Dräger Polytron 7500
Fixed Gas Detector

The Dräger Polytron 7500 is a transmitter for the continuous monitoring of NF_3 and PFCs (perfluoro compounds) e.g. C_4F_6, C_5F_8 in ambient air. It is the advanced version of the new modular Polytron Pyrolyzer family from Dräger Safety. It can be extended with modules for additional functions and features like local alarm relays, digital communication or diagnostic functions.

ST-3803-2005

SIMPLE, QUICK INSTALLATION

A two-component concept comprising a docking station and a main unit saves time and money. The docking station and the relay module can be electrically pre-wired. At commissioning the Dräger Polytron 7500 main unit is connected by a quick-lock mechanism to the docking station. After warm up the system is ready for operation.

The design supports the demand for a small footprint where space is limited.

RELIABLE MEASUREMENT

Through new technological advances in electronic design and a shielded full metal housing, Dräger Safety was able to provide transmitters with unsurpassed RFI resistance.

The use of durable and sturdy components for pumps and pyrolysis oven enables long reliable operation. Selective electrochemical DrägerSensors provide a stable and longlasting measurement of dedicated target substances with a fast response time.
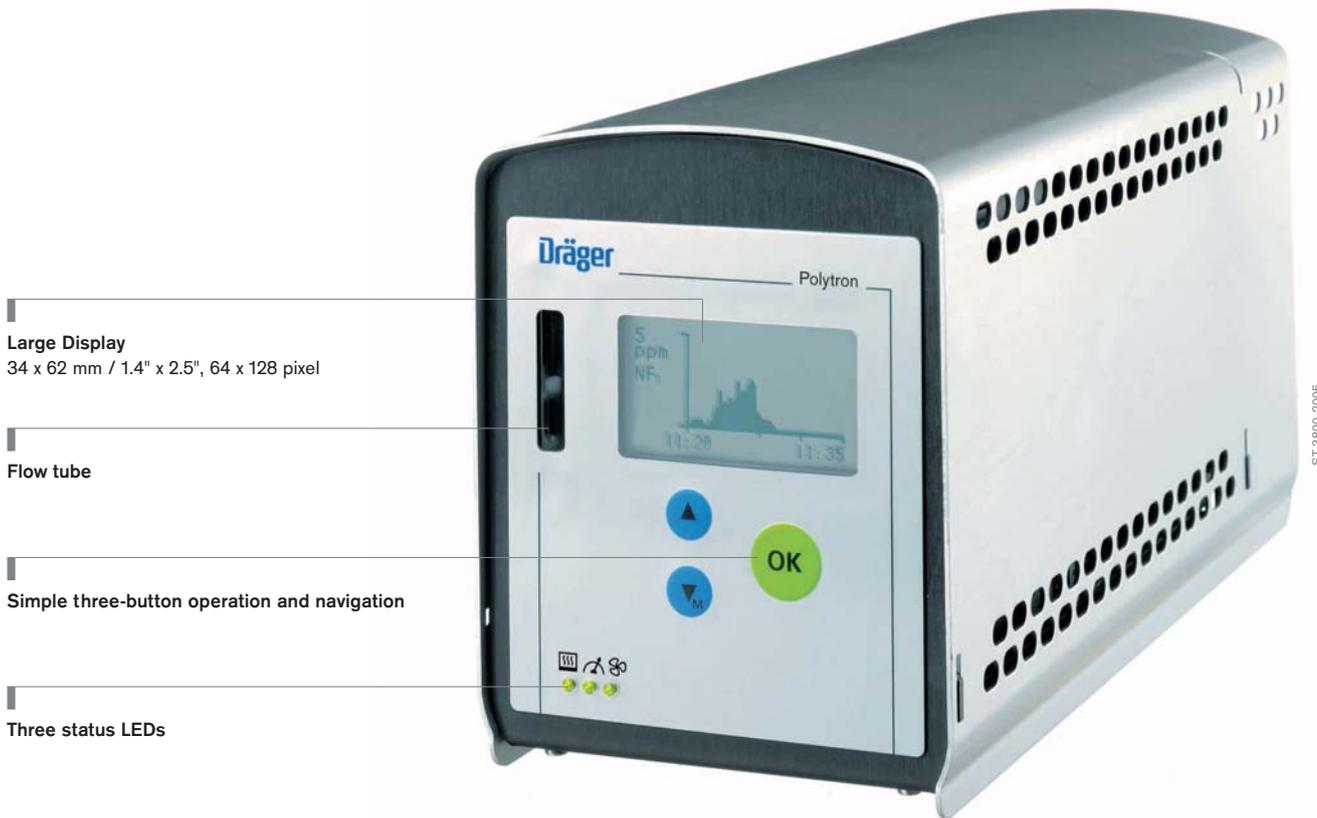
A unique branched internal flow system allows for a wide flow range from 0.5 to 1.5 l/min without interfering with the measurement performance.

EASY OPERATION

A large graphical display uses icons and plain text to show the status of the instrument, and guides the user through calibration and configuration. The software menu was designed in partnership with our customers, making it simple and easy to use. Only three keys are necessary to walk through the different functions. A password prevents unauthorized access.

ST-3804-2005

Dräger Polytron 7500
For the semiconductor industry.

Large Display
34 x 62 mm / 1.4" x 2.5", 64 x 128 pixel

Flow tube

Simple three-button operation and navigation

Three status LEDs

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 7500 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 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.

ORDER INFORMATION

Pyrolyzer docking station, one per transmitter		83 18 580
Dräger Polytron 7500	NF$_3$	83 18 827
Dräger Polytron 7500	PFC (C$_4$F$_6$ and C$_5$F$_8$)	83 18 828
Dräger Polytron 7500	NF$_3$ LON	83 18 829
Dräger Polytron 7500	PFC (C$_4$F$_6$ and C$_5$F$_8$) LON	83 18 830
Dräger Polytron 7500	Relay module	83 18 524
Dongle		
Sensor test		83 17 619
Sensor diagnostic		83 17 860
Datalogger		83 17 618

Relay module

TECHNICAL DATA

Type	Microprocessor-controlled transmitter with pump and oven
Gas and ranges	Nitrogen trifluoride NF$_3$ CAS 7783-54-2 0 to 50 ppm
	Octafluorocyclopentene C$_5$F$_8$ CAS 559-40-0 0 to 30 ppm
	Hexafluorobutadiene C$_4$F$_6$ CAS 685-63-2 0 to 30 ppm
Flow rate	1000 ml/min; tubing 4 mm ID, 6 mm OD / 1/4" OD
Output Analog	4 to 20 mA, digital HART®
	optional digital LON
Power supply	24 V DC ± 10 %; 1.5 A
Ambient condition	Temperature 0 to 40 ℃ / 30 to 100 ℉
	Humidity transmitter 0 to 99 %RH, non-condensing
	Humidity sample gas 20 to 90 %RH
Enclosure	IP 21
Size (HWD)	150 x 125 x 300 mm / 6" x 5" x 11.8"
Weight (approx.)	2.4 kg / 5.2 lbs
Approvals	CE mark electromagnetic compatibility (directive 89/336/EEC)

HART® is a registered trademark of the HCF, Austin, TX

COMMUNICATION INTERFACES

With the Dräger Polytron 7500 the communication to the central control system can be selected between 4 to 20 mA, HART® fieldbus or LON interface. 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. With the LON-WORKS® option, the Dräger Polytron 7500 can be integrated into any LON-WORKS® system architecture, offering the advantage of reduced wiring cost and a reliable and flexible communication network.

GAS SAMPLING

The transmitter is equipped with two internal pumps and two independent electronic flow monitors for each. One pump delivers at a high flow the gas sample to the Polytron 7500. The second pump feeds the oven with a constant gas stream. A tube flowmeter provides a quick visual feedback for proper operation.

The sampled gas is fed to an oven-type device which cracks the target gas at high temperature. Subsequently the gaseous by-products will be detected by means of an electrochemical DrägerSensor and displayed as concentration on the display.

RELAY MODULE

The Dräger Polytron 7500 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 the transmitter, so there is no additional installation cost or wiring to be done.

POLYTRON 7000 PLUG-IN FOR LNS

For the simple and quick network integration and configuration of the Dräger Polytron 7500 there is a free plug-in software for LNS version 3.0 and higher.

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