

Intrinsically safe melt pressure transmitter for pressure measurement in hot media Series EMT4X2 2

Model
EMT422 2
EMT462 2



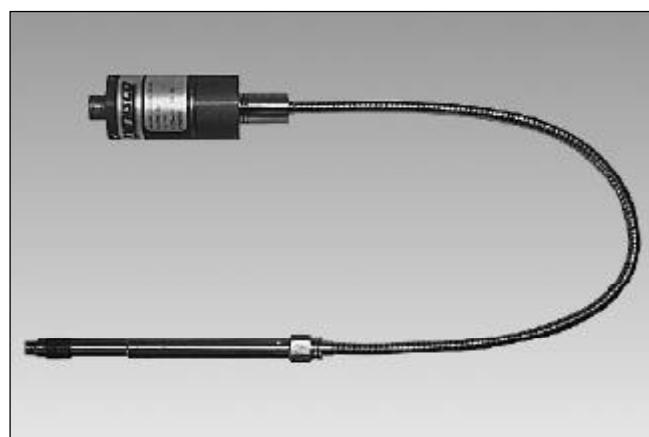
Description

The intrinsically safe melt pressure transducer series EMT based on the proven melt pressure transmitter series MDT. The integrated, PTB-approved, 2-wire mAmp amplifier converts the process pressure into an proportional output signal. The 2-wire mAmp-amplifier technique is insensitive to noise and well suited for economical long cable runs.

Many of the features found in Dyniscos standard MDT-series have been incorporated into the EMT-series, including proven bonded strain gauge construction for stable operation, a flexible armored capillary between the amplifier housing and the rigid stem and a flush diaphragm. Another advantage is the electrical built-in calibration.

Features

- Intrinsically safe according Ex-safety class
EEx ia IIC T5 up to 80 °C and EEx ia IIC T1-T4 up to 85 °C
- Installation for media temperature up to 400 °C
- Flexible capillary between rigid stem and housing
- 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 for range 1000 and 1400 bar max. 1750 bar and max. 2450 bar for range 2000 bar
Accuracy	EMT422 2 ± 0.5 % f.s.v. - up to 50 bar ± 1 % f.s.v. EMT462 2 ± 1 % f.s.v.	Burst pressure	6 x pressure range max. 3000 bar
Repeatability	EMT422 2 ± 0.1 % f.s.v. - up to 50 bar ± 0.2 % f.s.v. EMT462 2 ± 0.2 % f.s.v.	Material in contact with media	15-5 Mat. No. 1.4545
Resolution	infinite		

Electrical Characteristics

Configuration	4-arm Wheatstone bridge strain gauge (DMS)	Power consumption Zero balance	< 20 mA - 2 % / + 10 % of full scale adjustable
Output signal	4 - 20 mA ($R_L < 750 \Omega$ at 28 V or $< 145 \Omega$ at 15 V)	Internal Shunt-Calibration	80 % of full scale ± 10 %
Supply voltage	15 - 28 V DC -15% +0% via approved electrical equipment acc. to EN 50 020	Isolation resistance	1000 M Ω at 50 V DC

Temperature influence

Diaphragm

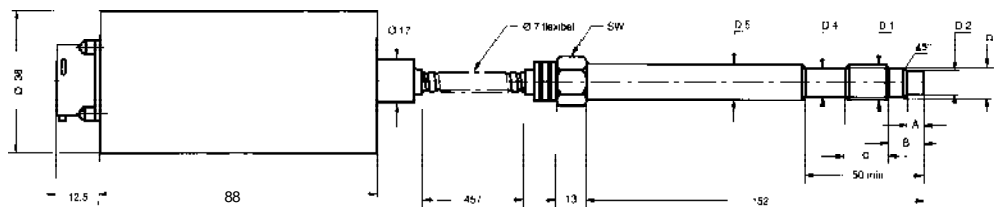
Max. Temperature	400 °C
Zero shift due to Temperature change	EMT422 2 ± 0.2 bar / 10 °C EMT462 2 ± 0.4 bar / 10 °C

Housing

Max. Temperature	85 °C
Zero shift due to Temperature change	± 0.2 % f.s.v. / 10 °C
Sensitivity shift due to temperature change	EMT422 2 ± 0.1% f.s.v./10°C -up to 50 bar ± 0.2% f.s.v./10°C EMT462 2 ± 0.4% f.s.v./10°C

Dimensions

EMT422 2 / EMT462 2



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

Ex-Power Supply, Cleaning Tool Kit, Machining Tool Kit

Order specifications

EMT4X2 2 - XXX - XXX - XX - XXX

Model
EMT422 2 = 0.5% Accuracy
EMT462 2 = 1.0% Accuracy

Mounting Thread
1/2 = Gewinde 1/2" 20 UNF 2A
M18 = Gewinde 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 EMT422 2 2) M18 only

Option

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 181.

Options on page 183.