

The WN 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 transmission of the pressure.

The fluid-filled system assures the temperature stability. The physical 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: $\pm 0.25\%$ FSO (H); $\pm 0.5\%$ FSO (M)
- Fluid-filled system for temperature stability
- Oil filling meets FDA requirements CFR 178.3620 and CFR 172.878
- Oil filling volume:
WN0 (30mm³); WN1, WN2, WN3 (40mm³)
- 1/2-20UNF, M18x1.5 standard threads; other types available on request
- Other diaphragms available on request
- Autozero function on board / external option
- Drift Autocompensation function (SP version)
- 17-7 PH corrugated diaphragm with GTP+ coating

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 WSP 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).

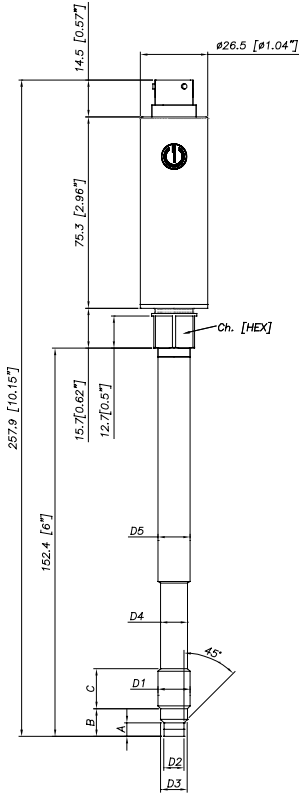
TECHNICAL SPECIFICATIONS

Accuracy (1)	H $\pm 0.25\%$ FSO (100...1000 bar) M $\pm 0.5\%$ FSO (35...1000 bar)
Resolution	Infinite
Measurement range	0..35 to 0..1000bar 0..500 to 0..15000psi
Maximum overpressure (without degrading performances)	2 x FS 1.5 x FS above 500bar/7500psi
Measurement principle	Extensimetric
Power supply	15...30Vdc N, C 10...30Vdc B, M -15...+15Vdc H, L
Maximum current absorption	25mA
Insulation resistance (at 50Vdc)	>1000 MOhm
Output signal Full Scale (FSO)	5Vdc (M, H) - 10Vdc (N, L) 5,1Vdc (B) - 10,1Vdc (C)
Zero balance (tolerance $\pm 0.25\%$ FSO)	0Vdc (M, N, H, L) 0,1Vdc (B, C)
Zero signals adjustment (tolerance $\pm 0.25\%$ FSO)	"Autozero" function
Span adjustment within $\pm 5\%$ FSO	See Manual
Maximum allowed load	1mA
Response time (10...90% FSO)	~ 1ms
Output noise (RMS 10-400Hz)	<math>< 0.025\%</math> FSO
Calibration signal	80% FSO
Output short circuit ingress and reverse polarity protection	YES
Compensated temperature range	0...+85°C
Operating temperature range	-30...+105°C
Storage temperature range	-40...+125°C
Thermal drift in compensated range: Zero / Calibration / Sensibility	<math>< 0.02\%</math> FSO/°C
Diaphragm maximum temperature	315°C/600°F
Zero drift due to change in process temperature (zero)	<math>< 0.04</math> bar/°C
Zero drift temperature for Auto-compensated version (SP) within the temperature range 20°C-315°C inclusive the drift temperature of the housing	<math>< 0.005</math> bar/°C 100 $\leq p < 500$ bar 0,0022 %FS/°C $p \geq 500$ bar
Standard Material in contact with process medium	Diaphragm: • 17-7PH corrugated diaphragm with GTP+ Stem • 17-4 PH
Thermocouple (model WN2)	STD: type "J" (isolated junction)
Protection degree (with 6-pole female connector)	IP65

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

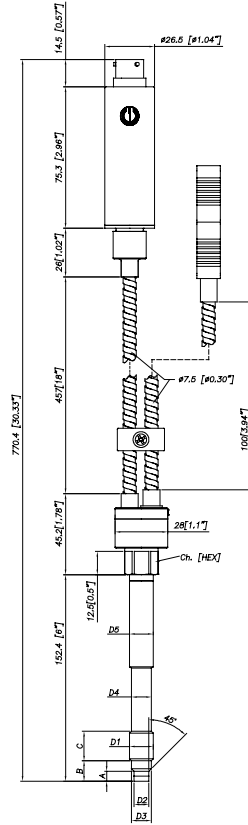
MECHANICAL DIMENSIONS

WN0

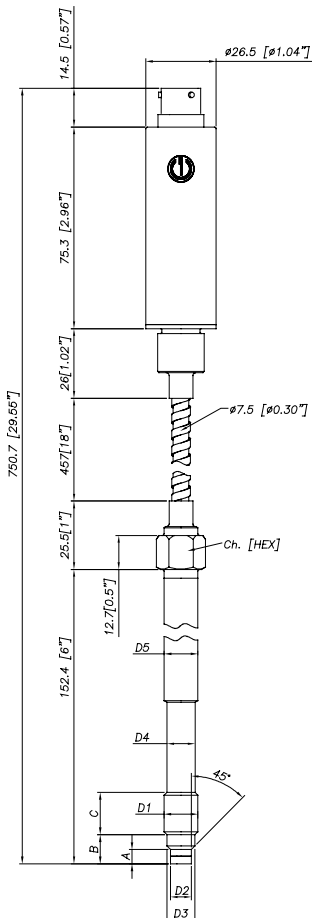


D1	1/2 - 20UNF
D2	$\phi 7.8 -0.05$ [$\phi 0.31$ " -0.002]
D3	$\phi 10.5 -0.025$ [$\phi 0.41$ " -0.001]
D4	$\phi 10.67$ [$\phi 0.42$ "]
D5	$\phi 12.7$ [$\phi 0.5$ "]
A	5.56 -0.26 [0.22" -0.01]
B	11.2 [0.44"]
C	15.74 [0.62"]
Ch [Hex]	16 [5/8"]

WN2

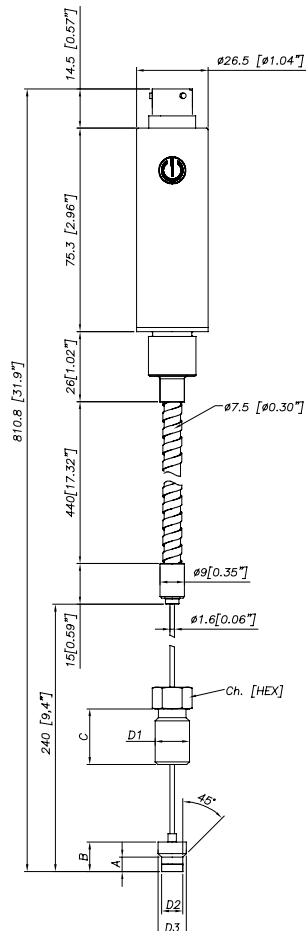


WN1



D1	M18x1.5
D2	$\phi 10 -0.05$ [$\phi 0.394$ " -0.002]
D3	$\phi 16 -0.08$ [$\phi 0.63$ " -0.003]
D4	$\phi 16 -0.4$ [$\phi 0.63$ " -0.016]
D5	$\phi 18$ [$\phi 0.71$ "]
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"]

WN3



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]

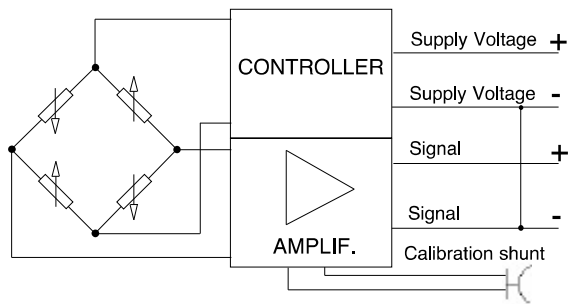
NOTE : dimensions refer to rigid stem length option "4" (153 mm – 6")

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

ELECTRICAL CONNECTIONS

VOLTAGE OUTPUT (M, N, B, C)

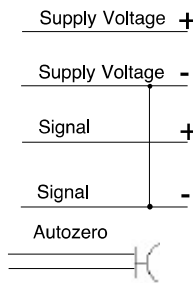
Power supply 15..30Vdc



MAGNETIC AUTOZERO

6-pin	
C	Supply Voltage +
D	Supply Voltage -
A	Signal +
B	Signal -
E - F	Autozero

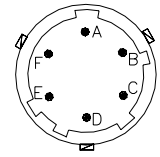
Shield drain wire is tied to connector via cable clamp



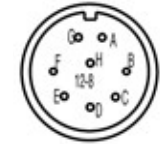
EXTERNAL AUTOZERO

6-pin	
C	Supply Voltage +
D	Supply Voltage -
A	Signal +
B	Signal -
E - F	Autozero

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



8 pin connector PC02E-12-8P Bendix

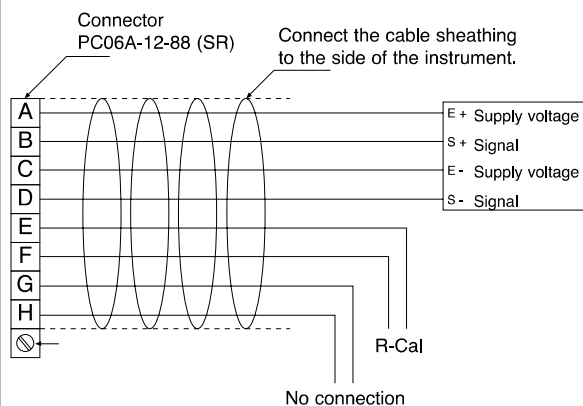


VOLTAGE OUTPUT (H, L)

Power supply -15..+15Vdc (*)

(*) The Pin B of the connector must be connected to the common of the ± 15Vdc supply

8-pin connector



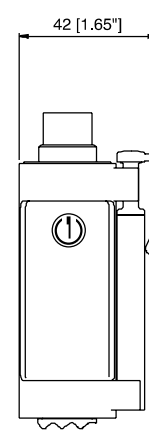
Magnetic Autozero version

A = Excitation + (white)
 B = Signal + (red)
 C = Excitation - (green)
 D = Signal - (black)
 E = R-Cal (blue)
 F = R-Cal (brown)
 G = no connection
 H = no connection

External Autozero version

A = Excitation + (white)
 B = Signal + (red)
 C = Excitation - (green)
 D = Signal - (black)
 E = Autozero (blue)
 F = Autozero (brown)
 G = no connection
 H = no connection

AUTOZERO FUNCTION



The Autozero function is activated through a magnetic contact (external magnet supplied with the sensor). See the manual for a complete Autozero function explanation.

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
 6-pin connector with 30m (100ft) cable
 8-pin connector with 8m (25ft) cable
 8-pin connector with 15m (50ft) cable
 8-pin connector with 25m (75ft) cable
 8-pin connector with 30m (100ft) cable
 Other lengths

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

CON300
 CON307

C08WLS
 C15WLS
 C25WLS
 C30WLS
 E08WLS
 E15WLS
 E25WLS
 E30WLS
 consult factory

SF18
 SC12
 SC18
 KF12
 KF18
 CT12
 CT18
 PKIT309
 PKIT312

Cable color code 6 wires		Cable color code 8 wires	
Conn.	Wire	Conn.	Wire
A	Red	A	White
B	Black	B	Red
C	White	C	Green
D	Green	D	Black
E	Blue	E	Blue
F	Orange	F	Orange
		G	n.c.
		H	n.c.

Thermocouple for WN2 model
 Type "J" (153mm - 6" stem)

TTER 601

