

Melt pressure transmitter for pressure measurement in hot media

Series MDT4X0 X

Description

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

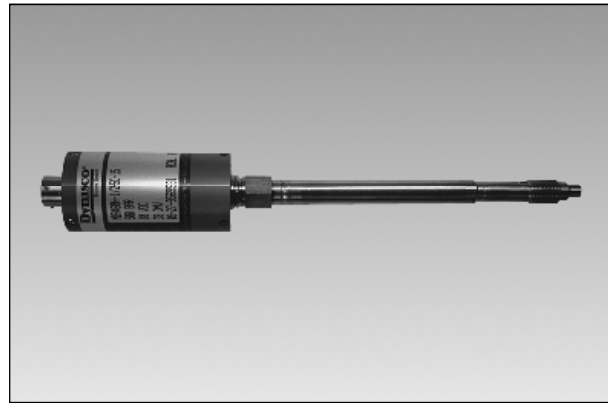
All models are available in 4-20 mA, 0-5 VDC and 0-10 VDC, 2-, 3- and 4-wire high level outputs.

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

- Installation for media temperature up to 400 °C
- Rigid stem between diaphragm 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
Accuracy	MDT420 X ± 0.5 % f.s.v. - up to 50 bar ± 1 % f.s.v. MDT460 X ± 1 % f.s.v.	Burst pressure	6 x pressure range max. 3000 bar
Repeatability	MDT420 X ± 0.1 % f.s.v. - up to 50 bar ± 0.2 % f.s.v. MDT460 X ± 0.2 % f.s.v.	Material in contact with media	15-5 Mat. No. 1.4545, DyMAX coated
Resolution	infinite		

Electrical Characteristics

Configuration	4-arm Wheatstone bridge strain gauge (DMS)	MDT4X0 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
MDT4X0F	2-wire mA	Load resistance	> 5 k Ω / > 5 k Ω > 10 k Ω / > 10 k Ω
Output signal	4 - 20 mA	MDT4X0 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

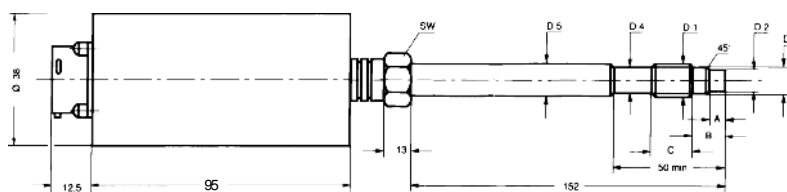
Max. Temperature	400 °C
Zero shift due to temperature change	MDT420 X < 0.2 bar / 10 °C MDT460 X < 0.4 bar / 10 °C

Housing

Max. Temperature	85 °C
Zero shift due to temperature change	± 0.2 % f.s.v. / 10 °C
Sensitivity shift due to temperature change	MDT420 X ±0.1% f.s.v./10 °C - up to 50 bar ± 0.2% f.s.v./10 °C MDT460 X ±0.4% f.s.v./10 °C

Dimensions

MDT420 X / MDT460 X



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

Accessories

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

Order specifications

MDT4X0 X - XXX - XXX - XX - XXX

Output

F = 2-wire mA
K, L, M, N = 3-wire V DC
G, H = 4-wire V DC

Mounting Thread

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

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 MDT420 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.