

Dräger Polytron 7000



ST-3751-2003

The Dräger Polytron 7000 is a gas detector that can satisfy all toxic and oxygen gas measurement applications on a single platform. It is meeting the requirements of the compliance market as well as the high specification requirements of customized solutions. Developed with an innovative modular design, there is now the flexibility to choose and purchase only the features that the application requires. The unit is upgradeable to a higher specification after it has been installed simply by adding modules. This allows the Dräger Polytron 7000 to develop in line with changing application requirements.

Intuitive operation

The software menu of the Dräger Polytron 7000 was designed in partnership with our customers making it simple and easy to use. The large graphical display uses icons and plain text to show the status of the instrument, and guides the user through calibration and configuration. Calibration has been made even easier with the auto-calibration function.

grated into any LONWORKS system architecture. Offering the advantage of reduced wiring cost and a reliable and flexible communication network. HART enables a simultaneous 4 to 20 mA signal and digital communication via the same single twisted pair line. Alternatively, up to eight transmitters can be daisy chained for operation on a single twisted pair connection in full digital mode.

Intelligent sensors

With over 30 different DrägerSensors to choose from, the Dräger Polytron 7000 is able to detect over 100 different gases. Specifically designed for the demanding requirements of a 24 hours a day, 365 days a year stationary gas detection system, the larger DrägerSensor are renown for their long life times and superior performance. The embedded sensor memory contains information on gas, range, cross-sensitivities, calibration values, temperature compensation, speedy sensor warm-up, and sensor-vitality data. All this enables the use of pre-calibrated sensors, which makes the Dräger Polytron 7000 ideal for a virtually maintenance free transmitter.

Software Options

A number of software dongles with different software functionality will customize the transmitter to specific application needs.

Sensor Test Dongle

With this dongle, the Dräger Polytron 7000 performs many patented sensor tests to ensure reliability and functionality of the sensor and the gas detection system.

Sensor Diagnostic Dongle

All sensors have a certain life time which can be affected by factors such as gas exposure, temperature exposure and the age of the sensor. Now, with the new sensor diagnostic function in the dongle (including Sensor Test), the stress and remaining life of the sensor is evaluated, and it is possible to predict and plan for a maintenance and replacement cycle.

Data Dongle

Datalogger and eventlogger options are implemented in this dongle, which stores gas values and events such as faults and alarms. Using an IR link with the PDA m515-Ex, the data can



ST-3812-2003

Dräger Polytron 7000:
Intrinsically safe gas detector for toxic gases and oxygen in ambient air

Communication interfaces

With the Dräger Polytron 7000 the communication to the central control system can be selected between 4 to 20 mA, HART fieldbus or LONWORKS. With the LONWORKS option, the Dräger Polytron 7000 can be inte-

be downloaded and evaluated on a PC with the GasVision software.

By pushing one button, a graphical 15 minute history of the gas concentration will be displayed on the transmitter screen, for quick evaluation of the current and past situation.

Simple, quick installation

The Dräger two component concept of a Docking Station and a Dräger Polytron 7000 electronics saves time and money. The Docking Station can be pre-installed – mounting and wiring it into place separately – while protected by a rain and dust cover until commissioning. At commissioning, the Dräger Polytron 7000 electronics is fixed by quick-lock mechanism into the Docking Station, the sensor inserted - and the system is ready for operation.

Rugged Housing

The design of the compact durable GRP housing of the Dräger Polytron 7000 is dust and water proof with an IP66/67 and NEMA 4 rating. It is verified to SIL 2 specification with unsurpassed RFI resistance.

Relay Module

The Dräger Polytron 7000 can be equipped with a relay module to make it a stand alone device with two gas alarms and one fault relay. The relay module forms a part of transmitter, so there is no additional installation cost or wiring to be done. For general purpose use only.*

Pump Module

An internal pump for sampling the gas mixture to the sensor is also a module option. The pump fits inside the Dräger Polytron 7000 with no additional need for extra wiring and mounting space. For general purpose use only.*

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



Accessories / Remote Sensor

The remote sensor is easy to install on the wall or, using the duct adapter, onto ducts and pipes (curvature diameter > 10 cm / 4", up to flat). It is available with a cable length of 5 to 30 m / 15 to 100 ft.

Duct Mount Kit

The duct mount kit enables direct mounting of the Dräger Polytron 7000 onto ducts and pipes (curvature diameter > 10 cm / 4", up to flat).

ORDER INFORMATION

Dräger Polytron 7000 with 4 to 20 mA output and Sensor Diagnostic Dongle 83 17 980

Dräger Polytron 7000 variations

4 to 20m A	HART	Display	Relay	Pump	
•					83 17 590
•			•		83 17 626*
•				•	83 17 627*
•			•	•	83 17 628*
•		•			83 17 610
•		•	•		83 17 636*
•		•		•	83 17 637*
•		•	•	•	83 17 638*
•	•				83 17 690
•	•		•		83 17 696*
•	•			•	83 17 697*
•	•		•	•	83 17 698*
•	•	•			83 17 710
•	•	•	•		83 17 776*
•	•	•		•	83 17 777*
•	•	•	•	•	83 17 778*

LON	Display	Relay	Pump	
•				83 17 790*
•		•		83 17 796*
•			•	83 17 797*
•		•	•	83 17 798*
•	•			83 17 810*
•	•	•		83 17 816*
•	•		•	83 17 817*
•	•	•	•	83 17 818*

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
GasVision, data display software	83 14 034
CC-Vision, calibration and configuration software	64 08 515
PDA m515-Ex	83 17 995

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Dräger Polytron 7000:
With internal pump*

ST-3816-2003



Dräger Polytron 7000:
With integrated relays*

ST-3801-2003



Dräger Polytron 7000:
With remote sensor and remote
cable up to 30 m / 100 ft.

TECHNICAL INFORMATION

Type	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®
	Warning signal, configurable	default: fault signal every 10 s for 1 s
	Maintenance signal	3.4 mA constant
	Fault signal	< 3.2 mA
Power Supply	16.5 to 30 VDC; < 100 mW, 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 1300 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)	approx. 175 x 130 x 130 mm / 11" x 6" x 5.5"	
Weight	approx. 900 g / 2 lbs.	
SIL Level	SIL 2 verified	
Approvals	ATEX	II 1G EEx ia IIC T6/T4, - 40 to + 40 / + 65 °C
		II 3G EEx nL IIC T6, - 25 to + 40 °C
	IEC	Ex ia IIC T6/T4, - 40 to + 40 / + 65 °C
		Class I, Div 1, Group A, B, C, D
	UL	Class II, Div 1, Group E, F, G
		Class I, Div 1, Group A, B, C, D
	CSA**	Ex ia IIC T6/T4, - 40 to + 40 / + 65 °C
CE-mark	electromagnetic compatibility (directive 89/336/EEC) low voltage directive (72/23/EEC, 93/68/EEC)	

HART® is a registered trademark of the HART Communication Foundation
LONWORKS® is a registered trademark of the Echelon Corporation
*general purpose use only. The transmitter does not have any approval, but the CE-mark when used with a pump or relay module
**pending

SYSTEMS CENTERS

P. R. CHINA

Beijing Fortune Draeger
Safety Equipment Co., Ltd.
Yu An Lu A 22, B Area
Beijing Tianzhu Airport
Industrial Zone
Houshayu Shunyi District
Beijing 101300
Tel +86 10 80 49 80 00
Fax +86 10 80 49 80 05

FRANCE

Draeger Industrie S.A.S.
3c, Route de la Fédération
67025 Strasbourg Cedex
Tel +33 388 40 76 76
Fax +33 388 40 76 67

SINGAPORE

Draeger Safety Asia Pte. Ltd.
67, Ayer Rajah Crescent # 06 03
139950 Singapore
Tel +65 68 72 92 88
Fax +65 67 73 20 33

UNITED KINGDOM

Draeger Safety UK Ltd.
Ullswater Close
Kitty Brewster Industrial Estate
Blyth, Northumberland NE24 4RG
Tel +44 1670 352 891
Fax +44 1670 540 033

USA

Draeger Safety, Inc.
505 Julie Rivers
Suite 150
Sugar Land, TX 77478
Tel +1 281 498 1082
Fax +1 281 498 5190

Dräger Safety AG & Co. KGaA

Revalstrasse 1
23560 Luebeck, Germany
Tel +49 451 882 2794
Fax +49 451 882 4991
www.draeger-safety.com