PRESSURE TRANSMITTER

# Models 245 / 345 DIGICOMP



## FEATURES

- High accuracy
- Small size and weight
- Many options available
- All stainless steel construction
- 3 to 5000 PSI (0.2 to 345 bar)
- Shunt calibration circuit
- Zero and Span adjustments

## TYPICAL APPLICATIONS

- Engine test stand
- Turbine-rocket
- Diesel-internal combustion
- Emission testing
- Production test stand
- Transmission testing
- Break testing

## COMPACT SIZE WITH STATE-OF-THE-ART CIRCUITRY

Viatran's 245 and 345 are our most accurate pressure transducer for industrial test and research applications. The 245/345 measures from 3 PSI to 5000 PSI (0.2 to 345 bar) with standard accuracy of ≤±0.06% FSO.

To achieve high static accuracy and low temperature errors, Viatran uses a state-of-the-art ASIC with an E2PROM to store corrective coefficients. Each unit is individually calibrated in a computer controlled environmental chamber

Digitally controlled programmable gain amplifier (PGA) based electronics allow us to maintain a deep temperature compensation in the range of -40°F to 185°F (-40°C to 85°) and linearize the output signal down to 0.06% FSO or less without sacrificing the 1-3 mS response time of the product.

## COMPACT SIZE FOR LIMITED SPACE APPLICATION

The compact size of the 245/345 allows more transmitters to fit into a smaller space so that more pressure points can be measured. The use of surface mount technology (SMT) allows this complex circuitry to be incorporated into a small package. Also included is an internal calibration signal circuit. This feature allows calibration of the transmitter without an external pressure source and minimizes the need to send the transmitter to a metrology lab.

## CIRCUIT PROTECTION

All welded construction of the product's body provides good EMC performance and the RFI protection circuit makes this product the most suitable for accurate measurements in an electrically noisy environment.

MECO MEASUREMENTS & CONTROLS
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# Models 245 / 345 DIGICOMP

## PERFORMANCE

| | |
|---|---|
| Full Scale Pressure Range | 0-5 thru 0-15 PSIV (0-0.34 thru 0-1.0 bar) |
| | 0-3 thru 0-5000 PSIS (0-0.2 thru 0-345 bar) |
| | 0-15 thru 0-5000 PSIA (0-1.0 thru 0-345 bar) |
| Nonlinearity (Best Fit Straight Line) | ≤±0.06% FSO |
| Hysteresis & Repeatability | ≤±0.06% FSO |
| Full Scale Output (FSO) | |
| 245 | 5 Vdc at 70°F (21°C) standard |
| 345 | 16 mA at 70°F (21°C) |
| Resolution | Infinite |
| Long Term Stability | ≤±0.2% FSO per 6 months |
| Temperature Shift | |
| Zero Repeat after 100°F (38°C) | ≤±0.1% FSO |
| Compensated Temperature | -40°F to 185°F (-40°C to 85°C) |
| Operating Temperature | -40°F to 250°F (-40°C to 121°C) - process |
| | -40°F to 185°F (-40°C to 85°C) - ambient |
| Storage Temperature Limits | -40°F to 250°F (-40°C to 121°C) |
| Temperature Effect on Zero | ≤±0.5% FSO per 100°F (37°C) |
| Temperature Effect on Span | ≤±0.5% FSO per 100°F (37°C) |

## ELECTRICAL

| | |
|---|---|
| Supply Voltage | |
| 245 | 9 to 30 Vdc at 3.5 mA nominal, 5 mA max |
| | (13 to 30 Vdc for 10 Vdc output option) |
| 345 | 9 to 30 Vdc |
| Power Supply Regulation | ≤±0.001% FSO per volt change over the supply voltage range |
| Output Signal | |
| 245 | 0 - 5 Vdc standard (see options) |
| 345 | 4 to 20 mA |
| Load Resistance | |
| 245 | 100K Ohms min |
| 345 | 1050 Ohms max at 30 Vdc |
| Zero Adjustment | ±10% FSO min |
| Span Adjustment | ±10% FSO min |
| Calibration Signal | 80% of FSPR, by shorting pins |
| Calibration Signal Accuracy | ≤±0.1% of the stated value |
| Circuit Protection | Input polarity may be reversed. Output may be short circuited |
| | indefinitely. Over voltage protection to 1000 volts for ≤1 mSec |
| Insulation Resistance | ≥200 MegOhms to case ground |
| Response Time | ≤2 mSec |
| Electrical Connection | Bendix PT02E-10-6P, mates PT06E-10-6S (SR) |

| | 245 | 345 |
|---|---|---|
| Pin A | +Power | +Power/Signal |
| Pin B | -Power | -Power/Signal |
| Pin C | +Signal | Calibrate |
| Pin D | -Signal | Calibrate |
| Pin E | Calibrate | No connection |
| Pin F | Calibrate | No connection |

## MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Wetted Parts | 316 stainless steel |
| Housing | 304 SS with a Cadmium plated electrical connector |
| Weight | 15 oz (425 g) |
| Identification | Laser etched onto body |

## ACCESSORIES

Direct Mount Digital Indicator/Power Supply
Mating Electrical Assembly

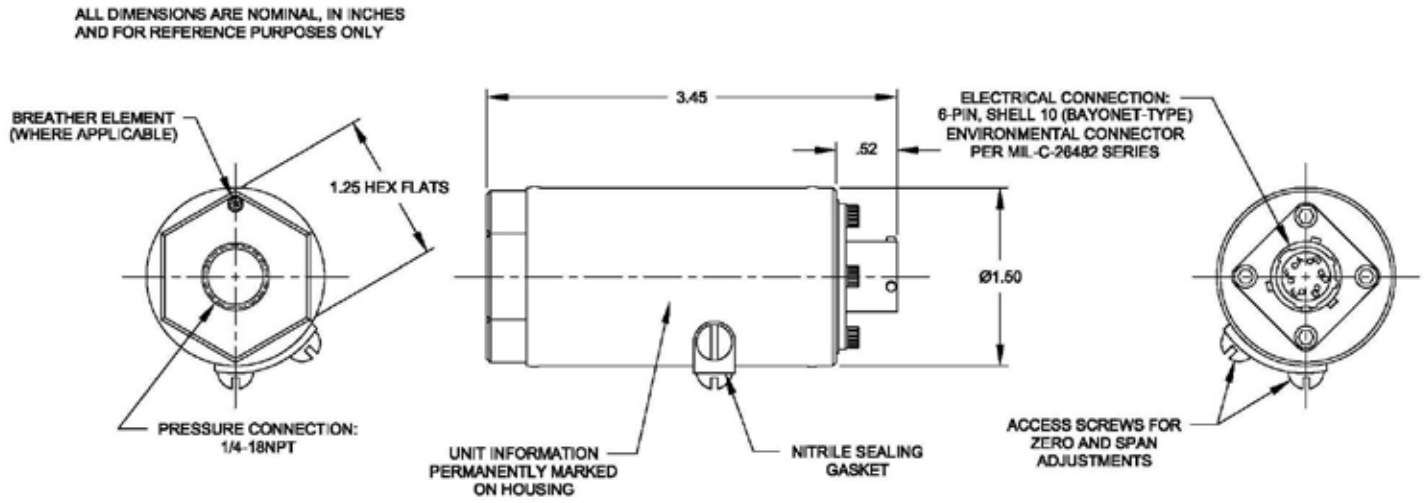
## MECHANICAL

| | | |
|---|---|---|
| Pressure Connection | Pressure Connection | 1/4" - 18 NPT female |
| Proof Pressure | ≤500 PSI (35 bar) | 3 times range or 1,200 PSI (80 bar)max |
| | >500 PSI (35 bar) | 3 times range or 10,000 PSI (700 bar) max |
| Burst Pressure | ≤500 PSI (35 bar) | 3 times range or 2400 PSI (170 bar) max |
| | >500 PSI (35 bar) | 1.5 times range or 10,000 PSI (700 bar) max |
| Pressure Cavity Volume | ≤500 PSI (35 bar) | 3.3 ml |
| | >500 PSI (35 bar) | 4.2 ml |
| | Mounting | May be supported by process piping |
| | Identification | Laser etched onto body |

## OPTIONS

| | | |
|---|---|---|
| | BF | (K)PTIH-10-6P |
| | BG | DIN 43650 |
| | BL | WK6-32S |
| | BN | (K)PTIH-8-4P |
| | BQ | (K)PTO2H-10-6P |
| | BR | CF3102E-14S-6P |
| | ZU | Direct cable (175°F Max Temp) (79°C) |
| | Y() | Multiple pressure available. Consult factory |
| Improved Performance | DH | Special ranging |
| | DK | Special calibration setting |
| | DM | Modified full scale output |
| | DQ | Cleaning for oxygen service |
| | EA | Special calibration run |
| | NH | Customer specified identification |
| | PW | 1/8 DIN digital indicator |

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




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

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