

## Standard Range(10"WC to 100 PSID) Wet/Wet Differential Pressure Transmitter



### MODEL 177 (10"WC to 100 PSID) WET/WET DIFFERENTIAL PRESSURE TRANSMITTER

#### Features

- Single Diaphragm for Precision
- Fast response
- 1,000 PSI Line Pressure (Standard)
- 3,000 PSI Line Pressure (Optional)
- Shunt calibration circuit

#### Applications

- Leak testing
- Flow measurement
- Engine test stands
- Research
- High speed testing
- Unidirectional or Bidirectional

#### PERFORMANCE

Full Scale Pressure Ranges (FSPR)	0 -10, 20, 100, 300" WC 0-15, 50, 100 PSI
Combined Accuracy (Non-Linearity (BFSL), Hysteresis & Repeatability)	$\leq \pm 0.20\%$ RSS
Full Scale Output (FSO)	3.0 mV/Vdc at 70°F (21°C) $\pm 2\%$ FSO
Resolution	Infinite
Zero Shift w/Line Pressure (%FSO/1000 PSI)	$\leq \pm 2\%$
Zero Shift After 1000 PSI Overload	
0-10 thru 0-50" WC	Single Side $\leq \pm 0.5\%$ FSO Alternate Sides $\leq \pm 0.5\%$ FSO
0-100" WC thru 0-100 PSI	Single Side $\leq \pm 0.2\%$ FSO Alternate Sides $\leq \pm 0.5\%$ FSO
Compensated Temperature Range	70°F to +170°F (21°C to 77°C)
Operating Temperature Range	0°F to +185°F (-20°C to 85°C)
Storage Temperature Range	-40°F to +250°F (-40°C to 120°C)
Thermal Effect on Zero	$\leq 2.0\%$ FSO per 100°F
Thermal Effect on Span	$\leq 2.0\%$ FSO per 100°F

#### ELECTRICAL

Supply Voltage	5-15 Vdc												
Power Supply Regulation	$< \pm .01\%$ FSO per volt												
Output Signal	3.0 mV/Vdc												
Output Loading	3,000 ohms minimum												
Current Draw	3.8 mAdc												
Range Calibration Signal	80% FSO by shorting pins E&F												
Calibration Signal Accuracy	$\leq \pm 1.0\%$												
Circuit Protection	Reverse polarity protected												
Insulation Resistance	$< 5$ nS to case ground												
Standard Electrical Connection	Mates with 6 pin, Hermetic, Box Mount, Shell Size 10, MIL-C-26482 bendix type connector												
Pin Outs	<table> <tr> <td>Pin A</td><td>+ Power</td></tr> <tr> <td>Pin B</td><td>- Power</td></tr> <tr> <td>Pin C</td><td>+ Signal</td></tr> <tr> <td>Pin D</td><td>- Signal</td></tr> <tr> <td>Pin E</td><td>Shunt Cal</td></tr> <tr> <td>Pin F</td><td>Shunt Cal</td></tr> </table>	Pin A	+ Power	Pin B	- Power	Pin C	+ Signal	Pin D	- Signal	Pin E	Shunt Cal	Pin F	Shunt Cal
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# MODEL 177 Differential Pressure Transmitter



## The Value of Viatran to Your Operation

- Viatran value is measured in maximum reliability and minimal repair, unlike products that result in less durability and more downtime for replacement. Viatran value is worth your investment for the long run:

### ♦ PRODUCTS

50 years of proven solutions

### ♦ TECHNICAL SUPPORT

Expert problem solvers

### ♦ CUSTOMER SERVICE

Fast, friendly and honest



## MECHANICAL

Standard Pressure Port	1/4" NPT Female
Line Pressure	1000 PSI maximum (3000 PSI - optional)
Proof Pressure	1000 PSI single sided
Burst Pressure	1500 PSI
0-10" WC	1,150 PSI
0-20" thru 0-300" WC	1,450 PSI
0-15 thru 0-100 PSI	1,850 PSI
Volume Displacement	≈0.1 mil at FSPR
Pressure Cavity Volume	
Standard Flanges:	0.4 cubic inches
Optional Process Flanges "NB":	1.5 cubic inches
Mounting	May be supported by process piping or by optional mounting bracket.
Response Time	Consult Engineering

## MATERIALS OF CONSTRUCTION

Wetted Materials	316 Stainless Steel and Viton O-Ring
Enclosure Material	304 and 316 Stainless Steel
Identification	Laser marked on body of unit
Weight	3.5 lbs. (6.5 lbs. with optional flanges)

## OPTIONS

B( )	Alternate electrical connector
DG	Improved temperature compensation
DH	Special Range
DK	Special calibration setting
EA	Special Calibration Run
GE	Buna 'N' O-Rings
NB	Alternate process flanges for increased pressure rating
NH	Customer specific identification
PW	Calibration of Meter w/Viatran unit
Y( )	Alternate pressure ports
Z( )	Alternate electrical connector

*Note: Application of some available options may affect standard performance. Consult Viatran Application Engineers for details.*

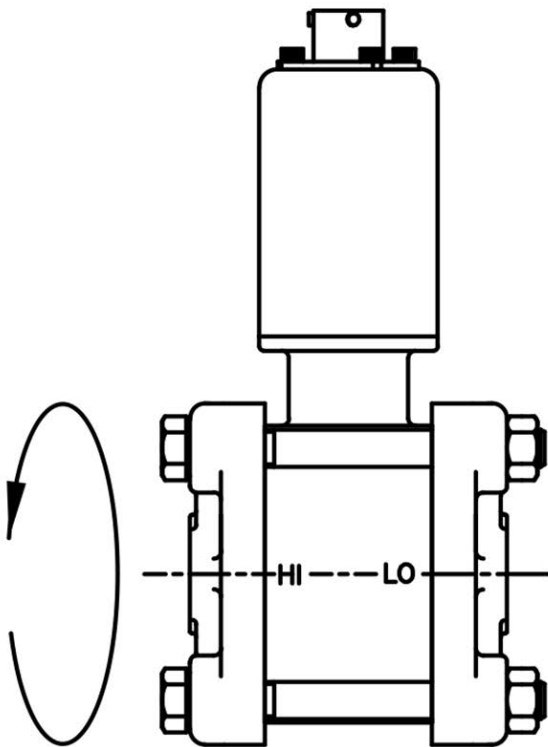
*Information is accurate to the best of Viatran's knowledge. We reserve the right to change specifications at any time. Please contact Viatran for specific order inquiries.*

# MODEL 177 Solutions custom-fit to your application

## MOUNTING

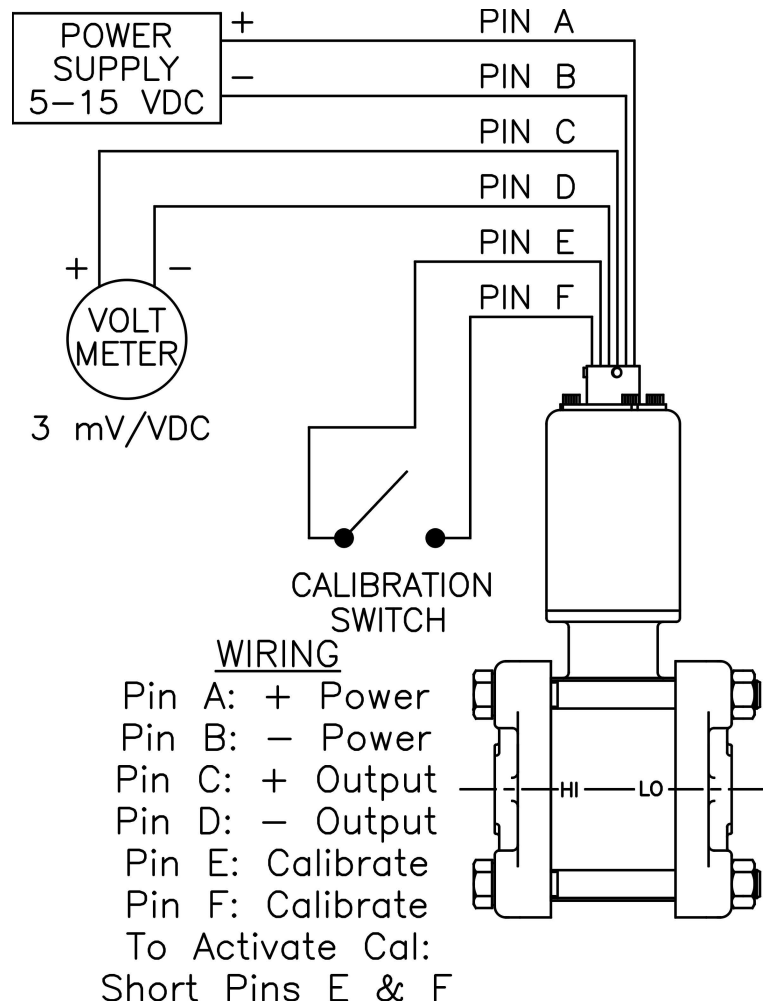


Model 377 mounted for  
Spray Booth Application



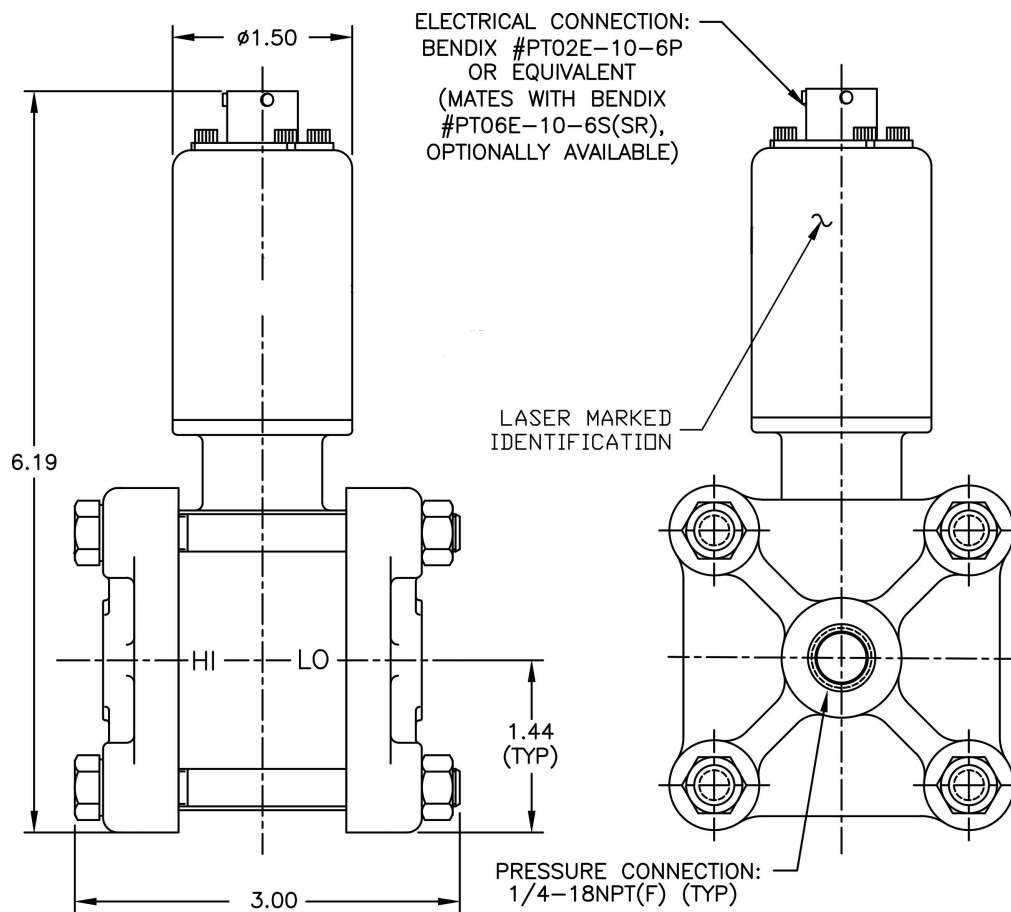
Due to the effects of gravity on the oil fill of the sensor, it's recommended that the product be mounted as shown

## WIRING CONNECTIONS



# MODEL 177 Differential Pressure Transmitter

## DIMENSIONAL DATA



## ACCESSORIES

Mounting Bracket  
Digital Indicator  
Mating Electrical Cable Assembly



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