

Dräger Polytron 7500 Fixed Gas Detector

The Dräger Polytron 7500 is a gas detector for nitrogen trifluoride (NF₃), fluorinated and chlorinated hydrocarbons in ambient air.



Dräger Polytron 7500 reliably detects leakages in many applications, including speciality gas supply systems for etchants such as NF₃, C₄F₆ or C₅F₈ refrigeration systems and gas insulated switchgear applications. An integrated sampling pump continuously draws air from the area to be monitored. Interfaces, such as relays and field bus connectors, can be integrated as optional modules.

SIMPLE, QUICK INSTALLATION

A modular concept comprising a docking station separate from the main unit saves time and money. The docking station and even 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 a short warm up period the system is ready for operation. The design meets the requirement for a small footprint where space is limited.

RELIABLE MEASUREMENT

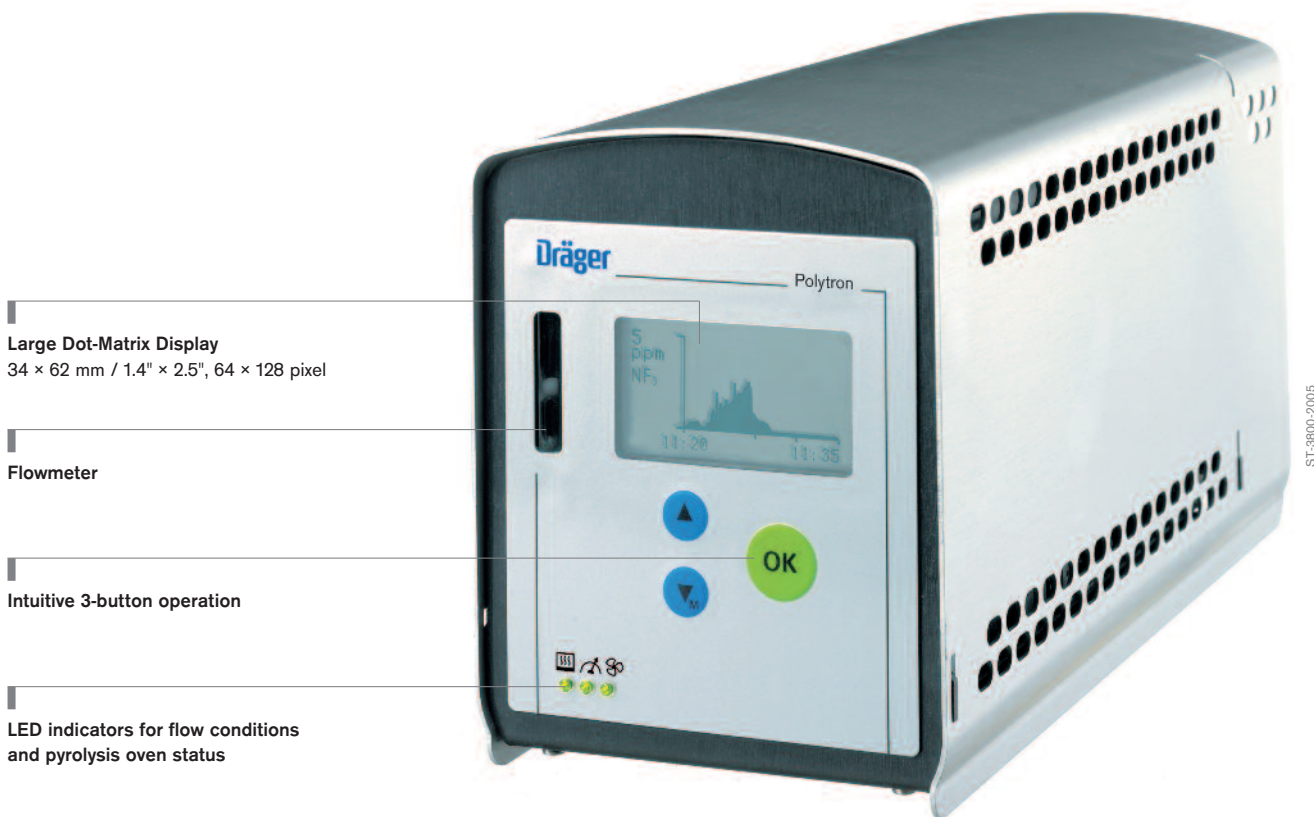
Through new technological advances in electronic design and shielding, Dräger is able to provide a gas detector with unsurpassed RFI resistance. The use of durable and sturdy components for pumps and pyrolysis oven achieves long reliable operation. Selective and long-lasting electrochemical DrägerSensors® XS provide a stable measurement of the target substances with a fast response time. A unique internal flow system guarantees stable measurements even with varying sample flows.

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 navigate through the different functions. A password prevents unauthorized access.



Dräger Polytron 7500
Fixed Gas Detector for NF₃, fluorinated and chlorinated hydrocarbons.



Large Dot-Matrix Display
34 × 62 mm / 1.4" × 2.5", 64 × 128 pixel

Flowmeter

Intuitive 3-button operation

**LED indicators for flow conditions
and pyrolysis oven status**

SOFTWARE-OPTIONS

A number of software dongles customises the Dräger Polytron 7500 to the specific application.

Sensor test dongle

With this dongle, the Dräger Polytron 7500 periodically performs a patented sensor test procedure to ensure reliability and functionality of the sensor and the gas detection system.

Sensor diagnostic dongle

The sensor diagnostic function (including sensor test) evaluates the stress of the sensor and estimates its remaining life time. So planning of a maintenance and replacement cycle can be optimised.

Data dongle

Data and event logger options are implemented in this dongle, which stores gas values and events such as alarms and faults. Using an IR link the data can be downloaded and evaluated on a PC with the GasVision-software. By pushing just one button, a graphical 15 minute history of the gas concentration will be displayed on the transmitter screen, for quick evaluation of a recent event.

COMMUNICATION INTERFACES

The Dräger Polytron 7500 allows communication with the central control system with a 4 to 20 mA-loop, HART® or LON interface. HART® simultaneously allows a 4 to 20 mA-signal and digital communication via the same twisted pair line. Alternatively, up to eight transmitters can be daisy chained for operation on a single twisted pair connection in full digital mode. The LONWORKS®-variant of the Dräger Polytron 7500 integrates into any LONWORKS® system architecture, offering the advantage of reduced wiring cost and a reliable and flexible communication network.

TECHNICAL DATA

| | | | |
|--------------------------|---|---|--------------|
| Type | Microprocessor-controlled transmitter with integrated electrochemical DrägerSensor XS, pyrolysis oven and sampling pump | | |
| Gases and ranges | | | |
| NF ₃ -version | Nitrogen trifluoride NF ₃ | CAS 7783-54-2 | 0 to 50 ppm |
| PFC-version | 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 |
| | Chlordifluoromethane (R22) | CAS 75-45-6 | 0 to 50 ppm |
| | Trichloromethane (R20) | CAS 67-66-3 | 0 to 100 ppm |
| | Difluoromethane (R32) | CAS 75-10-5 | 0 to 100 ppm |
| | 1,1,1,2- Tetrafluoroethan (R134a) | CAS 811-97-2 | 0 to 50 ppm |
| Sample Flow | 900 ±100 ml/min; tubing 4 mm ID, 6 mm OD | | |
| Output | Analogue 4 to 20 mA, digital HART® or LONWORKS® | | |
| Power supply | 24 V DC ±10 %; 1.5 A | | |
| Ambient condition | Temperature 0 to 40 °C / 30 to 100 °F | | |
| | Humidity transmitter 0 to 99 % RH, non-condensing | | |
| | Humidity sample gas | NF ₃ version 5 – 95 % rH PFC version 30 – 90 % rH | |
| Enclosure | IP 21 | | |
| Size | 175 × 125 × 300 mm / 6" × 4.9" × 11.8" (HWD) | | |
| | 180 × 125 × 362 mm / 7.1" × 4.9" × 14.3" (HWD), including Docking Station | | |
| Weight (approx.) | 2.4 kg / 5.2 lbs | | |
| Approvals | CE-mark: electromagnetic compatibility (directive 89/336/EEC) | | |

HART® is a registered trademark of the HART Communication Foundation
LONWORKS® is a registered trademark of the Echelon Corporation

ORDER INFORMATION

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| Dräger Polytron 7500 NF ₃ | 83 18 827 |
| Dräger Polytron 7500 NF ₃ LON | 83 18 829 |
| Dräger Polytron 7500 PFC | 83 18 828 |
| Dräger Polytron 7500 PFC LON | 83 18 830 |
| Docking station | 83 18 580 |
| Dräger Polytron 7500 Relay module | 83 18 524 |
| Dongle | |
| Sensor test | 83 17 619 |
| Sensor diagnostic | 83 17 860 |
| Data | 83 17 618 |

GAS SAMPLING

The transmitter is equipped with two internal pumps monitored by two independent electronic flow monitors. One pump continuously delivers a sample flow to the Dräger Polytron 7500 at a high flow rate. A flow meter provides a quick visual feedback of the sample flow. The second pump feeds the oven with a constant gas stream. The high temperature inside the oven cracks the target gas. Subsequently the gaseous by-products will be

detected by means of an electrochemical DrägerSensor XS and the target gas concentration displayed 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.



Relay module

POLYTRON 7000 PLUG-IN FOR LNS

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

Distributor of Dräger

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