

640 SERIES



- Designed for industrial and laboratory applications requiring high accuracy and repeatability
- Temperature compensation system virtually eliminates temperature induced errors from 50 °F to 104 °F
- Ranges include vacuum through 15,000 psi; Absolute ranges from 15 psia to 300 psia
- Standard output is digital with an RS232, 8N1/9600 Baud serial interface (other outputs & electrical connections available)
- Advanced diffused semi-conductor and sputtered thin film sensor provide maximum stability
- Gauge or absolute pressure ranges
- Outstanding accuracy and long term stability
- High over range protection
- Standard 1/2" NPT process connection
- Corrosion resistant stainless steel construction
- CE compliant to suppress RFI, EMI and ESD
- Final calibration tests prior to shipment ensures 100% "out of the box" reliability

SPECIFICATIONS

Output signals	4 mA to 20 mA, 2-wire; 0 Vdc to 5 Vdc and 0 Vdc to 10 Vdc, 3-wire; RS232-C digital output, USB
Pressure ranges	Standard gauge ranges from vacuum to 15,000 psig Standard absolute ranges from 15 psia to 300 psia
Proof pressure	3 times full scale for ranges 0 psi to 5 psi through 0 psi to 200 psi 2 times full scale for ranges 0 psi to 300 psi through 0 psi to 10,000 psi 1.5 times full scale for 0 psi to 15,000 psi range
Burst pressure	4 times full scale for ranges 0 psi to 5 psi through 0 psi to 200 psi 4 times full scale for ranges 0 psi to 300 psi through 0 psi to 10,000 psi 3 times full scale for 0 psi to 15,000 psi range
Accuracy	± 0.05% full scale (BFSL); optional ± 0.025% full scale (BFSL); (includes the effects of non-linearity, hysteresis, non-repeatability, zero point and full scale errors)
Hysteresis	≤ ±0.03% full scale
Stability	≤ ± 0.1% full scale; 5 psi ± 0.2% full scale per year
Power supply*	9 Vdc to 30 Vdc (4 mA to 20 mA, 2-wire) 9 Vdc to 30 Vdc (0 Vdc to 5 Vdc, 3-wire) 14 Vdc to 30 Vdc (0 Vdc to 10 Vdc, 3-wire) Voltage supply via RS232 interface (RS232)
Repeatability	≤ ±0.03% of full scale
Load limitations	≤ (VPower-10)/0.020 Amp for 4 mA to 20 mA ≥ 10,000 Ω for 0 Vdc to 10 Vdc, 3-wire ≥ 5,000 Ω for 0 Vdc to 5 Vdc, 3-wire
Wetted materials	316 stainless steel for vacuum through 300 psi; 17-4PH stainless steel sensing diaphragm and 316 stainless steel process connection for higher ranges
Housing materials	316 stainless steel
Temperature ranges	Compensated 32 °F to 160 °F (0 °C to 70 °C) Effect: ± 0.005% °F (32 °F-50 °F) to zero point and pressure range no effect (50 °F-104 °F) for zero and span ± 0.005%/ °F (104 °F-158 °F) to zero point and pressure range Storage -5 °F to 160 °F (-20 °C to 70 °C) Medium -5 °F to 160 °F (-20 °C to 70 °C) Ambient 32 °F to 160 °F (0 °C to 70 °C)
Response time	< 300 ms (between 10% to 90% full scale)
Durability	> 100,000,000 full scale cycles
Adjustment	± 5% full scale of zero and span (programmable with serial interface, communication software included)
Environmental protection	NEMA 4x, IP65 (IEC 529)
Electromagnetic rating	2004/108/EEC, EN 61326 Emission (Group 1, Class B) and Immunity (industrial locations)
Electrical protection	Reverse polarity, overvoltage and short circuit protection
Shock	Less than ± 0.05% full scale effect for 100 g's @ 20 ms on any axis
Vibration	Less than ± 0.01% full scale effect for 15 g's @ 5 Hz to 2,000 Hz on any axis
Weight	Approximately 11 oz.

FEATURES

- Advanced diffused semiconductor and sputtered thin film sensor for
- Gauge or absolute
- High accuracy and long term stability
- Ranges include vacuum through 15,000 psi
- High over range protection
- Serial or analog outputs
- Standard 1/2" NPT process connection
- Corrosion resistant stainless steel construction

APPLICATIONS

- Research
- Testing
- Aeronautical
- Calibration
- Precision controls
- Marine
- Power generation
- Medical