

DIFFERENTIAL PRESSURE TRANSMITTERS

0,1 mbar to 1200 mbar ranges

TPD-1100/1300

Desin
Instruments

DESCRIPTION

TPD-1300

- VERSIONS FOR ABSOLUTE PRESSURE
- OPTIONAL: AUTOMATIC ZERO ADJUSTMENT

TPD-1100 and TPD-1300

- VERSIONS FOR GAUGE AND DIFFERENTIAL PRESSURE
- CURRENT AND VOLTAGE OUTPUTS IN 2- AND 3-WIRE SYSTEMS
- HIGH OVERPRESSURE; OPTIONAL OVERPRESSURE PROTECTION 2 bar
- OUTPUT SIGNAL TEMPERATURE -COMPENSATED
- EXCELLENT LONG TERM STABILITY
- HIGH RESISTANCE AGAINST ELECTRICAL FAULTS
- CAUSED BY INCORRECT WIRING, SHORT-CIRCUIT AND OVERVOLTAGE
- RUGGED AND RELIABLE UNDER MOST CONDITIONS
- SHORT REACTION TIME
- LONG OPERATING LIFE
- OPTIONAL: LC-DISPLAY
- OPTIONAL: LIMIT CONTACTS

TPD-1100



TPD-1300



FEATURES

TPD-1100

The pressure transducer **TPD-1100** can be used to monitor pressure, vacuum and differential pressure of non-aggressive gases.

The **TPD-1100** bases on a piezoresistive pressure sensor (6,0 ... 1000 mbar). It has a long operating life and ensures almost no maintenance. Due to compensation the thermal effects of the transducer will be reduced to a minimum.

The integrated electronics supports a pressureproportional output signal (current 0(4)-20 mA or voltage 0-10 V). You can use the damping-function in case of heavy alternating pressure peaks.

As power supply are available DC-supply 24VDC (reverse polarity protection) or 230 VAC.

Due to their rugged design the transducers are suited for use in laboratories and in an industrial environment. The pressure transducer **TPD-1100** ensures long-term stability, linearity and good consistency.

Temperature drift is reduced to a minimum by specifically compensating of each sensor between 0 and 60 °C

TPD-1300

The pressure transducer **TPD-1300** can be used to monitor pressure, vacuum and differential pressure of non-aggressive gases.

The **TPD-1300** bases on an inductive pressure transducer. It operates longwearing and ensures almost no maintenance. Due to compensation the thermal effects of the transducer will be reduced to a minimum.

The integrated electronic supports a pressureproportional output signal (current 0(4)-20 mA or voltage 0-10 V). You can use the damping-function in case of heavy alternating pressure peaks.

As power supply is available DC-supply (24VDC (reverse polarity protection) or 230 VAC (optional 110 VAC, 24 VAC).

Due to their rugged design the transducers are suited for use in laboratories and in an industrial environment.

Their strong mechanism ensures long-term stability, linearity and REPEATABILITY.

Temperature drift is reduced to a minimum by specifically compensating of each sensor between 10 and 50 °C.



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SPECIFICATIONS

TPD-1100

- Pressure (mbar):
Differential: 6,0 10 16 25 40 60 100 160 | 250 400 600 1000
Overpressure: < 400 mbar: 5 times | \geq 400 mbar: 2 times
if Δp -measurement $p_{max} = 1$ bar | higher on request
- Accuracy: $\leq \pm 1\%$ FSO
- Process connection: $\varnothing 6,6 \times 11$ (for tubes $\varnothing 6$)
- Output signal: 4-20 mA 2 wires
0-20 mA (0-10 V 3 wires option)
- Electrical connection: Screw Terminals max. 1,5 mm²
PG-7 and PG-9
- Voltage: between 19 and 31 Vcc
between 12 and 31 Vcc (Output signal 4-20 mA
2 wires without display)
- Permissible Load:
Current 2 wires $(U_B (V) - 19) / 0,02 \Omega$ ($U_B (V) - 12) / 0,02 \Omega$
Current 3 wires $\leq 500 \Omega$
Voltage 3 wires ≥ 1 M Ω
- Thermal effect: $\leq \pm 0,5\%$ FSO / year
- Operating Temperature range
Sensor: 0 to +60 °C (0 to +50 °C with P.S. 230 Vac)
Storage: -10 to +50 °C
- Materials:
Housing ABS
Media wetted parts Ni, Al, CuBe, PU (Silicon-rubber)

TPD-1300

- Pressure (bar):
Nominal: 0,1 0,5 0,6 1,0 1,6 2,5 4,0 5,0 6,0 10 16
Differential: 20 25 50 100 160 200 250 400 500 600 1000
Absolute (option): 900...1100 | 800...1200 | 0...1000
- Overpressure: < 400 mbar: 5 times | \geq 400 mbar: 2 times
if Δp -measurement $p_{max} = 1$ bar | higher on request
- Accuracy: $\leq \pm 1\%$ FSO
- Process connection: $\varnothing 6,6 \times 11$ (for tubes $\varnothing 6$)
- Output signal: 4-20 mA 2 wires
0-10 V 3 wires (option)
0-20 mA / 4-20 mA 3 wires (option)
-5...5 V / -10...10 V 3 wires (option voltage)
- Electrical connection: Screw Terminals max. 1,5 mm²
PG-7
- Voltage: between 19 and 31 Vcc
between 12 and 32 Vcc (Output signal 4-20 mA 2 wires)
- Permissible Load:
Current 2 wires $(U_B (V) - 12) / I_{max} \Omega$
Current 3 wires $\leq 500 \Omega$
Voltage 3 wires ≥ 2 k Ω
- Thermal effect: $\leq \pm 0,5\%$ FSO / year
- Operating Temperature range
Sensor: 10 to +50 °C
Storage: -10 to +70 °C
- Materials:
Housing ABS
Media wetted parts Ni, Al, CuBe, PU (Silicon-rubber)

APPLICATIONS

- Heating - Air Conditioning
- Clean room Technology
- Medical Equipment
- Filter-, Flow-Measurement
- Level Measurement (via Air Column)
- Flow Velocity Measurement
- Pressure Tube, Orifice Meter

WIRING DIAGRAM

TPD-1100

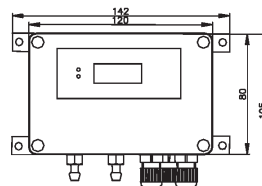
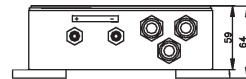
		Terminal name
2-wire-system: (DC-supply 19 ... 31 Vdc)	Supply +	1
	Supply -	2
	Ground	3
3-wire-system: (DC-supply 19 ... 31 Vdc)	Supply +	2
	Supply -	4
	Signal +	3
4-wire-system: (AC-supply 230 VAC)	Supply L	1
	Supply N	2
	Signal +	3
	Signal -	4

TPD-1300

		Terminals
2-wire-system: (DC-supply 12 ... 32 Vdc)	Supply +	2
	Supply -	1
	Ground	3
3-wire-system: (DC-supply 19 ... 31 Vdc)	Supply +	2
	Supply -	1
	Signal +	4
	Signal -	3
4-wire-System: (AC-supply 230, 110 and 24 VAC)	Supply L1 and N	1 and 2
	Signal +	4
	Signal -	3

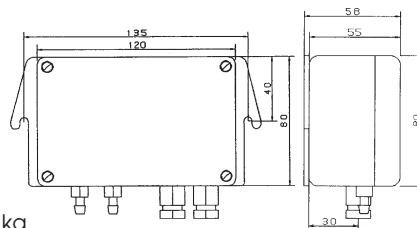
DIMENSIONS

TPD-1100



Weight:
appr. 0,200 kg

TPD-1300



Weight:
appr. 0,300 kg

HOW TO ORDER

- TPD-1100** Ranges 6 to 1000 mbar
- TPD-1300 / VLP** Rel and Dif. Pres Range 0,1 mbar
- TPD-1300 / LP** Rel and Dif. Pres Range 0,5 mbar
- TPD-1300 / MP** Rel and Dif. Pres Range 2 to 2,5 mbar
- TPD-1300 / HP** Rel and Dif. Pres Range 5 to 1000 mbar
- TPD-1300 / A** Absolute Pressure Range 900 to 1100 mbar
- TPD-1300 / A** Absolute Pressure Range 800 to 1200 mbar
- TPD-1300 / A** Absolute Pressure Range 0 to 1000 mbar

Options:
Special Ranges
0/10 V 3 wires output
Display 3 1/2" Dig
110 V or 220 V power supply