Dräger Polytron 7500

Instructions for Use

9023927 - 2nd edition - May 2007

Contents

For Your Safety

Strictly follow the Instructions for Use
Any use of the Polytron 7500 requires full understanding and strict observation of these Instructions for Use. The Polytron 7500 is only to be used for the purpose specified here.

Maintenance
The Polytron 7500 must be inspected and serviced regularly by suitably qualified persons. Repair and general overhaul of the Polytron 7500 may only be carried out by trained service personnel.
We recommend that a service contract be obtained with Dräger Safety and that all repairs also be carried out by them.
Only authentic Dräger spare parts may be used for maintenance.
Observe chapter “Maintenance intervals”.

Do not operate in explosion-hazard areas
The Polytron 7500 is not suitable for use in explosion-hazard areas.

Accessories
Do not use accessory parts other than those listed in the order list

Liability for proper function or damage
The liability for the proper function of the Polytron 7500 is irrevocably transferred to the owner or operator to the extent that the Polytron 7500 was serviced or repaired by personnel not employed or authorised by Dräger Safety or when the Polytron 7500 was used in a manner not conforming to its intended use.
Dräger Safety cannot be held responsible for damage caused by non-compliance with the recommendations given above. The warranty and liability provisions of the terms of sale and delivery of Dräger Safety are likewise not modified by the recommendations given above.

Dräger Safety AG & Co. KGaA

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Intended Use

Dräger Polytron® 7500

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— For stationary, continuous monitoring of gas concentrations in the intake ambient air, with built-in DrägerSensor®.
— The Polytron 7500 is available in four types:

Type	Order No.	
	Polytron 7500	DrägerSensor
Dräger Polytron 7500 NF_3 0 to 50 ppm NF_3 (CAS 7783-54-2)	83 18 827	68 11 125
Dräger Polytron 7500 PFC 0 to 30 ppm C_5F_8 (CAS 559-40-0) 0 to 30 ppm C_4F_6 (CAS 685-63-2)	83 18 828	68 11 120
Dräger Polytron 7500 NF_3 LON 0 to 50 ppm NF_3 (CAS 7783-54-2)	83 18 829	68 11 125
Dräger Polytron 7500 PFC LON 0 to 30 ppm C_5F_8 (CAS 559-40-0) 0 to 30 ppm C_4F_6 (CAS 685-63-2)	83 18 830	68 11 120

Note:
Polytron 7500 cannot be used with DrägerSensors other than the above listed. The corresponding DrägerSensor must be used to ensure that the unit functions correctly.

ATTENTION! Explosion hazard!
Do not operate underground or in explosion-hazard areas!
The Polytron 7500 does not meet the standards for flameproofing and explosion protection.

Not to be used for intake from explosion-hazard areas!
The concentration of flammable substances in the intake air must be limited to values below the LEL (Lower Explosive Limit)!
The gas mixture may otherwise be ignited because of the high pyrolysis temperature in the Polytron 7500.

Only suitable for use in buildings!

— The measuring range may be selected, but it is dependent on the sensor installed.

— With 4 to 20 mA interface or HART® for connection to a suitable control unit.
— Optional: compatible with LON interface for connection to a suitable control unit.

® Polytron is a registered trademark of Dräger.
DrägerSensor is a registered trademark of Dräger.
HART is a registered trademark of HCF, Austin, Texas, USA

If used together with a control unit (such as Regard) or equipped with a relay module:

— Warning before any hazardous gas concentrations are reached.
— Automatic implementation of counter measures (for example, additional ventilation).
— Indication of unit faults; display of maintenance measures required.
— Special calibration mode (blocking of alarm triggering, display of calibration mode, one-man calibration).

Optional extras:

Polytron 7500 relay module
This module permits the local switching of actuators, alarm generators, etc. on the basis of the measured gas concentration.

Dräger Polytron 7500 software dongles
For activation of additional functions of the Dräger Polytron 7500.

Installing Dräger Polytron 7500

Preparing for installation

The performance and effectiveness of the entire system depends essentially on the position chosen for installing the transmitter.

The following should be noted during installation:
- Local requirements and regulations governing the installation of gas measuring systems.
- Relevant regulations concerning the connection and routing of electric power supply and signal lines.
- The full scope of environmental factors to which the Polytron 7500 may be exposed (ambient conditions: see Technical Data, page 63).
- The specific uses (e.g. possible leaks).
- All other factors and conditions which could have a negative effect on the installation and operation of the system.
- Physical properties of the gas to be measured:
  For gases with a density lower than that of air, the gas intake must be located above any possible leak or at the highest point at which large concentrations of gas may occur.
  For gases and vapours with a density greater than that of air, the gas intake must be located below a possible leak or at the lowest point at which such gases and vapours may occur.
  The humidity of the gas to be measured must be between 20 and 90 % relative humidity.

- Accessibility for the necessary maintenance work . see “Installing the Pyrolyzer docking station” on page 8.

Dräger Polytron 7500 consists of two main components:
- Pyrolyzer docking station.
- Dräger Polytron 7500.

Installing the Pyrolyzer docking station

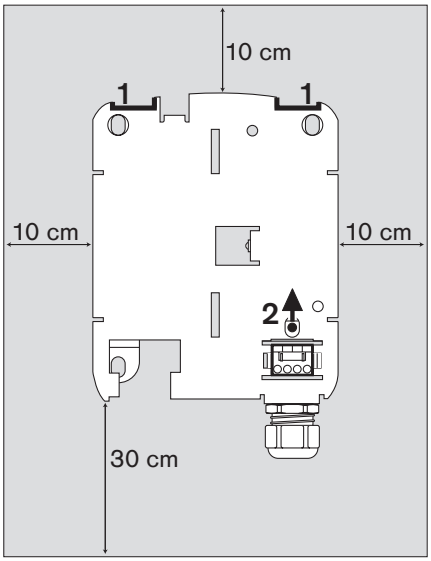
– Install in an area with low vibrations and stable temperatures.
– Do not install in an area where there are draughts of very warm air (>40 °C).

1 During installation, the slots for fitting the Polytron 7500 must point upwards on the upper edge.

- A space of at least 5 cm – preferably 10 cm – must be maintained above and to all sides for the installation of the Polytron 7500.
- A space of at least 10 cm – preferably 30 cm – must be maintained below the docking station to permit access for maintenance.

2 Push lock for connecting terminal block upwards, pull out 4-pin connecting terminal block from the front and insert it again after completion of the installation work.
- Install the docking station using four screws e.g. M6 to a firm wall (drilling template: see page 69)

Attention:
If the wall is not flat, use suitable spacers (such as mounting bracket 68 09 772) to prevent warping of the case



Electrical connections

Caution:
Do not connect the unit to the mains before the electrical installation is complete and has been checked.

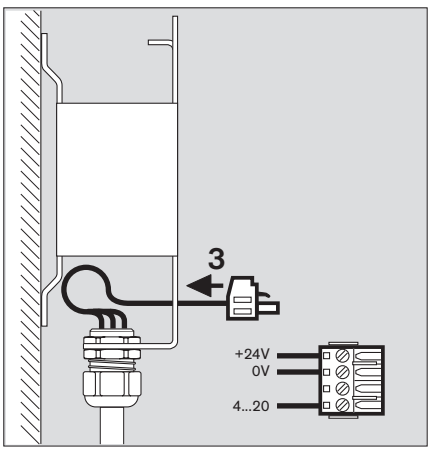
Connect the docking station to the central unit with a cable with at least three wires conductor cross-section, 0.5 to 2.5 mm^2.
Line lengths: see “Maximum line lengths” on page 9.
– For currents of 3 and 22 mA, a DC voltage between 16.5 V DC (3 mA), or 8.0 V DC (22 mA) must be present at the unit (between the terminals +24 V and 4...20).

3-wire connection

– Installing the 4 to 20 mA current loop

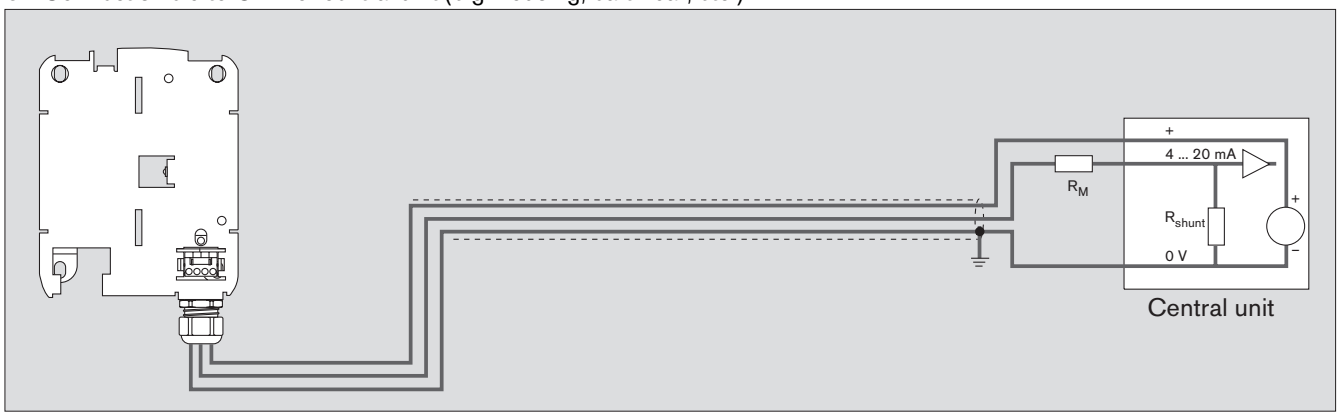
- Install the 3-wire connection cable in the cable gland, cut to length and strip ends (about 80 mm).
- Shorten the shield (if installed) to prevent short-circuiting.
- Connecting the cable:
  secure in terminals of 4-pin connecting terminal block – **ensure correct polarity**.

3 Slide connecting terminal block back into holder until the lock clicks into place.



– Connecting to the central unit with a central power supply

- Connect shield to GND of central unit (e.g. housing, earth bar, etc.).



Maximum line lengths

Installing a remote central unit with power supply by 3-wire connection the voltage drop due to the line resistance [R_{line}] has to be taken in consideration.
In order to detect a Pyrolyzer failure in the central unit [I_F] and the current drawn by the Pyrolyzer in a fault situation (250 mA) combined with the cable cross-section [A] and the shunt resistor [R_{shunt}] will result in a maximum cable length [L_{max}].

R_{line} = (R_{shunt} x I_F) / 250 mA
L_{max} = R_{line} x A / (0.0175 Ohm x mm^2 / m)

Example:
The following is valid with a permitted error current [I_F] of 3.15 mA:

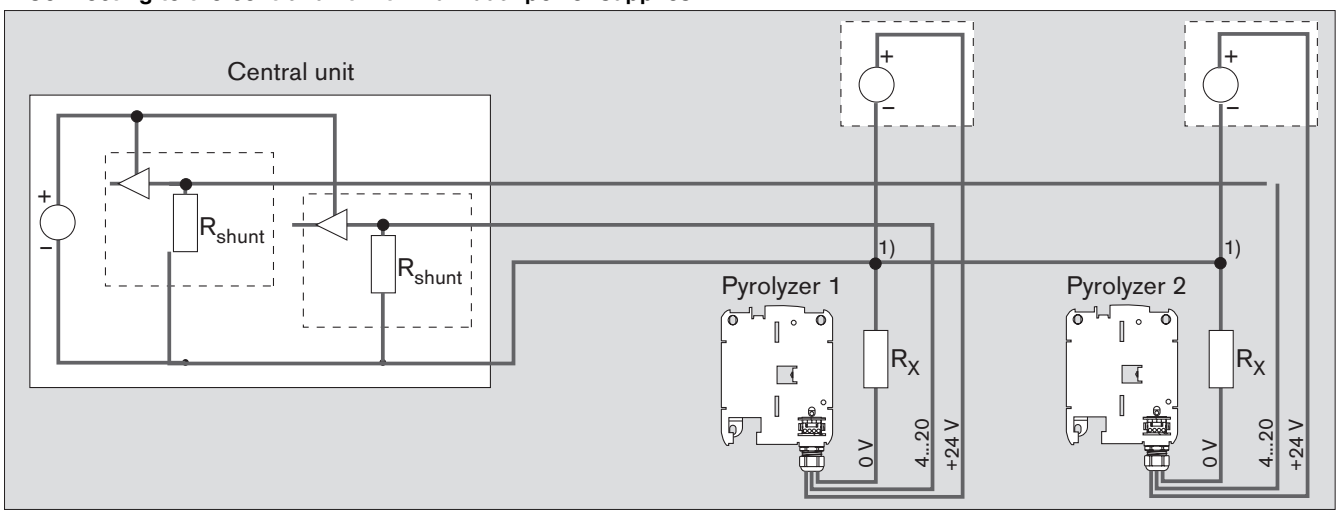
@ R_{shunt} = 50 Ohm		@ R_{shunt} = 100 Ohm		@ R_{shunt} = 250 Ohm	
A	L_{max}	A	L_{max}	A	L_{max}
0.50 mm^2	≥18.23 m	0.50 mm^2	≥36.46 m	0.50 mm^2	≥91.15 m
0.75 mm^2	≥27.34 m	0.75 mm^2	≥54.69 m	0.75 mm^2	≥136.70 m
1.50 mm^2	≥54.69 m	1.50 mm^2	≥109.38 m	1.50 mm^2	≥273.45 m
2.50 mm^2	≥91.15 m	2.50 mm^2	≥182.30 m	2.50 mm^2	≥455.75 m

In a given situation the cable length [L_{max}] can be increased by a series connection of a resistor [R_M] into the cable for the 4 to 20 mA signal.

$R_{schunt\ new}$ = $R_{shunt\ old}$ + R_M

Following limitations have to be fulfilled:
R_{line} + R_{shunt} = between 30 Ohm and 500 Ohm,
For currents of 3 and 22 mA, a DC voltage between 16.5 V DC (3 mA), or 8.0 V DC (22 mA) must be present at the unit (between the terminals +24 V and 4...20), see page 8.

– Connecting to the central unit with individual power supplies:



1) IMPORTANT: star-shaped ground system (no ground loops).

R_X corresponds to line resistance R_{line} from page 9.

– Connecting to a HART Multidrop-capable central

To ensure that the unit operates as intended, the impedance of the 4 to 20 mA signal loop must not exceed 500 Ohm and must be between 230 and 500 Ohm for HART-compatible "smart" loops. The conductors of the power supply must have a sufficiently low resistance to ensure that the supply voltage of the unit is correct.

- Each unit must first be put into service separately.
  Use the menu item "Polling Address" to assign a different polling address in the range "1" to "15" to each Polytron 7500, which is to be connected to the multidrop cable. It is best to assign sequential polling addresses, starting with "1".
- Depending on the supply unit, up to 8 Polytron 7500s can be connected to a line.

Multidrop installation with HART communication and individual power supplies:
R_{shunt} = 230 ... 500 Ω

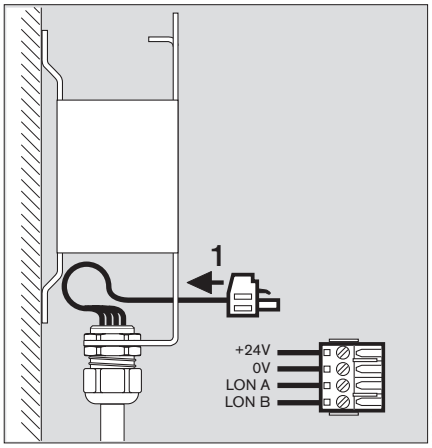
Multidrop installation with HART communication and a (central) power supply:
R_{cable} (pro wire) < U – 15 V Ω / n x 0.8 [Ω]
n = actual number of units in feed unit
U = output voltage in V of the feed unit with an output current of
n x 0.4 A
R_{shunt} = 230 ... 500 Ω

4-wire connection

– Installing the LON communication

- Install the 4-wire connection cable in the cable gland, cut to length and strip ends (about 80 mm).
- Shorten the shield (if installed) to prevent short-circuiting.
- Connecting the cable:
  secure in terminals of 4-pin connecting terminal block – ensure correct polarity.

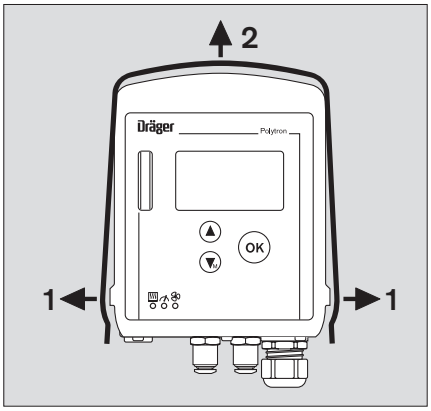
1 Slide the connecting terminal block back into holder until the lock clicks into place.



Installing the Dräger Polytron 7500

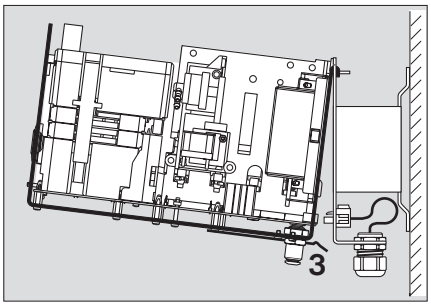
- Unpack the Dräger Polytron 7500.
- Remove the cover of the Polytron 7500. To do this

1 gently pull apart the cover on both sides and
2 lift upwards.



- Fit the Polytron 7500 using the metal hooks into the slots provided on the docking station.

Attention! The electrical connection via the edge connector must be clean, i.e. the safety hooks (3) underneath must snap into the docking station.

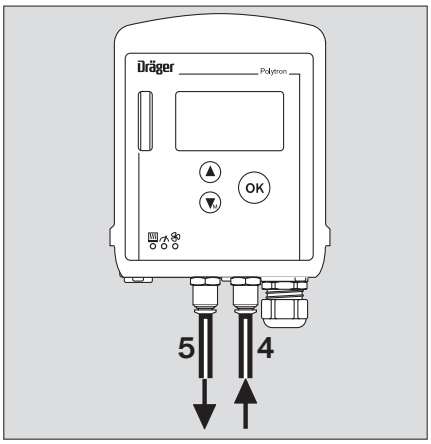


- Slide cover back over the installed Polytron 7500 until it snaps into place at the sides.

Attention! No cables or internal hoses must be pinched.

- Connecting the hoses:
  Insert the hose into the quick release fastener below the unit.

4 Gas input from the inlet point right connection (marked with O-ring).
5 Gas output to the offtake left connection.



- Check the hoses to make sure they are inserted properly

Installing accessories

Various accessories are available for the Dräger Polytron 7500 and may also be installed later.

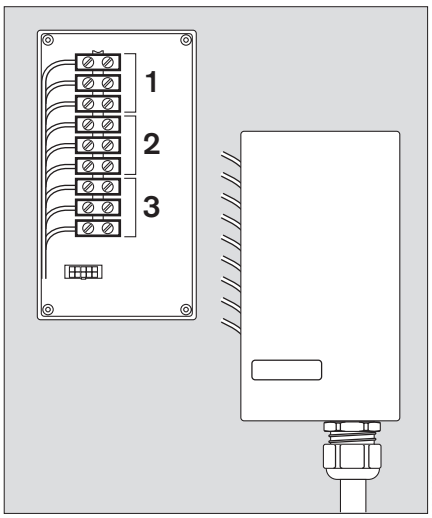
Relay module Polytron 7500

Intended Use

— For switching of actuators, alarm generators, etc. on the basis of the measured gas concentration.

Connecting the devices to be switched

- Open the relay housing using the cross screwdriver (4 screws on the rear side).
- Install the connection cable in the cable gland, cut to length and strip ends (approx. 80 mm).
- Shorten the shield (if installed) to prevent short-circuiting.

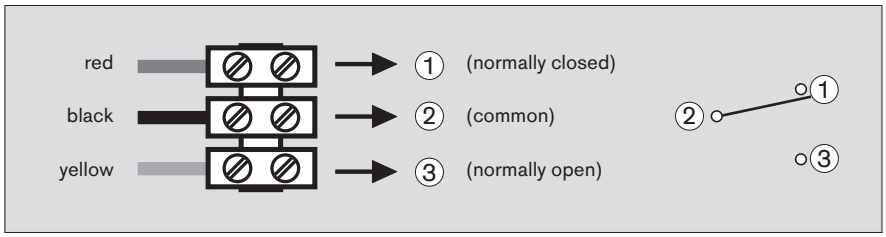


- Connecting the cable:
  3 potential-free relay outputs with 250 V / 5 A (AC) switching capability are available:

1 Fault relay (switches in the case of a device fault)
2 A2 relay (switches when the A2 gas alarm is active)
3 A1 relay (switches when the A1 gas alarm is active)

- Connect the devices to be switched to the terminals.

Connection assignment of relay module:



- Close the relay housing again.

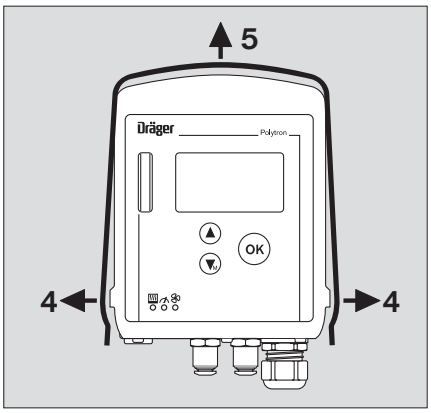
— Setting the alarm thresholds: see “Alarm / Relay settings” on page 45.

Inserting the relay module into the docking station

- Remove the cover of the Polytron 7500. To do this

4 gently pull apart the cover on both sides and

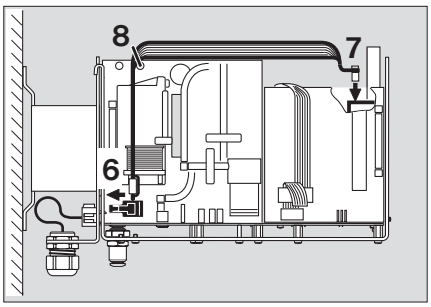
5 lift upwards.



6 Insert connector with clip of the relay cable into opening on the back-plate of the Polytron 7500.

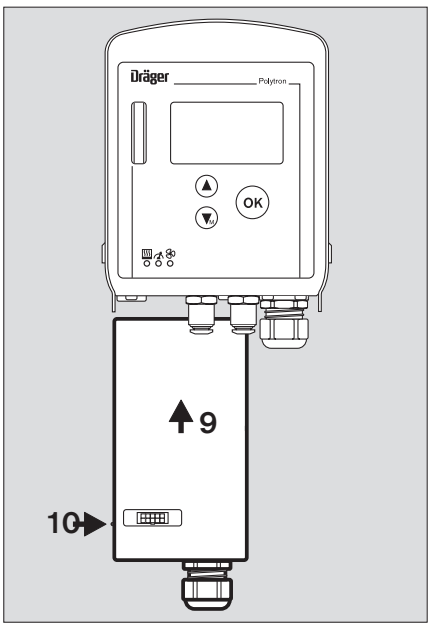
7 Connect the other end onto the terminal in the measuring unit.

8 Fix cable with cable tie to the bracket



9 Push relay housing from below into the docking station until it snaps into place.

- Insert the Polytron 7500 back into the docking station.



Carry out function test

– Polytron 7500 operates in the measurement mode (normal operation).

10 The LED on the side of the relay module lights green.

- Hold the hose briefly until a flow fault is displayed (red LED on the front side of the Dräger Polytron 7500).

10 The LED on the side of the relay module lights red.

Dräger Polytron 7500 software dongles

Intended Use

Dräger Polytron 7500 software dongle – 83 17 618, 83 17 619 or 8317860:

— For activating additional functions in the Dräger Polytron 7500:

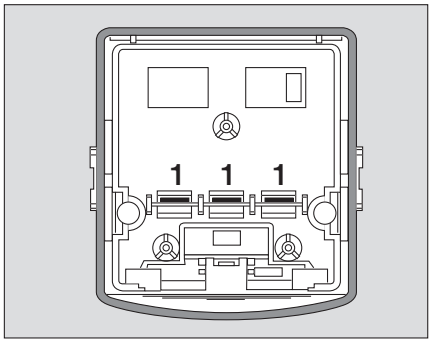
Data Dongle 83 17 618 Colour code blue	— Activates the Event Logger, the Datalogger and the graphical concentration display.
Sensor Dongle 83 17 619 Colour code silver	— Activates the sensor self-test.
Sensor Diagnostic Dongle 83 17 860 Colour code green	— Activates the sensor self-test, the display of the remaining sensor lifetime and the sensor diagnostic function.

Installing the software dongles

- Remove the cover from the Polytron 7500.
- Loosen lock below the Polytron 7500 and remove the unit from the docking station.

— **The Polytron 7500 must be disconnected from the mains!**

1 The Dräger logo on the dongle should be facing to the front. Then insert the dongle into any of the three slots.
Up to three dongles may be installed simultaneously.



- Insert the Polytron 7500 back into the docking station
- Place the cover back on.

Note:
The correct operation of the software dongle can be checked by switching the measuring unit on and selecting the menu items » Information «, » Instrument «, » Module « from the unit menu, see page 36.

Start-up

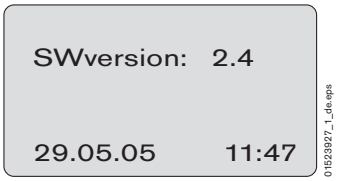
- Switch on power supply.

– The balls in the flow tube should be floating at half way.

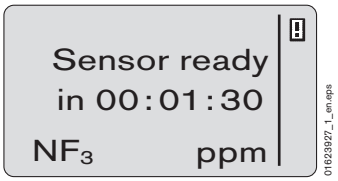
– The Polytron 7500 begins its warm-up routine:

– The software version, the date and the time are displayed.

Note:
For the correct operation and functionality it is important to set the date and time.



– The sensor is now warming up. The remaining warming-up time for the sensor is displayed.



– The sensor is ready for use.

– Depending on the type of sensor installed, the warming-up period time may last up to 30 minutes. See the related information in the operating instructions for the DrägerSensor. At extremely high or low temperatures, the warming-up time may last longer.

When the sensor has warmed up:

- Calibrate sensor, page 22, when a pre-calibrated sensor is not used.

– The Polytron 7500 is ready for use.

- Check the transmission of the signals between to the control unit and the initiation of alarms, see the function group » Analogue interface « on page 54.

Analogue signal

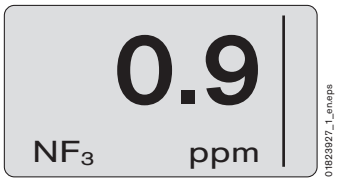
— A current between 4 and 20 mA flows through the current loop during normal operation. This current is proportional to the gas concentration.
— The Polytron 7500 uses various current values to indicate the operating status:

Current	Meaning
4 mA	Zero point
20 mA	Full-scale value
<3.2 mA	Fault
3.8 mA ... 4 mA	Sensor drift below zero point
20 mA ... 20.5 mA	Measuring range exceeded
>21 mA	Fault in analogue output
3.4 mA	Maintenance signal
<3.2 mA[1)] for 1 second[1)] every 10 seconds1)	Warning signal (factory setting: off)

[1)] Factory setting; can be configured as desired, page 52.

Display

— In measuring mode, the display shows the actual gas concentration, e.g.:



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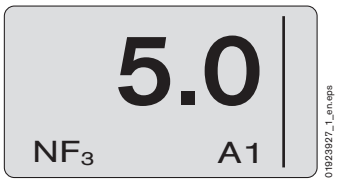
An alarm is triggered:

— when the alarm threshold for the concentration alarm is exceeded,



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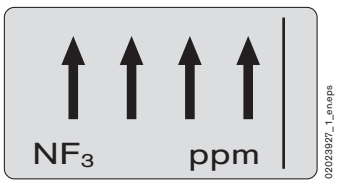
— if the measured concentration exceeds the full-scale value:
the special symbol » ↑↑↑↑ « is then displayed instead of the measured value.



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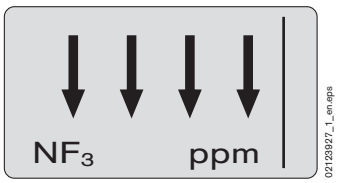
— If the measured concentration drops below the calibrated zero point:
the special symbol » ↓↓↓↓ « is then displayed instead of the measured value.



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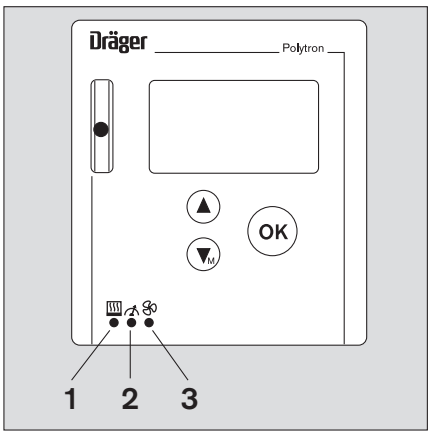
Displays of control LEDs



1 LED » « – pyrolysis oven
lights green when there is no error
lights red when the pyrolysis oven is defect. Replace the pyrolysis oven, page 26.

2 LED » « – pump measurement branch
lights green when there is no error
lights red when the flow rate in the measurement branch is not sufficient. Replace the pump, page 25 .
flashes red when an internal flow test is carried out.

3 LED » « – pump – principal branch
lights green when there is no error
lights red when the flow rate in the principal branch is not sufficient. Replace the pump, page 25.

The following icons may be displayed on the right side of the display in measuring mode in order to indicate the operating status of the unit:

A warning exists – see page 36 for information on how to display warnings. The information can be retrieved in info mode, see page 19.

A fault exists – see page 36 for information on how to display faults.

Maintenance signal to the control unit, see page 55

The flow monitoring is activated

There is a Pyrolyzer fault, see page 44

The measured value exceeds the full-scale value of the analogue interface

The measured value is less than the zero point of the analogue interface

The analogue interface is set to a fixed value (e.g. for multidrop) and is not transmitting measured values

"Predictive" maintenance: the sensor is ready for use

"Predictive" maintenance: The sensor is ready for use but nearing the end of its operating lifetime

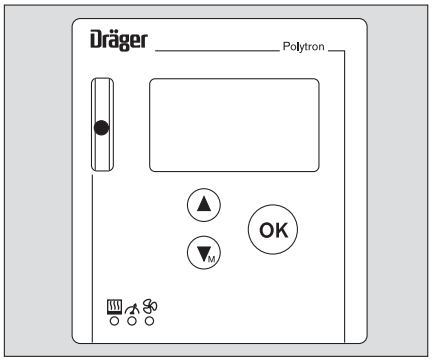
"Predictive" maintenance: The sensor is still ready for use but should be replaced as soon as possible

The Datalogger is active in roll mode. For details of activating and deactivating the Datalogger, see page 59

The Datalogger is active in stack mode. For details of activating and deactivating the Datalogger, see page 61

Activating info mode

The info mode is used to display information about general unit settings and the unit status.

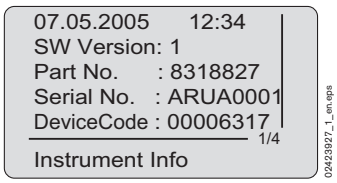


- Press and hold the » ▲ « key (longer than 3 seconds) – information about the units is displayed on several screens.
- Briefly press the » ▲ « key to move to the next screen.
- Briefly press the » ▼ « to move back to the previous screen.
- The info mode can be terminated at any time by pressing the » OK « key.
- If no key is pressed for 30 seconds, the unit automatically returns to its previous state.

Example of info mode:

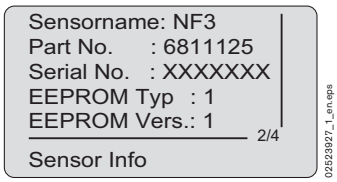
Screen 1

Instrument information
Line 1 – Date and time
Line 2 – Software version
Line 3 – Unit Part No.
Line 4 – Unit Serial No.
Line 5 – Unit code



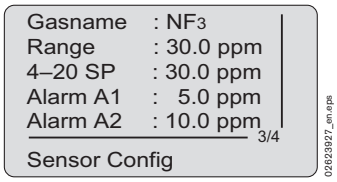
Screen2

Sensor information:
Line 1 – Sensor name
Line 2 – Sensor Part No.
Line 3 – Sensor Serial No.
Line 4 – EEPROM type
Line 5 – EEPROM version



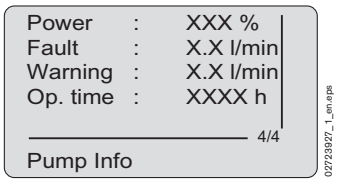
Screen. 3

Sensor configuration:
Line 1 – Gas name
Line 2– Measuring range (cannot be change) and unit of measurement
Line 3 – Measuring range for the analogue interface.
displayed only if the analogue interface card is installed
Line 4 – A1 alarm threshold and unit of measurement[1)]
Line 5 – A2 alarm threshold and unit of measurement[1)]



Screen 4

Pump Infos:
Line 1 – Pump flow
Line 2 – Threshold error
Line 3 – Threshold warning
Line 4 – Pump run time



1) Displayed only if a relay module is fitted!

If "xx.xx.xx xx:xx" is displayed instead of the date and time, or if an incorrect date and time are displayed:
(only after the clock has been reset due to a power failure)

- Set the date and time, see page 48.

Note:
If the date and time are not set correctly, some functions (such as calibration) cannot be executed.

Maintenance

Maintenance intervals

Before starting operation:

- Check the calibration, see page 22.
- Check the transmission of signals to the control unit and the triggering of alarms, page 54.

At regular intervals to be defined by the person responsible for the gas warning installation:

- Check the transmission of signals to the control unit and the triggering of alarms, page 54.

  If a selective filter specific to the sensor is being used:
- Replace the selective filter –
  see the related Instructions for Use for details of the capacity of the selective filter being used.

- Calibrate the sensor, see page 22.
  The interval for regular calibration depends on the sensor being used and on the operating conditions.
  Polytron 7500 calculates, from the selected calibration interval (see page 58) when the next calibration is due.
  Specific calibration data for the sensor, see the Instructions for Use for the Dräger sensor.

At the latest every twelve months:

- Inspection by specialists.
  The inspection intervals must be established in each individual case and shortened if necessary, depending on technical safety considerations, engineering conditions and the technical requirements of the equipment.
- We recommend that a service contract be obtained with Dräger Safety and that all repairs also be carried out by them.

- In order to check for leaks, measure the flow at the inlet point and behind the Polytron 7500.

As required:

- Replace the sensor, page 23.
- Replace the pump, page 25.
- Replace the pyrolysis oven, page 26.
- Replace the internal dust filter, page 27.

Calibrating the unit

– Ensure that the sensor is warmed up before it is calibrated. Warming-up time: see the Instructions for Use for the DrägerSensor.
– The Polytron 7500 can be calibrated by the operator on site.

– **For critical applications,** the calibration intervals are to be defined in accordance with the recommendations in EN 50073[1)] or. EN45544-4[2)] and national regulations.

Note the calibration sequence!

● First check the zero point and calibrate it if necessary, immediately after this, check the sensitivity and adjust it as necessary.
– Never calibrate the sensitivity before calibrating the zero point.

– Calibration cannot be carried out if the date and time are not set.
● Setting the date and time, page 48.

– Calibration menu, page 41 to page 39

– Zero gas and calibration gas: See the related information in the Instructions for Use for the DrägerSensor.

Caution:
Calibration gas must not be inhaled. Risk to health!
Care must be taken about the risks which can arise when using test gas; hazard instructions and safety advice must be observed.
For details, see appropriate Safety Sheets.

Setting up the unit

● Individual settings can be made:
– via the keypad in menu mode
– via the HART interface,
– with the Dräger Hand Held Terminal (DHHT)

Note:
After setting up the unit automatically with the copy function of the Dräger Hand Held Terminals, the plausibility of the settings must be checked.

1) EN 50073 – Guidelines for selection, installation, use and maintenance of devices for the detection and measurement of flammable gases and oxygen.
2) EN 45544-4 – Electrical devices for the direct detection and direct concentration measurement of toxic gases and vapours – Part 4: Guidelines for selection, installation, use and maintenance.

Replacing the sensor

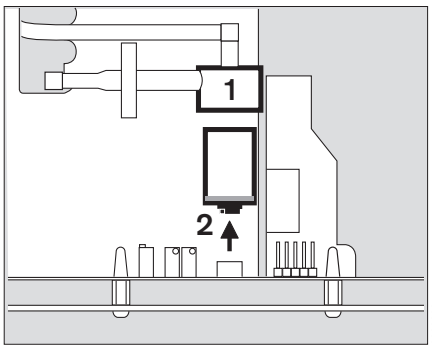
The sensor can be replaced, if necessary, without interrupting the supply voltage. Use only DrägerSensors, which are approved for use with the Polytron 7500.

Type	Order No.	
	Polytron 7500	DrägerSensor
Dräger Polytron 7500 NF_3 0 to 50 ppm NF_3 (CAS 7783-54-2)	83 18 827	68 11 125
Dräger Polytron 7500 PFC 0 to 30 ppm C_5F_8 (CAS 559-40-0) 0 to 30 ppm C_4F_6 (CAS 685-63-2)	83 18 828	68 11 120
Dräger Polytron 7500 NF_3 LON 0 to 50 ppm NF_3 (CAS 7783-54-2)	83 18 829	68 11 125
Dräger Polytron 7500 PFC LON 0 to 30 ppm C_5F_8 (CAS 559-40-0) 0 to 30 ppm C_4F_6 (CAS 685-63-2)	83 18 830	68 11 120

- In the menu » Settings « select the sub-menu » Sensor « and then the function » Change sensor « – page 56.

- Remove the cover of the Polytron 7500, by gently pulling apart the cover on both sides and lifting upwards.

Attention!
When the unit is opened, there is the danger of scalding yourself on hot parts of the Polytron 7500.



1 Loosen the sensor adapter from the sensor.
2 Remove the sensor from the socket on the printed circuit board.

- Remove the new sensor from the packaging. Check that the sensor type is identical to the one which is installed in the Polytron 7500.
  Remove the protective cap from the sensor on the DrägerSensor XS PFC!

- There is a coded connector on the back of the sensor. Insert the sensor such into the socket on the printed circuit board so that the code of the connector matches the code of the socket.
  Incorrect connection can damage the sensor!

1 Fit sensor adapter onto the sensor.

- Refit the cover of the Polytron 7500.
- Check the sensor function.

– The configuration of the Polytron 7500 is kept in its entirety, see also "– Sensor lock" on page 57.

Disposal of electrochemical sensors:
— Sensors must be disposed of as special waste.

Caution:
— Do not throw sensors into the fire – explosion hazard.
— Do not open sensors forcibly – risk of caustic burns.

Note the relevant waste disposal regulations.
Further information can be obtained from the relevant local authority and from appropriate waste disposal companies.

Sensor diagnostic function

This function is active only if the Polytron 7500 is equipped with a sensor diagnostic dongle (Order No. 83 17 860).

— Extended sensor self-test function, taking such things as the temperature, gas monitoring and remaining sensitivity into account.
— During normal operation, the sensor status is indicated by the sensor-diagnostic icon in the display:


The sensor is ready


The sensor is ready for use but nearing the end of its operating lifetime


The sensor is still ready for use but should be replaced as soon as possible

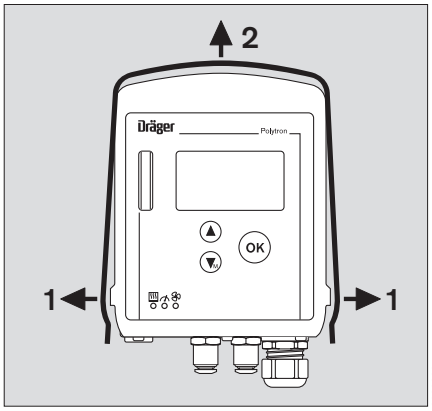
Replacing the pump

- Disable the supply voltage.
- Remove the cover of the Polytron 7500. To do this

1 gently pull apart the cover on both sides and

2 lift upwards.

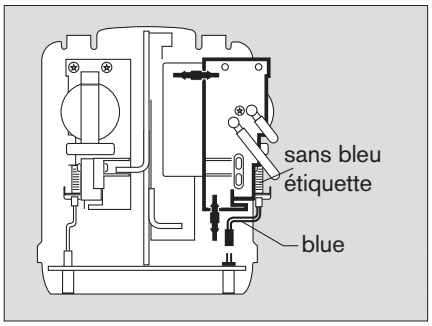
Attention!
When the unit is opened, there is the danger of scalding yourself on hot parts of the Polytron 7500.



Replace the pump for the measurement branch

– Pump on the right side infront of the pyrolysis oven.

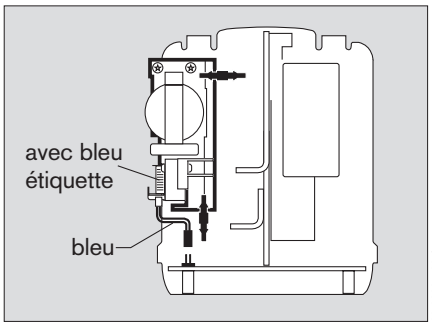
- Remove the connector of the pump.
- Remove the upper holder of the pump from the middle sheet.
- Remove the hose from the pump and insert it into the new pump at the same position.
- Refit the new pump (without blue label) sideways on the lower holder.
- Insert the upper holder of the pump into the middle sheet and pull it through.
- Insert the connector of the new pump into the socket on the printed circuit board. **Ensure correct polarity! Blue cable to the outside.**



Replace the pump for the principal branch

– Pump on the left side infront of the rear wall.

- Remove the connector of the pump.
- Remove the upper holder of the pump from the middle sheet.
- Remove the hose from the pump and insert it into the new pump at the same position.
- Refit the new pump (with blue label) sideways on the lower holder.
- Insert the upper holder of the pump into the middle sheet and pull it through.
- Insert the connector of the new pump into the socket on the printed circuit board. **Ensure correct polarity! Blue cable to the outside.**



- Refit the cover of the Polytron 7500.
- Switch on power supply.
- Wait until the sensor has fully warmed up.

– The Polytron 7500 is ready for use again.

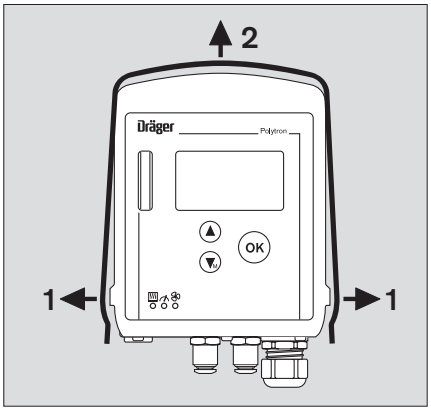
Replacing the pyrolysis oven

- Disable the supply voltage.
- Remove the cover of the Polytron 7500. To do this

1 gently pull apart the cover on both sides and

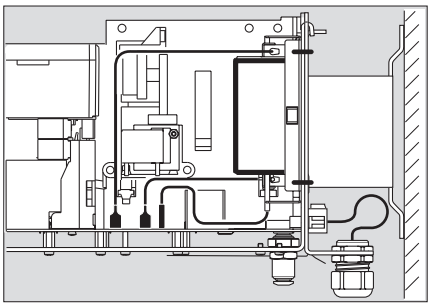
2 lift upwards.

Attention!
When the unit is opened, there is the danger of scalding yourself on hot parts of the Polytron 7500.



Only use a pyrolysis oven, which is suitable for use with the Polytron 7500 with the defined gas type, see “Order List” on page 64.

- Disconnect the three electrical connections of the pyrolysis oven on the printed circuit board.
- Loosen the two screws for fixing on the rear side – do not unscrew completely.
- Remove the pyrolysis oven upwards from the holder.



- Remove the hoses to the pyrolysis oven and connect to the new pyrolysis oven at the same position.
- Insert the new pyrolysis oven from above into the holder and tighten the two screws.
- Reconnect the three electrical connections of the pyrolysis oven.

- Refit the cover of the Polytron 7500.
- Switch on power supply.
- Wait until the sensor has fully warmed up.

– The Polytron 7500 is ready for use again.

Replacing the internal dust filter

– The internal dust filter can be replaced without interrupting the supply voltage.

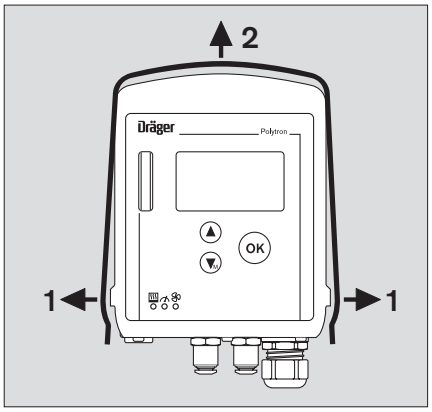
Attention!
The measurement result that is displayed during the replacement is not correct.

- Remove the cover of the Polytron 7500. To do this

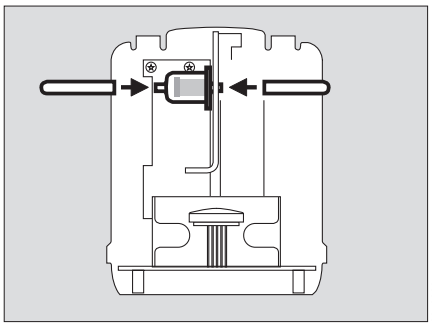
1 gently pull apart the cover on both sides and

2 lift upwards.

Attention!
When the unit is opened, there is the danger of scalding yourself on hot parts of the Polytron 7500.



- Disconnect hose connections from the dust filter and connect to the new dust filter at the same position.



- Refit the cover of the Polytron 7500.

– The Polytron 7500 is ready for use again.

Fault – Cause – Remedy

The fault and warning numbers shown in the following tables are displayed in the menu under » Information «, » Instrument «, » Fault « or » Warnings « – see page 36.

Fault number	Cause	Remedy
# 1	Serious data error in unit – various causes.	Initialise the unit with the menu items » Settings «, » Instrument «, » Init. device «, page 49. If this error occurs again: Have the Polytron 7500 checked by suitably qualified persons e.g. service personnel from Dräger Safety.
# 2	Serious unit fault – various causes.	Have the Polytron 7500 checked by suitably qualified persons e.g. service personnel from Dräger Safety.
# 61	Data error on the interface card – various causes	Have the Polytron 7500 checked by suitably qualified persons e.g. service personnel from Dräger Safety.
# 63	Hardware or software fault in the pyrolysis module.	Have the Polytron 7500 checked by suitably qualified persons e.g. service personnel from Dräger Safety.
# 64	Gas flow of the pump falls below the warning threshold. Reliable measurements are no longer possible.	Check the hoses for blockages, If necessary adjust pump flow.
# 65	Open-circuit in 3-wire cable.	Check the connections.
# 67	Bad contact of the relay module.	Check the connection of the relay module.
# 100	Unit cannot detect a sensor.	Remove the sensor and install it again, page 23. Check the sensor plug or install a new sensor.
# 101	Sensor data error in the unit.	Remove the sensor and install it again, page 23. If this error occurs again: Have the Polytron 7500 checked by suitably qualified persons e.g. service personnel from Dräger Safety.
# 102	Unit does not support this sensor version.	Use a compatible sensor, see page 23.
# 103	Sensor data error in the unit.	Initialise the sensor with the menu items » Settings «, » Sensor «, » Sensor-EC «, » Init. sensor «, page 58. If this error occurs again: Have the Polytron 7500 checked by suitably qualified persons e.g. service personnel from Dräger Safety.
# 106	Zero point not correctly.	Zero point calibration, page 39.
# 107	Sensitivity calibration not executed correctly.	Repeat sensitivity calibration, page 40.
# 108	Sensor data error.	Replace the sensor, page 23.
# 109	Unit fault.	Check the sensor contacts. If this does not help, have the Polytron 7500 checked by suitably qualified persons e.g. service personnel from Dräger Safety.
# 121	Fresh-air calibration (first step of autocalibration) not executed correctly.	Repeat autocalibration, page 41. making sure that the ambient air is free of other gases.
# 125	Sensor not ready.	Replace the sensor, page 23.

Fault number	Cause	Remedy
# 129	Electrolyte liquid evaporates	If the problem persists, fit a new sensor, page 23.
	The function » Sensor lock « is active or a sensor with a different Part No. has been inserted.	Deactivate the function » Sensor lock «, page 57 or use a sensor with the same Part No. as the one which was removed.
# 134	Bad contact between the sensor and the sensor card.	Check the sensor contacts. Remove and re-install the sensor several times. If the problem persists, fit a new sensor, page 23.
# 136	Sensor hardware fault.	Remove the sensor and install it again. If the problem persists, fit a new sensor, page 23.

Warning number	Cause	Remedy
# 1	Data error in the unit. Certain functions such as the Datalogger or the dongle functions may not be available.	Initialise the unit with the menu items » Settings «, » Instrument «, » Init. device «, page 49. If this error occurs again: Have the Polytron 7500 checked by suitably qualified persons e.g. service personnel from Dräger Safety.
# 51	Datalogger is in stack mode and is 100 % full. No more data can be recorded.	Read out the data. Then clear and restart the Datalogger
# 52	Datalogger is in stack mode and is 90 % full.	Read out the data as soon as possible. Then clear and restart the Datalogger.
# 53	No valid date and/or time is set.	Set the date and time, page 48.
# 58	Software dongle was removed without logging off.	Deactivate the function in the menu » Settings «, » Instrument «, » SW dongle «, » XXX dongle «, page 50.
	Hardware fault in the software dongle.	Change the software dongle, page 15.
# 59	Pump worn.	Replace the pump, page 25.
# 64	Pump gas flow falls below the warning threshold. Reliable measurements are no longer possible.	Check the hoses for blockages, If necessary adjust pump flow.
# 106	Increased zero point offset.	Zero point calibration, page 39.
# 111	Sensor is not working in the specified temperature range.	Operate sensor in the specified temperature range (see Instructions for Use for the DrägerSensor).
# 112	Sensor near end of life.	Replace the sensor, page 23.
# 114	Calibration interval expired.	Recalibrate the unit, page 22.
# 115	Sensor was operated for too long with a high concentration.	Reduce overgassing.
# 119	Sensor is not yet fully warmed up. An increased measuring error must be expected.	Wait until the sensor has fully warmed up.

Warning number	Cause	Remedy
# 120	The sensor has been exposed to an excessively high gas concentration for a long period.	Reduce the exposure to high gas concentrations. If the problem persists, fit a new sensor, page 23.
# 131	Bad sensor, no longer operating.	Replace the sensor, page 23.
# 132	Electrolyte liquid evaporates. Measurements are no longer possible.	If the problem persists, fit a new sensor, page 23.
# 135	Information such as the Part No. and the Serial No. is not available.	Disconnect the unit from the mains and restart it. If this error occurs again: Have the Polytron 7500 checked by DrägerService.

Fault	Cause	Remedy
LED »  « lights red	The pyrolysis oven is defect	Replace the pyrolysis oven, page 26.
LED »  « lights red	Fault in measurement branch – pump measurement branch defect	Check the hose connections for blockages. Replace the pump, page 25.
LED »  « flashes red	An internal flow test is being carried out – this is not a fault	– – –
LED »  « lights red	Fault in principal branch – pump principal branch defect	Check the hose connections for blockages. Replace the pump, page 25.
All three LEDs »  «, » « and » « lights or flashes red	Electronic defect	Polytron 7500 to be repaired by Service of Dräger Safety.

Menu functions

The menu can be operated as desired:
— from the keypad with an integrated display on the Polytron 7500,
— from a HART-compatible Hand Held Terminal (HHT),
— from a HART-compatible control unit or
— a Polytron 7500 Palm Pilot 515 (non-Ex version) or Palm Pilot 515x ex-version.

The menus are operated with the three keys – » ▲ «, » ▼ « and » OK «. The menus appear on the display.

Key » ▲ «
— Use this key to move upwards through the menus.

Key » ▼ «
— Use this key to move downwards through the menus.
— If the key is held down for more than 3 seconds, the main menu is opened.
— If the key is held down for longer than 1 second and less then 3 seconds, the quick menu is opened (the Info menu is displayed without prompting for a password).

Key » OK «
— This key is used to confirm inputs and selected menus and functions

Menu structure

Overview: page 32.

The unit has two operating modes: measuring mode and menu mode.
Menu mode contains the menus » Information «, » Calibration « and » Settings «.

Menu » Information «

The menu » Information « can be opened by any user, but the user is unable to make any changes with this menu option.

Menu » Calibration «

This menu permits routine operations needed for the regular maintenance of the Polytron 7500.
It should be accessible to persons who are responsible for such maintenance. If the maintenance password is entered, only this menu is accessible.

Menu » Settings «

This menu permits the setting of individual unit and sensor parameters. It should be accessible to authorised persons from the measuring and regulation department or the work safety department. If the password for this menu is entered, the menu » Calibration « is also accessible.

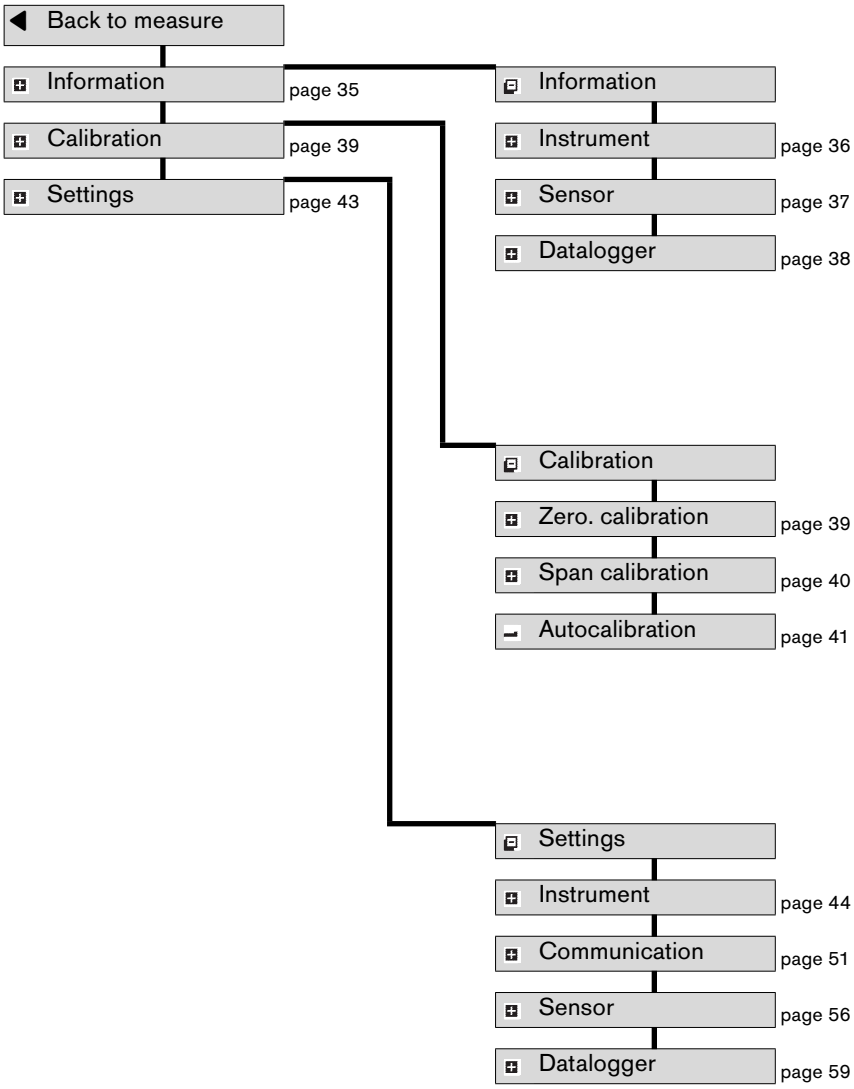
The passwords for the menus » Calibration « and » Settings « can be changed at any time, page 47.

Default password settings when the unit leaves the factory:

Password for the menu » Calibration «: **_ _ _ 1**

Password for the menu » Settings «: **_ _ _ 2**

Overview of the menu structure



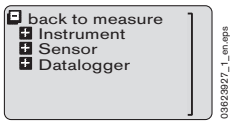
Information about the sub-menus and functions:

- See the specified page.

Basic operating procedures

Switching to quick-menu mode

- Press the » ▼ « for longer than 1 second but less than 3 seconds to open the quick menu.
  Here is the information on the status and settings of the transmitter, see page 35.



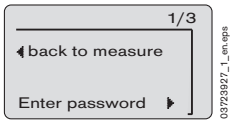
Switching to menu mode

- Press the » ▼ « for longer than 3 seconds.
  You will then be prompted for the password.

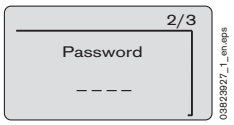
Entering the password

In measuring mode:

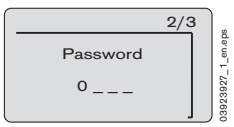
- Press the » ▼ « for longer than 3 seconds.
  You will then be prompted for the password.



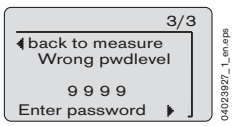
- Use the » ▼ « key to move to the line » Enter password « and press the » OK « key.
  The password entry screen appears.



- Use the » ▲ « and » OK « keys to set each of the four positions of the password and press the » ▼ « key to confirm each position.



– After you have confirmed the last position, the menu corresponding to the entered password is opened.
  If the entered password is invalid, a suitable error message is displayed.



Navigation in the menu

Graphical symbols (icons) simplify the navigation through the various menus:

Together with the text » Back «, » Menu «, etc. »
— Exit from the menu or return to previous menu.

Closed folder
— This item contains further functions or sub-menus.

Open folder
— The functions and sub-menus shown here are contained in this item.

Function
— If activated, functions can be executed in a single step or several steps.

Selection activated
— For functions which can be selected and activated, activation can be done by pressing the » OK « key.

Top of list displayed
— There are no further functions, menus or sub-menus above those currently displayed.

List can be scrolled up
— There are further functions, menus or sub-menus above those currently displayed.

End of list displayed
— There are no further functions, menus or sub-menus below those currently displayed.

List can be scrolled down
— There are further functions, menus or sub-menus below those currently displayed.

Next
— Execute the related action.

3/3 Number of current screen / total number of screens within the function.

2/2 Input
— Data input with the » ▲ « and » ▼ « keys.

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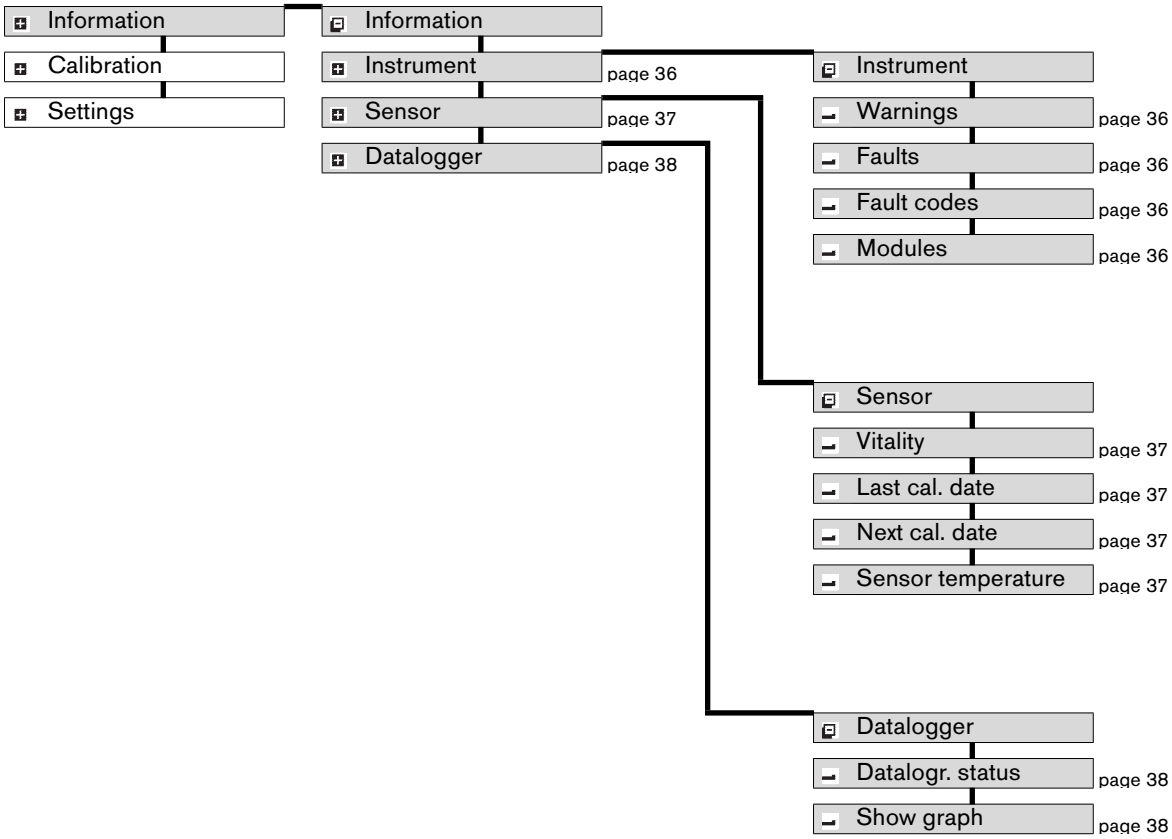
The menu » Information «

The menu » Information « contains all information about the unit status, the sensors and the Datalogger.

Overview



Sub-menu » Instrument «

The sub-menu » Instrument Info « contains all functions for interrogating the unit status.

Warnings

– This function displays any existing warnings in clear text with the warning number, see page 29.
The icon » ⓘ « is displayed if any warnings are active.

● Select the menu items » Information «, » Instrument « and » Warnings « in this order, pressing the » OK « key after each selection.

– Any existing warnings are displayed in clear text.
If more than one warning exists, the number of the currently displayed warning and the total number of warnings are displayed in the top right corner (example: 1/3 = screen 1 of 3).

Faults

– This function displays any existing faults in clear text with the error number, see page 28.
If a fault exists, the icon » ▣ « is displayed.

● Select the menu items » Information «, » Instrument « and » Faults « in this order, pressing the » OK « key after each selection.

– Any existing faults are displayed in clear text.
If more than one fault exists, the number of the currently displayed fault and the total number of faults are displayed in the top right corner (example: 1/2 = screen 1 of 2).

Fault codes

– This function displays any existing faults / warning codes in the form of a table.
If a fault exists, the icon » ▣ « is displayed.

● Select the menu items » Information «, » Instrument « and » Fault codes « in this order, pressing the » OK « key after each selection.

– Any existing faults are displayed in the form of numerical codes in a table. If all numerical groups are displayed with the value » 00 «, no faults exist.

Modules

– All installed hardware modules are displayed.

● Select the menu items » Information «, » Instrument « and » Modules « in this order, pressing the » OK « key after each selection.

– A list of all possible modules is displayed. The installed modules are indicated by a » □ «. Modules which are not installed are marked with a » ■ «.

● Use the » ▲ « and » ▼ « keys to select individual modules and press the » OK « key to display more detailed information.

Sub-menu » Sensor «

The sub-menu » Sensor « contains the functions for interrogating the sensor status.

Sensor vitality

This function is active only if the Polytron 7500 is equipped with the sensor diagnostic dongle, see page 15.

– This function displays the remaining sensitivity of the sensor.

● Select the menu items » Information «, » Sensor « and » Vitality « in this order, pressing the » OK « key after each selection.

– The current Sensor Vitality is displayed.
– Dräger Safety recommends that the sensor is exchange when the Sensor Vitality value is less than 25.

Last calibration date

– This function displays the date of the last calibration.

● Select the menu items » Information «, » Sensor « and » Last cal. date « in this order, pressing the » OK « key after each selection.

– The date of the last calibration is displayed.

Next calibration date

– This function displays the date on which calibration is next due.

● Select the menu items » Information «, » Sensor « and » Next cal. date « in this order, pressing the » OK « key after each selection.

– The date on which the sensor is next due for calibration is displayed.

Sensor temperature

– This function displays the current sensor temperature and the maximum sensor temperature which has been recorded.

● Select the menu items » Information «, » Sensor « and » Show sensor temp. « in this order, pressing the » OK « key after each selection.

– The current sensor temperature and the maximum sensor temperature which has been recorded are displayed.

Sub-menu » Datalogger «

The sub-menu » Datalogger « contains the functions for interrogating the Datalogger.

Datalogger status

This function is active only if the Polytron 7500 is equipped with the data dongle 83 17 618, see page 15.

– This function displays the status of the Datalogger and the Eventlogger.

- Select the menu items » Information «, » Datalogger « and » Datalgr. status « in this order, pressing the » OK « key after each selection.

– The current status of the Datalogger and the Eventlogger is displayed:
  Datalogr. : on or off (the Datalogger is on or off)
  Evntlogr. : on or off (the Eventlogger is on or off)

– Activating / deactivating the Datalogger: see page 59.
– Activating / deactivating the Eventlogger: see page 59.

Show graph

This function is active only if the Polytron 7500 is equipped with the data dongle 83 17 618, see page 15.

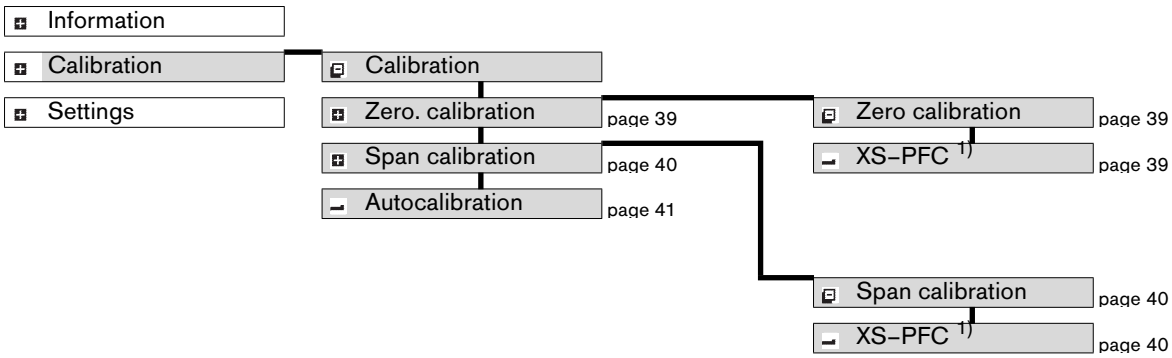
– The measured values of the sensor are displayed graphically on a time axis of 15 minutes.

- Select the menu items » Information «, » Datalogger « and » Show graph « in this order, pressing the » OK « key after each selection.

The menu » Calibration «

The menu » Calibration « contains all functions needed for the calibration and adjustment of the installed sensor.

Overview



1) The sensor shown in this overview serves only as an example and may differ from the actual sensor installed in the unit.

Sub-menu » Zero. calibration «

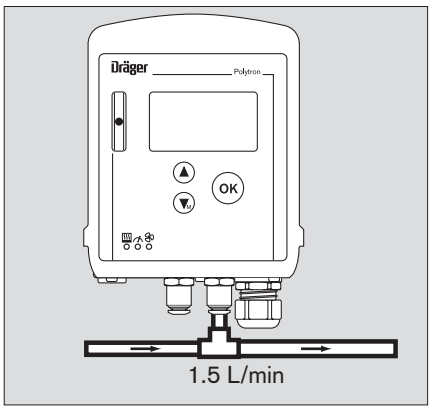
The sub-menu » Zero calibration « contains the functions for calibrating / adjusting the zero point of the installed sensor.

Zero point calibration / adjustment

The zero point can be calibrated without the use of zero gas when the ambient air is free from measuring gas and other interfering gases. Alternatively:

- Provide zero gas with a flow rate of 1.5 L/min via a T-piece to the inlet connection. Connect a hose with a length of 0.5 m and a diameter which is larger than the hose for the Polytron 7500 to the third connection of the T-piece.

Attention! Never release zero gas directly (without T-piece) from a compressed air cylinder!



Calibration procedure (using the DrägerSensor XS NF_3 as an example):

- Select the menu items » Calibration «, » Zero calibration « and » XS–NF_3 « in this order, pressing the » OK « key after each selection.

– The message » Supply zero gas with flow rate 500 ml/min « is displayed (this flow rate is not to be observed for the Polytron 7500).

- Supply zero gas to the sensor.
- Select » Next « and press the » OK « key.

– The current value and the expired time are now displayed.

When the displayed value has stabilised:
- Select » Calibrate « and press the » (OK) « key.

– The message » Zero calibration running « is displayed

– The required value and the actual value are now displayed.
If these are correct as displayed:
- Select » Back to menu « and press the » (OK) « key.
- Disconnect the flow of zero gas.

Zero point calibration can be aborted at any time:
- Use the » ▲ « key to move to » Back « and press the » (OK) « key.

Sub-menu » Span. cal. «

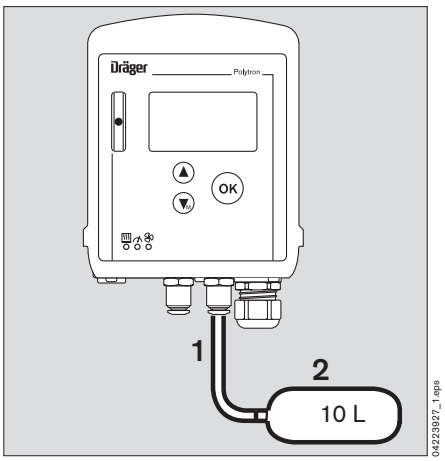
The sub-menu » Span calibration « contains all functions for calibrating the sensitivity of the installed sensor.

Sensitivity calibration

Caution:
Test gas must not be inhaled. Risk to health!
Care must be taken about the risks which can arise when using test gas; hazard instructions and safe safety advice must be observed.
For details, see appropriate Safety Sheets.

– The recommended calibration gas concentration for optimum accuracy is between 40 % and 100 % of the measuring range end value.

1 Remove the inlet line on the Polytron 7500.
2 Fill gas bag (Order No. 68 07 068) with the calibration gas and connect to the inlet connection of the Polytron 7500.



Calibration procedure (using the DrägerSensor XS NF_3 as an example):
- Select the menu items » Calibration «, » Span. cal. « and » XS–NF_3 « in this order, pressing the » (OK) « key after each selection.

– The values for the calibration gas are displayed, for example:
Cal. gas : NF_3
Unit : ppm
Concentr. : 000025

– The calibration gas, concentration and unit can be changed:
- Select » Cal. gas « and press the » (OK) « key. Select the desired calibration gas from the list and press the » (OK) « key again.
- Select » Concentr. « and press the » (OK) « key. Set the calibration gas concentration (same procedure as for input of a password).

- Select » Unit « and press the » (OK) « key: Select the desired unit from the list and

press the » OK « key again.

If the settings agree with the available calibration gas:

- Select » Next « and press the » OK « key.

– The message » Supply gas: NF_3 with flow rate 500 ml/min « is displayed (this flow rate is not to be observed for the Polytron 7500).
– Supply calibration gas to the Polytron 7500.

- Select » Next « and press the » OK « key.

– The current value and the expired time are now displayed.
When the displayed value has stabilised:

- Select » Calibrate « and press the » OK « key.

– In the display the maximum value and the current value as well as the remainder of the sensor vitality are represented as a bar indication.

If these are correct as displayed:

- Select » Next « and press the » OK « key.
- Disconnect the flow of calibration gas.

Attention: There is a danger after the gas is removed that an alarm is given on the central controller while the gas is returning to normal level!

– The calibration interval and the date of the next calibration are displayed.

- Select » Back to menu « and press the » OK « key.

Sensitivity calibration can be aborted at any time:

- Use the » ▲ « key to move to » Back « and press the » OK « key.

Autocalibration

Autocalibration consists of fresh-air calibration followed by sensitivity calibration. This function is intended only for users who are familiar with the unit, since the sequence of actions may result in calibration errors.
The function can be activated or deactivated with sequence » Settings «, » Sensor «, » Autocal. «.

Autocalibration procedure (using the DrägerSensor XS NF_3 as an example):

- Select the menu items "Calibration" and "Autocal." in this order, pressing the » OK « key after each selection.

Attention: The sensor must be supplied with fresh air, otherwise calibration errors may occur!

– The message » Fresh-air calibration running « is displayed.
- Expose the sensor to the ambient air (for some sensors, a zero gas such as N_2 must be used – see the information in the section “Zero point calibration / adjustment” on page 39).
  Afterwards:
– The values for the calibration gas are displayed, for example,:
  Cal. gas : NF_3
  Unit : ppm
  Concentr. : 000025

The current value and the calibration gas concentration are now displayed.

The calibration operation depends on whether the selected calibration gas supports so-called autostability.

– **Autostability is supported:**
  When the displayed value has stabilised:
- Select » Calibrate « and press the » OK « key.

– **Autostability is not supported:**
  The instrument evaluates the stability of the signal and automatically executes the calibration procedure.

– The required value and the actual value are now displayed.

- Disconnect the flow of calibration gas.

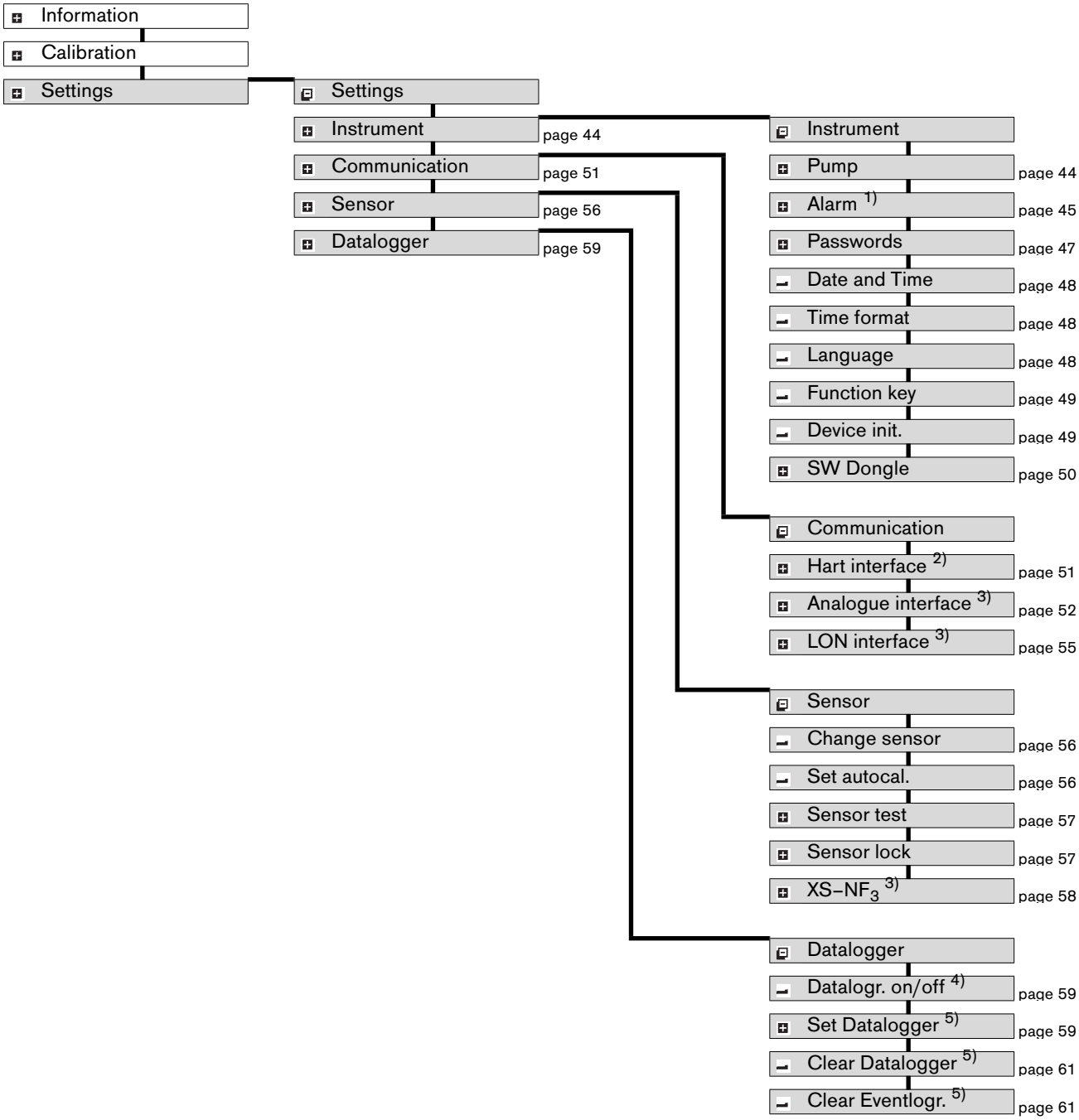
  Attention: There is a danger after the gas is removed that an alarm is given on the central controller while the gas is returning to normal level!

  If these are correct as displayed:
- Select » Accept value « and press the » OK « key.

The menu » Settings «

The menu » Settings « contains all functions needed for individual configuration of the unit.

Overview



1) This menu function can be executed only if the Polytron 7500 is equipped with a relay module, see page 13.
2) This menu function can be executed only if the Polytron 7500 is equipped with the appropriate interface card.
3) The sensor shown in this overview serves only as an example and may differ from the actual sensor installed in the unit.
4) This menu function can be executed only if the Polytron 7500 is equipped with the data dongle 83 17 618, see page 15.

Sub-menu » Instrument «

The sub-menu » Instrument « can be used to make various instrument settings.

Pump

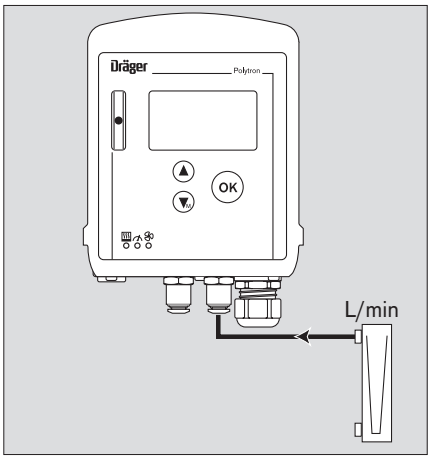
This function group contains the setting functions for the pump in the measurement branch.

– Flow fault on/off

— This flow fault setting is not possible for the Polytron 7500.

– Pump output

— This function is used to set the pump output.



- Select the menu items » Settings «, » Instrument «, » Pump « and » Pump output « in this order, pressing the » OK « key after each selection.

— The message: » Flow alarm will be switched off; please use a flowmeter « is displayed.

- Connect a flowmeter.
- Select » Next « and press the » OK « key.
- Use the » ▲ « and » ▼ « keys to set the pump output, monitoring the change on the flowmeter.
- Select » Next « and press the » OK « key.

— The flow thresholds are displayed –
Flow threshold for fault: e.g. 0.3 L/min
Flow threshold for warning: 0.4 L/min (example)

The flow thresholds cannot be changed for the Polytron 7500. If this setting is attempted, on the value 0.3 L/min is accepted.

– Operating time

— This function is used to display the operating time of the pump.

- Select the menu items » Settings «, » Instrument «, » Pump « and » Operating time « in this order, pressing the » OK « key after each selection.

— The actual operating time of the pump is displayed in hours.

Alarm / Relay settings

Alarms can be output via a relay and a digital interface if a relay module is installed. This group contains the setting functions for the alarms.

– Alarm on/off

— This function is used to enable and disable alarm monitoring.

- Select the menu items » Settings «, » Instrument «, » Alarm « and » Alarm on/off « in this order, pressing the » OK « key after each selection.
- Select » Enable « or » Disable « and press the » OK « key to activate it.

Attention:
If the alarm is disabled, no alarms will be signalled via the relay or the HART interface!

– Set alarm A1

— This function is used to change the alarm configuration for alarm A1.

- Select the menu items » Settings «, » Instrument «, » Alarm « and « Alarm A1 « in this order, pressing the » OK « key after each selection.
- Use the » ▲ « and » ▼ « keys to set each position of the threshold value for the alarm A1 and press the » OK « key to confirm the setting.
- Press the » OK « key to confirm the complete alarm threshold value. The setting for the alarm threshold A1 is displayed.

— The function for setting the alarm direction is opened.
- Select » Rising « or » Falling « and press the » OK « key to activate your selection.
- Select » Next « and press the » OK « key.

— The function for setting the self-hold function of the A1 alarm is opened.
- Select » Latching « or » Non latching « and press the » OK « key to activate it.
- Select » Next « and press the » OK « key.

— The function for setting the A1 acknowledgement is opened.
- Select » Can be acknowledged « or » Cannot be acknowledged « and press the » OK « key to activate it.

— The function for setting the A1 hysteresis is opened.
This function allows the user to set a bandwidth in which a tripped relay stays in its status until the gas concentration is outside this bandwidth. With this function relays will not "chatter" at the alarm set point. E.g. A1 set point is 40 ppm, hysteresis is set to 3 ppm. alarm A1 will come on at 40 ppm and will stay active until the concentration falls below 37 ppm.
- Select the line for input of the hysteresis and press the » OK « key to switch to edit mode.

- Use the » ▲ « and » ▼ « keys to set each digit of the value and press the » OK « key to confirm the setting.
- Select » Next « and press the » OK « key.

– The settings of the A1 are indicated.
- To confirm select » Confirm « and press the » OK « key.

– The settings for alarm A1 are now complete.

– Set alarm A2

– This function is used to change the alarm configuration for alarm A2.

- Select the menu items "Settings «, "Instrument «, "Alarm « and "Alarm A2 « in this order, pressing the » OK « key after each selection

– The settings are made in the same manner as for alarm A1.

– Set ack.

– This function is used to enable or disable the acknowledgement of the alarms with the » OK « key.

- Select the menu items » Settings «, » Instrument «, » Alarm « and » Set ack. « in this order, pressing the » OK « key after each selection.

- Select » Enable « or » Disable « and press the » OK « key to activate it.

– Test alarm A1

– This function simulates the A1 alarm state for testing purposes.

- Select the menu items » Settings «, » Instrument «, » Alarm « and » Test alarm A1 « in this order, pressing the » OK « key after each selection.

– The function » Test A1 status « is opened.
- Select » Enable « or » Disable « and press the » OK « key to activate it.

– When the function is enabled, the relay and the interfaces are set to the A1 alarm state.

– Test alarm A2

— This function simulates the A2 alarm state for testing purposes.

- Select the menu items » Settings «, » Instrument «, » Alarm « and » Test alarm A2 « in this order, pressing the » OK « key after each selection.

— The function » Test A2 status « is opened.

- Select » Enable « or » Disable « and press the » OK « key to activate it.

— When the function is enabled, the relay and the interfaces are set to the A2 alarm state.

– Test fault

— This function simulates the fault alarm state for testing purposes.

- Select the menu items » Settings «, » Instrument «, » Alarm « and » Test fault alarm « in this order, pressing the » OK « key after each selection.

— The function » Test fault status « is opened.

- Select » Enable « or » Disable « and press the » OK « key to activate it.

— When the function is enabled, the relay and the interfaces are set to the fault alarm state.

Passwords

This group contains the setting functions for the passwords.

– Password Calibration

— This function is used to change the password for the menu » Calibration «.

- Select the menu items » Settings «, » Instrument «, » Passwords « and » Password Cal. « in this order, pressing the » OK « key after each selection.

- Select the line for password input and press the » OK « key to switch to edit mode.
- Use the » ▲ « and » ▼ « keys to set each position of the password and press the » OK « key to confirm the setting.
- Press the » OK « key to confirm the complete password.

– Password Settings

— This function is used to change the password for the menu » Settings «.

- Select the menu items » Settings «, » Instrument «, » Passwords « and » Password Cfg. « in this order, pressing the » OK « key after each selection.

- Select the line for password input and press the » OK « key to switch to edit mode.
- Use the » ▲ « and » ▼ « keys to set each position of the password and press the » OK « key to confirm the setting.
- Press the » OK « key to confirm the complete password.

Date and time

– This function is used to set the date and / or time.

- Select the menu items « Settings «, « Instrument « and « Date and time « in this order, pressing the » OK « key after each selection.
- Select the desired input line (Date or Time) and press the » OK « key to switch to edit mode.
- Use the » ▲ « and » ▼ « keys to set the value and press the » OK « key to confirm the setting.

Time format

– This function is used to set the display format for the date and/or time.

- Select the menu items « Settings «, « Instrument « and « Time format « in this order, pressing the » OK « key after each selection.
- Select the desired input line (Date format or Time format) and press the » OK « key to switch to edit mode.
- Use the » ▲ « and » ▼ « keys to select the desired format (European or US) and press the » OK « key to confirm the setting.

Language

– This function is used to set the language for the menus.

- Select the menu items « Settings «, « Instrument « and « Language « in this order, pressing the » OK « key after each selection.
- Select the desired language from the list and press the » OK « key to activate it.

Function key

– This function is used to set the function which is to be activated when the function key (the » ▲ « key) is pressed briefly.
Default setting: Fault report.

- Select the menu items » Settings «, » Instrument « and » Function key « in this order, pressing the » OK « key after each selection.

- Select the desired function and press the » OK « key to activate it. An icon corresponding to the selected function appear on the right side of the display. Possible selections:

  Show graph – the measured values are displayed on a time axis, see page 38

  Fault report – existing faults are displayed in clear text, see page 36

  Notice report – existing warnings are displayed in clear text, see page 36

  Fault codes – existing fault codes are displayed in a numerical table, see page 36

– In measuring mode, briefly pressing the » ▲ « key will now activate the selected function.

Initialise device

This function resets all parameters of the Polytron 7500 to the factory default settings.
This affects the following parameters:
– Sensor lock.
– Gas selection (if the sensor is suitable for measuring several different gases).
– Units in the measured value display (normally ppm).
– Measuring range for the 4 to 20 mA interface.
– Gas configuration of the calibration gas (if the sensor is suitable for calibration with a replacement gas).
– Calibration interval. (the sensor-specific default values can be found in the related sensor data sheet).

It also affects the setting parameters for:
– Pump output
– Alarm parameters
– Passwords
– Language
– Function key
– HART interface
– Datalogger
– Analogue interface

- Select the menu items » Settings «, » Instrument « and » Device init. « in this order, pressing the » OK « key after each selection.

- Select » Confirm « and press the » OK « key to initialise the device.

SW dongle

This group permits the deactivation of individual dongles before they are removed or in the case of a fault in a dongle.
A dongle can be reactivated only by restarting the unit.

– Data dongle

- Select the menu items » Settings «, » Instrument «, » SW dongle « and » Data dongle « in this order, pressing the » OK « key after each selection.

- Select the line » Disable function « and press the » OK « key to disable the data dongle.

– Sensor test dongle

- Select the menu items » Settings «, » Instrument «, » SW dongle « and » Sensor test dongle « in this order, pressing the » OK « key after each selection.

- Select the line » Disable function « and press the » OK « key to disable the sensor test dongle.

– Diagnostic dongle

- Select the menu items » Settings «, » Instrument «, » SW dongle « and » Diagnostic dongle « in this order, pressing the » OK « key after each selection.

- Select the line » Disable function « and press the » OK « key to disable the diagnostic dongle.

Sub-menu » Communication «

The sub-menu » Communication « permits various settings to by made for the interfaces.

HART interface

This group contains the setting functions for the HART interface.

– Polling address

The polling address configures the unit either for the analogue mode (4 to 20 mA) or the multidrop mode. Setting the polling address to " 0 " enables the analogue mode (4 to 20 mA). To enter multidrop mode, the polling address must be set to a value in the range from " 1 " to " 15 ", which disables the analogue interface and freezes it to a constant current of approx. 3 mA. In order to enable the central controller to request the unique identifier (unambiguous HART address) using HART command #0, all Polytron 7500s located on one cable trunk need to be configured with a different polling address. It is advisable to choose a subsequent series of addresses, starting with address " 1 ".
This setting corresponds to the HART command #6 ("Write Polling Address").

- Select the menu items » Settings «, » Communication «, » Hart interface « and » Polling address « in this order, pressing the » OK « key after each selection.
- Use the » ▲ « and » ▼ « keys to set each position of the polling address and press the » OK « key to confirm the setting.
- Press the » OK « key to confirm the complete polling address.

– Unique Identifier

This function can be used to read out the unique identifier (unique HART address), which must be known for the addressing in almost all HART commands. However, knowledge of the unique identifier is necessary only for systems which are not able to read out the unique identifier with the HART command #0 in the short-frame format or the HART command #11. The display corresponds to the address returned by the HART command #0 ("Read Unique Identifier") or #11 ("Read Unique Identifier associated with Tag").

- Select the menu items » Settings «, » Communication «, » Hart interface « and » Identifier « in this order, pressing the » OK « key after each selection.

– The unique identifier will be displayed.

– Tag

The tag may be used to mark a specific transmitter and comprises up to 8 alphanumeric characters. It can also serve for addressing a Polytron 7500, in order to read the unique identifier using HART command #11 ("Read Unique Identifier associated with Tag"), even if the polling address is unknown.
This presumes that an unambiguous tag has been configured before.

- Select the menu items » Settings «, » Communication «, » Hart interface « and » Tag « in this order, pressing the » OK « key after each selection.
- Use the » ▲ « and » ▼ « keys to set each position of the tag and press the » OK « key to confirm the setting.
- Press the » OK « key to confirm the complete tag.

Analogue interface

This group contains the functions needed for the test and setting functions.

Settings for the analogue interface

– Analogue set point / Set measurement range

When the measuring range of the analogue interface must be adjusted.
The following corresponds: 0 ppm = 4 mA; Analogue set point / Set measurement range = 20 mA

— According to the standard, the standard measuring range of the sensor automatically ends here.

– Warning on/off

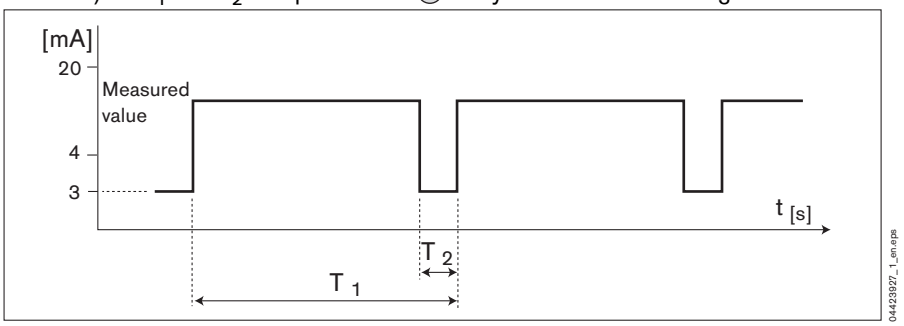
This function is used to switch the warning signal » ⚠ « on the analogue interface on and off. If the presence of a warning is to be signalled via the analogue interface, the warning signal must be switched on. In the case of a warning, the current on the analogue interface is switched for one second to the state "Warning". For the rest of the time, the measured signal is transmitted. The interval between the warning signals and the level of the analogue signal can be configured as desired, see "Warning signal" on page 53 and "Warning level" on page 53.

- Select the menu items » Settings «, » Communication «, » Analogue interface « and » Warning on/off « in this order, pressing the » OK « key after each selection.
- Select » Enable « or » Disable « and press the » OK « key to activate it.

– Warning interval

This function is used to set the interval between the warning signals » ! « on the analogue interface.

- Select the menu items » Settings «, » Communication «, » Analogue interface « and » Warning interval « in this order, pressing the » OK « key after each selection.
- Use the » ▲ « and » ▼ « keys to set each position of the time interval (in seconds) for T_1 and T_2 and press the » OK « key to confirm the setting.



- Press the » OK « key to confirm the complete time interval.

– Warning level

– This function is used to set the current on the analogue interface for the warning signal » ! «.

- Select the menu items » Settings «, » Communication «, » Analogue interface « and » Warning level « in this order, pressing the » OK « key after each selection.
- Use the » ▲ « and » ▼ « keys to set each position of the current value and press the » OK « key to confirm the setting.

- Press the » OK « key to confirm the complete current value.

– Maintenance level

– This function is used to set the current on the analogue interface for the maintenance signal » 🔧 «.

- Select the menu items » Settings «, » Communication «, » Analogue interface « and » Warning level « in this order, pressing the » OK « key after each selection.
- Use the » « and » « keys to set each position of the current value and press the » OK « key to confirm the setting.

- Press the » OK « key to confirm the complete current value.

Test functions for the analogue interface

– Test analogue

– This function is used to set various currents in the range 3 to 22 mA on the analogue interface.

Note:
These functions may trigger alarms in the control unit! If necessary, the alarms should be disabled in the control unit before using the functions.

- Select the menu items » Settings «, » Communication «, » Analogue interface « and » Test analogue « in this order, pressing the » OK « key after each selection.
- If the alarms are disabled in the control unit, confirm the message » Switch off all alarms « by pressing the » OK « key.

- Use the » ▲ « and » ▼ « keys to set each position of the current value and press the » OK « key to confirm the setting.

- Use the »» ▲ « and » ▼ « keys to select the state » Set current output « and press the » OK « key to activate it.

– The selected current is transmitted on the analogue interface.

- Use the » ▲ « and » ▼ « keys to select the line » Next « and press the » OK « key to confirm the selection. The function is terminated.
- When the alarms in the control unit have been enabled again, confirm the message » Switch on all alarms « by pressing the » OK « key.

– Test fault

– This function is used to set the analogue interface to the fault signal » ⊠ «.

Note:
These functions may trigger alarms in the control unit! If necessary, the alarms should be disabled in the control unit before using the functions.

- Select the menu items » Settings «, » Communication «, » Analogue interface « and » Test fault « in this order, pressing the » OK « key after each selection.

- Use the » ▲ « and » ▼ « keys to select » Enable « and press the » OK « key to activate it.

– The current for the fault signal is transmitted on the analogue interface.

- Use the » ▲ « and » ▼ « keys to select » Disable « and press the » OK « key to activate it.

– The current for the fault signal is switched off.

– Test warning

– This function is used to set the analogue interface to the warning signal » ⚠ «.

Note:
These functions may trigger alarms in the control unit! If necessary, the alarms should be disabled in the control unit before using the functions.

- Select the menu items » Settings «, » Communication «, » Analogue interface « and » Test warning « in this order, pressing the » OK « key after each selection.

- Use the » ▲ « and » ▼ « keys to select » Enable « and press the » OK « key to activate it.

– The current for the warning signal is transmitted on the analogue interface.

- Use the » ▲ « and » ▼ « keys to select » Disable « and press the » OK « key to activate it.

– The current for the warning signal is switched off.

– Test maintenance

– This function is used to set the analogue interface to the maintenance signal » 🔧 «.

Note:
These functions may trigger alarms in the control unit! If necessary, the alarms should be disabled in the control unit before using the functions.

- Select the menu items » Settings «, » Communication «, » Analogue interface « and » Test maintenance « in this order, pressing the » OK « key after each selection.

- Use the » ▲ « and » ▼ « keys to select » Enable « and press the » OK « key to activate it.

– The current for the maintenance signal is transmitted on the analogue interface.

- Use the » ▲ « and » ▼ « keys to select » Disable « and press the » OK « key to activate it.

– The current for the maintenance signal is switched off.

LON interface

This function group contains the functions for the LON interface. Operation with LON: see also “Polytron 7500 Operation via LON” on page 62.

– Neuron ID

Every Polytron 7500 has a Neuron chip with its own Neuron ID, with which the Polytron 7500 can be identified in the LON network.
To display the Neuron ID:

- Select the menu items » Settings «, » Communication «, » LON Interface « and » Neuron ID « pressing the » OK « key after each selection.

– The Neuron ID is displayed.

– Service PIN

The Polytron 7500 can be commissioned by sending its Neuron ID to the LON network with the aid of the function "Service PIN".

- Select the menu items » Settings «, » Communication «, » LON Interface « and » Service PIN « pressing the » OK « key after each selection.
- Use the » ▲ « and » ▼ « to select » Confirm « and press the » OK « key to activate this selection.

– The Neuron ID of the Polytron 7500 is transmitted.

Sub-menu » Sensor «

The sub-menu » Sensor « can be used to make various settings for the installed sensor.

Change sensor

– This function can be used to change a sensor while the unit is running without sending a fault alarm to the control unit. It also ensures that all sensor data currently in the microprocessor can be saved to the EEPROM of the sensor before the sensor plug is disconnected.
– In principle, a sensor can be replaced at any time. However, for technical safety reasons, a fault alarm will be activated until a new sensor is connected, in case a sensor is disconnected accidentally.

- Select the menu items » Settings «, » Sensor « and » Change sensor « in this order, pressing the » OK « key after each selection.

– The maintenance signal is transmitted on the interface and the message » Please remove sensor « is displayed.

- Remove the old sensor and plug in the new one (see page 23).

When the new sensor has been installed:

- The message » Loading database, please wait « is displayed.

When the sensor data have been loaded:

– The message » Database is loaded « is displayed.

- Select » Back to menu « and press the » OK « key.

The maintenance signal on the interface remains active until the sensor has warmed up.
The duration of the warming-up period depends on the type of sensor and its history. If, for example, the sensor had already been warmed up on another unit and it was disconnected only for a short time, the warming-up period may be shorter than that shown in the Instructions for Use for the sensor.
See the operating instructions for the sensor for the maximum warming-up period. see the Instructions for Use for the sensor.
If the old sensor is replaced with an identical sensor (with the same Part No.), the configuration of the Polytron 7500 (gas type, measuring range, calibration gas, calibration interval) remains unchanged.
Otherwise, the default values for the sensor (see Instructions for Use for the Dräger-Sensor) are used by the Polytron 7500 if the sensor-lock function (page 57) is disabled.

Autocalibration setting

– This function is used to enable and disable the autocalibration (page 41).

- Select the menu items » Settings«, » Sensor « and » Set autocal. « in this order, pressing the » OK « key after each selection.
- Select » Enable « or » Disable « and press the » OK « key to activate it.

– Autocalibration from the menu "Calibration" can be used only if this function is enabled.

Sensor test

This group contains the setting functions for the sensor self test.
These functions can be used only if the Polytron 7500 is equipped with the Sensor Dongle 83 17 619 or the Sensor Diagnostic Dongle 83 17 860, see page 15.

– Sensor test setting

– This function can be used to activate or reactivate the sensor self test.
- Select the menu items » Settings«, » Sensor «, » Sensor test « and » Set sensor test « in this order, pressing the » OK « key after each selection.

- Use the » ▲ « and » ▼ « keys to select « Enable « or « Disable « and press the » OK « key to activate it.

– If the sensor self test is enabled, the Polytron 7500 continually tests the sensor in order to ensure reliable operation. If the sensor does not pass the self test, a suitable warning or fault is generated.

– Sensor self-test

– This function is used to start the sensor self-test.
- Select the menu items » Settings«, » Sensor «, » XSxx « and » Sensor self test «.
- To start the sensor self-test (depending on the sensor and/or device status): select » Start sensor self-test « with » ▼ « key and press the » OK « key to start.

– After a few seconds the result is indicated in the display.

To terminate the function:
- Select » Back to menu « and press the » OK « key.

– Sensor lock

– This function is used to enable or disable the sensor lock.
For Polytron 7500 this function should always be switched on since only one sensor with the same Part No. can be replaced.

- Select the menu items » Settings «, » Sensor «, » XS–NF_3 « and » Sensor lock « « in this order, pressing the » OK « key after each selection.

- Select » Enable « or » Disable « and press the » OK « key to activate it.

Enable	=	Polytron 7500 will accept a new sensor only if it has the same Part No. (= Dräger Order No.) as the old sensor and thus the same sensor type.
Disable	=	Polytron 7500 will accept other sensor types. In this case, Polytron 7500 uses the default settings for the new sensor, which means that the configuration of the Polytron 7500 will be changed.

Sensor configuration
(using XS–NF_3 as an example):

This group contains the setting functions for the sensor.

– Gas setting

– This function is used to change the settings for the gas to be measured.

- Select the menu items » Settings «, » Sensor «, » XS–NF_3 « and » Set gas « in this order, pressing the » OK « key after each selection.

When several measuring gases of the sensor are displayed:

- From the list of measuring gases use the » ▲ « and » ▼ « keys to select and the » OK « key to activate it.

– The selected gas is indicated.

- Use the » ▲ « and » ▼ « keys to select the unit of measurement (e.g. ppm) from the list and press the » OK « key to activate it.

– The overview of the settings are displayed.

– If the settings are correct:

- Use the » ▼ « key to select the line » Confirm « and press the » OK « key.

– Sensor initialisation

– This function is used to set all parameters of the sensors back to the factory default values.

- Select the menu items » Settings «, » Sensor «, » XS–NF_3 « and » Sensor init. « in this order, pressing the » OK « key after each selection.

- Select » Confirm « and press the » OK « key to initialise the sensor.

– Set calibration interval

– This function is used to set the calibration interval.

- Select the menu items » Settings «, » Sensor «, » XS–NF_3 « and » Set cal. int. « in this order, pressing the » OK « key after each selection.

- Use the » ▲ « and » ▼ « keys to set each position of the calibration interval (in days) and press the » OK « key to confirm the setting.
  To confirm the entered calibration interval:
- Select » Confirm « and press the » OK « key.

Sub-menu » Datalogger «

The sub-menu » Datalogger « permits various settings to be made for the Datalogger and the Eventlogger.
These functions are available only if the Polytron 7500 is equipped with the Data Dongle 83 17 618, see page 15.
The contents of the Datalogger or Eventlogger can be evaluated only with the PC software GasVision (Version 5.5 or higher). The contents of the Datalogger for the previous 15 minutes can be viewed with the menu sequence » Information «, » Datalogger « and » Show graph «, page 38.

Datalogger:
The Datalogger saves the measured values in accordance with the configuration set under » Set Datalogger «. It can save at least 3000 measured values. If the data is saved at intervals of one minute, this is sufficient for a monitoring period of 50 hours. The monitoring period can be extended considerably by using the setting » Trigger « (page 60).

Eventlogger:
The Eventlogger saves unit and sensor events (such as: A1 threshold value exceeded; flow fault in pump). It can save a maximum of 100 events

Datalogger on/off

— This function is used to enable or disable the Data- or Eventlogger.

- Select the menu items » Settings «, » Datalogger « and » Datalgr. on/off « in this order, pressing the » OK « key after each selection.

- Select » Enable « or » Disable « and press the » OK « key to activate it.

Datalogger setting

This group contains the setting functions for the Datalogger.

– Sample time

— This function can be used to set the sample time for the Datalogger.

- Select the menu items » Settings «, » Datalogger «, » Set Datalogger « and » Sample time « in this order, pressing the » OK « key after each selection.

- Select the desired sample time from the list and press the » OK « key to activate it (» ✓ «).

– Peak / average

— This function can be used to select whether the Datalogger is to save peak or average values.

- Select the menu items » Settings «, » Datalogger «, » Set Datalogger « and » Peak/average « in this order, pressing the » OK « key after each selection.
- Select » Peak « or » Average « and press the » OK «« key to activate it.

Peak	The maximum concentration value measured during the selected sample time is saved.
Average	The average of all concentration values measured during the selected sample time is saved.

– Trigger on/off

— This function can be used to enable or disable the threshold criterion for saving of concentration values.
— If this function is enabled and a suitable trigger value is selected, it is possible to monitor the measured values for a longer period.

- Select the menu items » Settings «, » Datalogger «, » Set Datalogger « and » Trigger on/off « in this order, pressing the » OK « key after each selection.
- Select » Enable « or » Disable « and press the » OK « key to activate it.

Enable	Concentration values are saved only if they exceed the threshold set under » Trigger value « (referred to the previously saved value).
Disable	All measured values which occur during the sample time are saved.

– Trigger value

— This function can be used to set the trigger value.
This value refers proportionally to the whole measuring range.
Example: with a measuring range of 500 ppm a trigger value of 2 % is entered.
Then the Datalogger will only store measured values (refer to the last stored measured value) that deviate by more than 10 ppm.

- Select the menu items » Settings «, » Datalogger «, » Set Datalogger « and » Trigger value « in this order, pressing the » OK « key after each selection.
- Use the » ▲ « and » ▼ « keys to set each position of the trigger value and press the » OK « key to confirm the setting.
- Press the » OK « key to confirm the complete trigger value.

– **Stack/roll**

– This function can be used to set the operating mode of the Datalogger and the Eventlogger.

- Select the menu items » Settings «, » Datalogger «, » Set Datalogger « and » Stack/roll « in this order, pressing the » OK « key after each selection.

- Select » Stack « or » Roll « and press the » OK « key to activate it (» ✓ «).

Roll	when the Datalogger storage space is use up, the oldest data will be overwritten first.
Stack	when the Datalogger storage is full, no further data can be saved. An appropriate warning is generated.

Clear Datalogger

– This function is used to delete all data from the Datalogger.

- Select the menu items » Settings «, » Datalogger « and » Clear Datalogger « in this order, pressing the » OK « key after each selection.

– The message: » Clear Datalogger data « is displayed.
- Use the » ▼ « key to select the line » Confirm « and press the » OK « key.
– The data are deleted from the Datalogger.

Clear Eventlogger

– This function is used to delete all data from the Eventlogger.

- Select the menu items » Settings «, » Datalogger « and » Clear Eventlogger « in this order, pressing the » OK « key after each selection.

– The message: » Clear Eventlogger data « is displayed.
- Use the » ▼ « key to select the line » Confirm « and press the » OK « key.
– The data are deleted from the Eventlogger.

Polytron 7500 Operation via LON

There are 3 LEDs behind the display window that indicate the different status of the Polytron 7500.

— The red LED indicates an error.
— The orange LED indicates communication with the central unit via LON of LON specific data e.g. sending the Service PIN.
— The green LED indicates the correct operation of the Polytron 7500 when it is continuously on.
  When the green LED flashes it indicates a warning in the Polytron 7000.

Every Polytron 7500 has a Neuron Chip with its own Neuron ID, with which the Polytron 7500 can be identified in the LON network.
To view the Neuron ID:

- Select menu items » Settings «, » Communication «, » LON Interface « and » Neuron ID «.

To commission the Polytron 7500, the Neuron ID can be sent to the central unit using the "Service PIN" function.

- Select menu items » Settings «, » Communication «, » LON Interface « and » Service PIN «.
- Select » Confirm « and press the » OK « key to sent the Neuron ID.

Use the Polytron 7500 Plugin for configuration and commissioning the Polytron 7500.
The Plugin is available for free download under:
http://www.echelon.com/products/integration/plugin/

Technical Data

The measuring range and the measuring properties depend on the DrägerSensor –
see the Instructions for Use of the DrägerSensor being used.

Type	Microprocessor controlled transmitter with pump and pyrolysis oven
Measuring range and the measuring properties	depend on the type – see the Instructions for Use of the installed DrägerSensor
Flow rate	900 ±100 mL/min; Hose inside diameter 4 mm, hose outside diameter 6 mm
Signal transmission to the central unit	
Analogue:	
Measured-value signal	4 mA to 20 mA
Drift below zero point	3.8 mA
Measuring range exceeded	20 mA to 20.5 mA
Unit fault	<3.2 mA; 21 mA
Maintenance signal	3.4 mA ±0.2 mA constant
Digital:	HART compatible, transmission on 2-wire shielded cable optionally LON
Supply voltage	24 V DC ±2 V; 1.5 A
Cable inlet	M20x1.5, for cable diameter 6 to 12 mm (0.24" to 0.47")
Ambient conditions	Specifications for the sensor: see the Instructions for Use for the DrägerSensor 0 to 40 °C 700 to 1300 hPa 0 to 99 % relative humidity, no condensation
Dimensions (H x W x D)	150 mm x 125 mm x 300 mm
Weight	approx. 2.4 kg
CE markings	Electromagnetic compatibility (Directive 89/336/EEC)
Ingress protection	IP 21
Relay module:	
logical channels	A1, A2, Fault
principle	normally energised (for fail-safe operation)
contacts	1-pole changeover (SPDT)
contact rating	5 A at 30 V DC; 5 A at 250 V AC

Order List

Part name and description	**Order No.**
Pyrolyzer Docking Station Once per Dräger Polytron 7500	**83 18 580**
Dräger Polytron 7500 – NF_3 Measuring range 0 to 50 ppm NF_3 (CAS 7783-54-2)	**83 18 827**
Dräger Polytron 7500 – NF_3 LON Measuring range 0 to 50 ppm NF_3 (CAS 7783-54-2)	**83 18 829**
Dräger Polytron 7500 – PFC Measuring range 0 to 30 ppm C_4F_6 (CAS 685-63-2) Measuring range 0 to 30 ppm C_5F_8 (CAS 559-40-0)	**83 18 828**
Dräger Polytron 7500 – PFC LON Measuring range 0 to 30 ppm C_4F_6 (CAS 685-63-2) Measuring range 0 to 30 ppm C_5F_8 (CAS 559-40-0)	**83 18 830**
Accessories	
Dräger Polytron 7500 Relay Module	**83 18 524**
Dräger Polytron 7500 Software Dongles:	
Data Dongle	**83 17 618**
Sensor Dongle	**83 17 619**
Sensor Diagnostic Dongle	**83 17 860**
Calibration accessories	
Calibration Bag, 20 L	**68 07 068**
Spare parts	
DrägerSensor XS NF3 for Dräger Polytron 7500 – 83 18 824	**68 11 125**
DrägerSensor XS PFC for Dräger Polytron 7500 – 83 18 825 and 83 18 826	**68 11 120**
Pyrolysis oven NF3	**83 18 340**
Pyrolysis oven PFC	**83 18 820**
Spare part set pump (83 18 523) for the measurement branch	**83 19 518**
Spare part set pump (83 18 996) for the principal branch	**83 19 519**
Dust Filter internal	**83 17 348**
Cover, unit cover	**83 18 528**

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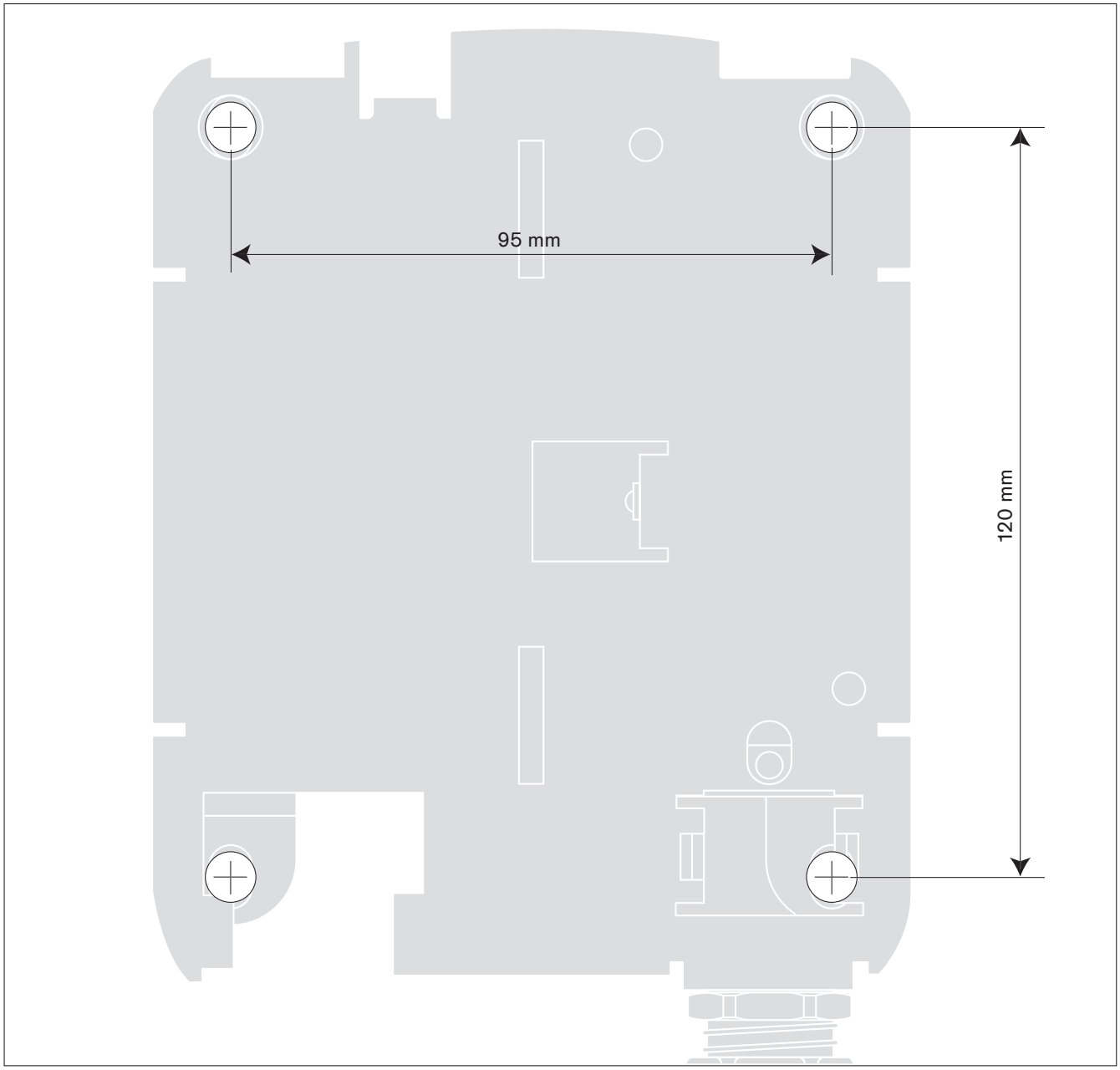
Pyrolyzer Docking Station



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.

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