

# Differential Pressure Transmitter DiPTMEx

With piezoresistive measuring cell, pressure ranges 0 – 16 mbar to 0 – 25 bar and diaphragm seal, mounted on one side

**ARMANO****T09-000-042**

## Applications

Differential pressure transmitter models DiPTMEx with mounted diaphragm seal are suitable for differential pressure measurements of liquid or gaseous media from 0 – 16 mbar to 0 – 25 bar, which do not corrode 1.4435 (diaphragm and process connection). They can be applied, for example, for differential pressure monitoring on filters with explosive dust-air-mixtures to control filter cleaning.

As category I/II devices, they have ignition protection type Ex ia when connected to a certified intrinsically safe circuit.

The differential pressure transmitters are temperature-compensated and provide a calibrated output signal.

## Construction

The piezoresistive sensor is installed in the pressure connection piece and immersed in silicone oil. It is separated from the medium by a diaphragm seal, which is attached on one side at the process for flush-mounted adaption.

The electronics is stored in a case with degree of protection IP65. The earth conductor of the plug connector is connected to the case.

## Standard Versions

### Construction Type

Installation length: standard, measuring cell placed inside

### Process Connection

E.g. DN 2 1/2" PN 10/25 Clamp ISO 2852

With 30.35 mm (1.19") extension tube

Stainless steel 316L (1.4435)

### Measuring Cell / Sensor

Piezoresistive sensor, membrane made of 316L

### Case

Stainless steel, degree of protection IP65

### Pressure Ranges / Overrange Protection

Pressure range	Overload capability
0 – 16 mbar to 0 – 160 mbar	3 bar
0 – 1 bar	6 bar
0 – 2 bar	12 bar
0 – 25 bar	40 bar

### Output Signal

	Supply voltage	Load impedance
4...20 mA 2-wire	10.5...36 V DC 12...28 V DC (Ex ia)	(U <sub>B</sub> – 10.5 V) / 0.02 A
0...10 V 3-wire	15...30 V DC	min. 5 kΩ

### Measuring Accuracy

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

### Temperature Ranges

Storage temperature –40 / +80 °C (–40 / +176 °F)

Rated temperature –25 / +80 °C (–13 / +176 °F)

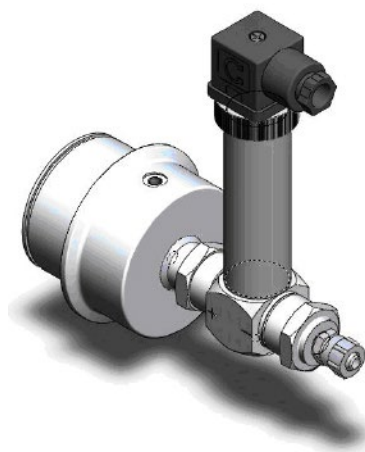
### Temperature Influence in the Rated Temperature Range

Zero point < 0.3 % / 10 K +0.1 mbar / 10 K

Span < 0.4 % / 10 K

### Reference Temperature

+20 °C (+68 °F)



### Long-term Stability of Zero Point and Span

0.1 % / a (0.2 % / a if ≤100 mbar)

### Reverse Voltage Protection

Available

### Electrical Connection

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

For assuring the electromagnetic compatibility (EMC), please use a shielded cable (e.g. LP/LiMYCY). The shield has to be connected to the ground terminal or the case. Wiring diagram see page 2.

### Position of Installation / Position of Connection

Horizontal

### EMC

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

### Ex-marking

CENELEC approval ATEX

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

I M1 Ex ia I

II 1D Ex ia D20 T105 °C

EU Type Examination Certificate

KDB 10 ATEX 054 X

## Special Versions Upon Request

- Other process connection
- Other electrical connection
- Other position of connection
- Degree of protection IP67

## Ordering Information

<b>Model</b>	DiPTMEx
<b>Pressure range</b>	e.g. 0 – 100 mbar
<b>Process connection</b>	e.g. DN 2 1/2" PN 10/25 Clamp ISO 2852 with 30.35 mm extension tube, stainless steel 1.4435
<b>Output signal</b>	e.g. 4...20 mA
<b>Specifics, if applicable</b>	see above
<b>Example</b>	<b>DiPTMEx, 0 – 100 mbar, DN 2 1/2" PN 10/25 Clamp ISO 2852 with 30.35 mm extension tube, material: 1.4435, 4...20 mA</b>

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04/2022  
Pel/SWü

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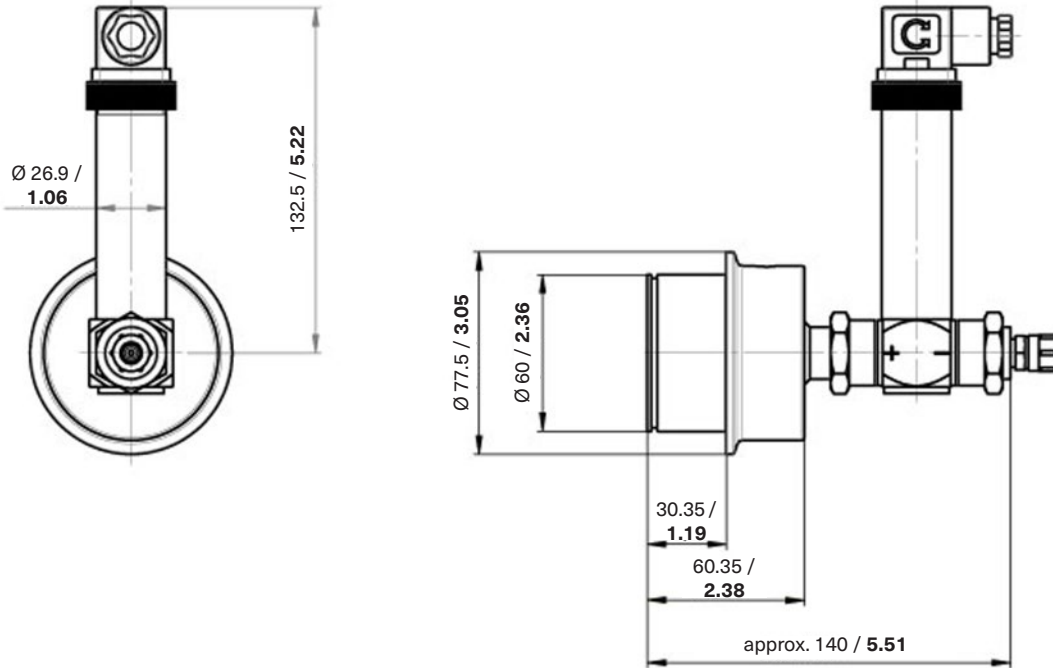


## Case Configuration, Dimensional Data and Weight, Wiring Diagram, Zero Adjustment

### Case Configuration DiPTMEx

Example: process connection DN 2½" PN 10/25 Clamp ISO 2852

#### Dimensional data (mm / inch)

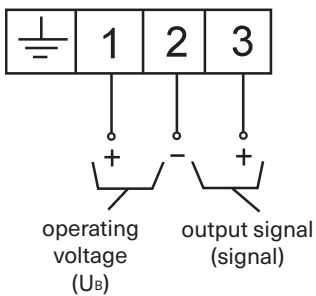


#### Weight

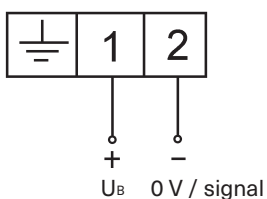
Approx. 2.1 kg (4.63 lb)

### Wiring Diagram

3-wire



2-wire



### Zero Adjustment

#### Zero adjustment

Our pressure transmitters are calibrated ex-works. Therefore, an adjustment of the potentiometer shall not be executed. Nevertheless, if a zero point adjustment is necessary, first the upper plug section has to be removed (loosen the knurled nut and tilt the plug connection sideways) and then it can be executed with P1 (ZERO) in the range of approx. ±10 %.

