PRESSURE TRANSMITTER

# Models 350 / 351



## FEATURES

- Flush Diaphragm
- 316 Stainless Steel wetted parts
- Three Tri-clamp sizes
  1.5", 2" 2.5"
- Clean in Place (CIP)
- No oil fill
- Bonded foil strain gage

## TYPICAL APPLICATIONS

- Pharmaceutical
- Food Processing
- Beverage Processing
- Pasteurizers

## CLEAN IN PLACE SYSTEMS

A flush diaphragm inhibits bacterial growth and facilitates Clean in Place (CIP) systems. The quick-disconnect Tri-clamp connections make these transmitters ideal for pharmaceutical, dairy and food processing applications where frequent cleaning is required.

## ACCURATE PRESSURE MEASUREMENT

Viatran technology allows for accurate pressure measurement up to 1000 PSI. The transmitters also have no moving parts, isolation diaphragm, or oil fill to contaminate your process fluid.

The Model 351 has magnetically coupled external controls for precise adjustments of zero and span, without exposing the electronics to the environment. The span control can adjusted for 5:1 ranging.

## SHUNT CALIBRATION SYSTEM

The Model 351 is also equipped with a built-in shunt calibration signal for easy set up and flexibility (one transmitter can be used in numerous applications). The Model 350 provides the same degree of accuracy for reliability for less money.

## 3A STANDARDS AND FM APPROVED

Viatran's Models 350 and 351 have approval options available. Consult your Viatran Rep for details.

MECO MEASUREMENTS & CONTROLS
Via Paolo Uccello, 4 20148 Milano
Tel. +39 02 4 692 680 Fax +39 02 4 694 602 info@mecoitalia.it www.mecoitalia.it

# Models 350 / 351

## PERFORMANCE

| | | |
|---|---|---|
| Full Scale Pressure Range | 350 | 0-100, 150. 200, 250, 300, 400, 500, 750, 1K PSIS, PSIA |
| | 351 | 0-100, 400, 1K PSIS, PSIA |
| | Non-linearity (Best Fit Straight Line) | ≤0.4% FSO |
| | Hysteresis | ≤0.25% FSO |
| | Repeatability | ≤±0.1% FSO |
| | Full Scale Output (FSO) | 16 mA at 70°F (21°C) |
| | Resolution | Infinite |
| | Long Term Stability | ≤±0.25% FSO per 6 months |
| | Pressure Connection Effect Zero Balance | ≤±0.1% |
| Response Time (mechanical & electrical combined) | 350 | 2 Sec (electronically damped) |
| | 351 | ≤50 mSec |
| | Temperature Effect on Zero | ≤±2% FSO per 100°F (37°C) |
| | Temperature Effect on Span | ≤±1% FSO per 100°F (37°C) |
| Temperature Effect on Calibrated Signal | 350 | Not applicable |
| | 351 | ≤±2% FSO per 100°F (37°C) |
| | Operating Temperature Range | 0°F to 180°F (-17°C to 82°C) |
| | Process Temperature Range | -65°F to 250°F (-53°C to 121°C) |
| | Storage Temperature Limits | -65°F to 250°F (-53°C to 121°C) |

## ELECTRICAL

| | | |
|---|---|---|
| | Sensor Technology | Bonded foil strain gage |
| Supply Voltage | 350 | 10 to 36 Vdc |
| | 351 | 9 to 40 Vdc |
| | Power Supply Regulation | ≤±0.04% FSO per Volt |
| | Output Signal | 4 - 20 mA at 70°F (21°C) |
| Load Impedance | 350 | 1300 Ohms max at 36 Vdc |
| | 351 | 1925 Ohms max at 40 Vdc |
| | Ripple | ≤±0.08% FSO |
| | Zero Balance | 4 mA ±5% FSO at 70°F (21°C) |
| Zero Adjustment | 350 | Not applicable |
| | 351 | 5:1 turndown, externally 30 PSI min range |
| Range Calibration Signal | 350 | Not applicable |
| | 351 | 20% of ±1.0% of FSPR, externally switched. 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 µSecs. Reverse polarity protected |
| | Bridge Resistance | 5000 Ohms nominal |
| | Insulation Resistance | ≤100 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" |
| | Red | +Power/Signal |
| | Black | -Power/Signal |
| | Green | Case Ground |

## MECHANICAL

| | | |
|---|---|---|
| | Pressure Connection | 1 1/2", 2", 2 1/2" Tri-clamp |
| | Proof Pressure | 1.5 times rated range |
| | Burst Pressure | ≤3 times rated range or max orange of clamp and tubing, whichever is less |
| Weight | 350 | 16 oz |
| | 351 | 30 oz |

## MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Enclosure Materials | 15-5, 304, and 316 stainless steel |
| Wetted Materials | 316 stainless steel |
| Identification | Laser etched onto body |
| Measured Fluids | Any gas or liquid compatible with 316 stainless steel |

MECO MEASUREMENTS & CONTROLS
Via Paolo Uccello, 4 20148 Milano
Tel. +39 02 4 692 680 Fax +39 02 4 694 602 info@mecoitalia.it www.mecoitalia.it
Viatran A Dynisco Company

## CERTIFICATIONS (Consult Factory for Available Options)

| | |
|---|---|
| Sanitary | Authorized to display the 3A symbol for Conformity to Sanitary standards for pressure and level devices # 74-02 |
| Intrinsically Safe | FM Approved Intrinsically Safe for use in Class I,II and III DIV 1, Groups A thru G indoor/outdoor |
| Suitable for Use | FM Approved, suitable for use in Class I,II, and III, DIV. 1, Groups A thru G Hazardous Locations |

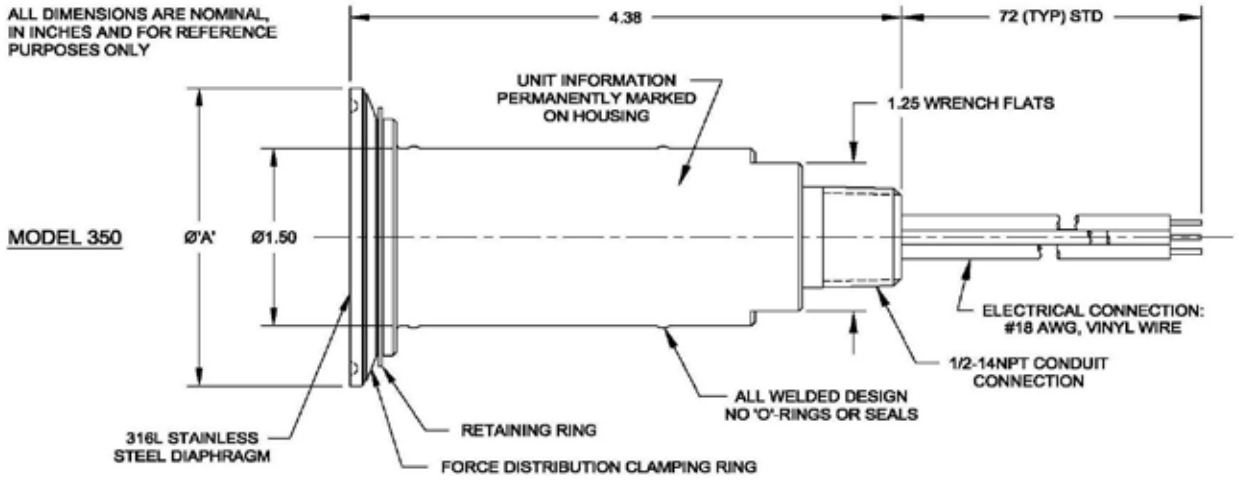
## OPTIONS

BZ.....Mini change connector
DG.....Improved temperature compensation
DH.....Special range (350 only)
EA .....Special calibration
JJ.....Direct mount indicator with Explosion Proof housing attached to
.....transmitter
MD .....FM Label
NH.....Customer specified identification
NSR.....Non-standard range (350 only)
PW .....1/8 DIN digital indicator
ZP .....CIA-C814-10-6P-10-0A1

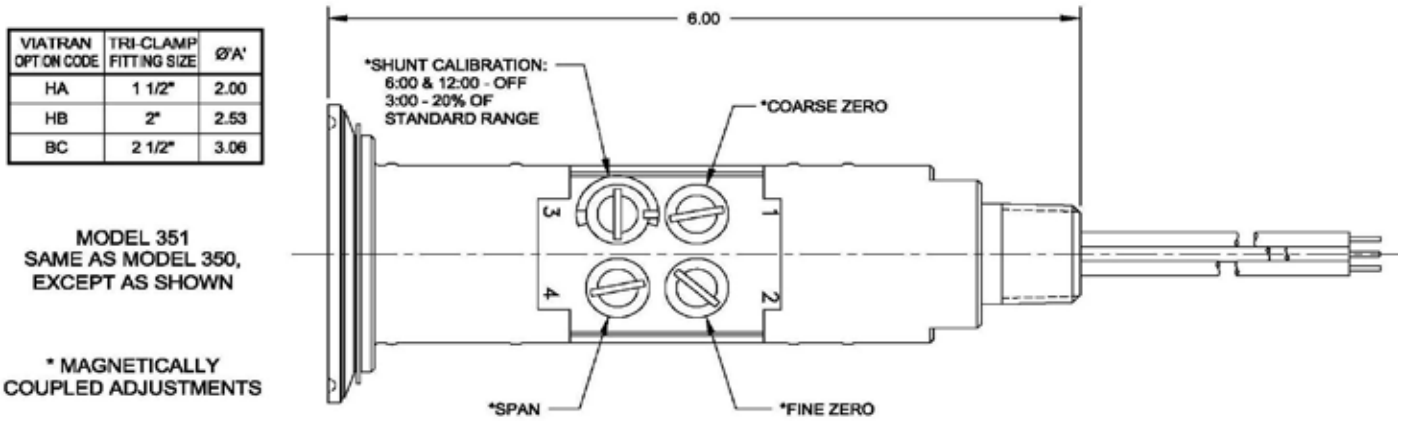
Note: Application of some available options may affect standard performance. Consult your Viatran Representative for details.

## ACCESSORIES

Tri-clamp clamp
Tri-clamp gasket
Conduit connector




| VIATRAN OPTION CODE | TRI-CLAMP FITTING SIZE | Ø'A' |
|---|---|---|
| HA | 1 1/2" | 2.00 |
| HB | 2" | 2.53 |
| BC | 2 1/2" | 3.06 |




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

98PB350351 05/10

MECO MEASUREMENTS & CONTROLS
Via Paolo Uccello, 4 20148 Milano
Tel. +39 02 4 692 680 Fax +39 02 4 694 602 info@mecoitalia.it www.mecoitalia.it
Viatran A Dynisco Company