Dynisco

Model
TDT432 F
TDT463 F

CE

New Generation 2-wire Melt Pressure Transmitter with excellent Noise Suppression, "Auto-Zero" Push-Button-Function and integrated Thermocouple Series TDT432F / TDT463F

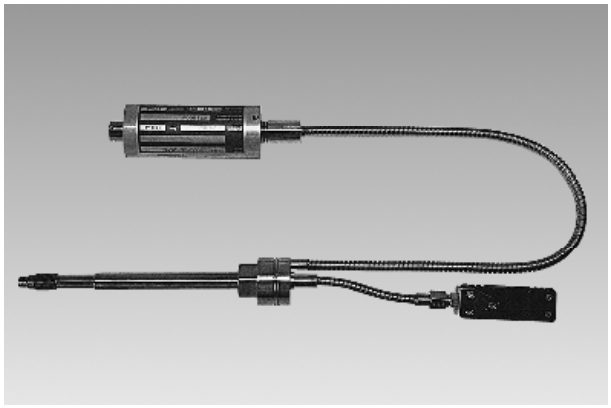
Description

The new Pressure Transmitter Series TDT provides special features for critical field applications in high noise surroundings.
The utilization of unshielded cables is also possible for long distance transmission free of noise interference for the converted process pressure signal 4-20 mA.
A further improvement is the new kind of Zero-adjustment through an integrated "Auto-Zero" function.

Many of the features found in Dyniscos standard TDA-series have been incorporated into the amplified TDT-series, including proven bonded strain gauge construction for stable operation, a flexible capillary between the stem with diaphragm and the amplifier housing and a flush diaphragm. The addition of a removable thermoelement simultaneously measures both temperature and pressure at a single point in the media. Another advantage is the electrical built-in calibration.

Features

- Simple and cheap unshielded two-wire cable connection in high noise ambients
- Efficient "Auto-Zero" adjustment either through pushbutton on the transmitter or in the control room
- Two-wire, 4-20 mA signal output
- Electrical built-in calibration
- Installation for media temperatures up to 400 °C
- Flexible capillary between stem with diaphragm and housing
- Integrated thermoelement, either thermocouple or RTD, measures simultaneously the media temperature
- Failure detection through "fail-safe" signal levels acc.to NAMUR recommendation NE43



Technical Data

Pressure range	0 - 17 bar to 0 - 2000 bar
Accuracy	TDT432F ± 0.5 % FSO - up to 50 bar ± 1 % FSO TDT463F ± 1 % FSO
Repeatability	TDT432F ± 0.1 % FSO - up to 50 bar ± 0.2 % FSO TDT463F ± 0.2 % FSO
Resolution	infinite
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
Burst pressure	6 x pressure range max. 3000 bar
Material in contact with media	15-5 PH SST (Mat. No. 1.4545), DyMAX™ coated

Electrical Characteristics

Configuration	4-arm Wheatstone bridge strain gauge (DMS)
Internal Shunt-Calibration	80 % of full scale ± 1 %
Output signal	2-wire 4 - 20 mA
Supply voltage	12 - 36 V DC
Zero balance	Through „Auto-Zero"-adjustment function
„Auto-Zero" initiation	In the field on the transmitter, „Zero"-push-button, or externally via „short circuit" between contacts „NP" and „GND"
Range Calibration 80% FSO	„Short circuit" between connection pins „CAL" and „GND" at the transmitter or externally from the control room
Load resistance	Maximum 1200Ω at 36 V DC Maximum 500Ω at 24V DC
Isolation resistance	1000 MΩ at 50 V DC
„Fail-Safe" signal levels	Signal levels acc. to NAMUR recommendation NE43: <=3,6mA or >=21,5mA

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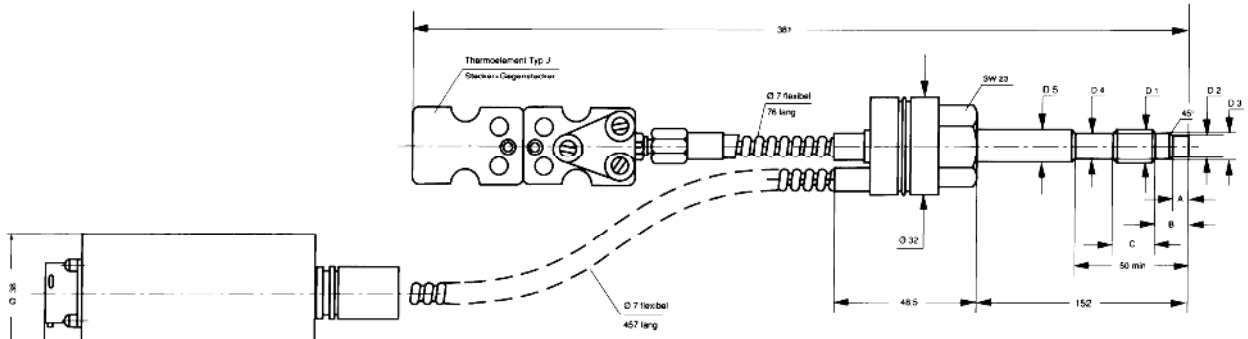
Temperature Influence

Diaphragm		**Housing**	
Max. Temperature	400 °C	Max. Temperature	85 °C
Zero shift due to temperature change	TDT432F < 0.2 bar / 10 °C TDT463F < 0.4 bar / 10 °C	Zero shift due to temperature change	± 0.2 % FSO / 10 °C
		Sensitivity shift due to temperature change	TDT420F ±0.1% FSO/10 °C -up to 50 bar ± 0.2% FSO/10 °C TDT460F ±0.3% FSO/10 °C

Dimensions



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

Accessories

Cleaning Tool Kit, Machining Tool Kit, Process Readout UPR 700 or 1391, Process Controller ATC770

Order Specifications

TDT4XX X - XXX - XXX - XX - XXX

Output
F = 2-wire mA

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

Pressure range

17[1)2)] =	0 - 17 bar	**2C** =	0 - 200 bar	**1M** =	0 - 1000 bar
35[1)] =	0 - 35 bar	**3,5C** =	0 - 350 bar	**1,4M** =	0 - 1400 bar
50[1)] =	0 - 50 bar	**5C** =	0 - 500 bar	**2M** =	0 - 2000 bar
1C =	0 - 100 bar	**7C** =	0 - 700 bar		

[1)] only TDT432 F [2)] 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.

09/2005

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