PRESSURE TRANSMITTER

Models 553 / 554



FEATURES

- Retrofit existing PMC pneumatic systems
- Solid State, no oil fill
- Corrosion resistant
- Flush mount design
- Rugged diaphragm design
- Small Size

TYPICAL APPLICATIONS

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

RETROFIT APPLICATIONS

Viatran's Models 553 and 554 are designed for new and retrofit applications in the pulp and paper industry. The flush mount units are available in a one inch O-ring design compatible with 1" PMC process connection. The bonded foil sensor has no oil fill which means easy cleaning and 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.

Viatran's Models 553 and 554 are compact and hermetically sealed units built for the harsh environments encountered in pulp and paper measurement. With 17-4PH NACE wetted parts standard (Inconel X750 optional), they are designed for protection against the most corrosive environments.

INTERNAL CALIBRATION CIRCUIT

The model 554 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 554 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 554, providing enhanced digital performance, rangeability and HART communications. Viatran Models 550 and 551 offer a solid state flush mount sensor with metric or NPT threads.

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PERFORMANCE

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

Accuracy
Combined Linearity, Hysteresis and
Repeatability.....≤±0.44%
Full Scale Output (FSO) .....16 mA
Resolution .....Infinite
Long Term Stability .....≤±0.5% FSO per 6 months
Pressure Connection Effect Zero Balance ....≤±1% FSO

Response time
Mechanical & Electrical Combined .....≤20 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°C)
Operating Temperature Range .....-40°F to 250°F (-40°C to 121°C) - Process
.....-40°F to 185°F (-40°C to 85°C) - Ambient
Storage Temperature.....-40°F to 250°F (-40°C to 121°C)

ELECTRICAL

Sensor Technology.....Bonded foil strain gage

Supply Voltage
553 .....12 to 40 Vdc
554 .....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.....4 mA ±1% FSO at 70°F (21°C)

Zero Adjustment
553 .....Not applicable
554 .....-50% FSPR (elevation) to 100% FSPR (suppression). Coarse and fine
.....adjustments standard
Span Balance .....20 mA ±1% FSO

Span Adjustment
553 .....Not applicable
554 .....5:1 turndown, externally

Range Calibration Signal
553 .....Not applicable
55 .....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.....≤0.2% FSO output change at 0 to 30 V/meter, 10-1000 Mhz
Electrical Connection.....1/2" NPT male conduit, 3 wires, 18 AWG, 36"
Red.....+Power/Signal
Black .....-Power/Signal
Green.....Case Ground

MECHANICAL

Pressure Connection.....1" diameter O-ring (PMC compatible)
Proof Pressure.....1.5 times rated range
Burst Pressure.....≥ 3 times rated range or max range of clamp and tubing, whichever
.....is less

Weight
553 .....16 oz
554 .....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

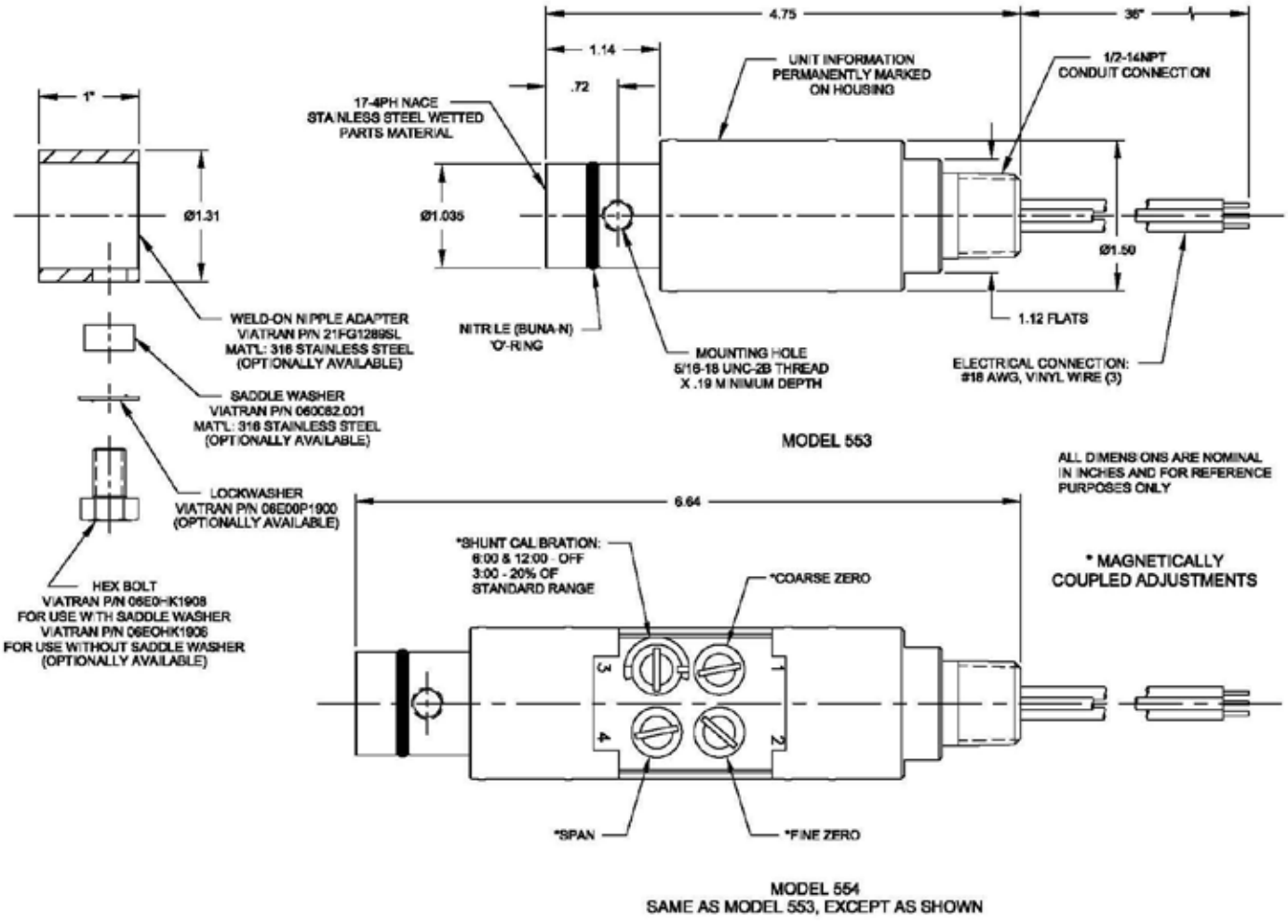
OPTIONS

Alternate Connector	BZ	Micro change connector
	ZP	6-pin hermetic (Bendix style)
Performance Options	DG	Improved temperature compensation
	DH	Special range (553 only)
	EA	Special calibration
	JJ	Direct mount indicator with Explosion Proof housing
	JS	Direct mount indicator
	NH	Customer specified identification
	NSR	Non-standard range (554 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



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

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