

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



MODEL 277 (10"WC to 100 PSID) WET/WET DIFFERENTIAL PRESSURE TRANSMITTER

Features

- Single Diaphragm for Precision
- Fast response
- External Zero & Span Adjustments
- 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)	≤±0.20% RSS
Full Scale Output (FSO)	5Vdc
Resolution	Infinite
Zero Shift w/Line Pressure (%FSO/1000 PSI)	≤±2%
Zero Shift After 1000 PSI Overload	
0-10 thru 0-50" WC	Single Side ≤±0.5% FSO Alternate Sides ≤ ±0.5% FSO
≥ 100" WC	Single Side ≤±0.2% FSO Alternate Sides ≤ ±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 +185°F (-40°C to 85°C)
Thermal Effect on Zero	≤ 2.0% FSO per 100°F
Thermal Effect on Span	≤ 2.0% FSO per 100°F

ELECTRICAL

Supply Voltage	9-30 Vdc
Power Supply Regulation	± .02% FSO per volt (Typical)
Output Signal	0-5 Vdc
Output Loading	3,000 ohms minimum
Current Draw	3.8 mAdc
Zero Adjustment	±5% FSO min./ ±50% FSO max.
Span Adjustment	±5% FSO min./ ±50% FSO max.
Range Calibration Signal	80% FSO ±10% by shorting pins E&F
Calibration Signal Accuracy	≤±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	Pin A + Power Pin B - Power Pin C + Signal Pin D - Signal Pin E Shunt Cal Pin F Shunt Cal

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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	0-10"WC 1,000 PSI maximum 0-20"WC thru 1,000 PSI 1000 PSI (Optional 3000 PSI w/ process flanges)
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 mL at FSPR
Pressure Cavity Volume	
Standard Flanges:	0.4 cubic inches, each side
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
DW	No external adjustments
DX	Modified full scale output (FSO)(≤5V)
EA	Special Calibration Run
GE	Buna 'N' O-Rings
NB	Alternate process flanges for increased line pressure rating (3,000 PSI)
NF	Fast response time
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.



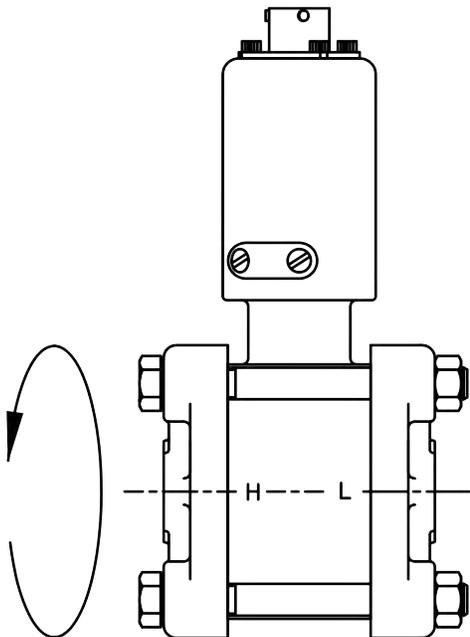
MODEL 277 Solutions custom-fit to your application

MOUNTING



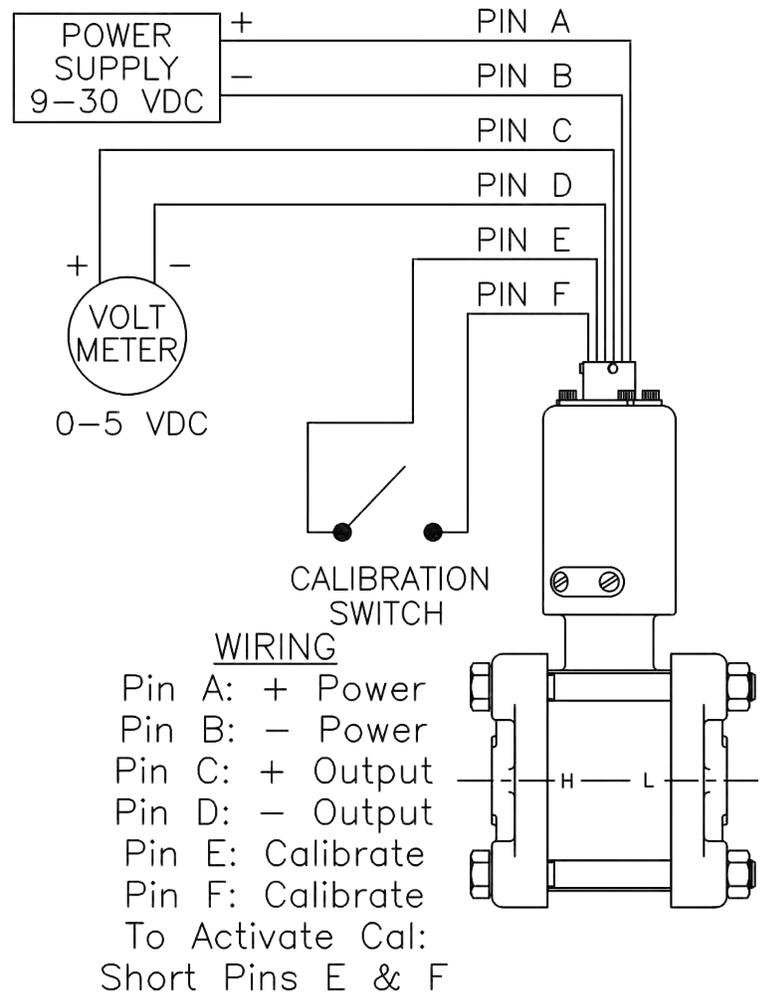
Example of Model 277 mounted in spray booth application.

ORIENTATION



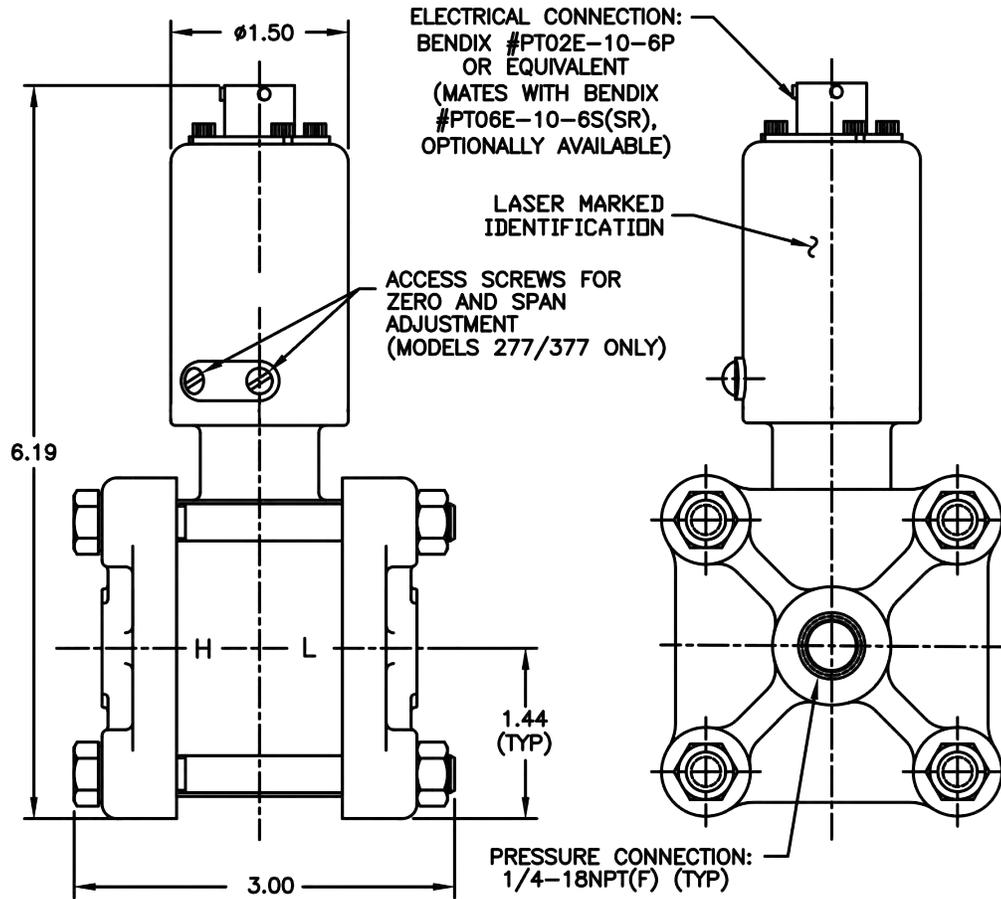
Due to the effects of gravity on the oil fill of the sensor, it's recommended that the product be mounted as shown

WIRING CONNECTIONS



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DIMENSIONAL DATA



ACCESSORIES

- Mounting Bracket
- Digital Indicator
- Mating Electrical Cable Assembly



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