Dynisco

Model
MDT420 F
MDT460 F

CE

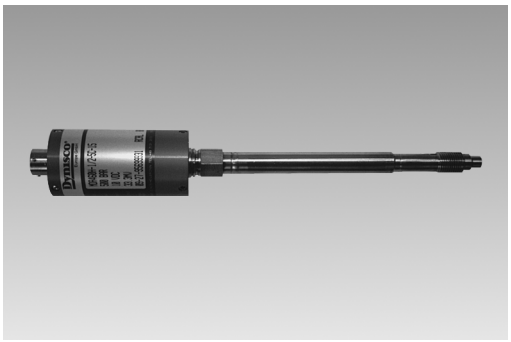
New Generation 2-wire Melt Pressure Transmitter with excellent Noise Suppression and “Auto-Zero” Push-Button-Function Series MDT4X0F

Description

The new Pressure Transmitter Series MDT provides special features for the 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, initiated either directly in the field on the transmitter “zero push-button” or from the distance in the control room.
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 rigid stem between the diaphragm and the amplifier housing and a flush diaphragm.
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
- 4-20 mA two-wire Signal Output
- Electrical built-in calibration
- Installation for media temperatures up to 400 °C
- Rigid stem between diaphragm and housing
- Failure detection through “fail-safe” signal levels acc.to NAMUR recommandation NE43



Technical 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
Accuracy	MDT420F ± 0.5 % FSO - up to 50 bar ± 1 % FSO MDT460F ± 1 % FSO	Burst pressure	6 x pressure range max. 3000 bar
Repeatability	MDT420F ± 0.1 % FSO - up to 50 bar ± 0.2 % FSO MDT460F ± 0.2 % FSO	Material in contact with Media	15-5 PH SST (Mat. No. 1.4545) DyMAX™ coated
Resolution	infinite		

Electrical Characteristics

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

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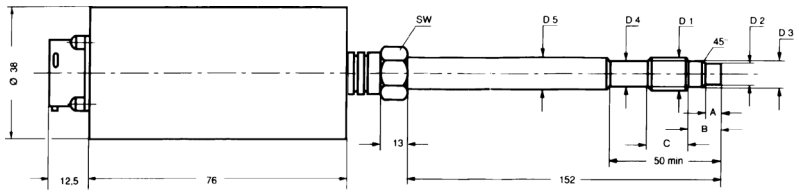
Temperature Influence

Diaphragm		**Housing**	
Max. Temperature	400 °C	Max. Temperature	85 °C
Zero shift due to temperature change	MDT420F < 0.2 bar / 10 °C MDT460F < 0.4 bar / 10 °C	Zero shift due to temperature change	± 0.2 % FSO / 10 °C
		Sensitivity shift due to temperature change	MDT420F ±0.1% FSO/10 °C -up to 50 bar ± 0.2% FSO/10 °C MDT460F ±0.3% FSO/10 °C

Dimensions



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

MDT4X0 X - XXX - XXX - XXXX - 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 MDT420F [2)] only M18

Options

Rigid stem
15 = Stem length 152 mm (Standard)

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

Options on page 136.

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