DPL

Differential Pressure Transmitter for liquid medium

thermokon®
HOME OF SENSOR TECHNOLOGY

Datasheet

Subject to technical alteration
Issue date: 04/07/2022 · A122

»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
Differental Pressure transmitter – 0..1 bar	DPL1/V	DPL1/A
Differental Pressure transmitter – 0..+2,5 bar	DPL2,5/V	DPL2,5/A
Differental Pressure transmitter – 0..+4 bar	DPL4/V	DPL4/A
Differental Pressure transmitter – 0..+6 bar	DPL6/V	DPL6/A

»SECURITY ADVICE – CAUTION

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

As a component of a large-scale fixed installation, Thermokon products are intended to be used permanently as part of a building or a structure at a pre-defined and dedicated location, hence the Waste Electrical and Electronic Act (WEEE) is not applicable. However, most of the products may contain valuable materials that should be recycled and not disposed of as domestic waste. Please note the relevant regulations for local disposal.

»PRODUCT TESTING AND CERTIFICATION

CE UKCA

Declaration of conformity
The declaration of conformity of the products can be found on our website https://www.thermokon.de/.

» TECHNICAL DATA

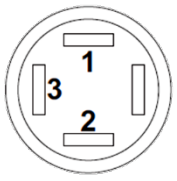
Measuring values	differential pressure (static and dynamic)			
Medium	fluids			
Output voltage *(type-dependent)*	**V** 0..10 V, min. load 2 kΩ			
Output Amp *(type-dependent)*	**A** 2x 4..20 mA. max. load 900 Ω			
Power supply *(type-dependent)*	**V** 15..24 V = (±10%) or 24 V ~ (±10%) SELV		**A** 15..24 V = (±10%) SELV	
Power supply *when using with UD-x Display*	**V** 24 V = or 24 V ~ (±10%) SELV		**A** 24 V = SELV	
Power consumption *(type-dependent)*	**V** typ. 0,37 W (24 V =) | 0,9 VA (24 V ~)		**A** max. 0,5 W	
Operating temperature range ** Max. permissible operating temperature*	**Medium** -4..+176 °F			
Measuring range pressure *(type-dependent)*	**DPL1** 0..+1 bar	**DPL2,5** 0..+2,5 bar	**DPL4** 0..+4 bar	**DPL6** 0..+6 bar
Accuracy pressure **deviation from calibration reference device (calibrator)*	<±1% of measuring range (typ. at +41..+167 °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	-4..+122 °F, 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 protected 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
- 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 attenuating elements in the pressurized connection line is recommended.

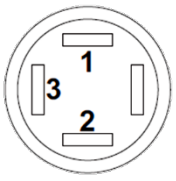
» TERMINAL CONNECTION PLAN

0-10V:



1: Uv: 15-24V=/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).

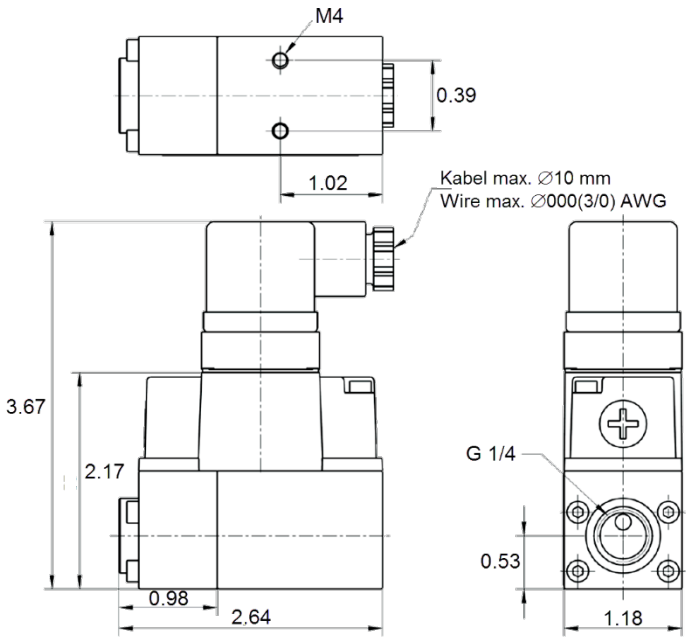
A prerequisite for the operation is a proper installation of all electrical supply, control and sensing leads as well as the pressurized connection line.

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

Pressurized sensing leads to be connected:

1. „+“: higher pressure
2. „-“: lower pressure

»DIMENSIONS (IN.)



»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