

Pressure measuring transducer

PRESSURE MEASURING TRANSDUCER

PRESSURE MEASURING TRANSDUCER

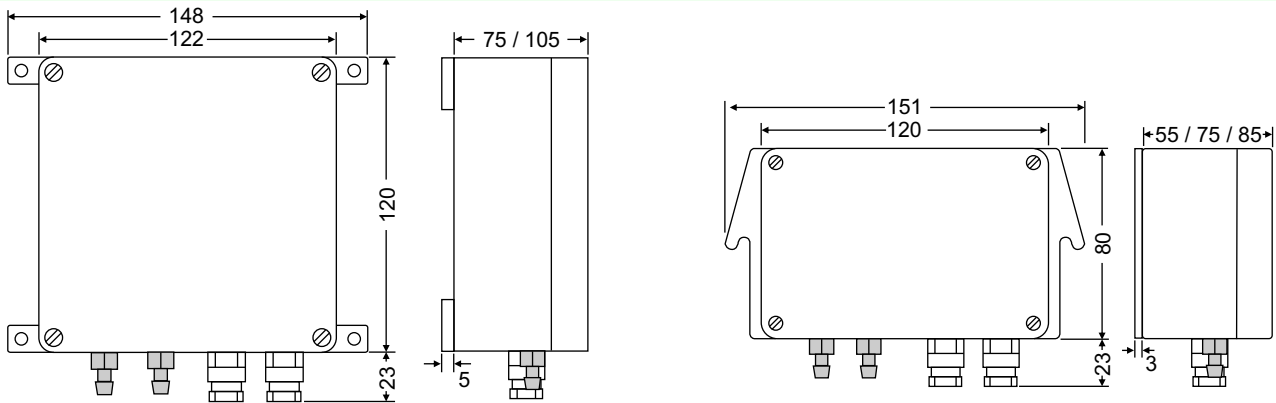
PRESSURE MEASURING TRANSDUCER

Characteristics



Positive and negative overpressure, differential and absolute pressure
 Measuring range: 0...0,1 hPa (mbar) up to 0...1000 hPa (mbar)
 Special range: 800...1200 / 900...1100 / 0...1000 / 0...500 hPa absolute
 Output: 0(4)...20 mA / 0...10 V / ±5 V / ±10 V / 4...20 mA 2-wire
 Supply: 24 VDC / 230 VAC / 115 VAC / 24 VAC
 Accuracy: 1% / 0,5% / 0,2% of end scale value
 Option: LCD display / limit contact / square root output
 Connection: Terminals via screwed cable gland
 Pressure terminal: for flexible hose Ø 6 mm
 Calibration: with potentiometer

Dimensions



Dimensions of enclosure

Dimensions of enclosures of the pressure measuring transducers (length x width x height) in mm	120x80x55	120x80x70	120x80x85	122x120x75	122x120x105
≥ 0,5 hPa, standard	X				
≥ 0,5 hPa, limit contact			X		
≥ 0,5 hPa, LCD display		X			
≥ 0,5 hPa, limit contact, LCD display			X		
≥ 0,5 hPa, auto zero				X	
≥ 0,5 hPa, auto zero, LCD display				X	
≥ 0,5 hPa, auto zero, limit contact, LCD display					X
< 0,5 hPa, standard, auto zero				X	
< 0,5 hPa, auto zero, LCD display					X
< 0,5 hPa, auto zero, limit contact				X	
< 0,5 hPa, auto zero, limit contact, LCD display					X

Applications

For use in clean-room technology, medical engineering, filter technology, heating and ventilating technics, air conditioning systems, level measuring (bubbling-through), flow rate (pressure tube).



Photos: www.pixelquelle.de

Ordering code

More options see in our price lists

D	N	X	X	X	X	X	X	-	X	X	X
---	---	---	---	---	---	---	---	---	---	---	---

Type:	Absolute pressure	0									
	Over-, under-, differential pressure	1									
	Differential pressure, auto zero	5									
	Over-, under- pressure, auto zero	6									
Output:	0...10 VDC	1									
	0...20 mA	2									
	4...20 mA	3									
	0...10 VDC, square root function	4									
	0...20 mA, square root function	5									
	4...20 mA, square root function	6									
	4...20 mA, 2-wire (no auto zero)	7									
	4...20 mA, 2-wire, square root (no auto zero)	8									
Power supply:	230 VAC					1					
	115 VAC					2					
	24 VAC					3					
	24 VDC					4					
Limit contacts:	1 change over-contact 230 VAC / 6A							1			
	2 change over-contacts 230 VAC / 6A							2			
Display:	LCD, 3,5 digits								1		
Characteristic curve deviation:	+/- 1% of end scale value									1	
	+/- 0,5% of end scale value									2	
	+/- 0,2% of end scale value									3	
Measuring range:	Standard										0
	Special range										1
	Range 1 hPa...<2,5 hPa										3
	Range 0,5 hPa...< 1 hPa										4
	Range < 0,5 hPa (auto zero)										5
Other/accessories:	special model										0

Technical data

Measuring range (input)

For differential pressure, positive and negative overpressure:
0,1 / 0,2 / 0,3 / 0,4 / 0,5 / 0,6 / 1 / 1,6 / 2,5 / 4 / 5 / 6 / 10 /
16 / 20 / 25 / 50 / 100 / 160 / 200 / 250 / 400 / 500 / 600 /
1000 hPa (mbar)

Measuring ranges <2,5 hPa will have a surcharge

For absolute pressure:
900...1100 / 800...1200 / 0...1000 / 0...500 hPa (mbar)

Other measuring ranges on request

Output

Analog: 0...10 V (load ≥ 2 kohms)

0(4)...20 mA (load ≤ 500 ohms) (optional)

4...20 mA, 2-wire ($U_B = 12...32$ VDC,
load(ohms) = $U_B - 12 / I_{max}$)

± 5 V or ± 10 V / load: ≥ 2 kohms

Option: square root output signal (0...10 V / 0(4)...20 mA)

Voltage: $U = \sqrt{(10 \times U_L)}$ Current: $I = \sqrt{(20 \times I_L)}$ ($U_L / I_L =$ linear output)

Option: Limit contacts

(1 or 2 relay, changeover contacts, 6A 230 VAC)

Accuracy

Linearity: $\pm 1\%$ of end scale value (FS)
 $\pm 0,5\%$ FS (optionally)
differential pressure: ≥ 1 hPa
absolute pressure: $\Delta P \leq 200$ hPa
 $\pm 0,2\%$ FS (optionally)
differential pressure: $\geq 2,5$ hPa
absolute pressure: $\Delta P \leq 100$ hPa

The options are not available with square root function

Hysteresis: $\pm 0,1\%$ FS maximum

Temp. drift: Zero: $\pm 0,3\%$ FS, 10 K maximum

Span: $\pm 0,3\%$ of end scale value / 10 K (maximum)

Stability: $\pm 0,5\%$ per year, typically (long term)

Time constant: T_{90} approx. 0,02 s

Auto zero: ranges <0,5 hPa: standard
other ranges: optionally

Display

Option: LCD indicator, 3½ digits

Power supply

Voltage: 19...31 VDC
230 / 115 / 24 VAC; ($\pm 10\%$, 50/60 Hz) (option)

Consumption: approx. 10 mA without load

auto zero: approx. 50 mA
limit contacts: approx. 35/45 mA

Protection: interference protection and filter elements (option)

Fuse: 250 mA T

Influence: <0,05%

Ambient conditions

Operating temperature: +10...+50°C

-10...+60°C (extended range) (option)

Storing: -10...+70°C

Humidity: up to 80% relative humidity

Medium: non-aggressive gases

Parts in contact

with medium: Ni, Al, CuBe, PU

Mechanics

Material case: ABS

Dimension case: see table page 1

Pressure terminal: $\varnothing 6,6 \times 11$ mm (for flexible hose $\varnothing = 6$ mm)

Protection: class II, IP 54

Weight: approx. 300 g, with power unit approx. 400 g

Connection: terminal screw (maximum 1,5 mm²)

via screwed cable gland M12x1,5

Overload capacity: range up to 400 hPa: 5x

range >400 hPa: 2x
 ΔP : maximum system pressure 1 bar

Option: up to 2 bar

Principle: inductive (measurement)

Shock resistance: 10 g

Volume of sensor: approx. 3 ml

Increase in volume: approx. 0,2 ml (nominal pressure)

Standards: EN50081-1 + 2 / EN 50082-1 + 2 / EN 16010