The Series 6000 Digital Pressure Transducer is a high-accuracy pressure measurement component that uses either RS-232 or RS-485 to communicate with a host computer over long distances. Any MS-DOS compatible PC with an available serial output port can serve as the host controller.

The Series 6000 Transducer is characterized over the full pressure and temperature range to achieve 0.020% FS accuracy. This accuracy specification includes linearity, hysteresis, repeatability and temperature errors. Also featured is an output which is updated at a rate of 50 readings per second.

System designers will appreciate the flexibility offered by having highly accurate pressure transducers that are not tied to a front panel and which may be located remotely. For remote operation the transducer can be located up to 4,000 feet from the host. A simple cable can accommodate both the power and the two-way communications requirements.

With a precision to 0.006% FS and an accuracy to 0.020% FS, the Series 6000 Digital Pressure Transducer provides exceptional performance.

**Features**
- Low Cost/High accuracy
- 0.020% FS accuracy @ 15 – 45°C
- Ranges from 0 – 15 psi up to 0 – 6000 psi
- Resolution to 1 ppm
- Absolute or Gauge
- Pneumatic or Hydraulic
- Customer Assigned Pressure Units
- RS-232 or RS-485 Communication
- Multi-drop Capability
- Fast Response (20ms)
- 316L Stainless Steel Housing
- CE Compliant

**Options**
- Dual Range
- Relief Valves
- Custom Ranges
Digital Pressure Transducers Specific Data  Series 6000

General Specifications

Accuracy 0.020% FS
Precision 0.006% FS
Calibration Stability Less than 0.02% FS for six months
Calibration
  Cal Interval: 180 Days
  Uncertainties: 0.020% FS
  Adjustments: Zero and Span. (Zero and Span may be reset via the serial interface without affecting the linearity)
Series Ranges 15 psi to 6000 psi
Special Ranges Vacuum, bidirectional, or intermediate ranges. Metric pressure unit ranges also available.
Pressure Units Selected from a list of 35: psi, inHg @ 0°C and 60°F, inH2O @ 4°C, 20°C and 60°F, ftH2O @ 4°C, 20°C and 60°F, mTorr, inSW @ 0°C, ftSW @ 0°C, ATM, bars, mbars, mmH2O @ 4°C, cm H2O @ 4°C, MH2O @ 4°C, mmHg @ 0°C, cmHg @ 0°C, Torr, hPa, mPa, kPa, Pa, D/cmsq, G/cmsq, Kg/cmsq, mSW @ 0°C, OSI, PSF, TSI, µHg @ 0°C, %fs. All seawater units are 3.5% salinity.
Resolution Up to 1 ppm, depending on measurement units and range.
Over Pressure Ratings 150% FS or greater, depending on range
Compensated Temperature Range 15 to 45°C
Warm-up 10 minutes to rated accuracy
Reading Update 50 per second
Response Time <0.2 for a full scale pressure step
Communications RS-232 or RS-485. LabVIEW® drivers are available.
Max Transmission 4000 feet (RS-485)
Multi-drop Capacity The maximum number of RS-485 Series 6000 transducers which can be connected to a single host computer is 31.
Mechanical Shock 5g max
Case Size 1.75" wide x 6.0" long (4.45 x 15.24 cm), not including pneumatic and electrical connectors

Weight Approximately 12 ounces (28.3 grams)
Pressure Media All media compatible with 316L stainless steel
Fittings
  Pressure Port: 1/4 inch male NPT
  Reference Port: 1/16 inch barb (gage instruments only)
Power Required
  6-20 VDC, 45mA @ 12VDC
  6 pin Bendix connector #PT02E-10-6P
Compliance Conforms to CE standards
Options Relief Valves—up to 1000 psig

Accuracy includes the following uncertainties in the pressure reading: repeatability, pressure hysteresis, creep, linearity, and temperature effects over the compensated range.

Precision is the closeness of agreement between independent test results obtained under stipulated conditions.

Per ANSI/NCSL Z540-2-1997 (U.S Guide to the Expression of Uncertainty in Measurement) “the term precision should not be used for accuracy”.

These models are calibrated with primary standards traceable to NIST. The calibration program at Mensor is compliant to ANSI/NCSL 2540-1-1994.

For more details on calibration of Mensor products see Technical Note entitled “Accuracy Specifications for Mensor Products” [available on our web site www.mensor.com].

Since product improvement is a continuous process at Mensor, we reserve the right to change specifications without notice.

Dimensions

Accuracy: Includes the following uncertainties in the pressure reading: repeatability, pressure hysteresis, creep, linearity, and temperature effects over the compensated range.

Precision: The closeness of agreement between independent test results obtained under stipulated conditions.

Per ANSI/NCSL Z540-2-1997 (U.S Guide to the Expression of Uncertainty in Measurement) “the term precision should not be used for accuracy”.

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