

Pressure Transducer

MODEL X45 DIGICOMP



HIGH ACCURACY FOR TEST AND RESEARCH

Viatran's Model 245 and 345 are our most accurate pressure transducer for industrial test and research applications. The 245/345 measures pressure from 3 PSI to 5000 PSI with standard accuracy of $\leq \pm 0.06\%$ FSO.

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

Digitally controlled programmable gain amplifier (PGA) based electronics allows us to maintain a deep temperature compensation in the range of -40°F to $+185^{\circ}\text{F}$ 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.

Viatran's Models 245 and 345 are among our most accurate pressure transmitters for industrial test and research applications. The "45" Series measures gage and absolute pressures from 0-5 PSI to 5000K PSI with standard accuracy of $\leq \pm 0.06\%$ FSO

FEATURES

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

TYPICAL APPLICATIONS

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

Approval Options Available



Viatran Model X45 Digicomp PRESSURE TRANSDUCER

SPECIFICATIONS

PERFORMANCE

Full Scale Pressure Range	0-5 thru 0-15 PSIV 0-3 thru 0-5000 PSIG 0-15 thru 0-5000PSIA
Non-Linearity (Best Fit Straight Line)	≤±0.06% FSO
Hysteresis & Repeatability	≤±0.06% FSO
Full Scale Output (FSO)	
Model 245	5 VDC at 70°F (21°C) standard
Model 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)	≤±0.1% FSO
Compensated Temperature Range	-40°F to +185°F (-40°C to 85°C)
Operating Temperature Range	-40°F to +250°F (-40°C to 121°C) (process) -40°F to +185°F (-40°C to 85°C) (ambient)
Storage Temperature Range	-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 maximum (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 Model 245	0 to 5 VDC standard (see options)
Model 345	4 to 20 mA
Load Resistance Model 245	100K Ohms
Model 345	1050 Ohms maximum at 30 VDC
Zero Adjustment	±10% FSO minimum
Span Adjustment	±10% FSO minimum
Calibration Signal	80% of the FSPR, by shorting pins
Calibration Signal Accuracy	≤±0.10% 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 Connections	Bendix PT02E-10-6P, mates PTO6E-10-6S (SR)

	Model 245	Model 345
Pin A	+Power	+Signal
Pin B	-Power	-Signal
Pin C	+Signal	Calibrate
Pin D	-Signal	Calibrate
Pin E	Calibrate	N/C
Pin F	Calibrate	N/C

MECHANICAL

Pressure Connections	1/4" - 18 NPT Female
Proof Pressure	
≤500 PSI	3 times range or 1,200 PSI maximum
>500 PSI	3 times range or 10,000 PSI maximum
Burst Pressure	
≤500 PSI	5 times range or 2,400 PSI maximum
>500 PSI	1.5 times range or 10,000 PSI maximum
Pressure Cavity Volume	
≤500 PSI	3.3 ml
>500 PSI	4.2 ml
Mounting	May be supported by process piping
Materials of Construction	
Wetted Parts	316 stainless steel
Housing	304 SS with a Cadmium plated electrical connector
Weight	15 oz.
Identification	Laser etched onto body

OPTIONS

OPTIONS	CODES
BF	(K)PTIH-10-6P
BG	DIN 43650 (345 Only)
BL	WK6-32S
BN	(K)PTIH-8-4P (345 Only)
BQ	(K)PTO2H-10-6P
BR	CF3102E-14S-6P
ZU	Direct Cable (175°F Max. Temp.) (79°C)
BY	(K)PTO2E-10-6P (multiple connectors available)
Y()	Multiple pressure ports available. Consult factory at 800-688-0030, ext 512 for details.

PERFORMANCE OPTIONS

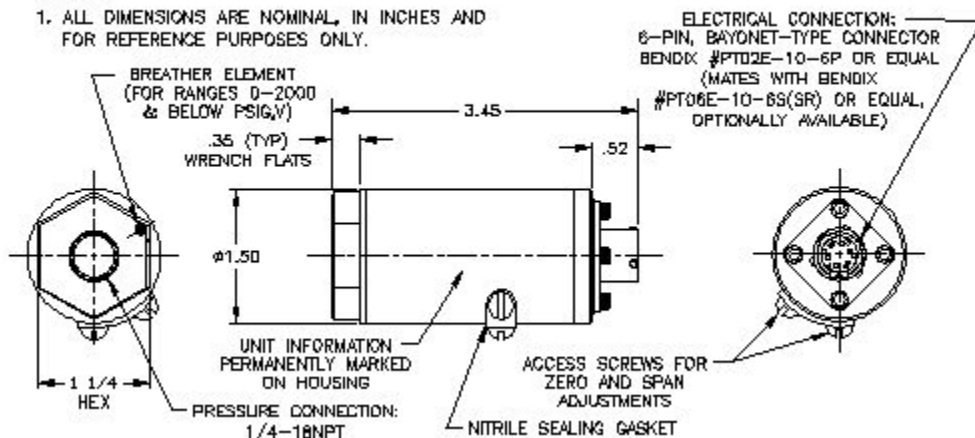
DH	Special ranging
DK	Special calibration setting
DM	Modified full scale output
DQ	Cleaning for oxygen service
EA	Special calibration run
NH	Customer specified identification
PW	1/8 DIN digital indicator

Accessories Direct Mount Digital Indicator
Mating Electrical Assembly

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

NOTE:

1. ALL DIMENSIONS ARE NOMINAL, IN INCHES AND FOR REFERENCE PURPOSES ONLY.



THE INDUSTRIAL TEST AND CONTROL FAMILY



CALL 1-800-688-0030, EXT 512 FOR DETAILS ABOUT THE ENTIRE PRESSURE MEASUREMENT FAMILY