

# Melt pressure transducer for pressure and temperature measurement in hot media

Model  
TPT432  
TPT463



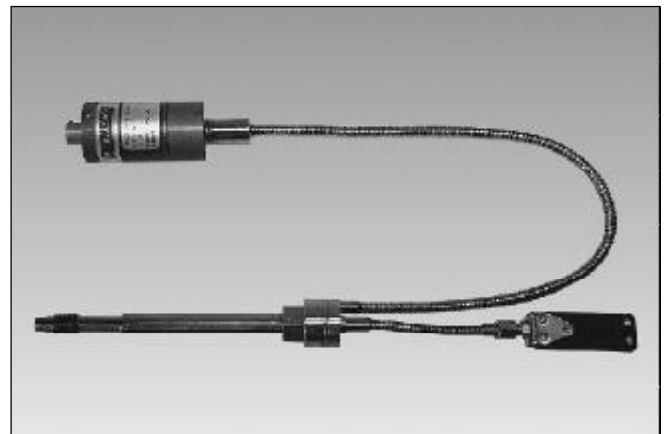
## Description

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		

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## Temperature influence

### Diaphragm

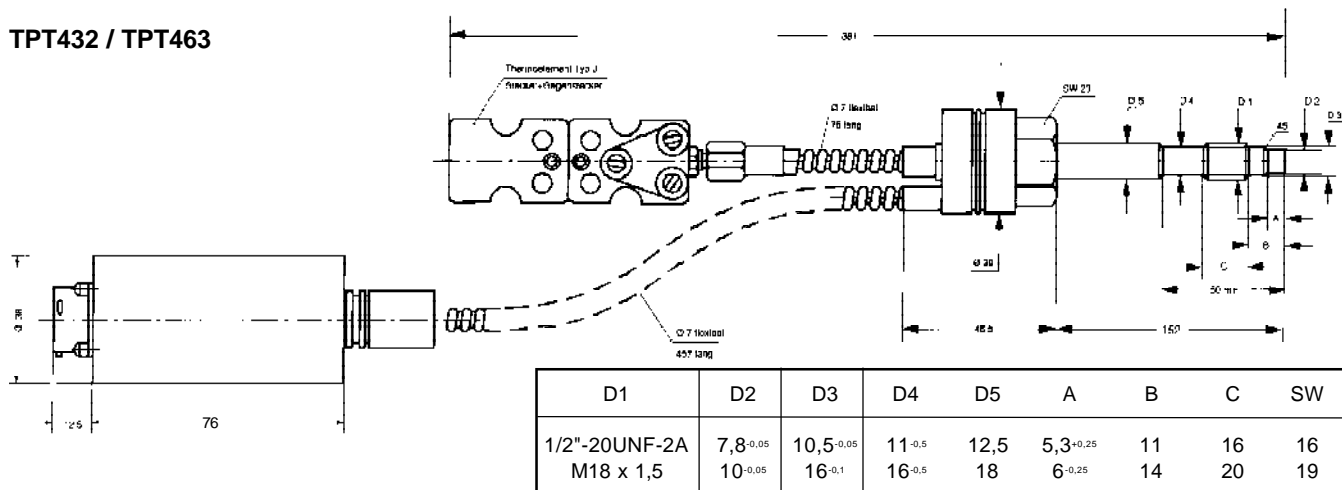
Max. Temperature 400 °C  
 Zero shift due to temperature change  
 TPT432 < 27 psi / 10 °C  
 TPT463 < 45 psi / 10 °C

### 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



## 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

### Mounting Thread

1/2 = Thread 1/2" 20 UNF 2A  
 M18 = Thread M18 x 1,5

### Pressure range

2,5C<sup>1)2)</sup> = 0 - 250 psi    1,5M = 0 - 1,500 psi    10M = 0 - 10,000 psi  
 5C<sup>1)</sup> = 0 - 500 psi    3M = 0 - 3,000 psi    15M = 0 - 15,000 psi  
 7,5C<sup>1)</sup> = 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

<sup>1)</sup> only TPT432    <sup>2)</sup> only M18

### Option

### Rigid stem / flexible stem

15/46 = Stem length 152 mm and flexible length 457 mm between rigid stem and housing

Conversion table psi/bar and inch/mm on page 181.

Options on page 183.