

Pressure Transmitter

Model #553/554

Pulp & Paper

Features

- Retro-fit 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

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 1,000 PSI 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 hermetically sealed units built for the harsh environments encountered in pulp and paper measurement. With 17-4 PH NACE wetted parts standard (Inconel X750 optional), they are designed for protection against extreme, corrosive environments.

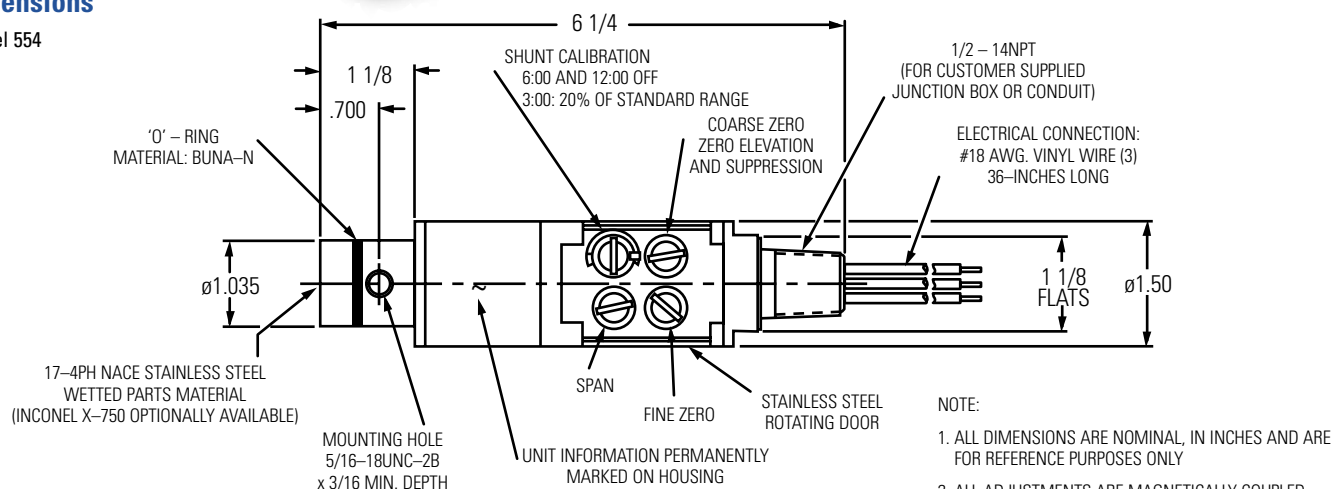
The Model 554 employs a unique, magnetically coupled external control system. This hermetically sealed enclosure has internal and external magnets that function as adjustments for zero, span, calibration, and fine zero. The 554 also features an internal calibration circuit for easy field set-up without the need for a calibrated pressure source. The span control allows 5:1 ranging.

Viatran also offers a HART version of the 554, providing enhanced digital performance, rangeability and HART communications. Viatran's Model 550 and 551 offer a solid state flush mount sensor with metric or NPT threads.

Call Viatran today for more information on our full line of pressure measurement products for the pulp and paper industry.

Dimensions

Model 554



Viatran Model 553/554 Specifications

Performance

Full Scale Pressure Range (FSPR)	0-50, 100, 150, 200, 250, 300, 500 750, 1K 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 on Zero Balance	≤ ±1.0% FSO
Response Time (Mechanical and Electrical combined)	≤ 20 mSec
Temperature Effect on Zero	≤ ±2.0% FSO per 100° F
Temperature Effect on Span	≤ ±2.0% FSO per 100° F
Compensated Temperature Range	0° F to +185° F
Operating Temperature Range	-40° F to +250° F Process -40° F to +185° F Ambient
Non-Operating Temperature Range	-40° F to +250° F

Electrical

Sensor Technology	Bonded Foil Strain Gage
Supply Voltage	Model 553 12 to 40 VDC Model 554 12 to 40 VDC
Power Supply Regulation	≤ ±0.04% FSO per Volt
Output Signal	4 to 20 mA at 70° F
Load Impedance	1400 Ohms maximum at 40 VDC
Ripple	≤ 1% FSO
Zero Balance	4 mA ±1% FSO at 70° F
Zero Adjustment	Model 553 Not Applicable Model 554 -50% FSPR (elevation) to 100% FSPR (suppression). Coarse and fine adjustments standard.
Span Balance	20 mA ±1% FSO
Span Adjustment	Model 553 Not Applicable Model 554 5:1 turndown, externally
Range Calibration Signal	Model 553 Not applicable Model 554 20% ±1.0% 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 to 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 to 1000 Mhz
Electrical Connection	1/2" NPT Male conduit, 3 Wires, 18AWG, 36"
Red	+ Signal
Black	- Signal
Green	Case Ground

Mechanical

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

Materials of Construction

Weight	Model 553 16 Oz Model 554 22 Oz
Enclosure Materials	304 & 316 stainless steel
Wetted Materials	17-4 PH NACE (Inconel X750 optional)
Identification	Laser etched onto body
Measured Fluids	Any gas or liquid compatible with 17-4 PH NACE
Enclosure Classification	NEMA 4X, 5, 6, 12

Options

Codes	Alternate Connector
BZ	Micro change connector
ZP	6-Pin Hermetic (Bendix Style)
Codes	Performance Options
DG	Improved temperature compensation
DH	Special range (Model 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 (Model 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
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Dimensions

Model 553

