

## PRESSURE TRANSMITTER

# Models 548 / 748 / 848



### FEATURES

- All welded construction
- 316L stainless steel wetted parts
- Ranges down to 20" WC full scale
- High accuracy
- Pressure up to 5000 PSI (1379 bar)

### TYPICAL APPLICATIONS

- Fuel tank level
- Chemical tank level
- Gas compressors
- Chemical processing

### FOR CORROSIVE ENVIRONMENTS

The "X48" Series features all welded stainless steel construction with 316L stainless steel wetted parts. Combined accuracy is 0.25% or better with an optional improved accuracy of better than 0.1%. Standard ranges are from 3 PSI to 5,000 PSI with outputs of mV/V, 4-20 mA and 0-5 VDC. Also available is an optional zero and span adjustment.

### A FULL LINE OF APPROVALS

The "X48" Series has the approvals necessary for use in hazardous areas. Viatran offers a variety of standard options and our ability to modify our products provides flexibility to meet your specific application needs. Options include alternate pressure ports, electrical connectors and various electrical outputs.

### VIATRAN'S FULL LINE

To compliment this series is a full line of pressure measurement products for the process control industry. Our Model 570 and 571 provide mid to high ranges up to 100K psi and the IDP10 can measure differential pressures as low as 0.5" WC full scale.

### YOUR SOLUTION

We have the solution to your pressure or level measurement application.



**PERFORMANCE**

Full Scale Pressure Range .....0-3 thru 0-5000 PSIG, PSIS; 0-15 thru 0-500 PSIA; 0-15 PSIV

Accuracy ..... $\leq \pm 0.25\%$  (optional  $\leq \pm 0.1\%$ )

(combined linearity, hysteresis &amp; repeatability)

Hysteresis & Repeatability ..... $\pm 0.10\%$  FSO

## Full Scale Output (FSO)

548 .....16 mA

748 .....5 Vdc

848 .....mV/V

Zero Balance ..... $\leq \pm 1\%$  FSOLong-Term Stability ..... $\leq \pm 0.25\%$  FSO per 6 monthsResponse Time ..... $\leq 1$  mSec for 10% to 90% FSOTemperature Effect on Zero ..... $\leq \pm 1\%$  FSO per 100°F (37°C)Temperature Effect on Span ..... $\leq \pm 1\%$  FSO per 100°F (37°C)

Compensated Temperature .....32°F to 180°F (0°C to 82°C)

Operating Temperature .....-40°F to 185°F (-40°C to 85°C)

Storage Temperature Limits .....-40°F to 250°F (-40°C to 121°C)

**ELECTRICAL**

## Supply Voltage

548 / 748 .....9.0 to 30 Vdc

848 .....15 Vdc max

Power Supply Regulation Effect ..... $\pm 0.0001$  FSO per volt

## Output Signal

548 .....4 - 20 mA

748 .....0 - 5 Vdc

848 .....3 to 5 PSI: 5 mV/V.  $\geq 10$  PSI: 10 mV/V

## Load Resistance

548 .....12 Vdc min with 150 ohm and 30 Vdc max with 1050 ohms

Circuit Protection .....Output may be short-circuited indefinitely. Input polarity may be reversed. Over voltage protected to 1000 volts.  $< 1$  mSec duration

Electrical Connection .....1/2" NPT (M), 18 AWG wire

## 548

## 748

## 848

Red

+Power/Signal

+Power

+Power

Black

-Power/Signal

+Signal

+Signal

Green

Case Ground

Case Ground

-Power

White

N/A

-Power/Signal

-Signal

Brown

N/A

N/A

Case Ground

**MECHANICAL**

Pressure Connection .....1/4" - 18 NPT female

Proof Pressure .....3 times rated range or 10K PSI whichever is less

Burst Pressure .....5 times rated range or 10K PSI whichever is less

Diameter .....1.5 in

Weight .....10 oz

**MATERIALS OF CONSTRUCTION**

Enclosure Housing .....304 and 316 stainless steel

Pressure Connection .....316 stainless steel

Sensor .....316 stainless steel

Mounting .....May be supported by pressure connection

Identification .....Laser etched onto body

**ACCESSORIES**

Mounting bracket

Conduit connection box

Loop Powered Digital Indicator

Protective cover

**CERTIFICATIONS (Consult Factory for Available Options)**

FM	<u>Explosion Proof:</u> Class I, Div. 1, Groups A, B, C, D, Class II/III, Div. 1, Groups E, F, G, T5 at Ta=88°C NEMA 4X, Hazardous Locations <u>Intrinsic Safety:</u> (model dependent) Class I, II, III, Div 1, Groups A thru G, AEx ia IIC T4 NEMA/Type 4X Hazardous Locations <u>Nonincendive:</u> (model dependent) Class I, Div 2., Groups A-D, Class II, Groups F, G, Class III and Class I, Zone 2, Group IIC, T4 Type 4X Hazardous Locations
CSA	<u>Division 2:</u> (model dependent) Class I, Div 2, Groups A-D, Class II, Groups F, G, Class III T4 Type 4x Hazardous Locations. <u>Intrinsic Safety:</u> (model dependent) Class I, II, III, Div. 1, Groups A-G, Ex ia IIC T4 ) Type 4X Hazardous Locations
ATEX	<u>Intrinsic Safety:</u> II 1 G EEx ia IIC, -20°C T4, Ta <50°C; Flameproof: II 2 G EEx d IIC, T5 (-20°C < Ta < 80°C) Type N: II 3 G EEx nL IIC T4 (-20°C < Ta < 60°C)
CE	<u>EMC Directive 89/336/EEC and Low Voltage Directive 72/23/EEC</u> EN61010-1 (993) / Safety Requirement EN61326 - (2001) EMC requirements PED Directive 97/23/EC

**OPTIONS**  
**PERFORMANCE OPTIONS**

Y()	Alternate pressure ports
DF	Bleed port
DH	Special range
DN	Improved accuracy ≤0.1% FSO
DM	Modified output (0 to 10 Vdc, 748 only)
DQ	Cleaning for oxygen service
DX	Modified output (0 to 4.5 Vdc, 748 only)
EA	Special calibration run
NG	ATEX Flameproof label
NH	Customer specified identification
NJ	CE design and label (consult factory)
NK	ATEX Intrinsic Safety label (consult factory)
NX	CSA Intrinsic Safety label (consult factory)
NY	FM Explosion Proof label
NZ	FM Nonincendive label (consult factory)
PW	1/8 DIN digital indicator (consult factory)
TF	FM Intrinsic Safety label (consult factory)
TJ	CSA Division 2 label (consult factory)
TK	ATEX Type n label (consult factory)

Note: For units equipped with a breather vent, consideration should be given to ensure that the breather element is kept clear and exposure to contamination is minimized. Applications 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

