

## Low Range Differential Pressure Transducer

Accuracy 0.25%

**Standard**            0...1/1.5/2 mV/V   - 4-wire  
                           or 4...20 mA        - 2-wire  
                           or 0...10 VDC       - 3-wire



### Description

Low range differential pressure transducers provide the user with the perfect solution for the measuring task at hand.

High line pressure, long-term stability, peak pressure resistance, corrosion resistance and a high level of mechanical safety make them suitable for the most demanding measuring tasks.

The graduated measurement ranges cover from 0 ... 0.04 bar to 0 ... 2 bar. The case and wetted parts are made from stainless steel to make them resistant to aggressive media. Both pressure chambers are hermetically sealed and the membranes are welded.

### Features

- High line pressure
- High peak pressure resistance
- High long-term stability
- Mechanically safe design
- Corrosion resistant stainless steel housing and wetted parts

### Measuring ranges

Differential pressure  
0 ... 0.04 bar to 0 ... 2 bar

Line pressure  
up to 100 bar

### Applications

Test stands  
 Flow measurement  
 Pressure drop across filters  
 Pump monitoring

Measurement range $\Delta P$ ( bar )	Max. overload either side $P_{max}$ ( bar )	Max. line pressure $line_{max}$ ( bar )
0... 0.04	100	100
0... 0.08		
0... 0.40		
0... 0.80		
0... 1.0		
0... 1.5		
0... 2.0		

Other ranges and units on request

**Model: P3314**

## Technical data

Low Range Differential Pressure Transducer																					
<b>Model</b>	P3314																				
<b>Execution</b>	Differential Pressure																				
<b>Process Connection</b> standard optional	2x G1/8 female 2x 1/8 NPT female																				
<b>Measuring principle</b>	Bonded foil strain gauge																				
<b>Measurement range (<math>\Delta P</math>)</b>	0 ... 0.04 bar to 0 ... 2 bar $\Delta P = P_1 - P_2$																				
<b>Max. overload<sup>1)</sup></b> (either side)	100 bar																				
<b>Max. Line pressure<sup>1)</sup></b>	100 bar																				
<b>Materials</b> Housing Wetted parts	Stainless steel 1.4542 Stainless steel 1.4542																				
<b>Output signal</b> mV/V  4..20 mA 0..10 VDC	Span <table border="0"> <tr> <td>&lt;0.04 bar</td> <td>1.0 mV/V</td> <td>4 – wire</td> <td>zero signal</td> </tr> <tr> <td>&lt; 0.30 bar</td> <td>1.5 mV/V</td> <td>4 – wire</td> <td>0 ± 1% of F.S.</td> </tr> <tr> <td>&lt; 2.0 bar</td> <td>2.0 mV/V</td> <td>4 – wire</td> <td>0 ± 1% of F.S.</td> </tr> <tr> <td></td> <td></td> <td>2 – wire (optional: 3 – wire)</td> <td></td> </tr> <tr> <td></td> <td></td> <td>3 – wire</td> <td></td> </tr> </table> others on request	<0.04 bar	1.0 mV/V	4 – wire	zero signal	< 0.30 bar	1.5 mV/V	4 – wire	0 ± 1% of F.S.	< 2.0 bar	2.0 mV/V	4 – wire	0 ± 1% of F.S.			2 – wire (optional: 3 – wire)				3 – wire	
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		2 – wire (optional: 3 – wire)																			
		3 – wire																			
<b>Power Supply</b> mV/V 4..20 mA 0..10 VDC	10 VDC 12 – 40 VDC 15 – 28 VDC																				
<b>Bridge Resistance</b>	350 $\Omega$ (1/1.5/2 mV/V)																				
<b>Accuracy<sup>2)</sup></b>	± 0.25 % of F.S. others on request																				
<b>Repeatability</b>	≤ ± 0.05 % of F.S.																				
<b>Temperature ranges</b> storage media ambient compensated range TK <sub>N</sub> TK <sub>S</sub>	0..85°C 0..85°C 0..85°C 0..50°C (others on request) ± 0.009% of F.S./K ± 0.009% reading/K																				
<b>Electr. connection</b> standard optional	Bayonet 6-pin DIN EN 175301-803, Form C																				
<b>Protection type</b> PTIH-10-6P DIN 175301-803	IP68 IP65																				
<b>Weight</b>	1.9 kg																				

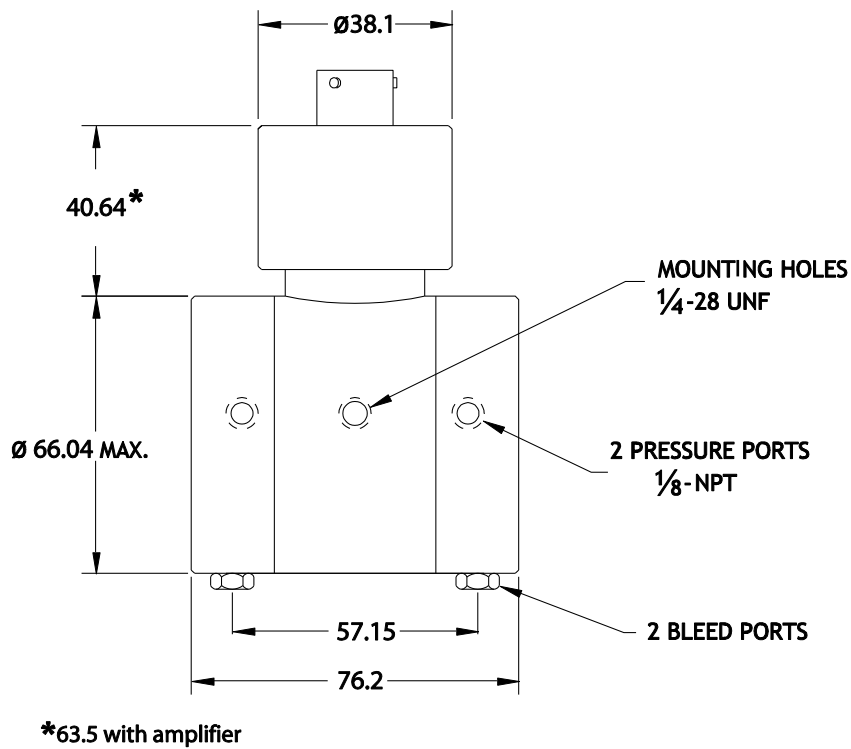
of F.S.= of full scale value  
 $P_1$  = pressure 1  
 $P_2$  = pressure 2 = line pressure  
 $\Delta P$  = differential pressure  
 $line_{max}$  = max. line pressure  
 $P_{max}$  = max. overload

<sup>1)</sup> The maximum pressure is the pressure that is permitted simultaneously on both ports of a differential pressure transducer. The line pressure is the lower absolute value seen on either side. The result of adding the line pressure to the pressure to be measured must also not exceed the maximum value.  
 Example: measuring range 0 .. 1.0 bar differential pressure  
 a)  $P_1=100$  bar /  $P_2 = 99.0$  bar or b)  $P_1= 0$  bar /  $P_2 = 1.0$  bar  
 If the measuring range is exceeded by more than 50%, the membrane presses against a stop. If overloading does occur, the zero point will move; a change in precision or damage is prevented. Damage will only be caused by frequent or sudden overload. When the line pressure changes, the zero point moves. The shift in zero point is reproducible. It is normal and is compensated for a line pressure of 100 bar.

<sup>2)</sup> Terminal point adjustment includes non-linearity and hysteresis.

## Dimensions (mm)

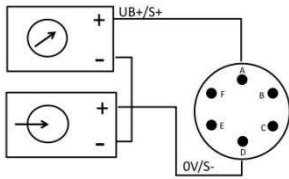
### Housing



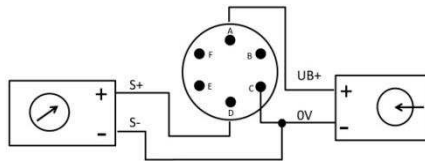
## Electrical connection

### Bayonet 6-pin

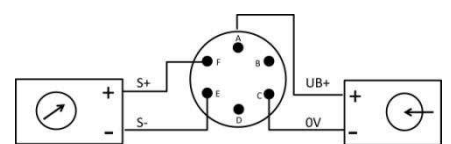
#### 2 – wire



#### 3 – wire



#### 4 – wire



Analogue output Electrical connection	4...20 mA 2-wire pin	0...10 V/4...20 mA 3-wire pin <sup>1)</sup>	mV/V 4-wire pin <sup>2)</sup>
Supply: $UB+$	A	A	A
Supply: $0V$	D	C	C
Signal: $S+$	A	D	F
Signal: $S-$	D	C	E

<sup>1)</sup> Pin C and B are connected internally.

<sup>2)</sup> Pin A and B are connected internally./Pin C and D are connected internally