

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



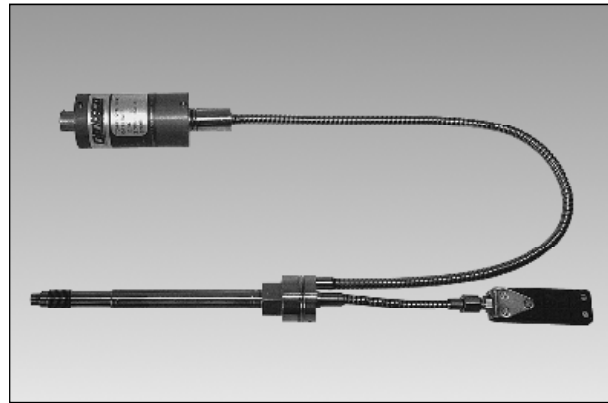
## Description

The pressure and temperature transducer series TDA 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
- Optional integral RTD element
- Flexible capillary between rigid stem and housing
- Liquid-filled transmission system
- Electrical built-in calibration
- Simultaneously measure pressure and temperature in one location



## Technical Data / Operating Data

Pressure range	0 - 17 bar to 0 - 2000 bar	Maximum overload (without influencing operating data)	2 x pressure range but for 1000 and 1400 bar range max. 1750 bar, for 2000 bar range max. 2400 bar
Temperature measurement	Thermocouple Type J	Burst pressure	6 x pressure range max. 3000 bar
Accuracy	TDA432 ± 0.5 % f.s.v. - up to 50 bar ± 1 % f.s.v. TDA463 ± 1 % f.s.v.	Material in contact with media	15-5 Mat. No. 1.4545, DyMAX coated
Repeatability	TDA432 ± 0.1 % f.s.v. - up to 50 bar ± 0.2 % f.s.v. TDA463 ± 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 % TDA432 ± 1.0 % TDA463
Output signal	3.33 mV/V	Leakage resistance	1000 MΩ at 50 V DC
Zero balance	± 5 % f.s.v., TDA432 ± 10 % f.s.v., TDA463		

**Temperature influence**

**Diaphragm**

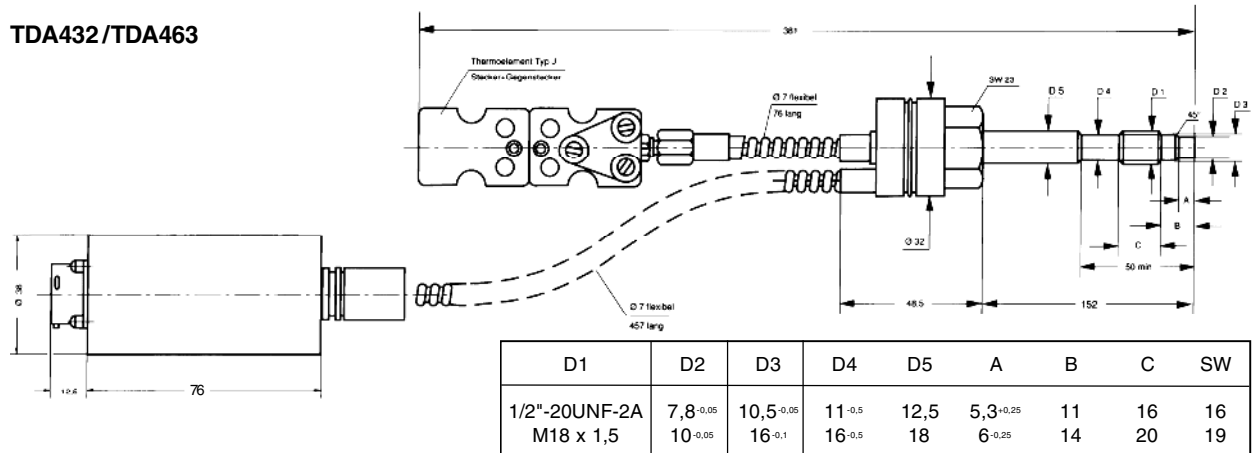
Max. Temperature 400 °C  
Zero shift due to temperature change  
TDA432 < 0,2 bar / 10 °C  
TDA463 < 0,4 bar / 10 °C

**Housing**

Max. Temperature 120 °C  
Zero shift due to temperature change  
TDA432 ± 0.2 % f.s.v./10 °C  
TDA463 ± 1.0 % f.s.v./10 °C  
Sensitivity shift due to temperature change  
TDA432 ± 0.1% f.s.v./10°C  
-up to 50 bar ± 0.2% f.s.v./10°C  
TDA463 ± 0.4% f.s.v./10°C

**Dimensions**

TDA432/TDA463



**Accessories**

Indicator 1390/1400, Process Readout UPR700, Process Controller ATC770, Cleaning Tool Kit, Machining Tool Kit

**Order specifications**

TDA4XX - XXX - XXX - XX - XXXX

**Model**

TDA432 = 0.5% Accuracy  
TDA463 = 1.0% Accuracy

**Mounting Thread**

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

**Pressure range**

17 <sup>1)2)</sup> = 0 - 17 Bar	2C = 0 - 200 Bar	1M = 0 - 1000 Bar
35 <sup>1)</sup> = 0 - 35 Bar	3,5C = 0 - 350 Bar	1,4M = 0 - 1400 Bar
50 <sup>1)</sup> = 0 - 50 Bar	5C = 0 - 500 Bar	2M = 0 - 2000 Bar
1C = 0 - 100 Bar	7C = 0 - 700 Bar	Bar <sup>1)</sup> only TDA432 <sup>2)</sup> only M18

**Options**

**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 141.

Options on page 136.