

## PRESSURE TRANSMITTER

# Models 148 / 248 / 348



### FEATURES

- Resistant to pressure spikes
- High accuracy ( $\leq 0.15\%$ )
- Response time less than 1 mSec
- Welded stainless steel construction
- All welded NEMA 4X design
- 3X overpressure rating
- mV/V, 0-5 Vdc, 4 to 20 mA outputs

### TYPICAL APPLICATIONS

- Die casting
- Stamping presses
- Rolling mills
- Injection molding
- Compressors and pumps
- Off road vehicles
- Hydraulic usage
- Test stands

### DESIGNED FOR HARSH CONDITIONS

All welded stainless steel construction combined with sensors that are hermetically sealed with no adjustment controls provide an airtight and watertight transducer preventing contamination from the application environment.

### SPIKE RESISTANT

The "48" Series is made to withstand overloads and severe pressure spikes that can offset, weaken or destroy other sensors. The minimum 3X overpressure rating on the X48 means better than 0.15% accuracy while still offering a response time of less than a millisecond. It's designed to provide years of reliable, repeatable service.

### FLEXIBLE TO MEET YOUR NEEDS

Standard pressure ranges are from 3 PSI thru 15K PSI (0.2 to 1034 bar) with outputs of mV/V, 0-5 Vdc and 4-20 mA. Additional outputs are also available. Viatran's available standard options and ability to modify products provide flexibility to meet your specified application needs.

Standard options include alternate pressure ports, electrical connectors, multiple pressure formats and various electrical outputs. Viatran's rugged reputation is also standard.

**PERFORMANCE**

	Full Scale Pressure Range .....	0-15 thru 0-200 PSIA (0-1.0 thru 0-13.7 bar)
		0-3 thru 0-15K PSIG, PSIS (0-0.2 thru 0-1034 bar)
		0-15 PSIV*
Accuracy (combined linearity, hysteresis & repeatability)	0-200 PSI (0-13.7 bar) .....	≤0.25%
	300-15K PSI (20-1034 bar) .....	≤0.15%
	Zero Balance .....	≤±1% FSO
Full Scale Output (FSO)	148 .....	mV/V output, range dependent
	248 .....	5 Vdc ±1%
	348 .....	16 mA ±1%
	Resolution .....	Infinite
	Long-Term Stability .....	≤0.5% FSO per 6 months
	Compensated Temperature Range .....	70°F to 170°F (21°C to 76°C)
	Operating Temperature .....	-40°F to 185°F (-40°C to 85°C)
	Storage Temperature Limits .....	-65°F to 250°F (-54°C to 121°C)
	Temperature Effect on Zero .....	≤±1% FSO per 100°F
	Temperature Effect on Span .....	≤±1% FSO per 100°F

**ELECTRICAL**

Supply Voltage	148	.....10Vdc nominal, 15V max	
	248	.....9 to 30 Vdc	
	348	.....9 to 30 Vdc	
	Power Supply Regulation Effect .....≤±0.05% FSO per volt over the supply voltage range (248/348 only)		
Output Signal	148	.....2.5 to 10 mV/V	
	248	.....0 - 5 Vdc	
	348	.....4 - 20 mA	
	Circuit Protection .....Reverse polarity protected		
	Insulation Resistance .....<5nS conductance		
	Response Time .....≤1 mSec for 10% to 90% FSO		
	Electrical Connection.....6 pin hermetic, bayonet-style, 303 SST weldmount connector		
	148	248	348
Pin A	+Power	+Power	+Power/Signal
Pin B	-Power	-Power	-Power/Signal
Pin C	+Signal	+Signal	No connection
Pin D	-Signal	-Signal	No connection
Pin E	No connection	No connection	No connection
Pin F	No connection	No connection	No connection

**MECHANICAL**

Pressure Connection .....	1/4" NPT female
Proof Pressure .....	3 times FSPR or 20K PSI (1378 bar), whichever is less
148 ≥ 300 PSI (20 bar) .....	1.5 times FSPR or 20K PSI (1378 bar), whichever is less
Burst Pressure .....	5 times FSPR or 45K PSI (3102 bar), whichever is less
Pressure Cavity Volume .....	3 mL without fittings

**MATERIALS OF CONSTRUCTION**

Wetted Parts	0-3 thru 200 PSI (0-0.2 thru 13 bar) .....	316 stainless steel
	>200 PSI (>13 bar) .....	15-5PH stainless steel
	Housing .....	316/304 stainless steel
	Weight .....	10 oz
	Mounting .....	May be supported by process piping
	Identification .....	Laser etched onto body

**ACCESSORIES**

Digital indicators  
 Mounting bracket  
 Mounting electrical connector/assembly  
 Protective cover

\* For PSIV and Compound Range units:

Temperature Effect on Zero .....	≤±3.0% per 100°F
Compensated Temperature Range .....	32°F to 170°F (0°C to 77°C)
148 output signal .....	5 mv/V

## OPTIONS

## Electrical Connection

BH .....	C21-10-6PN-20-0P1
BI .....	CF3102E-14S-2P
BZ .....	Micro change
ZU .....	Direct coupled cable
ZY .....	1/2" (M) NPT conduit connection

## Alternate Pressure Ports

WG .....	G-1/4" (F)
YC .....	MS33656-04 (M)
YD .....	MS33656-06 (M)
YG .....	MS16142-04 (F)
YK .....	1/4" NPT (M)
YU .....	MS16142-06 (F)

## Performance Options

DE .....	Internal calibration
DG .....	Improved temperature compensation
DH .....	Special ranging
DM .....	Modified full scale output
DQ .....	Cleaning for oxygen service
EA .....	Special calibration run
NH .....	Customer specified ID
NJ .....	CE approved
PW .....	1/8 DIN digital indicator
TH .....	Zero and span adjustment

Other options available upon request.

Note: Vented gage units should only be installed in environments that allow the breather to remain dry and free from contamination. Application of some available options may affect standard performance. Consult your Viatran Representative for details.

ALL DIMENSIONS ARE NOMINAL, IN INCHES  
AND FOR REFERENCE PURPOSES ONLY

