

# Liquid Level Transmitter

## MODEL 359



The Model 359 tank level transmitter has been designed to dramatically improve CIP recovery time. Using hydrostatic pressure to determine liquid level, the 359 ensures accurate and reliable measurement in ranges from 33" WC to 750" WC.

#### FEATURES

- ✦ All welded construction
- ✦ Hastelloy C-276 wetted parts
- ✦ Ranges down to 20"
- ✦ WC full scale
- ✦ High accuracy

#### TYPICAL APPLICATIONS

- ✦ Fuel tank level
- ✦ Chemical tank level
- ✦ Gas compressors
- ✦ Chemical processing

Approval Options Available

## RELIABLE LIQUID LEVEL MEASUREMENT

### SLOWS GREASE & GRIME BUILD UP

When tanks are cleaned using liquids at temperatures exceeding 200° F, sensors generally require five to ten minutes to recover before maintaining accurate readings. The Model 359 recovers in less than one minute, minimizing costly down time and wasted process media due to inaccurate readings.

The Model 359 fits tank receivers or fittings in use on most sanitary equipment. The transmitter also comes in three different lengths for varying tank wall thickness.

### CORROSION PROTECTION

The 359 utilizes Hastelloy C-276 wetted parts to provide excellent protection against corrosion.

With a flush diaphragm, it is specifically designed for CIP systems and is 3-A Compliant as being suitable for use with milk or milk products.

### 3-A COMPLIANT SANITARY TRANSMITTER

The 359 meets USDA guidelines for meat and poultry processing equipment. This hermetically sealed enclosure has internal and external magnets that function as adjustments for zero, span, calibration, and a fine-tuning zero adjustment not found in other transmitters. The 359 also features an internal calibration circuit with 3 to 1 span ranging for easy field set-up.

Viatran manufactures a complete line of pressure transmitters for all your sanitary applications.



# VIATRAN



For product availability, or to order please call 1-800-688-0030  
Franklin, MA • 1-800-688-0030 • [www.viatran.com](http://www.viatran.com) • [solutions@viatran.com](mailto:solutions@viatran.com)

An ISO 9001:2008 Certified Company

## SPECIFICATIONS

### PERFORMANCE

Full Scale Pressure Range (FSPR) . . . . .	0-100", 300", 750", 900" WC
Non-linearity (best fit straight line) . . . . .	≤±0.15% FSO
Hysteresis and repeatability . . . . .	≤±0.10% FSO
Full Scale Output (FSO) . . . . .	16 mA
Resolution . . . . .	Infinite
Long Term Stability . . . . .	≤±0.25% FSO per 6 months
Response Time (mechanical and electrical combined) . . . . .	≤10 mSec to reach 90% FSO
Thermal recovery time . . . . .	50 Sec to reach 90% FSO
Temperature Effect on Zero . . . . .	≤±1.5% FSO per 100°F
Temperature Effect on Span . . . . .	≤±1.5% FSO per 100°F
Temperature Effect on Calibration Signal . . . . .	≤±2.0% FSO per 100°F
Compensated Temperature Range . . . . .	35°F to +170°F
Process Temperature Limits . . . . .	-20°F to +220°F
High Temperature Option . . . . .	-20°F to +300°F at 70° ambient temperature
Ambient Temperature Limits . . . . .	-40°F to +250°F
Storage Temperature Limits . . . . .	-40°F to +250°F

### ELECTRICAL

Sensor Technology . . . . .	Silicon Piezoresistive
Supply Voltage . . . . .	9 to 30 VDC
Power Supply Regulation . . . . .	≤±0.01% FSO per volt
Output Signal . . . . .	4 to 20 mA
Load Impedance . . . . .	1500 Ohms max at 40 VDC
Zero Balance . . . . .	4 mA ±1% FSO
Zero Adjustment . . . . .	-100% FSPR (elevation) to 80% FSPR (suppression). Coarse and fine adjustments standard.
Span . . . . .	20 mA ±1% FSO
Span Adjustment . . . . .	3:1 Ranging
Range Calibration Signal . . . . .	30% of FSPR, externally switched
Calibration Signal Accuracy . . . . .	≤±0.2% FSO. The exact signal to pressure correlation is provided with each unit.
Circuit Protection . . . . .	Varistor protected across the input leads for surges above 55V and currents to 250 Amps peak with a pulse width of 8 to 20 µsec. 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 (M), 3 wires, 18 AWG, 36" Length
Red . . . . .	+Signal
Black . . . . .	-Signal
Green . . . . .	Case Ground

### MECHANICAL

Pressure Connection . . . . .	Flush mount sensor mates with King Engineering tank shell #1777
Proof Pressure . . . . .	2x rated range
Burst Pressure . . . . .	3x rated range
Oil Fill . . . . .	Less than 0.66 ml of DC 200 silicone oil
Measured Fluids . . . . .	Any gas or liquid compatible with Hastelloy C-276 steel and silicone O-Ring
Weight . . . . .	4 lbs. nominal
Enclosure Materials . . . . .	316L stainless steel
Wetted Materials . . . . .	Hastelloy C-276
Identification . . . . .	Laser etched onto body

### CERTIFICATIONS

Enclosure Classification	Consult Factory for Availability 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

Codes	Descriptions
NSDR . . . . .	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

### ADAPTERS

Codes	
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

### ACCESSORIES

Mounting Bracket
Conduit Connection Box
Loop Powered Digital Indicator
Protective Cover

\* Not 3A compliant

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

Model	"L" ± 10	"M" ± 10
359AA (STD)	10.77	6.63
359HD	6.37	2.13
359HE	13.02	8.78

