



# Instruments & Controls

## DIFFERENTIAL PRESSURE TRANSMITTER for LIQUID

### DPTL

111.xxx.xxx



### Applications

For differential pressure detection in liquid mediums of the air-conditioning, heating and water technique. Also suitable for light aggressive liquids.

### Model summary

| Type code<br>- A for mA output<br>- V for voltage output | Measuring range | Output signal | Accuracy typ. %/FS<br>(temperature: -20 ÷ 85°C) |
|--|-----------------|---------------|---|
| DPTL-1-V   | 0 ÷ 1 bar       | 0 ÷ 10 V      | ±1 %  |
| DPTL-1-A   | 0 ÷ 1 bar       | 4 ÷ 20 mA     | ±1 %  |
| DPTL-2,5-V   | 0 ÷ 2,5 bar     | 0 ÷ 10 V      | ±1 %  |
| DPTL-2,5-A   | 0 ÷ 2,5 bar     | 4 ÷ 20 mA     | ±1 %  |
| DPTL-4-V   | 0 ÷ 4 bar       | 0 ÷ 10 V      | ±1 %  |
| DPTL-4-A   | 0 ÷ 4 bar       | 4 ÷ 20 mA     | ±1 %  |
| DPTL-6-V   | 0 ÷ 6 bar       | 0 ÷ 10 V      | ±1 %  |
| DPTL-6-A   | 0 ÷ 6 bar       | 4 ÷ 20 mA     | ±1 %  |

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#### Technical data

|                                  |  |
|----------------------------------|--|
| Material contacting the medium   | Ceramic/Stainless steel A203/1 4305  |
| Sealing material                 | EPDM   |
| Static pressure maximum          | 21 bar   |
| Over pressure maximum            | 6 bar, ranges 1 and 2,5 bar<br>16 bar, ranges 4 and 6 bar                      |
| Responsetime                     | 10mS   |
| Electrical connector             | Angle plug according to DIN 43650 Construction A                               |
| Pressure connectors              | Inside thread G1/4"  |
| Installation position            | Unrestricted   |
| Enclosure                        | Bottom part Stainless steel 1,4305<br>Top cover Aluminium pressure die casting |
| Protection                       | IP54 according to to EN60529   |
| Ambient temperature              | -10 ÷ 50 °C  |
| Temperature of medium            | -10 ÷ 80 °C  |
| Storage temperature and moisture | -20 ÷ 50 °C / max 85 %RH   |
| weight                           | 510g   |

#### Type DPTL xxx A

|                     |                                      |
|---------------------|--------------------------------------|
| Supply voltage      | 15 ÷ 24 Vdc (±10 %)                  |
| Current consumption | max. 20 mA                           |
| Output signal       | 4 ÷ 20 mA, max load 900 ohm / 24 Vdc |

#### Type DPTL xxx V

|                   |                                      |
|-------------------|--------------------------------------|
| Supply voltage    | 15 ÷ 24 Vdc (±10 %) or 24 Vac (±10%) |
| Power consumption | typ. 0,37 W (Vdc) / 0,9 W (Vac)      |
| Output signal     | 0 ÷ 10 V, min load 2 kOhm            |

#### Norms and standards

|                |   |
|----------------|---|
| Product safety | EN61010-1 safety requirements for electrical equipment for measurement, control and laboratory use  |
| EMC            | EN61326-1 (2006) Electrical equipment for measurement, control and laboratory use EMC requirements<br>EN61326-2-3 Particular requirements- test configuration, operational conditions and performance criteria for transducer with integrated or remote signal conditioning |
| CE-Conformity  | 89/336/EEC Electromagnetic compatibility  |

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## Caution

### Security Advice

The installation and assembly of electrical equipment may only be performed by an authorized and skilled electrician.

The modules must not be used in any relation with equipment that supports, directly or indirectly, human health or life or with applications that can result in danger for people, animals or real value.

### Mounting Advices

- The device is designed for assembly on smooth walls or mounting plates.
- For connecting the device, the process lines must be unpressurized.
- The device has to be secured against pressure surges by appropriate measures.
- Note the suitability of the device for the medium to be measured.
- The device is designed for pipe mounting
- Note the maximum pressures
- To avoid the occurrence of interfering dead times, the pressure sensing leads shall be as small as possible and shall be laid without any sharp bends.
- With pulsating pressures on the system, function interferences of the device can be caused. As a protection, the installation of an attenuating element in the pressurized connection line is recommended.



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### Electrical connection

The devices are constructed for the operation of protective low voltage (SELV). For the electrical connection, the technical data of the corresponding device are valid.

Sensing devices with transducer should in principle be operated in the middle of the measuring range to avoid deviation at the measuring end points. the ambient temperature of the transducer electronics should be kept constant.

### Installation

A prerequisite for the operation I a proper installation of all electrical supply, control and sensing leads as well as the pressurized connection line.

Before installing the device, the leak tightness of the pressurized connection lines must be inspected.

+: Higher pressure

-: Lower pressure

### Terminal connection

0 ÷ 10 V type

4 ÷ 20 mA Type



1: Uv: 15-24V= /24V~  
2: GND  
3: Out 0-10V



1: Uv: 15-24V=  
2: GND Out 4-20mA

### Dimensions

