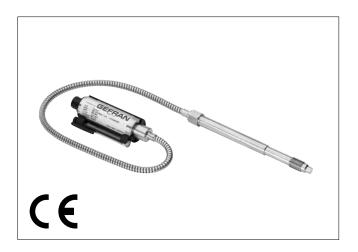
GEFRAN

MELT PRESSURE TRANSMITTERS

ME SERIES

Output 4...20mA



MAIN FEATURES

- Pressure ranges from:
 0-35 to 0-2000 bar / 0-500 to 0-30000 psi
- Accuracy: < ±0.25% FSO (H); < ±0.5% FSO (M)
- · Fluid-filled system for temperature stability
- Mercury filling volume: ME0 (30mm³); ME1, ME2, ME3 (40mm³)
- 1/2-20UNF, M18x1.5 standard threads; other types available on request
- · Autozero function on board / external option
- · Drift Autocompensation function (SP version)
- Standard diaphragm is 15-5 PH stainless steel with GTP coating
- 17-7 PH corrugated diaphragm with GTP coating for ranges below 100 bar-1500 psi

GTP (advanced protection)
Coating with high resistance against corrosion, abrasion and high temperature

AUTOZERO FUNCTION

All signal variations in the absence of pressure can be eliminated by using the Autozero function.

This function is activated by closing a magnetic contact located on the transmitter housing.

The procedure is permitted only with pressure at zero.

AUTOCOMPENSATES INFLUENCE OF MELT TEMPERATURE

Thanks to internal self-compensation, the MSP series transmitter cancels the effect of pressure signal variation caused by variation of Melt temperature.

This reduces at the minimum the read error caused by heating of the filling fluid (typical of all sensors built with "filled" technology).

The ME series of Gefran, are pressure transmitters for using in High temperature environment.

The main characteristic of this series is the capability to read temperature of the media up to 400°C.

The constructive principle is based on the hydraulic trasmission of the pressure.

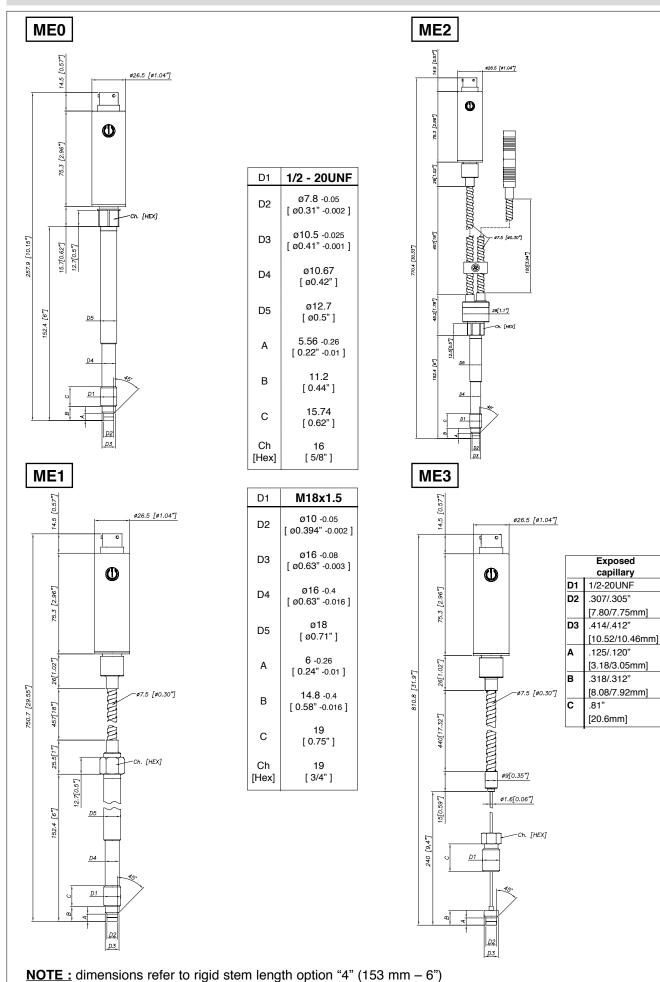
The fluid-filled system assures the temperature stability. The phisical measure is transformed in a electrical measure by means the strain-gauge technology.

TECHNICAL SPECIFICATIONS

Accuracy (1)	H <±0.25%FSO (1002000 bar) M <±0.5%FSO (352000 bar)
Resolution	Infinite
Measurement range	035 to 02000bar 0500 to 030000psi
Maximum overpressure (without degrading performances)	2 x FS 1.5 x FS above 1000bar/15000psi
Measurement principle	Extensimetric
Power supply	1030Vdc
Maximum current absorption	32mA
Insulation resistance (at 50Vdc)	>1000 MOhm
Output signal Full Scale (FSO)	20mA
Zero balance (tollerance ± 0.25% FSO)	4mA
Zero signals adjustment (tollerance ± 0.25% FSO)	"Autozero" function
Span adjustment within ± 5% FSO	See Manual
Maximum allowed load	See diagram
Response time (1090% FSO)	~ 1ms
Output noise (RMS 10-400Hz)	< 0.025% FSO
Calibration signal	80% FSO
Output short circuit ingress and reverse polarity protection	YES
Compensed temperature range	0+85°C
Operating temperature range	-30+105°C
Storage temperature range	-40+125°C
Thermal drift in compesated range: Zero / Calibration / Sensibility	< 0.02% FSO/°C
Diaphragm maximum temperature	400°C / 750°F
Zero drift due to change in process temperature (zero)	< 0.02 bar/°C
Zero drift temperature for Autocompensated version (SP) within the temperature range 20°C-400°C inclusive the drift temperature of the housing	< 0.003 bar/°C 100 ≤ p < 500 bar 0.0014 %FS/°C p ≥ 500 bar
Standard material in contact with process medium	Diaphragm: • 15-5 PH with GTP coating • 17-7 PH corrugated diaphragm with GTP coating for ranges <100 bar (1500psi) Stem: • 17-4 PH
Thermocouple (model ME2)	STD: type "J" (isolated junction)
Protection degree (with 6-pole female connector)	IP65

 $\label{eq:FSO} FSO = Full scale output: (1) BFSL method (Best Fit Straight Line): includes combined effects of Non-Linearity, Hysteresis and Repeatability.$

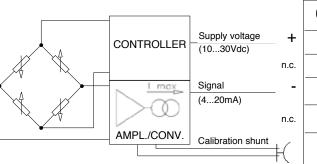
MECHANICAL DIMENSIONS



WARNING: For installation use a maximum tightening torque of 56 Nm (500 in-lb)

ELECTRICAL CONNECTIONS

CURRENT OUTPUT (4...20mA, two wires)



6 pin connector VPT07RA10-6PT2

MAGNETIC AUTOZERO

6-pin	8-pin
Α	В
С	Α
В	D
D	С
E-F	E-F
	G - H

Shield drain wire is tied to connector via cable clamp

EXTERNAL AUTOZERO

	6-pin	8-pin
+	Α	В
n.c.	С	Α
	В	D
n.c.	D	С
+(E-F	E-F
n.c.		G - H

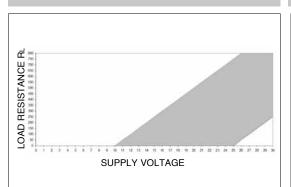


(PT02A-10-6P)

8 pin connector PC02E-12-8P Bendix



LOAD DIAGRAM



n.c.

The diagram shows the optimum ratio between the load and supply voltage of the 4...20mA transmitter.

For a correct use, choose any combination of load resistance and supply voltage, in the shaded area.

AUTOZERO FUNCTION

Supply voltage

(10...30Vdc)

Signal

(4...20mA)

Autozero



The Autozero function is activated through a magnetic contact (external magnet supplied with the sensor).

See the manual for a complete Autozero function explanation.

Cable color code

Conn. Wire

ACCESSORIES

Connectors

6-pin mating connector (IP65 protection degree) 8-pin mating connector Extension cables 6-pin connector with 8m (25ft) cable 6-pin connector with 15m (50ft) cable 6-pin connector with 25m (75ft) cable C25WLS 6-pin connector with 25m (75ft) cable

6-pin connector with 30m (100ft) cable

Other	iengths
	

Accessories
Mounting bracket
Dummy plug for 1/2-20UNF
Dummy plug for M18x1.5
Drill kit for 1/2-20UNF
Drill kit for M18x1.5
Cleaning kit for 1/2-20UNF
Cleaning kit for M18x1.5
Fixing pen clip
Autozero pen
Thermocouple for ME2 model

Type "J" (153mm - 6" stem)

C08WLS	Α	Red
C15WLS	В	Black
C25WLS	C	White
C30WLS	_	
	D	Green
consult factory	Е	Blue
consult factory	F	Orange
SF18		
SC12		
SC18		
KF12		
KF18		
CT12		
CT18		
PKIT309		
PKIT312		
INITOIL		

ORDER CODE 000= Standard version Autocompensation (*) SP Special or customized versions Standard available on request (*) available for ranges > to 100bar (*) not available for version ME3 External autozero Magnetic autozero **OUTPUT SIGNAL** 4...20mA Ε **FLEXIBLE LENGTH** (mm / inches) CONFIGURATION Rigid stem Standard (ME0) Rigid stem + flexible 1 0 none 2 With thermocouple Standard (ME1, ME2) 3 Exposed capillary 457mm 610mm 24' CONNECTOR 30' F 760mm Standard Standard (ME3) 6 pin 711mm 28" 8 pin 8 Available on request Α 76mm **ACCURACY CLASS** В 152mm 6 0.25% FSO 12' (ranges ≥ 100 bar/1500 psi) C 300mm G 914mm 36 0.5% FSO Н 1067mm 42' **RANGE** 1220mm 48' 54' 1372mm bar 1520mm 60" K B35U 500 P₀₅C 35 B05D 750 P75D 50 B07D 1000 P01M 70 **RIGID STEM LENGTH** 100 B01C 1500 P15C (mm / inches) B02C 3000 200 **P03M** Standard (ME0, ME1, ME2) B35D 350 5000 P05M 153mm 500 B05C 7500 P75C 5 318mm 12.5" 700 B07C 10000 **P10M** Standard (ME3) 0 none 1000 B01M 15000 P15M Available on request 20000 **P20M** 1400 B14C 38mm B02M 30000 2000 **P30M** 50mm 2" 3 76mm 3" 6 350mm 14' Examples 400mm 16' 7 8 456mm 18' ME2-6-M-B07C-1-4-D-000 Melt pressure transmitter with type "J" thermocouple, 4...20mA output, **THREAD** 6-pin connector, 1/2-20UNF thread, 700 bar full scale, 0,5% accuracy Standard class, 153 mm (6") rigid stem, 457mm (18") flexible capillary. 1/2 - 20 UNF MSPE0-6-M-P03M-1-4-0-000 M18 x 1.5 Melt pressure transmitter autocompensated version, rigid stem, 4...20mA output, 6-pin connector, 1/2-20UNF thread, 3000 psi full scale, 0,5% accuracy class, 153 mm (6") rigid stem.

Sensors are manufactured in compliance with:

- EMC 2004/108/CE compatibility directive
- RoHS 2002/95/CE directive

Electrical installation requirements and Conformity certificate are available on our web site: www.gefran.com

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GEFRAN reserves the right to make any kind of design or functional modification at any moment without prior notice.



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