

# Pressure Transmitter

## MODEL 960



The design of the Model 960 incorporates Viatran's Digital Compensation, providing one of the most accurate sanitary tank level transmitters on the market today.

### FEATURES

- <1 Minute CIP/SIP Recovery Time
- Standard Flush Hastelloy wetted parts
- Digitally Compensated
- 10:1 Turndown
- HART Communication
- 30°F-185°F Compensation
- Easy wet calibration

### TYPICAL APPLICATIONS

- Dairy
- Pharmaceutical
- Biotechnology
- Food / Beverage

Approval Options Available.  
Contact Viatran for details.

## A SMART, CLEAN TANK LEVEL TRANSMITTER

### THE HART PROTOCOL

Digital compensation provides a combined error band of less than  $\pm 0.3\%$ , (includes temperature, hysteresis, repeatability and linearity).

Rangeability, wet or dry calibration, and other digital communications are possible with the HART protocol. The 960 will still function as a standard 4-20 mA device, accurately measuring levels as low as 0-20" WC and as high as 0-900" WC.

### IMPROVED CIP/SIP RECOVERY

An integral temperature sensor dramatically improves CIP/SIP recovery time. When temperatures exceed 200°F, standard sanitary transmitters need four to six minutes to recover. The Model 960 recovers in less than 60 seconds.

### EASILY ADAPTS TO APPLICATIONS

The Model 960 offers an industry standard tank receiver design and can easily adapt to Anderson, King, Tank Mate or many other sanitary receivers on the market. This transmitter also comes in different lengths for single wall and varying insulated tank wall thickness.

### CORROSION PROTECTION

Constructed of 316L Stainless Steel and a Hastelloy sensing diaphragm, the 960 provides excellent protection against corrosion even for the most extreme applications. With a flush diaphragm, it is specifically designed for CIP and SIP systems. It's also very clean, and comes with 3A approval making it suitable for use with milk or milk products.



For product availability, or to order please call 1-800-688-0030, ext 506.

Grand Island, NY • 1-800-688-0030 • [www.viatran.com](http://www.viatran.com) • [solutions@viatran.com](mailto:solutions@viatran.com)

An ISO 9001:2000 Certified Company

### SPECIFICATIONS

#### PERFORMANCE

Full Scale Pressure Range (FSPR)	0-100", 300", 750", 900" WC
Turndown	10: 1
Total Accuracy (includes Linearity <BSFL> Hysteresis, Repeatability)	0.15% span at 75°F ± 50°F at 1:1 range
Thermal Effect	over operating range: ≤±0.35% (30°F to 185°F)
Full Scale Output (FSO)	16 mA
Long Term Stability	≤±0.25% FSO per 6 months
Response Time	≤300 mSec to reach 63% FSO
Thermal Recovery Time	50 Sec to reach 90% of FSO
Compensated Temperature	30°F to +185°F
Process Temperature Limits	-40°F to +250°F
Ambient Temperature Limits	0°F to +185°F
Storage Temperature Limits	-40°F to +250°F

#### ELECTRICAL

Sensor Technology	Silicon Piezoresistive
Supply Voltage	11.5 VDC min. w/2300 Ohm load to 30 VDC max with 1100 ohm load
With display add	4.5 VDC
Power Supply Regulation	≤±0.02% FSO per Volt
Output Signal	Two wire 4 to 20 mA. Digital process signal superimposed on a 4-20 mA signal, available to any host computer system conforming to HART protocol.
Load Impedance	230 Ohms to 1,100 Ohms
Circuit Protection	Reverse polarity protected.
Insulation Resistance	≥ 200 MegOhms to case ground
RFI/EMI Suppression	Negligible effect to 500 Mhz at 5 watts direct contact.
Electrical Connection	1/2" NPT (F) Internal terminal block
Terminal	+Signal
Terminal	-Signal
Terminal	Case Ground

#### MECHANICAL

Pressure Connection	Flush mount sensor mates with King Engineering tank shell #1777 (other adaptors available)
Proof Pressure	3X rated range
Burst Pressure	5X rated range
Oil Fill	Less than 0.66 ml of silicone oil
Measured Fluids	Any gas or liquid compatible with Hastelloy and Silicone O-Ring
Weight	4 lbs. nominal
Enclosure Materials	316L Stainless Steel

#### MECHANICAL

Wetted Materials	Hastelloy-C276 (Standard)
Identification	Laser etched onto body
Enclosure Classification	NEMA 4X, 5, 6, 12
Sanitary Standards Council	Authorized to display the 3A symbol for conformity to sanitary standards for sensor, sensor fittings and connections used on milk and milk product equipment (#74-00)

#### Options

NSR	Non Standard Ranging
HD	Short length for single wall tanks
HE	Extra long length for King receiver #1777-3
GA	Viton O-Ring
GB	Teflon O-Ring
GE	Buna-N O-Ring

#### Codes Descriptions

#### ADAPTERS

Codes	Description
HB	2" Tri Clover
HC	2 1/2" Tri Clover
HG	3" Tri Clover
HI	2" NPT
HJ	Cherry-Burrell (standard shell)
HK	Tank Mate (long shell)
HL	2" Cherry-Burrell I-Line
HM	2 1/2" Cherry-Burrell I-Line
HN	Anderson (standard shell)
HP	Anderson (long shell)
HS	1/4" NPT
HT	Cherry-Burrell (short shell)
HU	1/2" NPT
HV	Taylor

Application of some available options may affect standard performance. Consult your Viatran representative for details.

#### Accessories

Tri-Clover Clamps  
Digital Indicators  
Electrical Connection Box  
Spare Silicone O-Ring  
Spare Teflon O-Ring  
Tank Gage Receiver  
Receiver Nut  
Spanner Wrench

#### THE VIATRAN SANITARY FAMILY.

