free transmitter.

Software options

With three different software dongles, a range of functions are incorporated into the transmitter adjusting it to user or application specific requirements. With the sensor test dongle, the Dräger Polytron 7000 performs many different patented sensor tests that ensure the reliability and functionality of the sensor and gas detection system. With the new sensor diagnosis function (including the sensor test), operational demands and the remaining sensor life time is estimated so that maintenance and exchange schedules can be created. A data

Benefits

and event saving option is integrated into the data dongle. This saves the measured values and events such as alarms and warnings. The data can be downloaded onto a PDA m515-Ex via an IR interface and evaluated on a PC with the Dräger GasVision software or at the push of a button, a 15 minute concentration history is shown on the transmitter display.

Pump module

The inclusion of a pump module enables the Polytron 7000 to draw gas samples from difficult to reach areas, the gas sample is then passed across the DrägerSensor for detection. The pump unit, like all accessories in the Polytron 7000 range is modular, and can be retrofitted into existing transmitters. (Not suitable for use in hazardous areas)

System Components



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®.

System Components



ST-3831-2003

Electrochemical DrägerSensor®

Fast response, high accuracy, great stability, long life. Electrochemical DrägerSensors offer all these benefits. You can use the robust and long-life sensors for the selective measurement of the smallest concentrations of toxic gases and oxygen in ambient air.



D-2777-2009

Dräger REGARD® 3900

The Dräger REGARD® 3900 is a standalone, self contained control system for the detection of Toxic, Oxygen and Ex hazards. The control system is fully configurable between 1 and 16 channels, depending upon the type and quantity of input/output boards installed.



ST-335-2004

Dräger REGARD®-1

The Dräger REGARD®-1 is a standalone, self contained single channel control system for the detection of Toxic, Oxygen and Ex hazards. The control system is fully configurable for a single input from either a 4 to 20 mA transmitter or a Dräger Polytron® SE Ex measuring head.

Accessories



ST-3805-2003

Docking station

For easy, time-saving mounting and commissioning of the Dräger Polytron® 3000 or 7000. One is required for each Polytron® 3000 or 7000

Order No.: 83 17 990



ST-5695-2006

Test gas ampoules

For use with the calibration bottle.

Related Products



ST-3811-2003

Dräger Polytron® 3000

The Dräger Polytron® 3000 is an intrinsically safe gas detector for the continuous monitoring of more than 60 toxic gases and oxygen in ambient air. It is the part of a new generation of gas detectors developed on a modular platform. Communication to the central control system is done via a 4 to 20 mA signal.

Related Products



D-156-2016

Dräger Polytron® 5100 EC

The Dräger Polytron® 5100 EC is a cost-effective 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. A 2 or 3-wire with 4 to 20 mA output with relays make it compatible with most control systems.

Technical Data

Typ	Intrinsically safe transmitter for electrochemical sensors		
Gases and Ranges	Toxic gases and oxygen, ranges user adjustable, see sensor data sheet		
Display	Large graphic display, 34 x 62 mm, 64 x 128 pixel 1.3" x 2.4" Menu structure and messages in real text, 3 button navigation		
Output	Analog	4 to 20 mA	
	Digital	HART®, LONWORKS®, PROFIBUS PA, FOUNDATION fieldbus™	
	Warning signal, configurable	default: warning signal every 10s for 1s	
	Maintenance signal, configurable	3.4 mA constant or 4 mA ± 1 mA, 1 Hz modulation	
	Fault signal	< 3.2 mA	
Power Supply	16,5 to 30 VDC 2-Wire, 3-Wire for Pump module* and relay module*		
Pump Module*	Tubing up to 30 m / 100 ft. @ 0.5 l/min with 4 mm / 3/16" inner diameter		
Relay Module*	Two alarm relays, one fault relay, SPDT, user programmable Rating 5 A 240 VAC, 5 A 24 VDC		
Ambient Conditions	Transmitter only, for sensors see separate sensor data sheet		
	Temperature	-40 to +65 °C / -40 to +150 °F	
	Pressure	700 to 1,300 hPa / 23.6 to 32.5 inch Hg	
	Humidity	0 to 100 % RH, non condensing	
Enclosure	GRP, IP 66/67, NEMA 4, M20 cable gland		
Size (H x W x D)	166 x 135 x 129 mm, 6.54" x 5.32" x 5.08" ft.		
Weight	Approx. 900 g / 2 lbs.		
SIL Level	SIL 2 verified		
Approvals	ATEX	II 1G Ex ia IIC Ga T4/T6 -40 °C to +65/ +40 °C	
		II 3G Ex ic IIC Gc T4/T6 -40 °C to +65/ +40 °C	
		II M1 Ex ia I Ma -40 °C to 65 °C	
	O ₂ measuring function for protection against explosion (measurement of inertisation)		
	IECEX	Ex ia IIC Ga T4/T6 -40 °C to +65/+40 °C	
		Ex ic IIC Gc T4/T6 -40 °C to +65/+40 °C I M1 Ex ia I Ma -40 °C to 65 °C	
	UL	In accordance with IEC 60079-27, FISCO Class I, Div 1, Group A, B, C, D, Class II, Div 1, Group E, F, G	
CSA	Class I, Div 1, Group A, B, C, D / Ex ia IIC T6/T4, -40 to 40/+65 °C		
CE mark	Electromagnetic compatibility (2004/108/EEC) Low Voltage (Directive 2006/95/EC)		

HART® is a registered trademark of the HART Communication Foundation

LONWORKS® is a registered trademark of the Echelon Corporation

FOUNDATION fieldbus™ is a registered trademark of the Fieldbus Foundation™

*General purpose use only. The transmitter does not have any approval, but the CE-mark when used with LON. a pump or relay module.

Ordering Information

Dräger Polytron® 7000 with 4 to 20 mA output and Sensor Diagnostic Dongle

83 17 980

Ordering Information

Dräger Polytron® 7000 variations

4 to 20 mA	HART®	Relay	Pump		
x					83 17 610
x		x			83 17 636*
x			x		83 17 637*
x		x	x		83 17 638*
x	x				83 17 710
x	x	x			83 17 776*
x	x		x		83 17 777*
x	x	x	x		83 17 778*
PROFIBUS® PA	FOUNDATION fieldbus™ H1	LON	Relay	Pump	
		x			83 17 810*
		x	x		83 17 816*
		x		x	83 17 817*
		x	x	x	83 17 818*
x					83 19 430
x			x		83 19 427*
x				x	83 19 436*
x			x	x	83 19 438*
	x				83 19 440
	x		x		83 19 428*
	x			x	83 19 437*
	x		x	x	83 19 439*
Dräger Polytron® Docking Station – one required per transmitter			83 17 990		
Modules					
Pump Module			83 17 350		
Relay Module			83 17 360		
Relay Connector			18 90 086		
Software Dongles					
Data Dongle			83 17 618		
Sensor Test Dongle			83 17 619		
Sensor Diagnostic Dongle			83 17 860		
Accessories					
Remote Sensor Adapter			83 17 275		
Remote Cable and plug 5 m / 16 ft.			83 17 270		
Remote Cable and plug 15 m / 49 ft.			83 17 998		
Remote Cable and plug 30 m / 100 ft.			83 17 999		
Remote duct adapter			83 17 617		
Duct Mounting Kit			83 17 150		
Cable Entry Set M20, with cable gland and connector for multi-drop			83 17 282		
Calibration Adapter, electrochemical sensors			68 06 978		
Pump Adapter for DrägerSensor AC L			83 17 976		
Calibration Adapter, DrägerSensor AC L			68 09 380		
Dräger GasVision, data display software			83 14 034		
Dräger CC-Vision GDS, calibration and configuration software			68 11 989		

Ordering Information

IR data cable, USB DIRA	83 17 409
PDA m515-Ex	83 17 995
Process Adapter RS EC, Stainless Steel	83 23 404

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