



Melt pressure transmitter for pressure and temperature measurement in hot media

Description

Dyniscos MDT-series amplified transducers convert process pressure into an amplified signal for long distance transmission free of noise interference.

All models are available in 4-20 mA, 0-5 VDC and 0-10 VDC, 2-, 3- and 4-wire high level outputs.

The TDT-series features an integral thermocouple that allows pressure and temperature to be measured in a single sensor.

Many of the features found in Dyniscos standard MDA-series have been incorporated into the amplified MDT-series, including proven bonded strain gauge construction for stable operation, a flexible armored capillary between the rigid stem and the amplifier housing and a flush diaphragm. Another advantage is the electrical built-in calibration.

Features

- Installation for media temperature up to 400 °C
- Integral thermocouple for simultaneous temperature measurement at the media
- Standard thermocouple type J
- Flexible capillary between rigid stem and housing
- Electrical built-in calibration
- Various high level outputs
- 4-20 mA, 2-wire, 0-10 V DC, 3/4-wire and other volt output signal ranges



Technical Data / Operating Data

Pressure range	0 - 17 bar to 0 - 2000 bar	Maximum overload (without influencing operating data)	2 x pressure range for range 1000 and 1400 bar max. 1750 bar and max. 2400 bar for range 2000 bar
Temperature measurement	Thermocouple Type J	Burst pressure	6 x pressure range max. 3000 bar
Accuracy	TDT432 X ± 0.5 % f.s.v. - up to 50 bar ± 1 % f.s.v. TDT463 X ± 1 % f.s.v.	Material in contact with media	15-5 Mat. No. 1.4545, DyMAX coated
Repeatability	TDT432 X ± 0.1 % f.s.v. - up to 50 bar ± 0.2 % f.s.v. TDT463 X ± 0.2 % f.s.v.		
Resolution	infinite		

Electrical Characteristics

Configuration	4-arm Wheatstone bridge strain gauge (DMS)	TDT4XX K / L / M / N	3-wire V DC
Internal Shunt-Calibration	80 % of full scale ± 5 %	Output signal	K 0-5 V DC / M 1-6 V DC / L 0-10 V DC / N 1-11 V DC
Leakage resistance	1000 M Ω at 50 V DC	Supply voltage	15 - 32 V DC
TDT4XXF	2-wire mA	Load resistance	> 5 k Ω / > 5 k Ω > 10 k Ω / > 10 k Ω
Output signal	4 - 20 mA	TDT4XX G / H	4-wire V DC
Supply voltage	10 - 36 V DC	Output signal	G 0-5 V DC / H 0-10 V DC
Zero balance	- 2 % / + 5 % of full scale adjustable	Supply voltage	dual ± 10 to ± 16 V DC single 19 - 32 V DC
Load resistance	Maximum 1,2 k Ω at 36 V	Load resistance	> 5 k Ω / > 10 k Ω

Temperature influence

Diaphragm

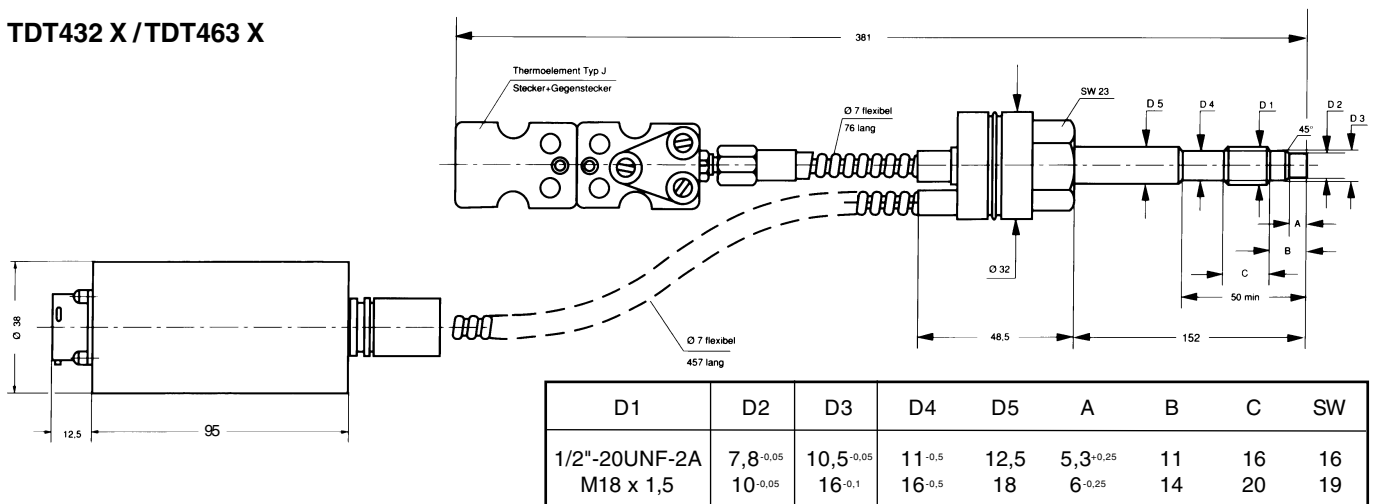
Max. Temperature	400 °C
Zero shift due to temperature change	TDT432 X < 0.2 bar / 10 °C TDT463 X < 0.4 bar / 10 °C

Housing

Max. Temperature	85 °C
Zero shift due to temperature change	± 0.2 % f.s.v. / 10 °C
Sensitivity shift due to temperature change	TDT432 X ±0.1% f.s.v./10 °C -up to 50 bar ± 0.2% f.s.v./10 °C TDT463 X ±0.4% f.s.v./10 °C

Dimensions

TDT432 X / TDT463 X



Accessories

Cleaning Tool Kit, Machining Tool Kit, Process Readout UPR700, Process Controller ATC770

Order specifications

TDT4XX X - XXX - XXX - XX - XXX

Output F = 2-wire mA K, L, M, N = 3-wire V DC G, H = 4-wire V DC	Options
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 17¹⁾ 2) = 0 - 17 bar 2C = 0 - 200 bar 1M = 0 - 1000 bar 35¹⁾ = 0 - 35 bar 3,5C = 0 - 350 bar 1,4M = 0 - 1400 bar 50¹⁾ = 0 - 50 bar 5C = 0 - 500 bar 2M = 0 - 2000 bar 1C = 0 - 100 bar 7C = 0 - 700 bar ¹⁾ only TDT432 X ²⁾ only M18	

Conversion table psi/bar and inch/mm on page 141.
 Options on page 136.