GEFRAN

OIL-FILLED MELT PRESSURE TRANSDUCERS W3 SERIES *mV/V output*

The W3 series of Gefran, are pressure transducers 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.

MAIN FEATURES

- Pressure ranges from:
  0-35 to 0-1000 bar / 0-500 to 0-15000 psi
- Accuracy: <±0.25% FSO (H); <±0.5% FSO (M)
- Fluid-filled system for temperature stability
- Oil filling meets FDA requirements CFR 178.3620 and CFR 172.878
- Oil filling volume:
  W30 (30mm^3); W31-W32-W33 (40mm^3)
- 1/2-20UNF, M18x1.5, standard threads; other types available on request
- Standard diaphragm is a 17-7 PH stainless steel GTP coating corrugated diaphragm

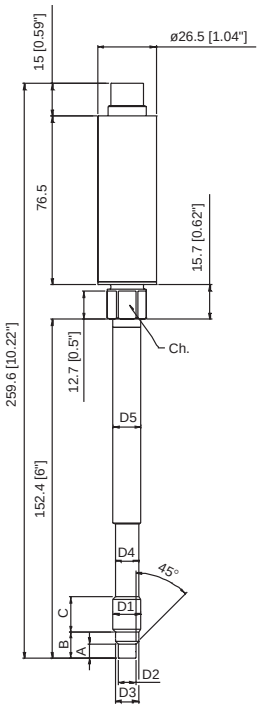
GTP (advanced protection)
Coating with high resistance against corrosion, abrasion and high temperature

TECHNICAL SPECIFICATIONS

Accuracy (1)	**H** <±0.25%FSO (350...1000 bar) **M** <±0.5%FSO (35...1000 bar)
Resolution	Infinite
Measurement range	0..35 to 0..1000bar 0..500 to 0..15000psi
Maximum overpressure	2 x FS 1.5 x FS above 500bar/7500psi
Measurement principle	Strain gage Wheatstone bridge
Supply voltage	6..12Vdc (10Vdc typical)
Strain gage bridge resistance	350 Ohm (550 Ohm below 100bar - 1500psi)
Isolation resistance (at 50Vdc)	>1000 MOhm
Full Scale Output (FSO) (toll. 0.5% FSO)	2.5 mV/V (option 2) 3.33 mV/V (option 3)
Zero balance	±0.5%
Calibration signal	80% FSO
Strain gauge housing compensated temperature range	0...+100°C 32...212°F
Maximum housing temperature range	-30...+120°C -22...250°F
Thermal drift in compensated range Zero/Calibr./Sens.	< 0.02% FSO/°C < 0.01% FSO/°F
Diaphragm maximum temperature	315°C 600°F
Zero drift due to change in process temperature	0.04 bar/°C 30 psi/100°F
Material in contact - Standard with process medium	17-7PH corrugated diaphragm with GTP
Thermocouple (model W32)	STD : type "J" (isolated junction)
Protection degree (with 6-pin mating connector)	IP65
Electrical connections	6-pin Conn. VPT07RA10-6PT (PT02A-10-6P) 8-pin Conn. PC02E-12-8P

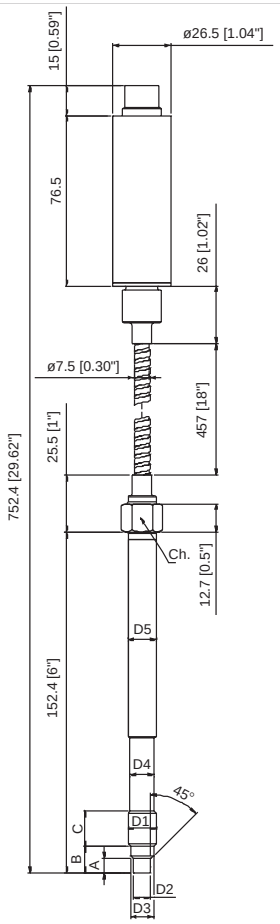
FSO = Full Scale Output
(1) BFSL method (Best Fit Straight Line): includes combined effects of Non-Linearity, Hysteresis and Repeatability

MECHANICAL DIMENSIONS



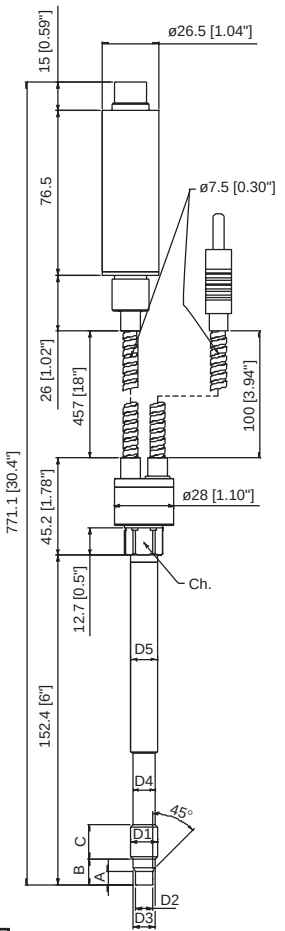
W30

D1	**1/2 - 20UNF**
D2	ø7.8 -0.05 [ø0.31" -0.002]
D3	ø10.5 -0.025 [ø0.41" -0.001]
D4	ø10.67 [ø0.42"]
D5	ø12.7 [ø0.5"]
A	5.56 -0.26 [0.22" -0.01]
B	11.2 [0.44"]
C	15.74 [0.62"]
Ch [Hex]	16 [5/8"]



W31

D1	**M18x1.5**
D2	ø10 -0.05 [ø0.394" -0.002]
D3	ø16 -0.08 [ø0.63" -0.003]
D4	ø16 -0.4 [ø0.63" -0.016]
D5	ø18 [ø0.71"]
A	6 -0.26 [0.24" -0.01]
B	14.8 -0.4 [0.58" -0.016]
C	19 [0.75"]
Ch [Hex]	19 [3/4"]



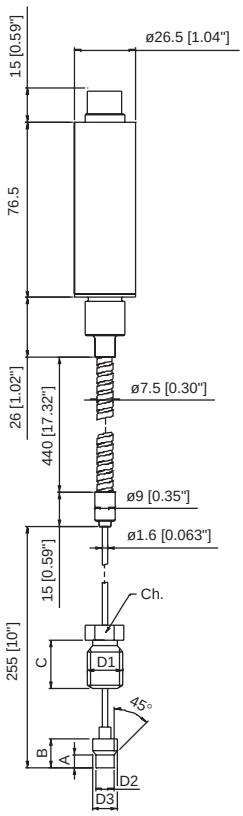
W32

NOTE :

Dimensions refer to rigid stem length option "4" (153mm - 6")

WARNING :

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

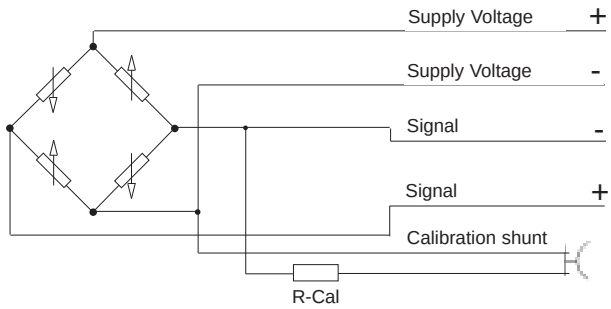


W33

Capillare esposto Exposed capillary	
D1	1/2-20UNF
D2	.307/.305" [7.80/7.75mm]
D3	.414/.412" [10.52/10.46mm]
A	.125/.120" [3.18/3.05mm]
B	.318/.312" [8.08/7.92mm]
C	.81" [20.6mm]

ELECTRICAL CONNECTIONS

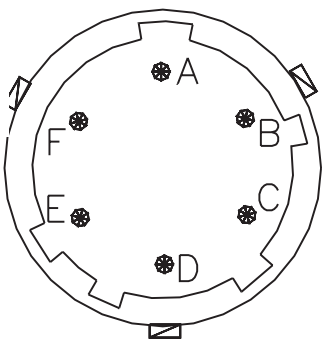
mV/V OUTPUT



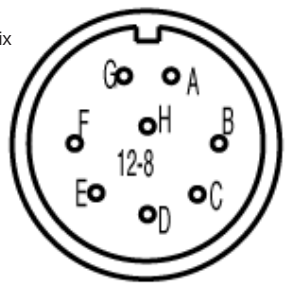
6-pin	8-pin
C	A
D	C
B	D
A	B
E - F	E - F
	G - H

Connect the cable sheathing to the side of the instrument.

6 pin connector
VPT07RA10-6PT2
(PT02A-10-6P)



8 pin connector
PC02E-12-8P Bendix



ACCESSORIES

Connectors

6-pin mating connector (IP65 protection degree)	**CON300**
8-pin mating connector	**CON307**

Extension cables

6-pin connector with 8m (25ft) cable	**C08W**
6-pin connector with 15m (50ft) cable	**C15W**
6-pin connector with 25m (75ft) cable	**C25W**
6-pin connector with 30m (100ft) cable	**C30W**
Other lengths	**consult factory**

Cable color code	
Conn.	**Wire**
A	Red
B	Black
C	White
D	Green
E	Blue
F	Orange
G	n.c.
H	n.c.

Accessories

Mounting bracket	**SF18**
Dummy plug for 1/2-20UNF	**SC12**
Dummy plug for M18x1.5	**SC18**
Drill kit for 1/2-20UNF	**KF12**
Drill kit for M18x1.5	**KF18**
Cleaning kit for 1/2-20UNF	**CT12**
Cleaning kit for M18x1.5	**CT18**

Thermocouple for W32 model

Type “J” (153mm - 6” stem)	**TTER601**

ORDER CODE

000 = Standard version
Special or customized versions available on request

OUTPUT SIGNAL	
2.5 mV/V	**2**
3.33 mV/V	**3**

VERSION	
Rigid stem	**0**
Rigid stem + flexible	**1**
With thermocouple	**2**
Exposed capillary	**3**

CONNECTOR	
Standard	
6 pin	**6**
8 pin	**8**

ACCURACY CLASS	
0.25% FSO (ranges ≥ 350 bar/5000 psi)	**H**
0.5% FSO	**M**

RANGE			
bar		psi	
35	**B35U**	**500**	**P05C**
50	**B05D**	**750**	**P75D**
70	**B07D**	**1000**	**P01M**
100	**B01C**	**1500**	**P15C**
200	**B02C**	**3000**	**P03M**
350	**B35D**	**5000**	**P05M**
500	**B05C**	**7500**	**P75C**
700	**B07C**	**10000**	**P10M**
1000	**B01M**	**15000**	**P15M**

FLEXIBLE LENGTH (*) (mm / inches)		
Standard (W30)		
0	none	
Standard (W31, W32)		
D	457mm	18”
E	610mm	24”
F	760mm	30”
Standard (W33)		
L	711mm	28”
Available on request		
A	76mm	3”
B	152mm	6”
C	300mm	12”

RIGID STEM LENGTH (*) (mm / inches)		
Standard (W30, W31, W32)		
4	153mm	6”
5	318mm	12.5”
Standard (W33)		
0	none	
Available on request		
1	38mm	1.5”
2	50mm	2”
3	76mm	3”
6	350mm	14”
7	400mm	16”
8	456mm	18”

(*) Note : maximum combined stem/flex length is 914mm - 36”

THREAD	
Standard	
1	1/2 - 20 UNF
4	M18 x 1.5

Examples

W32-6-M-B07C-1-4-D-000
Melt pressure transducer with type “J” thermocouple, 3.33 mV/V output, 6-pin connector, 1/2-20UNF thread, 700bar full scale, 0.5 % accuracy class, 153 mm (6”) rigid stem, 457mm (18”) flexible capillary.

W20-8-M-P03M-1-4-0-000
Melt pressure transducer, rigid stem, 2.5 mV/V output, 8-pin connector, 1/2-20UNF thread, 3000psi full scale, 0.5 % accuracy class, 153 mm (6”) rigid stem

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