

Melt pressure transducer for pressure and temperature measurement in hot media

Model
TPT432
TPT463



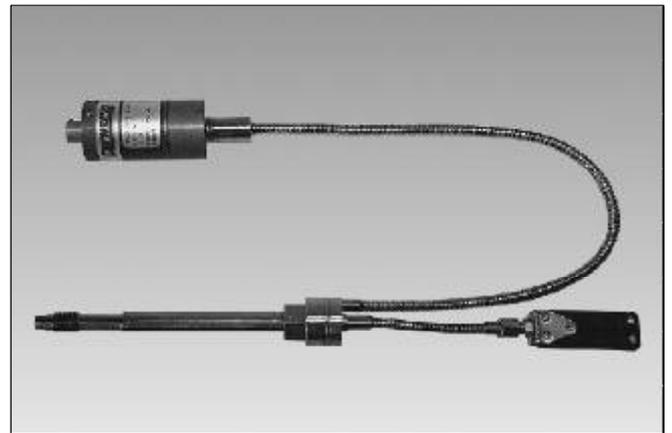
Description

The pressure and temperature transducer series TPT features an integrated temperature sensor. This allows the measurement of pressure and temperature in a single hole.

Available mounting holes can be used to add an additional measurement capability.

Features

- Installation for media temperature up to 400 °C
- Integral thermocouple for simultaneous temperature measurement at the media
- Flexible capillary between rigid stem and housing
- Liquid-filled transmission system
- Electrical built-in calibration



Technical Data / Operating Data

Pressure range	0 - 250 psi to 0 - 30,000 psi	Maximum overload (without influencing operating data)	2 x pressure range or for 15,000 and 20,000 psi range max. 30,000 psi, for 30,000 psi range max. 35,000 psi
Temperature measurement	Thermocouple Type J	Burst pressure	6 x pressure range max. 45,000 psi
Accuracy	TPT432 ± 0.5 % f.s.v. - up to 750 psi ± 1 % f.s.v. TPT463 ± 1 % f.s.v.	Material in contact with media	15-5 Mat. No. 1.4545
Repeatability	TPT432 ± 0.1 % f.s.v. - up to 750 psi ± 0.2 % f.s.v. TPT463 ± 0.2 % f.s.v.	Resolution	infinite

Electrical Characteristics

Configuration	4-arm Wheatstone bridge strain gauge (DMS)	Supply voltage	10 V DC, max. 12 V DC
Strain resistance	350 Ω	Internal Shunt-Calibration	80 % f.s.v. ± 0.5 %
Output signal	3.33 mV/V	Leakage resistance	1000 MΩ at 50 V DC
Zero balance	± 5 % f.s.v., adjustable		

Temperature influence

Diaphragm

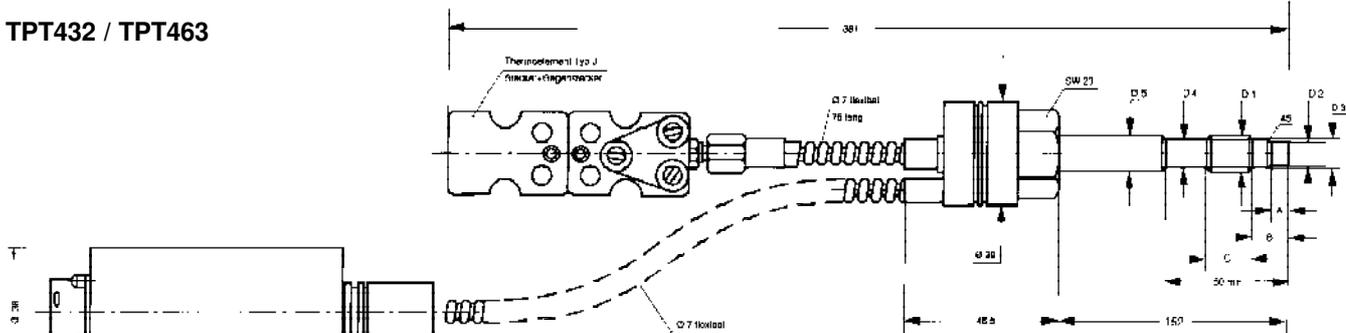
Max. Temperature	400 °C
Zero shift due to temperature change	TPT432 < 27 psi / 10 °C TPT463 < 45 psi / 10 °C

Housing

Max. Temperature	120 °C
Zero shift due to temperature change	TPT432 ± 0.2 % f.s.v./10 °C TPT463 ± 1.0 % f.s.v./10 °C
Sensitivity shift due to temperature change	TPT432 ± 0.1%f.s.v./10°C -up to 700 psi ± 0.2% f.s.v./10°C TPT463 ± 0.4%f.s.v./10°C

Dimensions

TPT432 / TPT463



D1	D2	D3	D4	D5	A	B	C	SW
1/2"-20UNF-2A M18 x 1,5	7,8 ^{-0,05} 10 ^{-0,05}	10,5 ^{-0,05} 16 ^{-0,1}	11 ^{-0,5} 16 ^{-0,5}	12,5 18	5,3 ^{+0,25} 6 ^{-0,25}	11 14	16 20	16 19

Accessories

Indicator 1290/1400, Process Readout UPR700, Process Controller ATC770, Cleaning Tool Kit, Machining Tool Kit

Order specifications

TPT4XX - XXX - XXX - XX - XXX

Model TPT432A = 0.5% Accuracy TPT463E = 1.0% Accuracy	Option
Mounting Thread 1/2 = Thread 1/2" 20 UNF 2A M18 = Thread M18 x 1,5	Rigid stem / flexible stem 15/46 = Stem length 152 mm and flexible length 457 mm between rigid stem and housing
Pressure range 2,5C ¹⁾²⁾ = 0 - 250 psi 1,5M = 0 - 1,500 psi 10M = 0 - 10,000 psi 5C ¹⁾ = 0 - 500 psi 3M = 0 - 3,000 psi 15M = 0 - 15,000 psi 7,5C ¹⁾ = 0 - 750 psi 5M = 0 - 5,000 psi 20M = 0 - 20,000 psi 1M = 0 - 1,000 psi 7,5M = 0 - 7,500 psi 30M = 0 - 30,000 psi 1) only TPT432 2) only M18	Conversion table psi/bar and inch/mm on page 181. Options on page 183. Instruments Extrusion Polymer Test