

Medium Range Differential Pressure Transducer

Accuracy 0.25%

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



Description

Medium 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 ... 4.0 bar to 0 ... 50 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 ... 4.0 bar to 0 ... 50 bar

Line pressure
up to 100 bar

Applications

- Test stands
- Flow measurement
- Pressure drop across filters
- Pump monitoring

Measurement range ΔP (bar)	Max. overload either side P_{max} (bar)	Max. line pressure $line_{max}$ (bar)
0... 4.0	100	100
0... 6.0		
0... 10.0		
0... 16.0		
0... 25.0		
0... 40.0		
0... 50.0		

Other ranges and units on request

Model: P3313

Technical Data

Differential Pressure Transducer	
Model	P3313
Execution	Differential Pressure
Process Connection standard optional	2x 1/8 NPT female 2x G1/8 female
Measuring principle	Bonded foil strain gauge
Measurement range (ΔP)	0 ... 4.0 bar to 0 ... 50 bar $\Delta P = P_1 - P_2$
Max. overload¹⁾ (either side)	100 bar
Max. Line pressure¹⁾	100 bar
Materials Housing Wetted parts	Stainless steel 1.4542 Stainless steel 1.4542
Output signal mV/V 4..20 mA 0..10 VDC	Span 2,0 mV/V 4 – wire 2 – wire (optional: 3 – wire) 3 – wire Zero signal 0 \pm 1% of F.S. others on request
Power Supply mV/V 4..20 mA 0..10 VDC	10 VDC 12 – 40 VDC 15 – 28 VDC
Bridge Resistance	350 Ω (2 mV/V)
Accuracy²⁾	\pm 0.25 % of F.S. others on request
Repeatability	$\leq \pm$ 0.05 % of F.S.
Temperature ranges storage media ambient compensated range TK _N TK _S	0..85°C 0..85°C 0..85°C 0..50°C (others on request) \pm 0.009% of F.S./K \pm 0.009% reading/K
Electr. connection standard optional	Bayonet 6-pin DIN EN 175301-803, Form C
Protection type PTIH-10-6P DIN 175301-803	IP68 IP65
Weight	2.3 kg

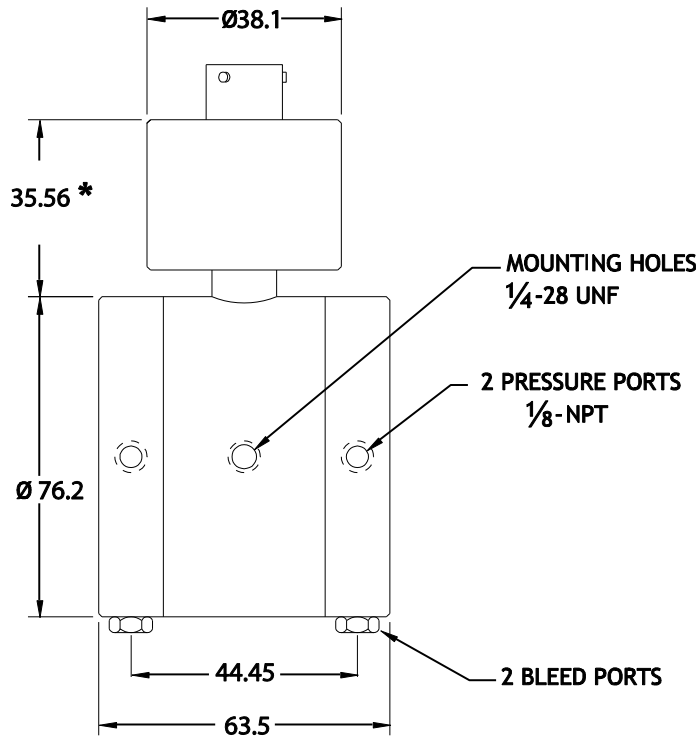
of F.S.= of full scale value
 P_1 = pressure 1
 P_2 = pressure 2 = line pressure
 ΔP = differential pressure
 $line_{max}$ = max. line pressure
 P_{max} = max. overload

¹⁾ 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 .. 10 bar differential pressure
 a) $P_1=100$ bar / $P_2 = 90$ bar or b) $P_1=0$ bar / $P_2 = 10$ 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.

²⁾ Accuracy: Terminal point adjustment includes non-linearity and hysteresis.

Dimensions (mm)

Housing

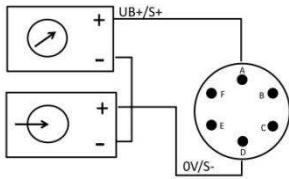


*63.5 with amplifier

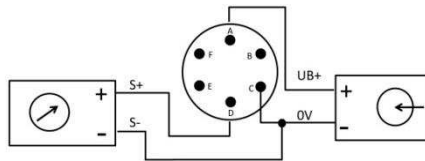
Electrical connection

Bayonet 6-pin

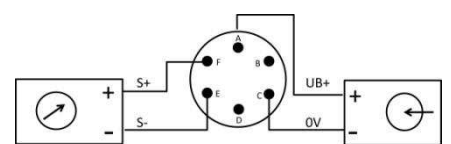
2 – wire



3 – wire



4 – wire



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

¹⁾ Pin C and B are connected internally.

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