

Intrinsically safe melt pressure transmitter for pressure measurement in hot media Series EMT4X0 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 rigid stem between the diaphragm and the amplifier housing 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
- Rigid stem between diaphragm and housing
- Electrical built-in calibration



Performance Characteristics

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	EMT420 2 ± 0,5 % f.s.v. - up to 50 bar ± 1 % f.s.v. EMT460 2 ± 1 % f.s.v.	Burst pressure	6 x pressure range max. 3000 bar
Repeatability	EMT420 2 ± 0,1 % f.s.v. - up to 50 bar ± 0,2 % f.s.v. EMT460 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 Mw at 50 V DC

Temperature influence

Diaphragm

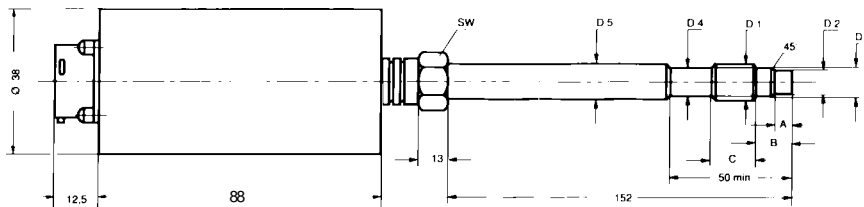
Max. Temperature	400 °C
Zero shift due to Temperature change	EMT420 $2 \pm 0,2 \text{ bar} / 10 \text{ °C}$ EMT460 $2 \pm 0,4 \text{ bar} / 10 \text{ °C}$

Housing

Max. Temperature	85 °C
Zero shift due to Temperature change	$\pm 0,2 \text{ \% f.s.v.} / 10 \text{ °C}$
Sensitivity shift due to temperature change	EMT420 $2 \pm 0,1 \text{ \% f.s.v.} / 10 \text{ °C}$ -up to 50 bar $\pm 0,2 \text{ \% f.s.v.} / 10 \text{ °C}$ EMT460 $2 \pm 0,4 \text{ \% f.s.v.} / 10 \text{ °C}$

Dimensions

EMT420 2 / EMT460 2



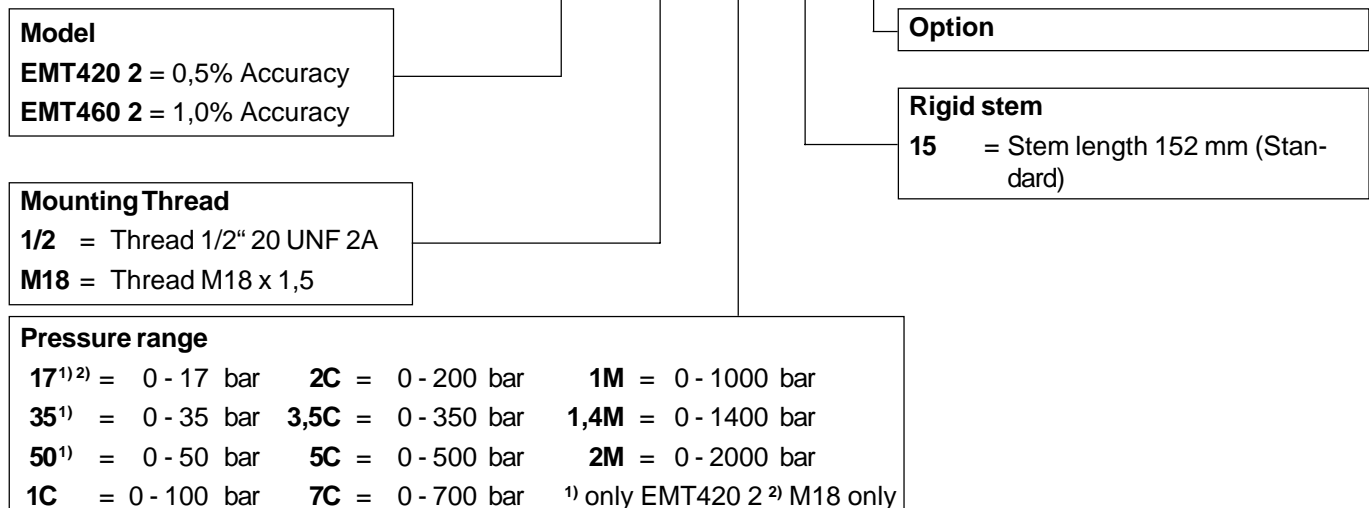
D1	D2	D3	D4	D5	A	B	C	SW
1/2"-20UNF-2A M18 x 1,5	7,8 ^{-0,05} 10 ^{-0,05}	10,5 ^{-0,05} 16 ^{-0,1}	11 ^{-0,5} 16 ^{-0,5}	12,5 18	5,3 ^{+0,25} 6 ^{-0,25}	11 14	16 20	16 19

Accessories

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

Order specifications

EMT4X0 2 - XXX - XXX - XX - XXX



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

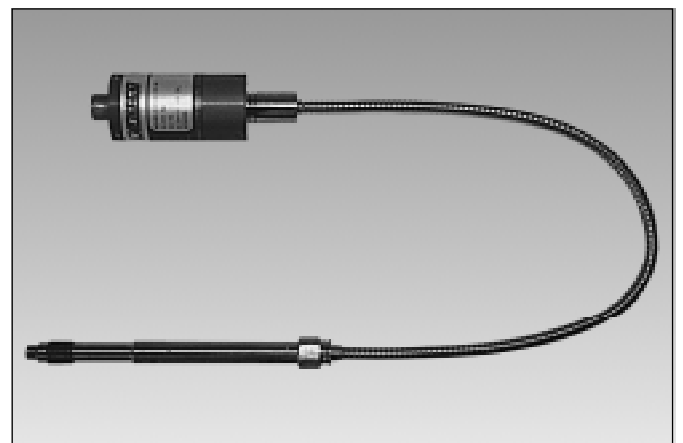
Description

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



Performance Characteristics

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

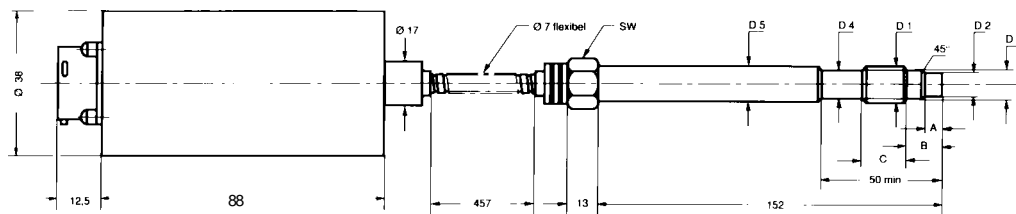
Max. Temperature	400 °C
Zero shift due to Temperature change	EMT422 2 ± 0,2 bar / 10 °C EMT462 2 ± 0,4 bar / 10 °C

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	Option
Mounting Thread 1/2 = Gewinde 1/2" 20 UNF 2A M18 = Gewinde M18 x 1,5	Rigid stem / flexible stem 15/46 = Stem length 152 mm and flexible length 457 mm between rigid stem and housing
Pressure range 17¹⁾²⁾ = 0 - 17 bar 2C = 0 - 200 bar 1M = 0 - 1000 bar 35¹⁾ = 0 - 35 bar 3,5C = 0 - 350 bar 1,4M = 0 - 1400 bar 50¹⁾ = 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	

Intrinsically safe melt pressure transmitter for pressure measurement in hot media Series EMT423 2 with flange

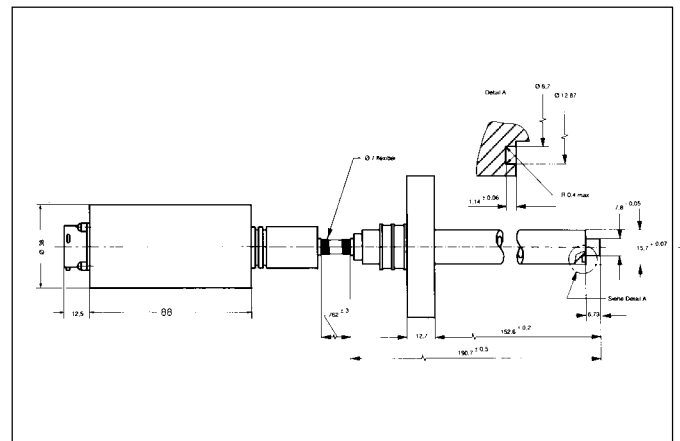
Description

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
- Rigid stem with flange
- Electrical built-in calibration



Performance Characteristics

Pressure range	0 - 35 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	± 0,5 % f.s.v. - up to 50 bar ± 1 % f.s.v.	Burst pressure	6 x pressure range max. 3000 bar
Repeatability	± 0,1 % f.s.v. - up to 50 bar ± 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	< 20 mA
Output signal	4 - 20 mA ($R_L < 750 \Omega$ at 28 V or $< 145 \Omega$ at 15 V)	Zero balance	- 2 % / + 10 % of full scale adjustable
Supply voltage	15 - 28 V DC -15% +0% via approved electrical equipment acc. to EN 50 020	Internal Shunt-Calibration	80 % of full scale ± 10 %
		Isolation resistance	1000 M Ω at 50 V DC

Temperature influence

Diaphragm

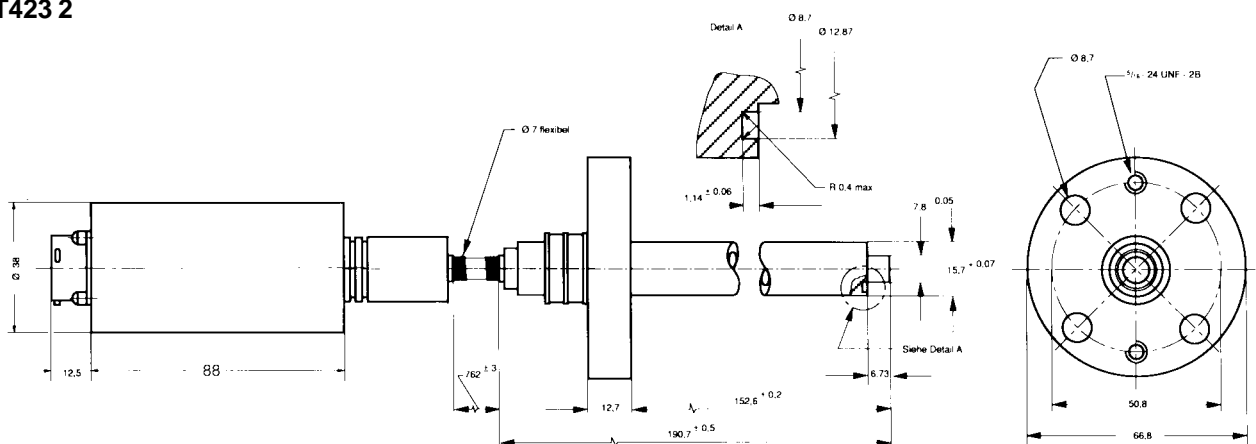
Max. temperature 400 °C
Zero shift due
to temperature
change $\pm 0,2 \text{ bar} / 10 \text{ }^\circ\text{C}$

Housing

Max. temperature 85 °C
Zero shift due
to temperature
change $\pm 0,2 \text{ \% f.s.v.} / 10 \text{ }^\circ\text{C}$
Sensitivity shift
due to temperature
change $\pm 0,1 \text{ \% f.s.v.} / 10 \text{ }^\circ\text{C}$
-up to 50 bar $\pm 0,2\% \text{ f.s.v./}10^\circ\text{C}$

Dimensions

EMT423 2



Accessories

Ex- Power Supply

Order specifications

EMT423 2 - F - XXX - XX - XXX

Option

Rigid stem / flexible stem

15/76 = Stem length 152 mm and flexible length 762 mm between rigid stem and housing

Pressure range

35 = 0 - 35 bar	3,5C = 0 - 350 bar	1M = 0 - 1000 bar
50 = 0 - 50 bar	5C = 0 - 500 bar	1,4M = 0 - 1400 bar
1C = 0 - 100 bar	7C = 0 - 700 bar	2M = 0 - 2000 bar
2C = 0 - 200 bar		

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

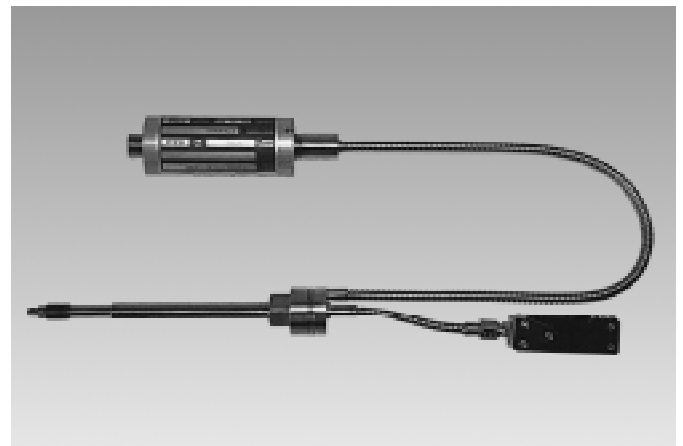
Description

The intrinsically safe melt pressure transducer series EMT based on the proven melt pressure transmitter series MDT. The integrated, PTB-approved, 2-wire mA amplifier converts the process pressure into an proportional output signal. The 2-wire mA-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



Performance Characteristics

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
Temperature measurement	Thermocouple Type J	Burst pressure	6 x pressure range max. 3000 bar
Accuracy	EMT432 2 ± 0,5 % f.s.v. - up to 50 bar ± 1 % f.s.v. EMT463 2 ± 1 % f.s.v.	Material in contact with media	15-5 Mat. No. 1.4545
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		

Electrical Characteristics

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

Temperature influence

Diaphragm

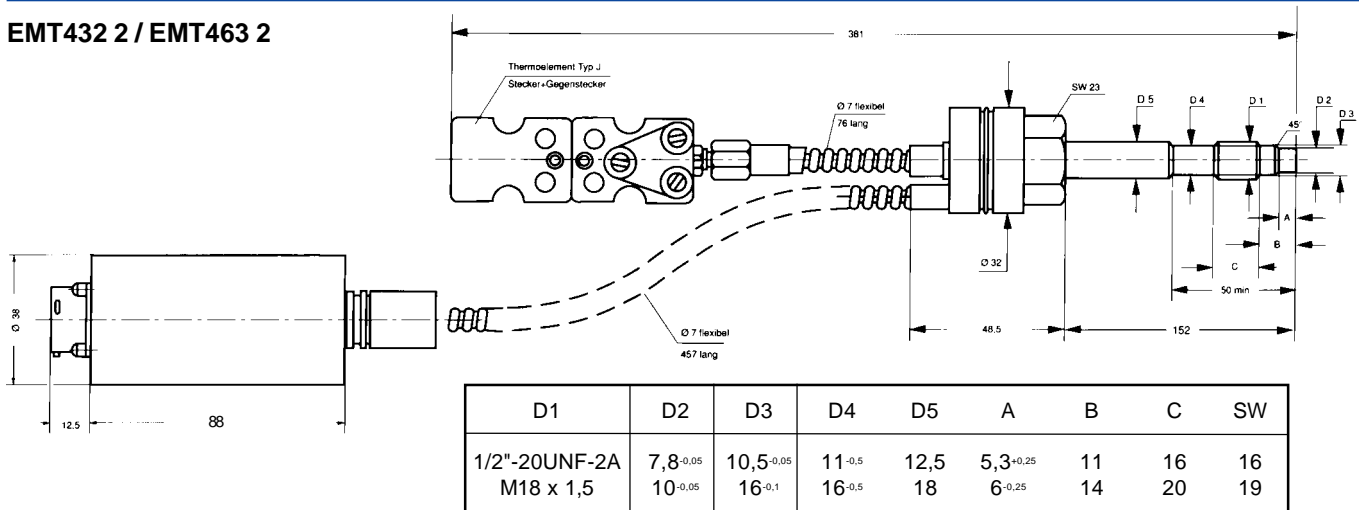
Max. temperature 400 °C
 Zero shift due to temperature change
 EMT432 2 ± 0,2 bar / 10 °C
 EMT463 2 ± 0,4 bar / 10 °C

Housing

Max. temperature 85 °C
 Zero shift due to temperature change ± 0,2 % f.s.v. / 10 °C
 Sensitivity shift due to temperature change
 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

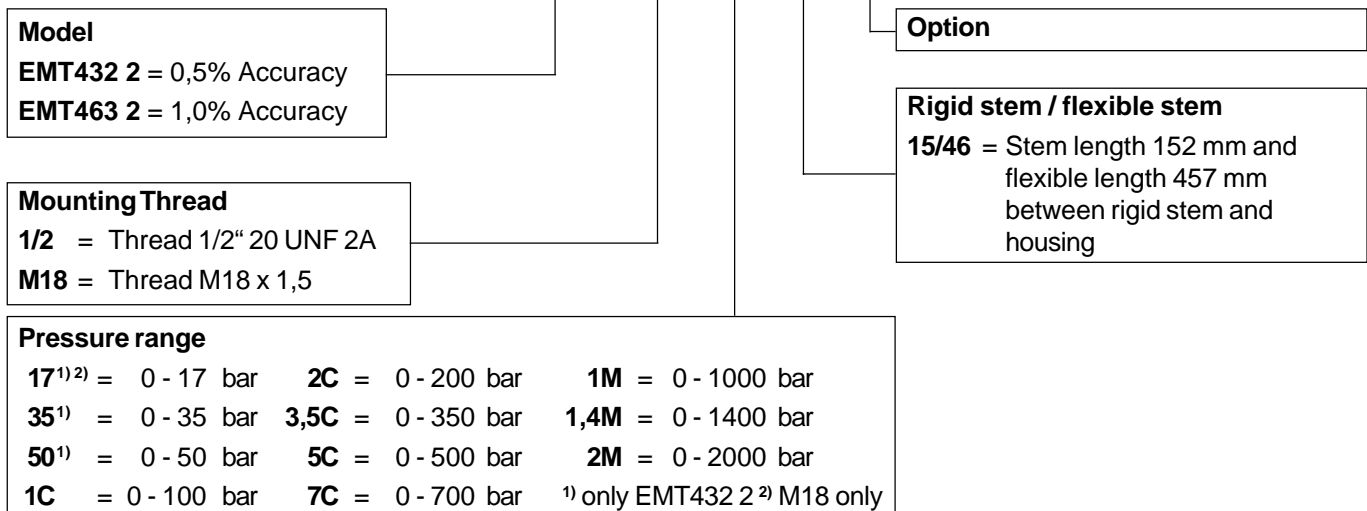


Accessories

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

Order specifications

EMT4XX 2 - XXX - XXX - XX - XXX



Intrinsically safe melt pressure transmitter for pressure measurement in hot media and small areas

Model
EMT435 2
EMT467 2



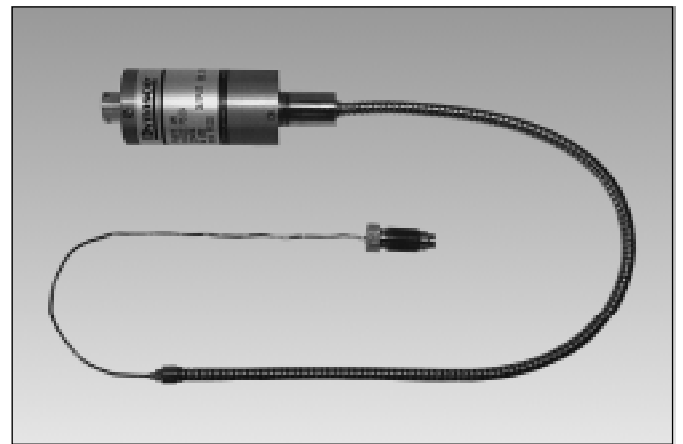
Description

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 diaphragm 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
- Pressure transmitter for small areas
- Flexible capillary between diaphragm and housing
- Electrical built-in calibration



Performance Characteristics

Pressure range	0 - 35 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	EMT435 $2 \pm 0,5$ % f.s.v. - up to 50 bar ± 1 % f.s.v. EMT467 2 ± 1 % f.s.v.	Burst pressure	6 x pressure range max. 3000 bar
Repeatability	EMT435 $2 \pm 0,1$ % f.s.v. - up to 50 bar $\pm 0,2$ % f.s.v. EMT467 $2 \pm 0,2$ % 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

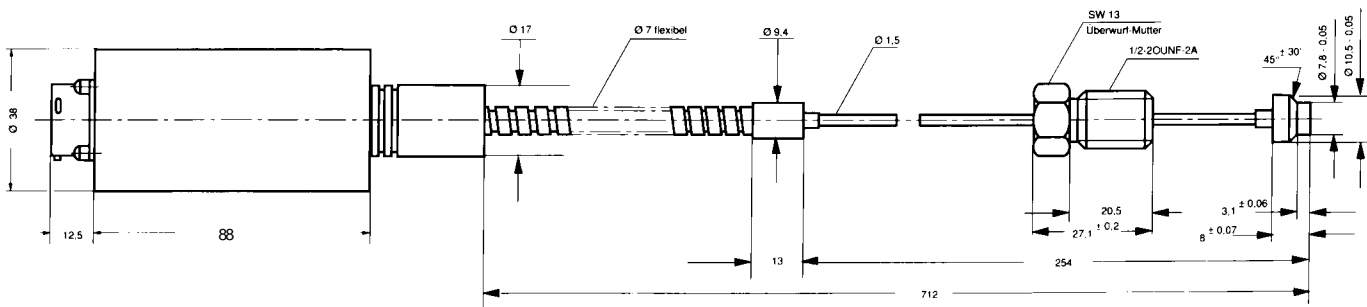
Max. temperature 400 °C
 Zero shift due to temperature change
 EMT435 2 ± 0,2 bar / 10 °C
 EMT467 2 ± 0,4 bar / 10 °C

Housing

Max. temperature 85 °C
 Zero shift due to temperature change ± 0,2 % f.s.v. / 10 °C
 Sensitivity shift due to temperature change
 EMT435 2 ± 0,1% f.s.v./10°C
 -up to 50 bar ± 0,2% f.s.v./10°C
 EMT467 2 ± 0,4% f.s.v./10°C

Dimensions

EMT435 2 / EMT467 2



Accessories

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

Order specifications

EMT4XX 2 - XXX - XXX

Model

EMT435 2 = 0,5% Accuracy
 EMT467 2 = 1,0% Accuracy

Option

Pressure range

35¹⁾ = 0 - 35 bar 3,5C = 0 - 350 bar 1,4M = 0 - 1400 bar
 50¹⁾ = 0 - 50 bar 5C = 0 - 500 bar 2M = 0 - 2000 bar
 1C = 0 - 100 bar 7C = 0 - 700 bar
 2C = 0 - 200 bar 1M = 0 - 1000 bar ¹⁾ EMT435 2 only

Intrinsically safe melt pressure transmitter for pressure measurement in hot media Series EMT450 2 with flange

Description

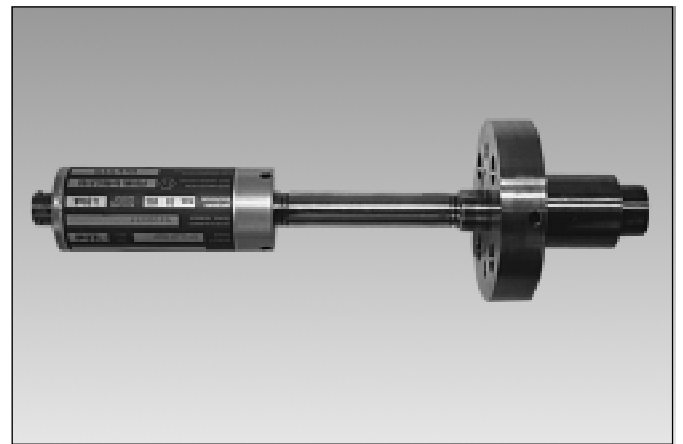
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Many of the features found in Dyniscos standard MDT-series have been incorporated into the EMT-series, including proven bonded strain gauge construction for stable operation, a rigid stem between the amplifier housing and the diaphragm and a flush 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
- Rigid stem between diaphragm and housing
- Rigid stem with flange
- Electrical built-in calibration



Performance Characteristics

Pressure range	0 - 1,75 bar to 0 - 7 bar	Maximum overload (without influencing operating data)	3 x pressure range
Accuracy	± 1,0 % f.s.v.	Burst pressure	6 x pressure range
Repeatability	± 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	< 20 mA
Output signal	4 - 20 mA ($R_L < 750 \Omega$ at 28 V or $< 145 \Omega$ at 15 V)	Zero balance	- 2 % / + 10 % of full scale adjustable
Supply voltage	15 - 28 V DC -15% +0% via approved electrical equipment acc. to EN 50 020	Internal Shunt-Calibration	80 % of full scale ± 10 %
		Isolation resistance	1000 M Ω at 50 V DC

Temperature influence

Diaphragm

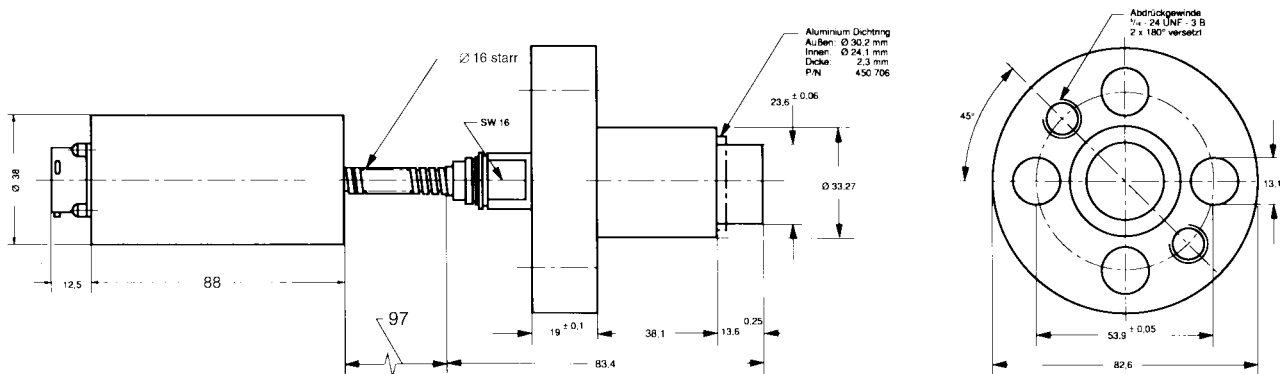
Max. temperature	315 °C
Zero shift due to temperature change	± 0,01 bar / 10°C at 24°C to 232°C ± 0,04 bar / 10°C at 232°C to 315°C

Housing

Max. temperature	85 °C
Zero shift due to temperature change	± 0,2 % f.s.v. / 10 °C
Sensitivity shift due to temperature change	± 0,1 % f.s.v. / 10 °C

Dimensions

EMT450 2



Accessories

Ex-Power Supply

Order specifications

EMT450 2 - F - XXX - XXX

Pressure range

1,75 = 0 - 1,75 bar
3,5 = 0 - 3,5 bar
7 = 0 - 7 bar

Option