PRESSURE TRANSMITTER

Models 550 / 551



FEATURES

- Solid state, no oil fill
- Corrosion resistant
- Flush mount design
- Rugged diaphragm design

TYPICAL APPLICATIONS

- Tank level
- Pulp slurries
- Head box feed
- Paper coating systems
- Black liquor flow
- Digesters

RUGGED TRANSMITTERS FOR THE PULP AND PAPER INDUSTRY

Viatran's Models 550 and 551 are the most rugged transmitters available for the pulp and paper industry. With a standard M44 X 1.25 flush pressure fitting (1-1/2" NPT optional) and 17-4PH NACE diaphragm, they are ideal for use with the corrosive media that accumulates and clogs standard fittings. Unlike capacitance or micro-machined silicon sensors, Viatran's flush bonded foil sensor has no oil fill which means easy cleaning with no damage to the unit or its performance.

Standard pressure ranges are from 50 PSI to 1000 PSI (3.4 to 68.0 bar) sealed gage and absolute formats. A vented cable option with a filter plug is available for lower gage pressure ranges.

Compact and hermetically sealed, the 550 and 551 are built for the harsh environments encountered in pulp and paper measurement. With Inconel X750 wetted parts available, they are designed for protection against the most corrosive environments.

INTERNAL CALIBRATION CIRCUIT

The model 551 employs unique, magnetically coupled external adjustments. This hermetically sealed enclosure has internal and external magnets that function as adjustments for zero, span, calibration and fine zero. The 551 also features an internal calibration circuit for easy field setup without the need for a calibrated pressure source. The span control allows 5:1 ranging.

Viatran also offers HART version of the 550, providing enhanced digital performance, rangeability and HART communications. Viatran Models 553 and 554 are direct replacements for one inch PMC flush mount pneumatic transmitters.

MECO MEASUREMENTS & CONTROLS
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PERFORMANCE

Full Scale Pressure Range (FSPR) .....0-50, 100, 150, 200, 250, 300, 500, 750, 1000, PSIG, PSIS, PSIA

Accuracy
Combined Linearity, Hysteresis and Repeatability.....≤±0.45%
Full Scale Output (FSO) .....16 mA at ±0.5% FSO
Resolution .....Infinite
Long Term Stability .....≤±0.5% FSO per 6 months
Pressure Connection Effect Zero Balance ....≤±0.5% FSO
Response time
Mechanical & Electrical Combined .....≤0.1 mSec
Temperature Effect on Zero .....≤±2% FSO per 100°F (37°C)
Temperature Effect on Span .....≤±2% FSO per 100°F (37°C)
Compensated Temperature Range .....0°F to 185°F (-17°C to 85°)
Operating Temperature Range .....-40°F to 250°F (-40°C to 121°) - Process
.....-40°F to 185°F (-40°C to 85°) - Ambient
Storage Temperature.....-40°F to 250°F (-40°C to 121°C)

ELECTRICAL

Sensor Technology.....Bonded foil strain gage
Supply Voltage
550 .....12 to 40 Vdc
551 .....12 to 40 Vdc
Power Supply Regulation.....≤±0.04% FSO per Volt
Output Signal .....4 - 20 mA at 70°F (21°C)
Load Impedance.....1400 Ohms max at 40 Vdc
Ripple .....≤1% FSO
Zero Balance
550 .....4 mA ±1% FSO
551 .....4 mA ±0.5% FSO
Zero Adjustment
550 .....Not applicable
551 .....-50% FSPR (elevation) to 100% FSPR (suppression). Coarse and fine
.....adjustments standard.
Span Adjustment
550 .....Not applicable
551 .....5:1 turndown, externally
Range Calibration Signal
550 .....Not applicable
551 .....20% ±1% of FSPR, externally switched. The exact signal to pressure
.....correlation is provided with each unit.
Circuit Protection .....Varistor protected across the input leads for surges above 38 V and currents to 250 Amps peak with a pulse width of 8-20 µSec. Reverse polarity protected
Bridge Resistance.....5000 Ohms nominal
Insulation Resistance .....≥ 2000 MegOhms at 50 Vdc
RFI/EMI Suppression.....≤1% FSO output change at 30 V/meter, 10-1000 Mhz
Electrical Connection.....1/2" NPT male conduit, 3 wires, 18 AWG, 36"L
Red.....+Power/Signal
Black .....-Power/Signal
Green.....Case Ground

MECHANICAL

Pressure Connection.....M44 X 1.25 fitting
Proof Pressure.....1.5 times rated range
Burst Pressure.....≥ 3 times rated range or max range of clamp and tubing, whichever
.....is less
Weight
550 .....16 oz
551 .....22 oz

MATERIALS OF CONSTRUCTION

Enclosure Materials .....304 and 316 stainless steel
Wetted Materials .....17-4PH NACE (Inconel X750 optional)
Identification.....Laser etched onto body
Measured Fluids.....Any gas or liquid compatible with 17-4PH NACE
Enclosure Classification.....NEMA 4X, 5, 6, 12

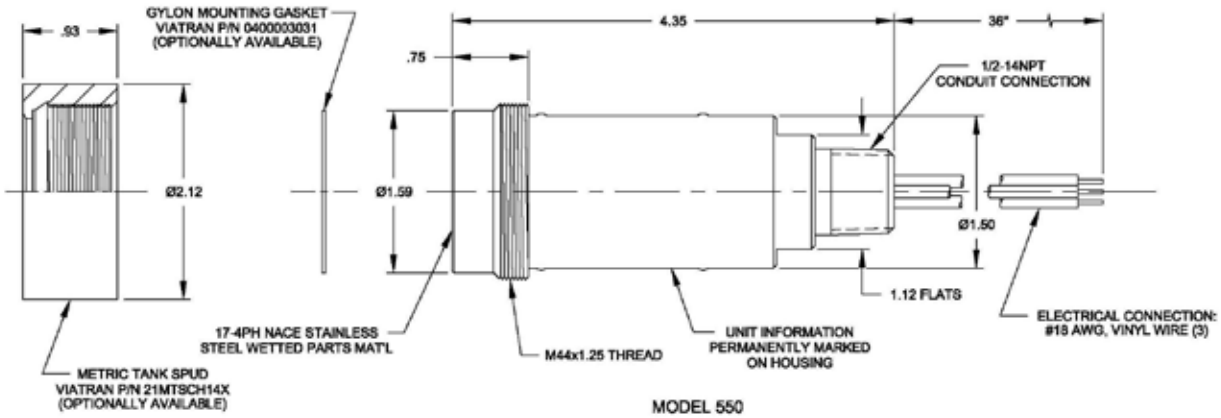
OPTIONS

Alternate Connector	BZ	Micro change connector
	ZP	6-pin hermetic (Bendix style)
Performance Options	DG	Improved temperature compensation
	DH	Special range (550 only)
	EA	Special calibration
	JJ	Direct mount indicator with Explosion Proof housing
	JS	Direct mount indicator
	NH	Customer specified identification
	NSR	Non-standard range (551 only)
	PW	1/8 DIN digital indicator
	QB	Inconel wetted parts

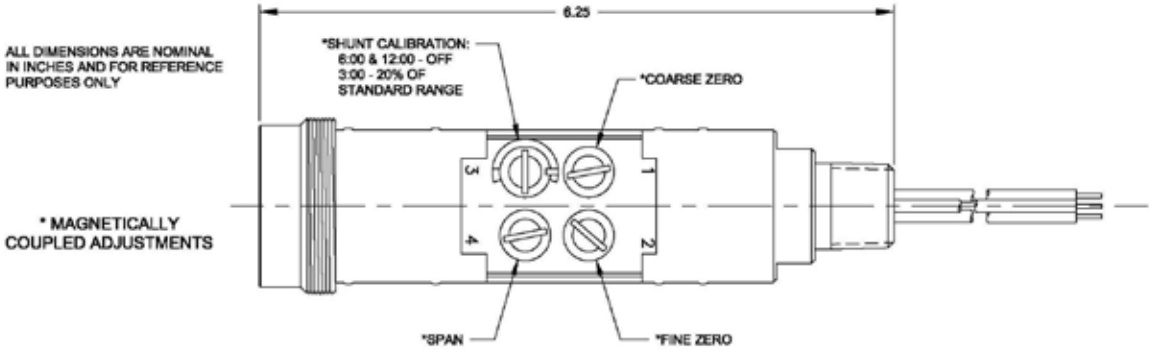
Note: Application of some available options may affect standard performance. Consult your Viatran Representative for details.

ACCESSORIES

Conduit connection box
Tank fittings
Gylon sealing gasket



MODEL 550



MODEL 551
SAME AS MODEL 550, EXCEPT AS SHOWN

Information is accurate to the best of Viatran's knowledge. We reserve the right to change specifications at any time.

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