

High 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

High 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 ... 140 bar to 0 ... 600 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 ... 140 bar to 0 ... 600 bar

Line pressure
up to 700 bar

Applications

Test stands
Flow measurement
Pump monitoring
Hydraulic cylinder monitoring

Measurement range ΔP (bar)	Max. overload either side P_{max} (bar)	Max. line pressure $line_{max}$ (bar)
0... 160	320	$line_{max} = P_{max} - \Delta P$
0... 250	500	
0... 400	700	
0... 600	700	

Other ranges and units on request

Model: P3312

Technical data

Differential Pressure Transducer	
Model	P3312
Execution	Differential Pressure
Process Connection standard optional	2x G1/4 female 2x 1/4 NPT female
Measuring principle	Bonded foil strain gauge
Measurement range (ΔP)	0 ... 140 bar to 0 ... 600 bar $\Delta P = P_1 - P_2$
Max. overload¹⁾ (either side)	0 ... 140 bar to 0 ... 200 bar $P_{max} = \Delta P + 100\%$ 0 ... 250 bar to 0 ... 600 bar $P_{max} = \Delta P + 50\%$ max. 700 bar
Max. Line pressure¹⁾	$line_{max} = P_{max} - \Delta P$
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 $0 \pm 1.0\%$ 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	350Ω (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	-50..120°C -50..120°C -50..120°C 15..70°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	IP67 IP65
Weight	1.6 kg

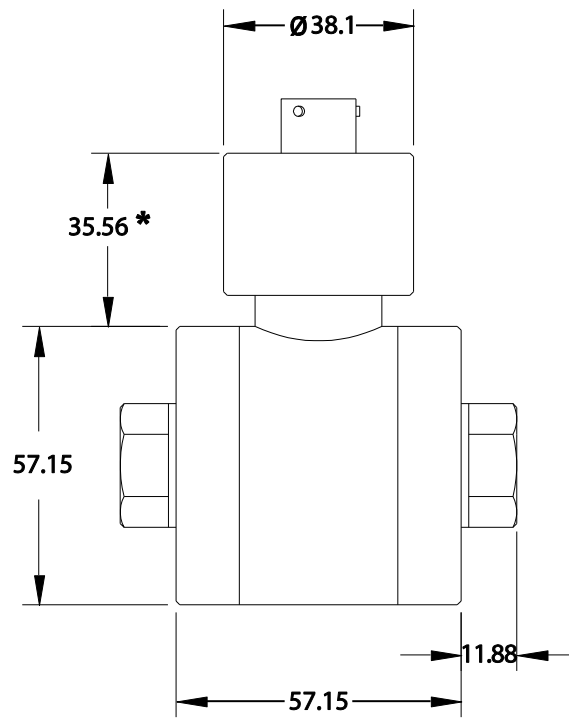
of F.S. = of full scale value
 P_1 = pressure 1
 P_2 = pressure 2 = line pressure
 ΔP = differential pressure
 $line_{max}$ = max. line pressure
 P_{max} = max. overload

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 - 400 bar differential pressure
 a) $P_1=540$ bar and $P_2 = 140$ bar or b) $P_1=0$ bar and $P_2 = 400$ bar

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

Dimensions (mm)

Housing

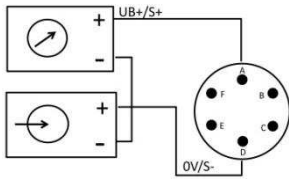


*63.5 with amplifier

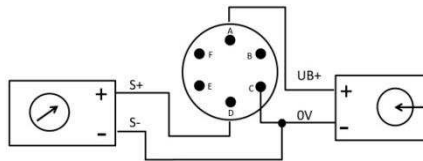
Electrical connection

Bayonet 6-pin

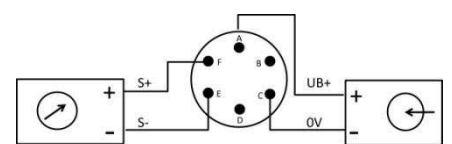
2 – wire



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