

# Differential Pressure Transmitter DPT

**Pressure range:** 0,5kPa,  $\pm 1$ ,  $\pm 2$ ,  $\pm 5$ ,  $\pm 10$ ,  $\pm 20$ ,  $\pm 30$ kPa and 100kPa  
( $\pm 5$  mbar,  $\pm 10$ ,  $\pm 20$ ,  $\pm 50$ ,  $\pm 100$ ,  $\pm 200$ ,  $\pm 300$  mbar and  $\pm 1$  bar)  
**Output:** 4...20 mA and 0...10 V  
**Media:** Air, non aggressive gases

## Construction

- Material: Wetted material sensor are parts and housing from plastics
- Silicon membrane
- Operating temperature 0 °C bis +50 °C
- Accuracy:  $\pm 1,0\%$  F.S.

## Application / Possibles uses

- Air conditioning and Heating
- Civil engineering / Process control
- Pneumatics

## Description / Options

The differential pressure transmitter use in industrial application, environmental measurement and facility management. To measure differential pressure in gases. The pressure sensors are maintenance free.

### Technical information:

Output: 0...10 V or 4...20 mA  
Supply voltage: 12...32 V DC  
Linearity:  $\pm 1,0\%$  F.S.  
Total error :  $\pm 2,5\%$  F.S.  
Electrical connector: C-clamp in the housing  
Pressure connector: hose connector 3,5 mm or 5.5 mm  
Operating temperature: 0...+50 °C  
Environment temperature: 0... +50 °C  
Protection class: IP65 acc. to DIN EN 60 529

DPT

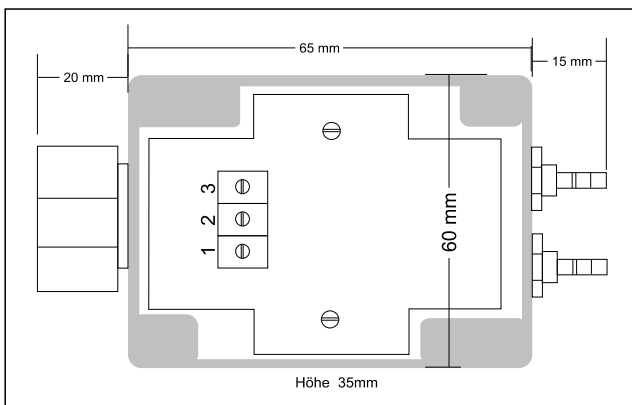


DPT-LCD



### Connection:

Pin	(Output 0...10V)	(Output 4...20mA)
1	+ Supply	1 + Supply
2	Output	2 ground and resistor
3	Ground	3 not used



### Service

The pressure sensors can be operated free of maintenance.

### Note

We compiled this operating instructions carefully. Nevertheless, it was not possible to take all possibilities of application into account. If this data sheet should lack the solution of your special task, please don't hesitate to contact us.

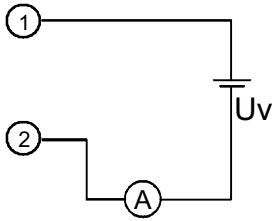
### Safety information

During installation, putting into service and operation of the pressure sensors, it is necessary to observe the relevant safety regulations that are in force in the country of the user (as for example, DIN VDE 0100 part 410).



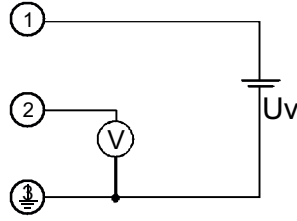
## Assignment of elbow-type plug:

2-wire connection (4-20mA)



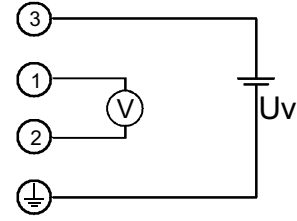
1 = supply voltage +Vs  
2 = GND / signal

3-wire connection (voltage)



2 = signal +  
1 = supply voltage +Vs  
⊥ = supply voltage -Vs  
signal -

4-wire connection (voltage)



1 = signal +  
2 = signal -  
3 = supply voltage +Vs  
⊥ (4) = supply voltage -Vs

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## General installation instructions:

To mount the connection cable (2-, 3-, or 4-wire depending on type of device) the angle plug screw has to be loosened and the coupling insert has to be removed by means of a screw driver at the position indicated (arrow). Pull out connection cable through PG glanding and connect to the loose coupling insert as described in the wiring diagram. Replace loose coupling insert onto the pins at the transmitter housing and turn cover cap with PG glanding in the direction desired till it snaps on (4 different starting positions at 90° intervals). Re-tighten the screw at the angle plug

## Pressure Connection:

### Measuring transducer for absolute pressure:

Absolute pressure for over pressure measurements over absolute zero (Reference Vacuum).

The output signal corresponds to the absolute pressure.

pressure connection: port "A" (port "B" is not used)

### Measuring transducer for relative pressure:

#### - For measurements of over- or under pressure:

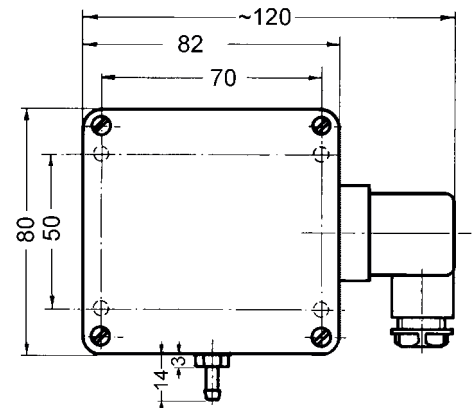
The output signal corresponds to the pressure difference between the connected pressure and the ambient pressure.

pressure connection for over pressure measurement: port "B"  
under pressure measurement: port "A"

#### - Difference pressure measuring:

The output signal corresponds to the pressure difference between the both pressure ports.

pressure connection higher pressure: port "B"  
lower pressure: port "A"



## Safety instructions:

This device has been designed and tested in accordance with the safety regulations for electronic devices. However, its trouble-free operation and reliability cannot be guaranteed unless the standard safety measures and special safety advises given in this manual will be adhered to when using the device.

1. Trouble-free operation and reliability of the device can only be guaranteed if the device is not subjected to any other climatic conditions than those stated under "Specification". If the device is transported from a cold to a warm environment condensation may cause in a failure of the function. In such a case make sure the device temperature has adjusted to the ambient temperature before trying a new start-up.
2. General instructions and safety regulations for electric, light and heavy current plants, including domestic safety regulations (e.g. VDE), have to be observed.
3. If device is to be connected to other devices (e.g. via PC) the circuitry has to be designed most carefully. Internal connection in third party devices (e.g. connection GND and earth) may result in not-permissible voltages impairing or destroying the device or another device connected.
4. If there is a risk whatsoever involved in running it, the device has to be switched off immediately and to be marked accordingly to avoid re-starting.