



# Model 511 Hammer Union Pressure Transmitter



## MODEL 511 HAMMER UNION PRESSURE TRANSMITTER

**4-20 MA OUTPUT, 2" 1502  
FITTING, HAZARDOUS  
LOCATION APPROVALS**

511 is Viatran's state of the art hammer union pressure transmitter with industry exclusive features that were developed in direct response to requests from the field. Included in these features is a voltage powered shunt cal, ability to calibrate and track pressure spikes using **HART<sup>®</sup>** Communicators or DevCom2000 Lite software and packaged in a patented\* housing which can withstand extreme vibration and abusive impact and still perform to specification.

### PERFORMANCE

Full Scale Pressure Ranges	0-5K, 0-6K, 0-10K, 0-15K, 0-20K PSIS
Combined Accuracy (BFSL)	(Non-Linearity, Hysteresis & Repeatability) $\leq \pm 0.25\%$ FSO
Full Scale Output (FSO)	16.00 mA $\pm 1\%$ FSO @70°F
Zero Balance.	4 mA $\pm 1\%$ 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)	$\leq \pm .25\%$ FSO per 6 months
Thermal Effect on Zero	$\leq \pm 1\%$ FSO per 100°F Typical
Thermal Effect on Span	$\leq \pm 1\%$ FSO per 100°F Typical

### ELECTRICAL

Output Signal	4-20 mA @70°F
Supply Voltage	9-28 Vdc
Power Supply Regulation	$< \pm .01\%$ 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]
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 $\pm 10\%$ by exciting pins E&F
Calibration Power Supply Voltage	8.5 -28 VDC
Calibration Signal Accuracy	Readings on calibration certificate are within $\pm 0.2\%$ 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

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1502 Hammer Union Pressure Fitting



RoHS Compliant



ShuntCal



IP-68 Rated



High Pressure Applications

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

Shunt calibration

\* US Patents D711266 , US 9,607,596 B2

\* EU Patent No. 002334250-001

\*CN Patent ZL 201330 527540.1

## PIN OUTS

PIN A + Power / Signal  
PIN B – Power / Signal  
PIN C No Connection  
PIN D No Connection  
PIN E + Calibration  
PIN F – Calibration

## 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 (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

\* Pending approvals

## OPTIONS

DC	Extended Compensated Temperature Range (Cold) -40°F to 140°F (-40°C to 60°C)
DG	Improved temperature compensation
DH	Special Range
DN	Improved accuracy
EA	Special Calibration Run
EH	Extended Compensated Temperature Range (Hot) +40°F to 180°F (4°C to 82°C)
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
TW	Russia Intrinsic Safety and Non-Sparking

Are you getting a connection error  
when swapping out a new computer  
and need to scrub your 511 Hammer

# Model 511 Hammer Union Pressure Transmitter



- Model 511 CE Declaration of Conformity
- Model 511 EMC/RoHS Declaration of Conformity
- Model 511 PED Declaration of Conformity



- US NI Certificate of Compliance
- US IS Certificate of Compliance



- Canada IS Certificate of Compliance
- Canada Non Incendive Certificate of Compliance



- ATEX IS Declaration of Conformity
- ATEX Non Incendive Declaration of Conformity
- ATEX Production QAN



- IECEx IS Certificate of Compliance



- FM (US & Canada) Certificate of Compliance



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CE Marking    Russian Intrinsic Safety

