

# Melt pressure transmitter for pressure measurement in hot media Series MDT4X2

## Description

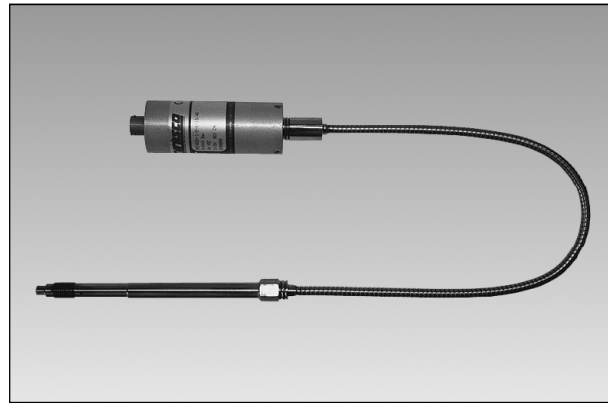
Dyniscos MDT-series amplified transducers convert process pressure into an amplified signal for long distance transmission free of noise interference.

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 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
- 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
Accuracy	MDT422 X $\pm 0.5$ % f.s.v. - up to 50 bar $\pm 1$ % f.s.v. MDT462 X $\pm 1$ % f.s.v.	Burst pressure	6 x pressure range max. 3000 bar
Repeatability	MDT422 $\pm 0.1$ % f.s.v. - up to 50 bar $\pm 0.2$ % f.s.v. MDT462 X $\pm 0.2$ % 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)	<b>MDT4X2 K / L / M / N</b>	<b>3-wire V DC</b>
Internal Shunt-Calibration	80 % of full scale $\pm 5$ %	Output signal	<b>K</b> 0-5 V DC / <b>M</b> 1-6 V DC / <b>L</b> 0-10 V DC / <b>N</b> 1-11 V DC
Leakage resistance	1000 M $\Omega$ at 50 V DC	Supply voltage	15 - 32 V DC
<b>MDT4X2F</b>	<b>2-wire mA</b>	Load resistance	> 5 k $\Omega$ / > 5 k $\Omega$ > 10 k $\Omega$ / > 10 k $\Omega$
Output signal	4 - 20 mA	<b>MDT4X2 G / H</b>	<b>4-wire V DC</b>
Supply voltage	10 - 36 V DC	Output signal	<b>G</b> 0-5 V DC / <b>H</b> 0-10 V DC
Zero balance	- 2 % / + 5 % of full scale adjustable	Supply voltage	dual $\pm 10$ to $\pm 16$ V DC single 19 - 32 V DC
Load resistance	Maximum 1,2 k $\Omega$ at 36 V	Load resistance	> 5 k $\Omega$ / > 10 k $\Omega$

### Temperature influence

#### Diaphragm

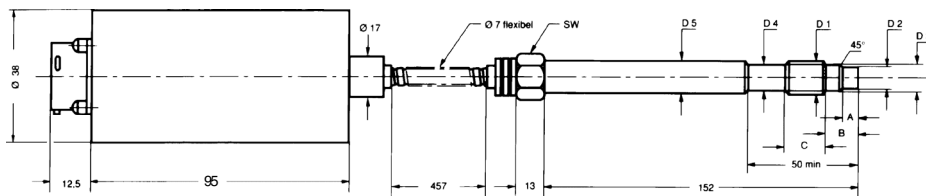
Max. Temperature 400 °C  
Zero shift due to temperature change  
MDT422 X < 0.2 bar / 10 °C  
MDT462 X < 0.4 bar / 10 °C

#### Housing

Max. temperature 85 °C  
Zero shift due to temperature change ± 0.2 % f.s.v. / 10 °C  
Sensitivity shift due to temperature change  
MDT422 X ±0.1% f.s.v./10 °C  
-up to 50 bar ± 0.2% f.s.v./10 °C  
MDT462 X ±0.4% f.s.v./10 °C

### Dimensions

#### MDT422 X / MDT462 X



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

### Accessories

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

### Order specifications

#### MDT4X2 X - XXX - XXX - XXXX - 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

**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    <sup>1)</sup> only MDT422 <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.