Dynisco

Model
EMT432 2
EMT463 2

Intrinsically safe melt pressure transmitter for pressure measurement in hot media Series EMT4XX 2

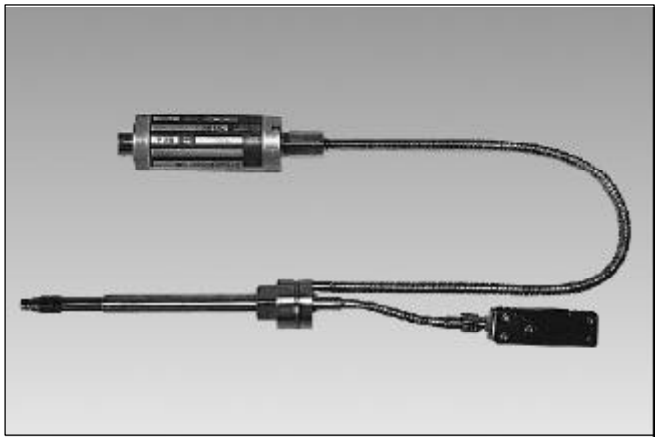
Description

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. The EMT-series 432/463 features an integral thermocouple that allows pressure and temperature to be measured in a single sensor.

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
- Integral thermocouple for simultaneous temperature measurement at the media
- 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
Temperature measurement	Thermocouple Type J
Accuracy	EMT432 2 ± 0.5 % f.s.v. - up to 50 bar ± 1 % f.s.v. EMT463 2 ± 1 % f.s.v.
Repeatability	EMT432 2 ± 0.1 % f.s.v. - up to 50 bar ± 0.2 % f.s.v. EMT463 2 ± 0.2 % f.s.v.
Resolution	infinite
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
Burst pressure	6 x pressure range max. 3000 bar
Material in contact with media	15-5 Mat. No. 1.4545

Electrical Characteristics

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

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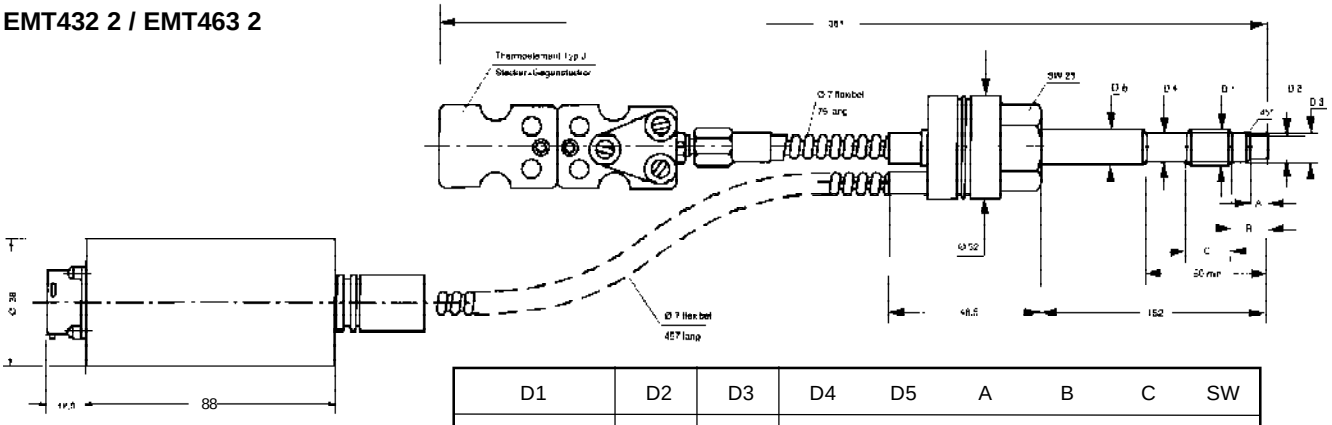
Temperature influence

Diaphragm		Housing	
Max. temperature	400 °C	Max. temperature	85 °C
Zero shift due to temperature change	EMT432 2 ± 0.2 bar / 10 °C EMT463 2 ± 0.4 bar / 10 °C	Zero shift due to temperature change	± 0.2 % f.s.v. / 10 °C
		Sensitivity shift due to temperature change	EMT432 2 ± 0.1% f.s.v./10°C -up to 50 bar ± 0.2% f.s.v./10°C EMT463 2 ± 0.4% f.s.v./10°C

Dimensions

EMT432 2 / EMT463 2



D1	D2	D3	D4	D5	A	B	C	SW
1/2"-20UNF-2A	$7{,}8^{-0.05}$	$10{,}5^{-0.05}$	$11^{-0.5}$	12,5	$5{,}3^{+0.25}$	11	16	16
M18 x 1,5	$10^{-0.05}$	$16^{-0.1}$	$16^{-0.5}$	18	$6^{-0.25}$	14	20	19

Accessories

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

Order specifications

EMT4XX 2 - XXX - XXX - XX - XXX

Model
EMT432 2 = 0.5% Accuracy
EMT463 2 = 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	[1)] only EMT432 2 [2)] M18 only	

Rigid stem / flexible stem
15/46 = Stem length 152 mm and flexible length 457 mm between rigid stem and housing

Option

Conversion table psi/bar and inch/mm on page 181.

Options on page 183.