

Melt pressure transducer for pressure measurement in hot media

Series MDA4X2



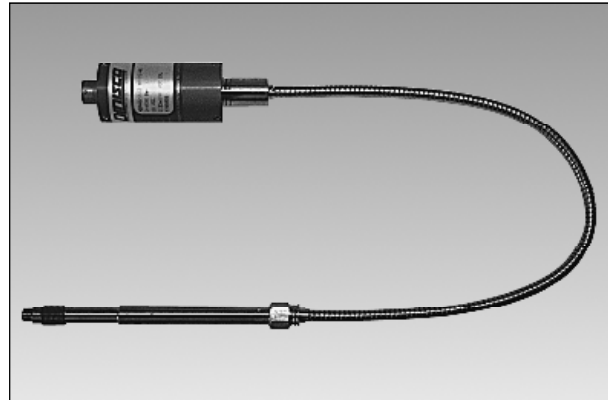
Description

The models MDA422 and MDA462 have an additional 457mm long flexible tubing between the strain gauge housing and the rigid stem. They are designed for applications where proximity of the strain gauge element

to the process is prohibited because of extreme temperature. They are also designed for applications where flexibility is required.

Features

- Installation for media temperature up to 400 °C
- Flexible capillary between rigid stem and housing
- Liquid-filled transmission system
- Electrical built-in calibration



Technical Data / Operating Data

Pressure range	0 - 17 bar to 0 - 2000 bar	Maximum overload (without influencing operating data)	2 x pressure range but for 1000 and 1400 bar range max. 1750 bar, for 2000 bar range max. 2400 bar
Accuracy	MDA422 ± 0.5 % f.s.v. - up to 50 bar ± 1 % f.s.v. MDA462 ± 1 % f.s.v.	Burst pressure	6 x pressure range max. 3000 bar
Repeatability	MDA422 ± 0.1 % f.s.v. - up to 50 bar ± 0.2 % f.s.v. MDA462 ± 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)	Supply voltage	10 V DC, max. 12 V DC
Strain resistance	350 Ω	Internal Shunt-Calibration	80 % f.s.v. ± 0.5 % MDA422 ± 1.0 % MDA462
Output signal	3.33 mV/V	Leakage resistance	1000 MΩ at 50 V DC
Zero balance	± 5 % f.s.v., MDA422		
Zero balance	± 10% f.s.v., MDA 462		

Temperature influence

Diaphragm

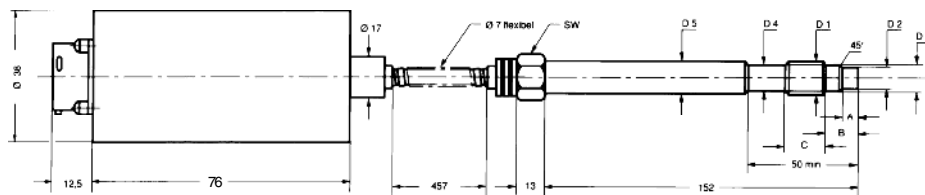
Max. Temperature	400 °C
Zero shift due to temperature change	MDA422 < 0,2 bar / 10 °C MDA462 < 0,4 bar / 10 °C

Housing

Max. Temperature	120 °C
Zero shift due to temperature change	MDA422 ± 0.2% f.s.v./10 °C MDA462 ± 1.0 % f.s.v./10 °C
Sensitivity shift due to temperature change	MDA422 ± 0.1% f.s.v./10°C -up to 50 bar ± 0.2% f.s.v./10°C MDA462 ± 0.4% f.s.v./10°C

Dimensions

MDA422 / MDA462



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

Indicator 1390, Process Readout UPR700, Process Controller ATC770, Cleaning Tool Kit, Machining Tool Kit

Order specifications

MDA4X2 - XXX - XXX - XX - XXXX

Model

MDA422 = 0.5% Accuracy
MDA462 = 1.0% Accuracy

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	Bar ¹⁾ only MDA420 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.