

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)
- Isolated 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 Strength testing

STATE-OF-THE-ART CIRCUITRY DELIVERS HIGH ACCURACY

Viatran's 245 and 345 are our most accurate pressure transducers for industrial test and research applications. The 245/345 measures from 3 PSI to 5000 PSI (0.2 to 345 bar) with standard linearity of $\leq \pm 0.06\%$ FSO.

To achieve high static accuracy and low temperature errors, Viatran uses ASIC technology with integrated EEPROM to store corrective coefficients. Digital connection allows Viatran to offer optional temperature compensation in the range of -40°F to 170°F

(-40°C to 77°C) and linearize the signal down to 0.06% FSO or less without sacrificing the $<2\text{ms}$ response time of the unit.

COMPACT SIZE FOR LIMITED SPACE APPLICATIONS

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 isolated 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

To maintain excellent performance and ensure immunity in electrically noisy environments, both mechanical and electrical designs are optimized for EMI handling. Sample devices were extensively tested in a simulated environment allowing for the development of a more reliable and robust product.

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PERFORMANCE

	Full Scale Pressure Range	0-3 thru 5000 PSIG (PSIS FOR >500 PSI) (0.2 thru 345 bar) 0-15 thru 0-5000 PSIA (0-1.0 thru 0-345 bar) 0-15 PSIV (0-1.03 BarV)
	Nonlinearity (Best Fit Straight Line).....	≤±0.06% FSO
	Hysteresis & Repeatability	≤±0.06% FSO each
Full Scale Output (FSO)	245	5 Vdc at 70°F (21°C) ≤±0.10% FSO standard
	345	16 mA at 70°F (21°C) ≤±0.10% FSO
	Resolution	Infinite
	Long Term Stability	≤±0.3% FSO per 6 months
Temperature Shift	Compensated Temperature.....	32°F to 170°F (0° to 77° 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	≤±1.0% FSO per 100°F
	Temperature Effect on Span	≤±1.0% FSO per 100°F

ELECTRICAL

Supply Voltage	245	8 to 30 Vdc at 3.5 mA nominal, 5 mA max (12 to 30 Vdc for 10 Vdc output option)
	345	8 to 30 Vdc
Output Signal	Power Supply Regulation.....	≤±0.01% FSO per volt change over the supply voltage range
	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	±5% FSO min
	Span Adjustment	±5% FSO min
Calibration Signal	245	80% of FSPR, by shorting calibration pins
	345	100% of FSPR, by shorting calibration pins
	Calibration Signal Accuracy	≤±0.1% of the stated value
	Circuit Protection	Reverse polarity protected. Output may be short circuited indefinitely. Over voltage protection to 1000 volts according to EN61000-4-5
	Insulation Resistance	≥200 MegOhms to case ground
	Response Time.....	<2 mSec to reach 90% of full scale
	RFI/EMI Suppression.....	CE EMC compliant per IEC EN 61326. CE marked.
	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
Shell	Ground	Ground

MATERIALS OF CONSTRUCTION

Wetted Parts.....	316 stainless steel
Housing.....	304 SS with a Cadmium plated electrical connector
Weight	10 oz (283 g)
Identification	Laser etched onto body

ACCESSORIES

Direct Mount Digital Indicator/Power Supply
Mating Electrical Assembly



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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 9,000 PSI (620 bar) max
Burst Pressure	≤500 PSI (35 bar).....	5 times range or 2,400 PSI (170 bar) max
	>500 PSI (35 bar).....	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 ports available. Consult factory
DC.....	Extended temperature operation: -40°F to 170°F (-40°C to 77°C)]
DG.....	Improved temperature compensation (≤±0.5% FSO per 100°F zero and span shift)
DH.....	Special ranging
DK.....	Special calibration setting
DM.....	Modified full scale output
DN.....	Improved linearity
DQ.....	Cleaning for oxygen service
EA.....	Special calibration run
NH.....	Customer specified identification
PW.....	1/8 DIN digital indicator
TW.....	GOST-R approval

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

