GEFRAN

OIL FILLED MELT PRESSURE TRANSMITTERS FOR HAZARDOUS AREAS

WX SERIES

4-20mA Output



MAIN FEATURES

- Pressure ranges: 0-35 to 0-1000bar / 0-500 to 0-15000psi
- Extensimetric measurement principle with Wheatstone bridge
- Precision: <±0.25% FSO (H); <±0.5% FSO (M)
- · Calibration signal 80% FSO internally generated
- Filling with FDA-approved oil CFR 178.3620 and CFR 178.878
- · Completely interchangeable with all existing products
- Protection level: IP65 (6-pin connector)
- Standard threading 1/2-20UNF, M18x1.5, other versions on request
- 17-7 PH stainless steel diaphragm with GTP
- **WX0** The rigid rod configuration provides fast and easy installation.
- **WX1** The flexible rod configuration is suitable for applications demanding greater thermal isolation and where installation would otherwise be difficult.
- **WX2** This configuration lets you measure process pressure and temperature at the same point with a single installation.
- **WX3** The configuration with exposed tip is ideal for applications in limited space.

Main intrinsic safety characteristics

Transmitter designed and produced in compliance with Directive 94/9/CE ATEX and according to European standards. For the second group (II-surfaces), category 1, explosive atmosphere with presence of gases, fumes or mists (G) protection mode Ex ia IIC T5, T4 room temperature -20°C/+55°C/+60°C/+70°C

Maximum voltage	30 V
Maximum current	100 mA
Maximum power	0,75 W
Equivalent inductance (*)	0,23 mH
Equivalent capacity (*)	26 nF

(*) includes inductance levels and capacity of a cable: (typical L 1microH/m and typical C 100pF/m) with maximum length 15m.

The WX 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 315°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

Rated precision, including effects of Linearity, Repeatability and Hysteresis	H <±0.25%FSO (3501000 bar) M <±0.5%FSO (351000 bar)	
Resolution	Infinite	
Pressure ranges	035 to 01000bar 0500 to 015000psi	
Maximum applicable pressure	2 x FS 1,5 x FS oltre i 500bar/7500psi	
Principle of measurement	Strain gauge	
Power supply	1230Vdc	
Maximum input	30mA	
Isolation resistance (at 50 Vdc)	>1000 MOhm	
Signal at rated pressure (FSO)	20mA	
Zero balancing	4mA	
Calibration: Rated pressure Room pressure	5% FSO min. 10bar (150psi)	
Maximum load	see diagram (page 3)	
Response time (10 at 90% FSO)	~ 4ms	
Output noise (RMS 10-400Hz)	< 0.05% FSO	
Calibration signal	80% FSO	
Protection against overvoltages and power supply polarity reverse	YES	
Protection against pulses injected on output	YES in compliance with 89/336/EEC	
Temperature range of Strain Gauge Housing	-20+70°C -4158°F	
Thermal drift in compensated range: Zero/Calibrat/Sensitivity	< 0.02% FSO/°C < 0.01% FSO/°F	
Maximum temperature of diaphragm	315°C 600°F	
Influence due to fluid temperature change (zero)	0.04 bar/°C 30 psi/100°F	
Standard Material in contact with process medium	Diaphragm: • 17-7PH corrugated diaphragm with GTP Stem	
	• 17-4 PH	
Thermocouple (model WX2)	STD: type "J" (isolated junction)	
Protection level (with 6-pin female connector installed)	IP65	
Electrical connections	6-pin conn. VPT07RA10-6PT (PT02A-10-6P) 8-pin conn. PC02E-12-8P	

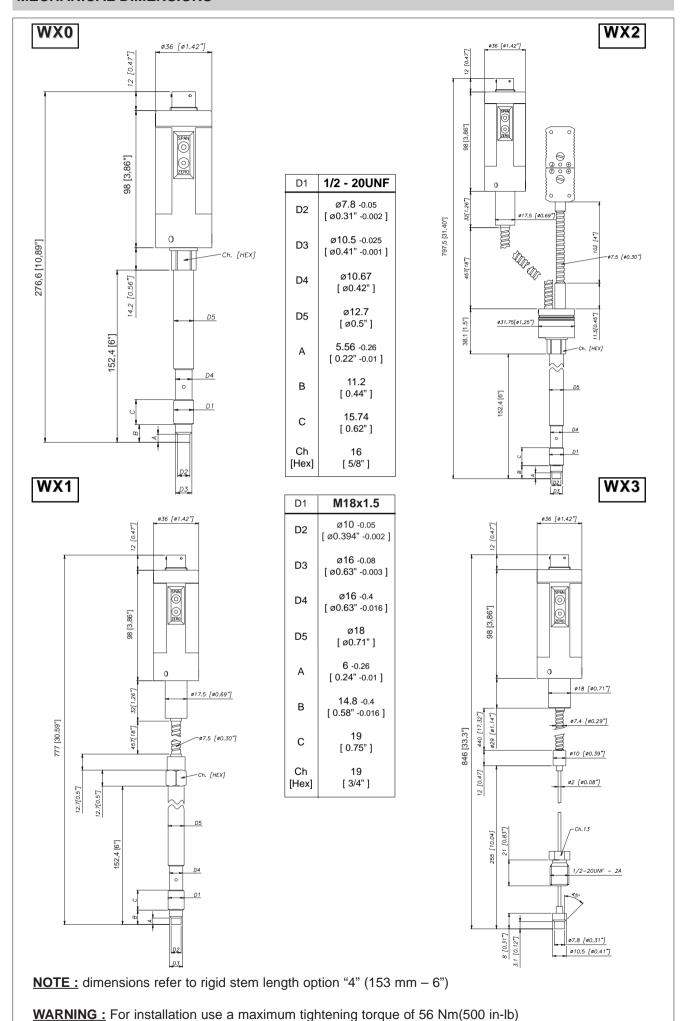
FSO = Full Scale Output (Signal at rated pressure)

Power at zener barrier or active barrier. For version WX2, the thermocouple must be connected to EX-i circuits with devices assigned to galvanic separation and with protection mode [EX ia] IIC.



EC-Type Examination Certificate number: CESI 02 ATEX 107

MECHANICAL DIMENSIONS



ELECTRICAL CHARACTERISTICS AND TEMPERATURE CLASSES

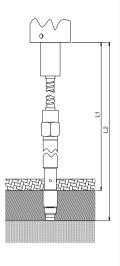
MODEL	(*) LEVEL L2	(*) LEVEL L1	TEMPERATURE CLASSES	ROOM TEMPERATURE
WX0	> 165mm	> 125mm	T4	-20+60°C
WX1	> 665mm	> 625mm	T5	-20+55°C
			T4	-20+70°C
WX2	> 665mm	> 625mm	T5	-20+55°C
			T4	-20+70°C
WX3	> 665mm	> 625mm	T5	-20+55°C
			T4	-20+70°C

(*) with the level (L) in fig. 1, the table sets the minimum distance that the electrical circuit has to maintain from the block at high temperature.

thermal isolating material with adequate thickness for the process temperature

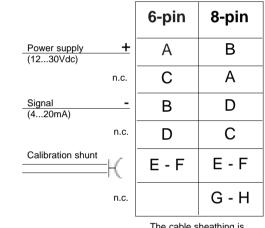
pressure transmitter housing block

fluid at temperature (315°C)

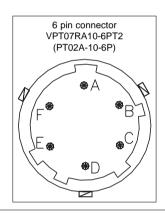


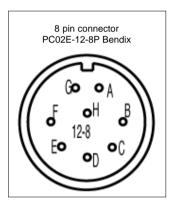
ELECTRICAL CONNECTIONS

Output in current (4...20mA 2 wires)



The cable sheathing is connected to the transducer body



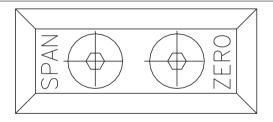


LOAD DIAGRAM (current output)

OAD RESISTANCE RL 800 750— 600 AREA OF **POSSIBLE** 400 USE 10 15 20 25 30 **VOLTAGE**

The diagram shows the best ratio of load to power supply for transmitters with 4...20mA output. For correct function, use a combination of load resistance and voltage that stays in the shaded zone.

SETTINGS

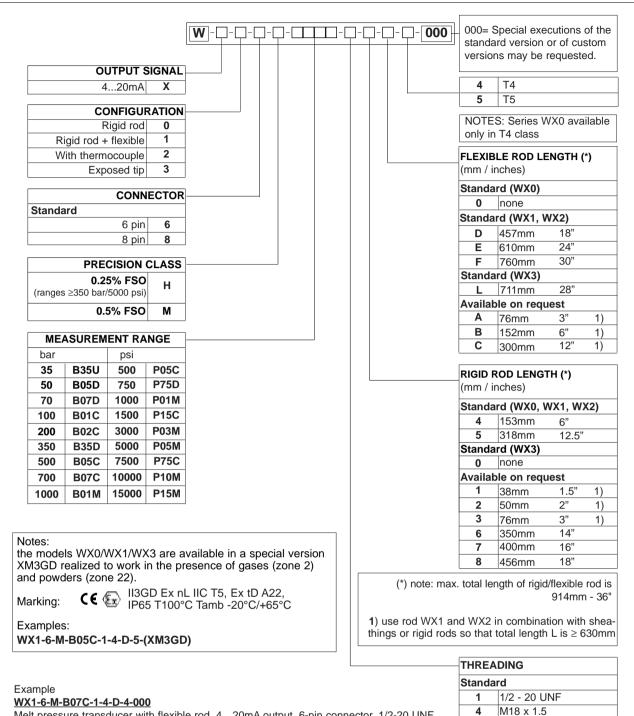


The signal setting to room pressure (ZERO) and the setting to rated pressure (SPAN) can be made with the appropriate trimmers, accessed inside the transmitter after removing the two fastening screws.

The SPAN setting is made during production and must not be changed.

Accessories		Extension cables	
Fastening bracket	SF18	6-pin connector with 3mt Atex cable	PCAV221
Protection plug for 1/2-20 UNF	SC12	6-pin connector with 4mt Atex cable	PCAV104
Protection plug for M18x1.5	SC18	6-pin connector with 5mt Atex cable	PCAV105
Drill kit for 1/2 -20 UNF	KF12	6-pin connector with 10mt Atex cable	PCAV106
Drill kit for M18 x 1.5	KF18	o pin defined of with Territ Attex easie	1 0/11 100
Cleaning kit for 1/2-20 UNF	CT12	Thermocouples for model WX2	
Cleaning kit for M18x1.5	CT18	Type "J" (for rigid rod 153mm - 6")	TTER 718

ORDER CODE



Melt pressure transducer with flexible rod, 4...20mA output, 6-pin connector, 1/2-20 UNF threading, pressure range 700 bar, precision class 0.5%, 153 mm (6") rigid rod, 457 mm (18") flexible rod, temperature class T4 (-20°C...+70°C).

Sensors are manufactured in compliance with:

- EMC 2004/108/CE compatibility directive
- RoHS 2002/95/CE directive
- ATEX 94/9/CE

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



The Melt pressure transmitter/transducer are available with GOST-R certification. The request of this version must be specified on the order.

GEFRAN spa reserves the right to make aesthetic or functional changes at any time and without notice.

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