

Differential Pressure Transmitter

With piezoresistive measuring cell
Pressure ranges 0-16 mbar to 0-25 bar
and one-sided mounted diaphragm seal

Accuracy $\pm 0,25\%$

Model **DiPTMEx**



T09-000-042

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Application

Differential pressure transmitter model DiPTMEx with attached diaphragm seal are suitable for differential pressure measurements of liquid or gaseous media of 0-16 mbar to 0-25 bar, that do not corrode 1.4435 (316 stainless steel) (diaphragm and process connection).

When connecting I/II-instruments to a certified intrinsically safe circuitry, they belong to type of protection Ex ia. The differential pressure transmitter are temperature compensated and provide a calibrated output signal.

Construction

The piezoresistive sensor is installed in the pressure connection piece and encircled by silicone oil.

It is separated from the medium by an one-sided attached diaphragm seal 7340.15 DN 2½" (Clamp ISO 2852) at the process with extension tube made of stainless steel.

The electronics is stored in a case with protection type IP65, IP67, depending on the electrical connection.

The earth conductor of the plug connection is connected to the case.

Standard Version

Construction type

Installation length: standard,
measuring cell placed inside

Process connection

DN 2½" PN 10/25 Clamp ISO 2852
with 30.35 mm extension tube
material: 1.4435 (316 stainless steel)

Measuring cell/sensor

piezoresistive, diaphragm made of 316L

Case

Stainless steel, case protection type IP65

Pressure ranges/overload

Differential pressure 0-16 mbar to 0-25 bar

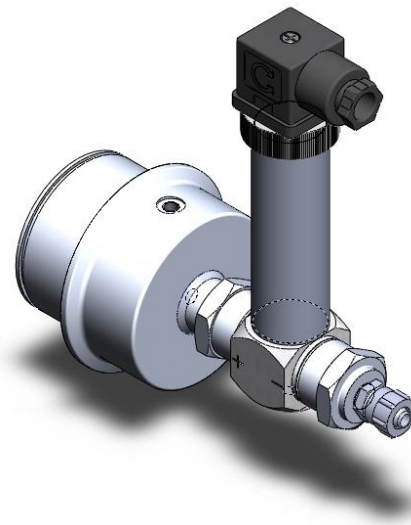
Differential pressure	max. statical pressure/ overload capability
16 mbar up to 160 mbar	3 bar
1 bar	6 bar
2 bar	12 bar
25 bar	40 bar

Output signal

	Supply voltage	Load impedance
4...20 mA 2-wire	10.5...36 VDC 12...28 VDC (Ex ia)	$(U_B - 10.5)/0.02A$
0...10 V 3-wire	15...30 VDC	min. 5 k Ω

Measuring accuracy

Better than 0.25 % (0.4 % for ≤ 100 mbar) of full scale value (including non-linearity, hysteresis and non-repeatability).



Temperature ranges

Storage temperature: -40...+80°C
Rated temperature: -25...+80 °C

Temperature influence in rated temperature range

Zero point: 0.3 %/10 K +0,1 mbar/10K
Span: 0.4 %/10 K

Reference temperature

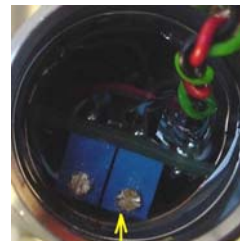
+20 °C

Long term stability of zero point and span

0.1 %/a (0.2 %/a for ≤ 100 mbar)

Zero point adjustment

Our pressure transmitters are calibrated ex-works. An adjustment of the potentiometer must therefore not be executed. Nevertheless, if a zero point adjustment is necessary, the upper part of the plug has to be removed (loosen the thumb screw and upend the plug connection to the side) and can be executed with P1 (ZERO) in the range of approx. $\pm 10\%$.



ZERO

Reverse polarity protection
existing



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Electrical connection

Plug connector DIN EN 175301-803 Bf. A, 3-pin + protective contact, case protection type IP65 (EN 60529/IEC 529).

Electromagnetic compatibility (EMC) can only be ensured by using a shielded cable (e.g. LP/LiMYCY). For this the shield has to be connected to the ground terminal or the case (wiring diagram see reverse side).

Position of installation

horizontal

EMC

EN 61000-6-3, EN 61000-6-2, EN 61326

Ex-Approval

CENELEC-approval ATEX

Marking:

II 1/2G Ga/Gb Ex ia IIC T4...T6

I M1 Ex ia I

II 1D Ex ia D20 T105°C

EC-Type examination certificate :

KDB 09 ATEX X

Special versions

- other process connection
- other electrical connection
- other position of connection



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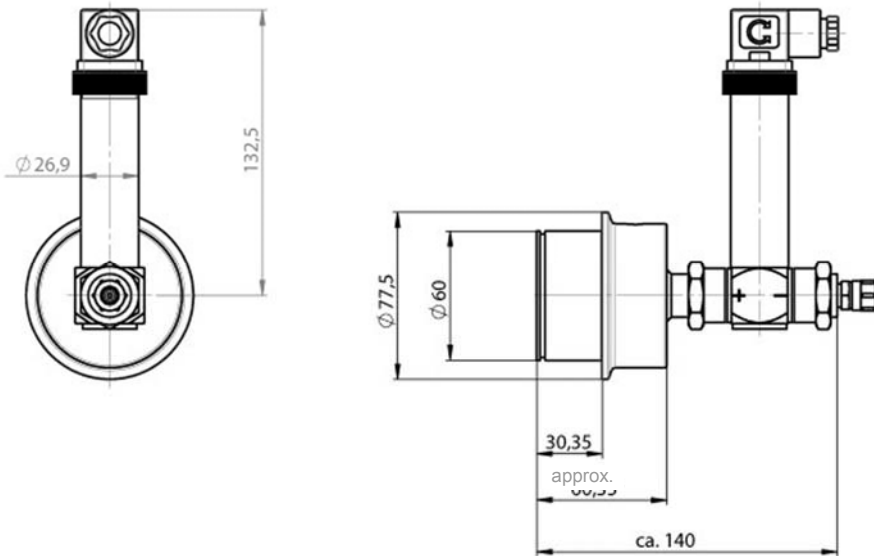
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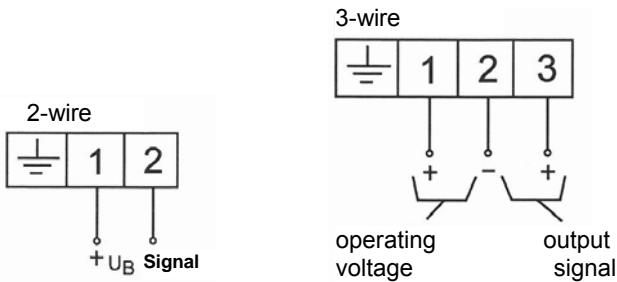
Dimensional data and weight, wiring diagram, ordering information

Dimensional data



Weight
approx. 2.1 kg

Wiring diagram



Ordering information

Please state in your order:

Basic model: DiPTMEx
Pressure range: e. g. 0-100 mbar
Output signal: e. g. 4...20 mA
If applicable **specifics:** see above

Example for ordering code:
DiPTMEx, 0-100 mbar, 4...20 mA

(subject to change)



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