

Melt pressure transducer for pressure measurement in hot media

Series MDA4X0



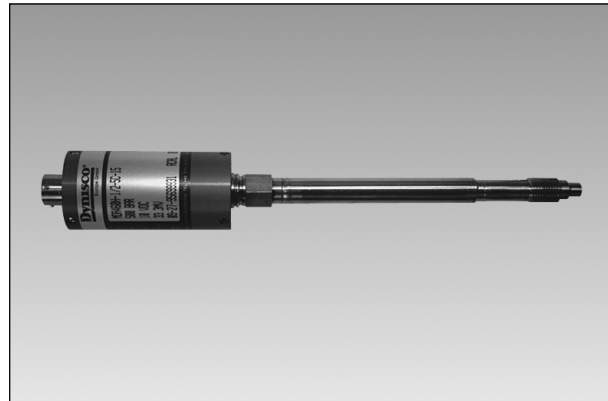
Description

The basic models MDA420 and MDA460 are rugged, reliable pressure transducers which are the basic starting point for monitoring and measuring pressure. The rigid stem configuration allows simplest installation in

applications where the strain gauge element is not subject to high localized temperatures. The pressure transmission from the diaphragm to the strain gauge ensures a temperature compensated liquid column.

Features

- Installation for media temperature up to 400 °C
- Rigid stem between diaphragm and housing
- Liquid-filled transmission system
- Electrical built-in calibration
- All stainless steel wetted parts



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	MDA420 $\pm 0,5$ % f.s.v. - up to 50 Bar ± 1 % f.s.v. MDA460 ± 1 % f.s.v.	Burst pressure	6 x pressure range max. 3000 bar
Repeatability	MDA420 $\pm 0,1$ % f.s.v. - up to 50 Bar $\pm 0,2$ % f.s.v. MDA460 $\pm 0,2$ % 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)	Supply voltage	10 V DC, max. 12 V DC
Strain resistance	350 Ω	Internal Shunt-Calibration	80 % f.s.v. ± 0.5 % MDA420 ± 1.0 % MDA460
Output signal	3.33 mV/V	Leakage resistance	1000 M Ω at 50 V DC
Zero balance	± 5 % f.s.v., MDA 420 ± 10 % f.s.v., MDA 460		

Temperature influence

Diaphragm

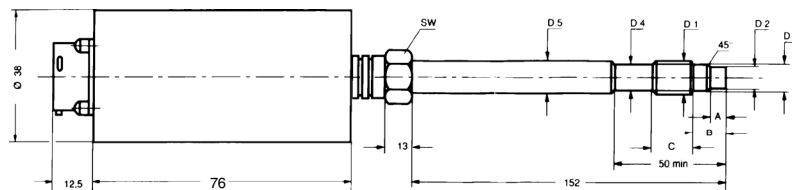
Max. Temperature	400 °C
Zero shift due to temperature change	MDA420 < 0,2 bar / 10 °C MDA460 < 0,4 bar / 10 °C

Housing

Max. Temperature	120 °C
Zero shift due to temperature change	MDA420 ± 0.2% f.s.v./10 °C MDA460 ± 1.0% f.s.v./10 °C
Sensitivity shift due to temperature change	MDA420 ± 0.1% f.s.v./10°C -up to 50 bar ± 0.2% f.s.v./10°C MDA460 ± 0.4% f.s.v./10°C

Dimensions

MDA420/MDA460



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

MDA4X0 - XXX - XXX - XX - XXXX

Model
MDA420 = 0.5% Accuracy
MDA460 = 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

15 = Stem length 152 (Standard)

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

Options on page 136.