Viatran 511 Hammer Union Pressure Transmitter for measuring pump discharge pressure for drilling, fracturing, acidizing, cementing and nitrogen injection.

- Patented† Design to withstand extreme vibration and abusive impact
- Impervious to Fluid Ingress with patented angled connector base, drain holes, and sealing method
- Easy Access Connector Housing - 77% greater area
- Expanded compensated temperature range
- Improved sealing method for connector pins
- External adjust, identification and peak pressure capture
- RoHS compliant

PERFORMANCE

Full Scale Pressure Ranges	0-5K, 0-6K, 0-10K, 0-15K, 0-20K PSIS (0-350, 410, 700, 1000, 1400 Bar)
Combined Accuracy (BFSL) (Non-Linearity, Hysteresis & Repeatability)	≤ ± 0.25% FSO
Full Scale Output (FSO)	16.00 mA ±1% FSO @70°F
Zero Balance	4 mA ±1% FSO @70°F
Compensated Temperature Range	+40°F to 140°F (4°C to 60°C)
Operating Temperature Range	-40°F to 185°F (-40°C to 85°C)
Storage Temperature Range	-67°F to 302°F (-55°C to 150°C)
Long Term Stability (%FSO)	≤±0.25% FSO per 6 months
Thermal Effect on Zero	≤±1% FSO per 100°F Typical
Thermal Effect on Span	≤±1% FSO per 100°F Typical

ELECTRICAL

Output Signal	4-20 mA @70°F
Supply Voltage	9-28 Vdc
Power Supply Regulation	<±.01% FSO per volt
Load Impedance	900 ohms @ 28 VDC decreasing linearity to 0 ohms @ 9 VDC
Circuit Protection	Reverse polarity protected
RFI/EMI	<1% FSO output change with 3V Rms from 150 kHz to 80 MGz (80% AM modulated at 1 kHz) applied to power supply and signal lines [IEC 61000-4-6 radio frequency common mode immunity], 1% output change when exposed to a radiated electromagnetic field of 10 V/m from 80 MHz to 1 GHz AM modulated at 1 kHz and 3 V/m 1.4 GHz to 2.7 GHz. [IEC 61000-4-3 Radiated electromagnetic field immunity]

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Voltage Spike Protection	Withstand 1000 volt spike per EN 61000-4-5
Insulation Resistance	<5 nS
Response Time	<1 millisecond to reach 90% of FSO
Range Calibration Signal	100% FSO ±10% by exciting pins E&F
Calibration Power Supply Voltage	8.5-28 VDC
Calibration Signal Accuracy	Readings on calibration certificate are within ±0.2% FSO of actual Cal signal output
Bridge Resistance	10K ohms, nominal
Standard Electrical Connection	Mates with 6 pin, Hermetic, Box Mount, Shell Size 10, MIL-C-26482 bendix type connector

MECHANICAL

Standard Pressure Port	Male hammer union 2 inch #1502
Pressure Cavity Volume	Standard: 0.45 cubic inches Option "TP": 0.22 cubic inches
Zero Effect from Installation	<±0.3% FSO w/200 ft-lbs torque on union #1502
Shock Sensitivity	1000 g, 0.5 ms half sine wave pulse shall not cause change in calibration
Proof Pressure	1.67X range or 22,500 PSI max
Burst Pressure	3 times full scale pressure range, limited by union #1502: 22.5K PSI

MATERIALS OF CONSTRUCTION

Wetted Materials	NACE compliant Inconel 718 wetted material as standard (MR0175/ISO 15156-3:2009(E))
Enclosure Material	304 Stainless Steel
Identification	Laser marked on body of unit
Enclosure Rating	IP68*, NEMA 6P*
Weight	5.6 lbs. nominal

OPTIONS

DC	Compensated temperature -40°F to 140°F
DG	Improved temperature compensation
DH	Special Range
DN	Improved accuracy
EA	Special Calibration Run
EH	Compensated temperature range 40°F to 180°F
LW	Narrow adapter for banding
NA	Carrying handle attached
NH	Customer specific identification
NP	Protective ring cage
NQ	Protective criss-cross cage
Z()	Special connectors

APPROVALS

NX	Canada Intrinsic Safety Label
TJ	Canada Non-Incendive Label
NK	Europe Intrinsic Safety Label
TK	Europe Non-Incendive
KH	IECEX International Intrinsic Safety Label
TW*	GOST-R
TF	US Intrinsic Safety Label
NZ	US Non-Incendive
TG	US & Canada Intrinsic Safety Labels

* Pending

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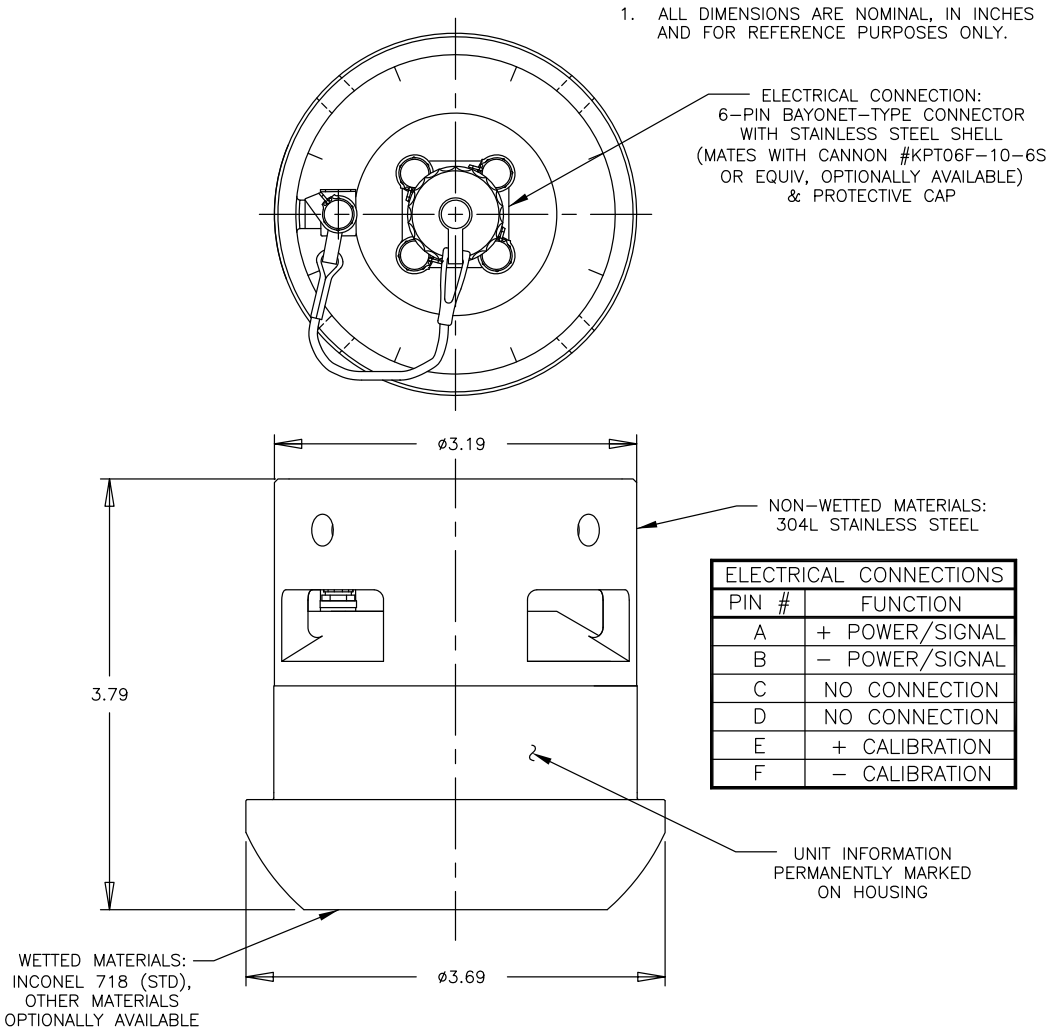
CERTIFICATIONS (CONSULT FACTORY FOR AVAILABLE OPTIONS)

USA	Intrinsic Safety: Class I, Division 1, Groups A-D, Zone 0, AEx ia IIC, T4: Ta -40° to 85°C, T5: -40° to 40°C, NEMA Type 6P, IP68 Non-Incendive: Class I, Division 2, Groups A-D,Class 1 Zone 2, AEx nA IIC, T4 -40° to 85°C, T5: -40° to 40°C, NEMA Type 6P, IP68
CANADA	Intrinsic Safety:Class I, Division 1, Groups A-D, Class 1 Zone 0 Ex ia IIC, T4: -40° to 85°C, T5: -40° to 40°C, NEMA Type 6P, IP68 Non-Incendive: Class I, Division 2, Groups A-D, Class 1 Zone 2, Ex nA Group IIC, T4: -40° to 85°C, T5: -40° to 40°C, NEMA Type 6P, IP68
IECEx	Intrinsic Safety: II 1G, Ex ia IIC,T4 Ga, Ta: -40° to 85°, T5: -40° to 40°C, IP68 Non-Sparking: I1 3 G, Ex nA IIC T4 Gc,Ta -40° to 85°C T5: -40° to 40°C, IP68
EUROPE	Intrinsic Safety: II 1G Ex ia IIC, T4 Ga, Ta -40° to 85°C T5: -40° to 40°C, IP68 EMC Directive 2004/108/EC EN 61326-1:2006



ELECTRICAL CONNECTIONS	
PIN #	FUNCTION
A	+ POWER/SIGNAL
B	– POWER/SIGNAL
C	NO CONNECTION
D	NO CONNECTION
E	+ CALIBRATION
F	– CALIBRATION

EXTERNAL CALIBRATION

- Trim zero and full scale with pressure source using DevCom 2000-LT desktop software
- Record 4 pressure spikes up to 140% of rated pressure and cumulative time on
- Digital output resolution +/- 0.06%
- Factory reset option
- Non interactive zero and span adjustment

EXTERNAL CALIBRATION ACCESSORIES:

DevCom 2000-LT Desktop software

System Requirements (minimum)

Operating System Windows NT, 2000, XP, Vista (32/64), 7 (32/64), 8 (32/64)
Processor Speed Pentium, 600 Mhz
Memory 256 MB
Hard Disk Space 500 MB
Monitor 256-color VGA
Communication Port USB, RS232, or Bluetooth

HART ® Modem (Various PC connections and cable lengths/connections available)
24VDC power source
Power Xpress kit
250 ohm resistor

†US Patent D 711266
†EU Patent No. 002334250-001
†CN Patent ZL 201330527540.1
† Patents Pending

*HART ® is a registered trademark of the HART ® Communications Foundation

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