DPL02

Differential pressure transducer for liquid media

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HOME OF SENSOR TECHNOLOGY

Data sheet

Subject to technical changes
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»APPLICATION

Transducer for measuring differential pressure in liquid media. Typical applications include monitoring supply and return flows in heating systems, as well as monitoring filters and compressors. For easy connection, we recommend the optional connection cable with plug (see Accessories).

»TYPES AVAILABLE

	active 0..10V	active 4..20 mA
Differental pressure transducer – 0..1 bar	DPL02 1/V	DPL02 1/A
Differental pressure transducer – 0..+2,5 bar	DPL02 2,5/V	DPL02 2,5/A
Differental pressure transducer – 0..+4 bar	DPL02 4/V	DPL02 4/A
Differental pressure transducer – 0..+6 bar	DPL02 6/V	DPL02 6/A

»SECURITY ADVICE – ATTENTION



The installation and mounting of electrical devices (modules) may only be carried out by an authorized and qualified electrician.

The device is intended exclusively for its specified use. Unauthorized modifications or alterations to the device are prohibited!

The modules must not be used in connection with devices that directly or indirectly serve purposes related to human safety, health protection, or life support, or whose operation may pose a risk to people, animals, or property.

Devices with a mains power connection may only be connected when the supply line has been disconnected and is voltage-free.
The following also apply:

- Local laws, health and safety regulations, technical standards, and applicable regulations
- The condition of the device at the time of installation to ensure safe installation
- This data sheet and the operating instructions of the device

»NOTES ON DISPOSAL



The symbol of the crossed-out wheelie bin indicates that the product or any removable batteries must not be disposed of with household or commercial waste.
Within the EU, you are legally obliged to ensure that the product is disposed of separately and appropriately in accordance with the applicable national regulations 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

CE

Declaration of conformity
Declarations of conformity for our products can be found on our website:
https://www.thermokon.de/direct/en-gb/categories/dpl02

» TECHNICAL DATA

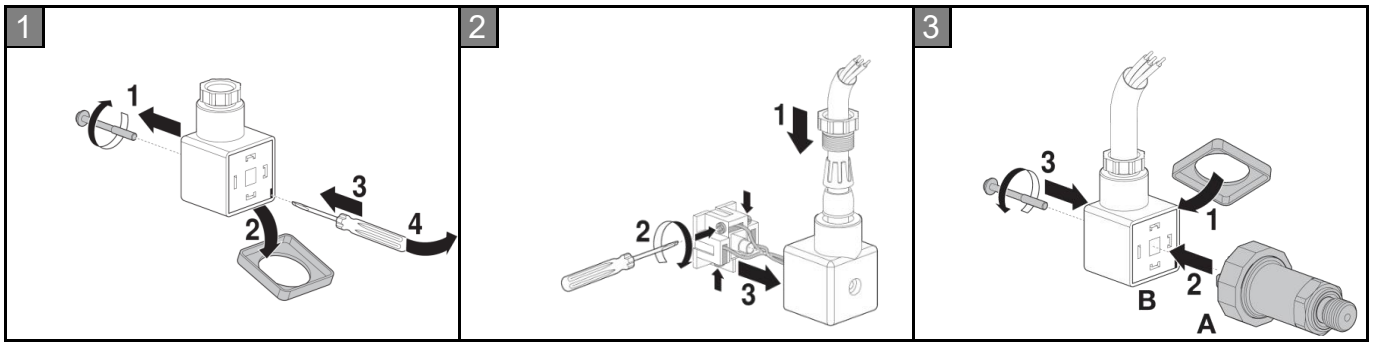
Measuring values	Differential pressure (static and dynamic)	
Medium	Liquid medium	
Ambient condition	-30..+80 °C, max. 85 %rH, short term condensation	
Medium temperature range	**Medium** -30..+80 °C	
Enclosure	Stainless steel V2A	
Media-contacting materials	Housing: Stainless steel Seal: FKM	
Cable entry	**HS** Compression fitting for cable max. Ø = 5 mm (5 x 0,12 mm²)	
Weight	**HS** 523 g	**M12** 582 g
Protection	IP65 according to EN60529	
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 = 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
Output voltage *(type-dependent)*	**V** 0..10 V, min. load 10 kΩ	
Output Amp *(type-dependent)*	**A** 4..20 mA. max. load 850 Ω	
Connection electrical	**HS** MVS connector according to EN175301-803A	**M12** M12 connector according to IEC 61076-2-101
Connection mechanical	G 1/4”	
Notes	Other measuring ranges please request.	

» Differential pressure

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 -5..+75 °C)			
Max. working overpressure	**DPL1** 2 bar	**DPL2,5** 5 bar	**DPL4** 8 bar	**DPL6** 12 bar

» 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 must 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 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.



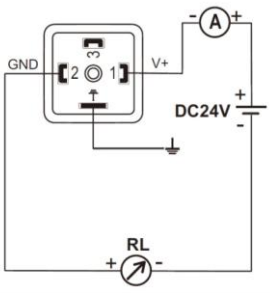
» CONNECTION PLAN

DPL02 HS

V – active 0..10 V	
1	24 V = / 24 V ~
2	GND
3	Out 0..10 V

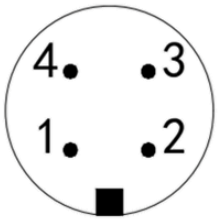


A – active 4..20 mA	
1	24 V =
2	GND Out 4..20 mA
3	-



DPL02 M12

V – active 0..10 V	
1	24 V = / 24 V ~
2	Out 0..10 V
3	GND



A – active 4..20 mA	
1	24 V =
2	-
3	GND Out 4..20 mA

» COMMISSIONING

Static system pressure p_max = 200 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.

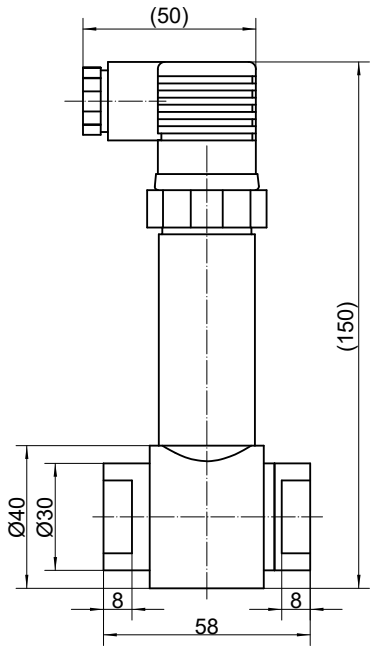
Before installing the device, the leak tightness of the pressurized connection lines must be inspected.

Pressurized sensing leads to be connected:

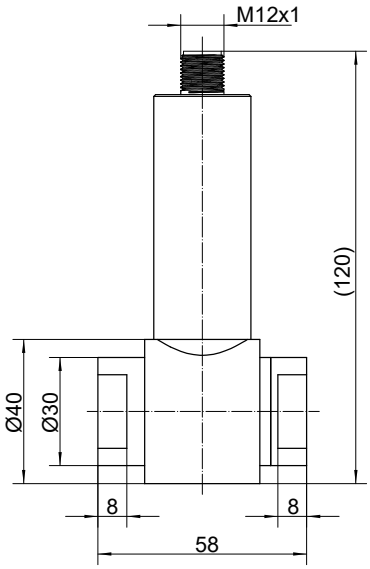
„+“: higher pressure
„–“: lower pressure

» DIMENSIONS (MM)

DPL02 HS



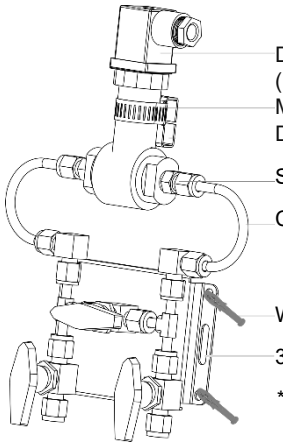
DPL02 M12



» ACCESSORIES (OPTIONAL)

Screw connection set 6mm brass (2 pcs.)	Item-No.: 373401
Screw connection set 6mm stainless steel (2 pcs.)	Item-No.: 373388
Screw connection set 8mm brass (2 pcs.)	Item-No.: 373418
Screw connection set 8mm stainless steel (2 pcs.)	Item-No.: 373395
Connection cable HS 2m	Item-No.: 809047
Connection cable HS 5m	Item-No.: 668309
Connection cable HS 10m	Item-No.: 840590
Connection cable M12 2m	Item-No.: 840606
Connection cable M12 5 m	Item-No.: 840613
Connection cable M12 10 m	Item-No.: 840620
Mounting bracket for DLF02/DPL02	Item-No.: 841375
Display UD-A (for 4..20mA device)	Item-No.: 718189
Display UD-V (for 0..10V device)	Item-No.: 775113
3-valve assembly for DPL02 shut-off and pressure equalization valves	Item-No.: 841368

» Recommended configuration with 3-valve assembly



Differential pressure transducer (DPL02)
Mounting bracket for DLF02/DPL02*
Screw connection*
Connection cable*
Wall plugs + screws (M6 x 40) *
3-valve assembly*
**Not included with the DPL02*

To prevent damage to the differential pressure transducer caused by water hammer, we recommend connecting it in conjunction with the 3-valve assembly (841368). This enables the valve to be disconnected from the pipework system in critical situations and the bypass to be opened. The bypass is also used to check the offset settings.