PRESSURE TRANSMITTER

Model 780



FEATURES

- 2000V surge protected
- NACE compatible
- TURCK ® connector, flying leads or jacketed cable are available
- <1.3 mA current consumption
- All welded construction
- Small size
  - Diameter 1.375”
  - Length 3.88”
- Watertight/submersible design (PSIS)
- 1-5 volt output
- Well suited for use with the Viatran Networking System (VNS)

LOW POWER CONSUMPTION

The Viatran Low Power Pressure Transmitter is the result of 40 years experience in the Oil and Gas arena. Rely on Viatran to provide expertise to assist you in recovering oil and gas from remote areas where power is scarce. Built-in 2000 volt surge protection virtually eliminates potential loss of measurement in the event of an electrical storm.

WIRELESS OPTION

Do you need to know what is happening at the wellhead? Do trips to a large field with multiple wells eat up your employees’ valuable time by visiting a well only to find out that it is producing? Has well productivity been lost because an out of service condition was not discovered?

You need to maximize the utilization and optimization of your wellheads. Pair the 780 and Viatran Networking System (VNS) with an RTU, PLC, or Flow Computer. VNS makes readings at the wellhead and along the pipeline available to site managers without taking a trip and without trench wiring. With constant knowledge of the status of the wellhead and pipeline, unproductive visits to wellheads and pipelines can be minimized yet you are aware immediately when a trip is required!

TYPICAL APPLICATIONS

- Wellhead Casing and Tubing Pressure
- Pipelines
- Gas Compressors
- Flow Lines
- Tank Level
- Separators

MECO MEASUREMENTS & CONTROLS
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PERFORMANCE

Full Scale Pressure Range	0-300, 500, 750, 1000, 1500 PSIG
	2000, 3000, 5000, 7500, 10K PSIS, 15K PSIS
Linearity	Best Fit Straight Line ≤±0.25% FSO: ±0.1% FSO option
	Hysteresis & Repeatability ≤0.15% FSO
	Full Scale Output (FSO) 1 to 5 Vdc with optional 0.5 to 4.5 Vdc
	Zero and Span Balance ±0.5% FSO
	Long Term Stability ≤±0.1% FSO per 6 months
	Response Time ≤5 mSec
	Compensated Temperature -5°F to 170°F (-21°C to 77°C)
	Operating Temperature -40°F to 185°F (-40°C to 85°C)
	Storage Temperature Limits -67°F to 257°F (-55°C to 125°C)
	Temperature Effect on Zero ≤±1.0% FSO per 100°F (55°C)
	Temperature Effect on Span ≤±1.0% FSO per 100°F (55°C)

ELECTRICAL

Supply Voltage	7 to 30 Vdc
Power Consumption	≤1.3 mA
Load Impedance	>50K Ohms
Circuit Protection	Reverse polarity protected
Insulation Resistance	≤5 nS (nanoSiemens)
Voltage Spike Protection	Withstand 2000 V spike per EN61000-4-5
RFI/EMI	CE marked, EN61326-2-3

MECHANICAL

Pressure Connection	1/4" - 18 NPT Female
Proof Pressure	1.5 times rated range or 20K PSI (1379 bar) whichever is less
Burst Pressure	0-300 to 5K PSI (0-21 to 345 bar) 5 times FSPR or 15K (1034 bar) whichever is less
	7.5K to 15K PSI (517 to 1034 bar) 2.3 times FSPR
Diameter	1.375 inches (3.5 cm)
Weight	24 oz (680 g)

MATERIALS OF CONSTRUCTION

Enclosure Housing	304 stainless steel
Pressure Connection	316L stainless steel below 7500 PSI (517 bar)
Pressure Connection	Inconel 718 for 7500 PSI (517 bar) and above
Sensor	718 Inconel, meets NACE MR 1075 standards
Mounting	May be supported by pressure connection
Identification	Laser etched onto body

OPTIONS

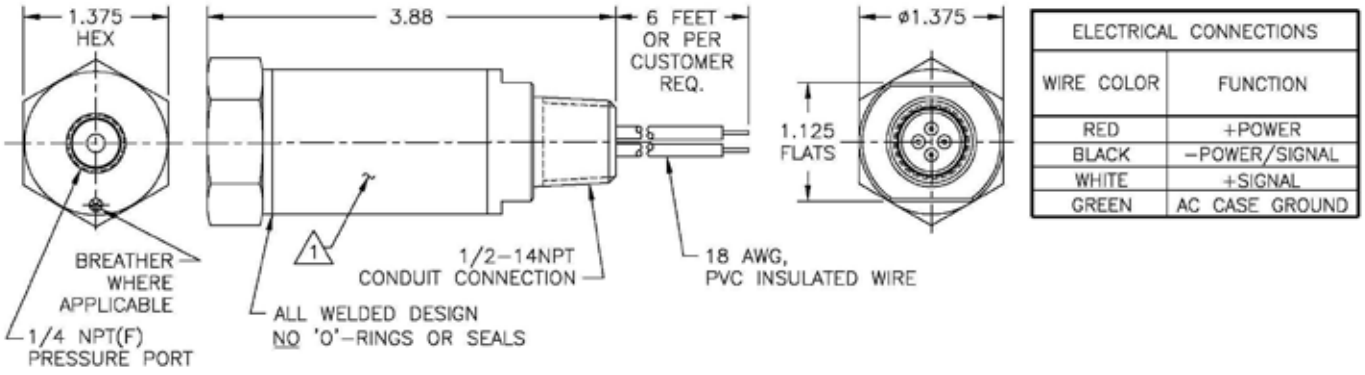
Performance Options	DH Special range
	DN Improved accuracy
	DX Modified output (0.5 to 4.5 Vdc)
	NH Customer specified indentification
	Electrical Connection 1/2" NPT male, 18 AWG wire, 72"
Options	ZU Direct coupled cable
	BX TURCK minifast connector
	CL Extra wire length
Alternate Pressure Ports	YP 1/2" NPT (M)
	YK 1/4" NPT (M)
	WQ G-1/4" (F)
	YX G-1/4" (M)
	WU G-1/2" (F)
	WT G-1/2" (M)
	YM 1/4" F250-C high pressure tube
	Other Pressure Ports Available Consult factory

CERTIFICATIONS (Consult Factory for Available Options)

Intertek (ETL)	Non-Incendive Class I, II, III Div. 2, Groups A, B, C, D, F, G T4: -40°C to 85°C, T5: -40°C to 40°C Dual Seal
USA & Canda	Intrinsic Safety Class I, II, III Div. 1, Groups A – G T4: -40°C to 85°C, T5: -40°C to 40°C Dual Seal Explosion Proof Class I, II, III Div. 1, Groups A – G T4: -40°C to 85°C, T5: -40°C to 40°C Dual Seal, 4X
ATEX	Non-Incendive: II 3G Ex nA II , T4: -40 °C < Ta < 85 °C, T5: -40 °C < Ta < 40 °C Intrinsic Safety II 1G EEx ia IIC , T4: -40 °C < Ta < 85 °C, T5: -40 °C < Ta < 40 °C Flameproof II 1G EEx d IIC , T4: -40 °C < Ta < 85 °C, T5: -40 °C < Ta < 40 °C
CE	EMC directive 2004/108/EC

NOTE:

1. UNIT INFORMATION PERMANENTLY MARKED ON EXTERNAL HOUSING.
2. ALL DIMENSIONS ARE NOMINAL, IN INCHES AND FOR REFERENCE PURPOSES ONLY.



ELECTRICAL CONNECTIONS	
WIRE COLOR	FUNCTION
RED	+POWER
BLACK	–POWER/SIGNAL
WHITE	+SIGNAL
GREEN	AC CASE GROUND

Information is accurate to the best of Viatran's knowledge. We reserve the right to change specifications at any time.

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