



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 (30mm<sup>3</sup>); WN1, WN2, WN3 (40mm<sup>3</sup>)
- 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)	< 0.025% 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	< 0.02% FSO/°C
Diaphragm maximum temperature	315°C/600°F
Zero drift due to change in process temperature (zero)	< 0.04 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	< 0.005 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.