

DPL

Differential Pressure Transmitter for liquid medium

thermokon[®]
HOME OF SENSOR TECHNOLOGY

Datasheet

Subject to technical alteration
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» APPLICATION

The differential pressure transmitter detects the differential pressure in liquid media. Typical areas of application include supply and return liquid flows in heating systems as well as the monitoring of filters and compressors. For easy connection we recommend the 5 m connecting cable with plug (see accessories).

» TYPES AVAILABLE

| | active 0..10V | active 4..20 mA |
|---|---------------|-----------------|
| Differential Pressure transmitter – 0..1 bar | DPL1/V | DPL1/A |
| Differential Pressure transmitter – 0..+2,5 bar | DPL2,5/V | DPL2,5/A |
| Differential Pressure transmitter – 0..+4 bar | DPL4/V | DPL4/A |
| Differential Pressure transmitter – 0..+6 bar | DPL6/V | DPL6/A |

» SECURITY ADVICE – CAUTION



The installation and assembly of electrical equipment should only be performed by authorized personnel. The product should only be used for the intended application. Unauthorised modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Please comply with

- Local laws, health & safety regulations, technical standards and regulations
- Condition of the device at the time of installation, to ensure safe installation
- This data sheet and installation manual

» NOTES ON DISPOSAL



The crossed-out wheeled bin symbol indicates that the product or removable batteries must not be disposed of with household or commercial waste. Within the EU, you are legally obliged to dispose of the product separately and appropriately in accordance with the national laws of your country. Alternatively, please contact your supplier or Thermokon Sensortechnik GmbH. Further information can be found at: www.thermokon.com

» PRODUCT TESTING AND CERTIFICATION



Declaration of conformity

The declaration of conformity of the products are available on our website
<https://www.thermokon.de/direct/en-gb/categories/dpl>

» **TECHNICAL DATA**

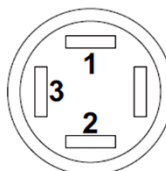
| | | | | |
|--|--|------------------------------|--|--------------------------|
| Measuring values | differential pressure (static and dynamic) | | | |
| Medium | fluids | | | |
| Output voltage <i>(type-dependent)</i> | V 0..10 V, min. load 2 k Ω | | | |
| Output Amp <i>(type-dependent)</i> | A 2x 4..20 mA. max. load 900 Ω | | | |
| Power supply <i>(type-dependent)</i> | V 15..24 V = (\pm 10%) or 24 V ~ (\pm 10%) SELV | | A 15..24 V = (\pm 10%) SELV | |
| Power supply when using with UD-x Display | V 24 V = or 24 V ~ (\pm 10%) SELV | | A 24 V = SELV | |
| Power consumption <i>(type-dependent)</i> | V typ. 0,37 W (24 V =) 0,9 VA (24 V ~) | | A max. 0,5 W | |
| Operating temperature range <i>* Max. permissible operating temperature</i> | Medium -20..+80 °C | | | |
| Measuring range pressure <i>(type-dependent)</i> | DPL1 0..+1 bar | DPL2,5 0..+2,5 bar | DPL4 0..+4 bar | DPL6 0..+6 bar |
| Accuracy pressure <i>*deviation from calibration reference device (calibrator)</i> | < \pm 1% of measuring range (typ. at -5..+75 °C) | | | |
| Max. working overpressure | DPL1 6 bar | DPL2,5 6 bar | DPL4 16 bar | DPL6 16 bar |
| Enclosure | stainless steel V2A, cover: aluminium pressure die casting, measuring cell ceramic | | | |
| Protection | IP54 according to EN60529 | | | |
| Connection electrical | Angle plug according to DIN 43650 construction A | | | |
| Connection mechanical | G 1/4" | | | |
| Ambient condition | -20..+50 °C, max. 85% rH short term condensation | | | |

» **MOUNTING ADVICE**

- 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.
- Consider the suitability of the device for the medium to be measured.
- The device is designed for pipe mounting.
- Consider maximum pressures.
- To avoid the occurrence of interfering dead times, the pressure sensing leads shall be as small as possible and shall be layed without any sharp bends.
- With pulsating pressures on the system, function interferences of the device can be caused. As a protection, the installation of attenuating elements in the pressurized connection line is recommended.

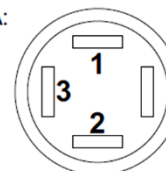
» **TERMINAL CONNECTION PLAN**

0-10V:



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

4-20mA:



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

» COMMISSIONING

Static system pressure $p_{\max} = 21$ bar, pressure peaks are to be damped by design measures (capillary).

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

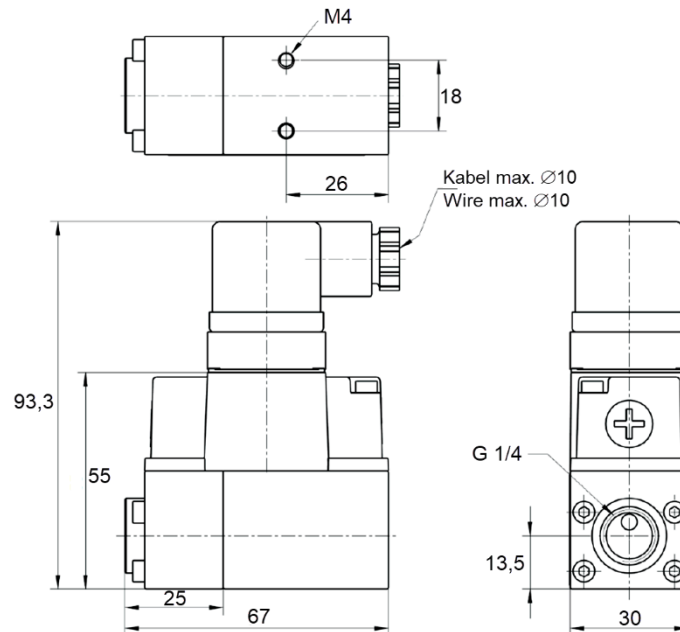
Before installing the device, the leak tightness of the pressurized connection lines must be inspected.

Pressurized sensing leads to be connected:

„+“: higher pressure

„-“: lower pressure

» DIMENSIONS (MM)



» ACCESSORIES (OPTIONAL)

Screw connection set 6mm brass (2 pcs.)

Art.-No. 373401

Screw connection set 6mm stainless steel (2 pcs.)

Art.-No. 373388

Screw connection set 8mm brass (2 pcs.)

Art.-No. 373418

Screw connection set 8mm stainless steel (2 pcs.)

Art.-No. 373395

Display UD-A (for 4..20mA device)

Art.-No. 718189

Display UD-V (for 0..10V device)

Art.-No. 775113