



Precise Sensors

"Defining Higher Expectations"

High Level Output Pressure Transducer

Model 781

Description

Model 781X is the high level output (signal) version of the Model 7810. Designed for use where reliability, small size, and long term stability are major selection criteria. The Model 781X is well suited for static and dynamic measurements in gaseous and liquid medias compatible with 316 stainless steel. The Model 781X is covered by a 3 year warranty. If flush mounting of sensing element (diaphragm) is required, see Models 7820 or 782X.



Performance Specifications @ 72°F (22°C)

| | | | |
|-------------------------------------|---|--------------------------------------|---|
| Linearity and Hysteresis (B.F.S.L.) | Less than ± 0.25% of span (±0.15% of span typical) | Power Supply Effect | Less than ±0.005% per volt change @ F.S. |
| Repeatability | Within ±0.05% of calibrated span | Zero Adjustability | ± 3% of span minimum |
| Resolution | Infinite | Span Adjustability | ± 5% of span minimum |
| Operating Temperature Range | -13°F(-25°C) to 185°F(85°C) | Loop Resistance | 0 Ω @10 VDC to 1000 Ω @ 30 VDC |
| Compensated Temperature Range | 0°F(-18°C) to 160°F(71.1°C) | Voltage Output Specifications | |
| Thermal Zero Shift | Less than ±0.0075% F.S.O./°F (Less than ±0.0135% F.S.O./°C) | Signal Output | 0.1-5 VDC, 1-5 VDC, 0.2-5.2 VDC and 0.1-10 VDC |
| Thermal Sensitivity Shift | Less than ±0.0075% F.S.O./°F (Less than ±0.0135% F.S.O./°C) | Load Resistance | 2500 Ω min. for 5 VDC Output 5000 Ω min. for 10 VDC Output |
| Rise Time | Less than 3 milliseconds from 10 to 90% step change | Load Capacitance | .01uF maximum |
| | | Supply Voltage | 10 to 30 VDC for 5 VDC F.S. 15 to 30 VDC for 10 VDC F.S. |
| | | Zero Adjustability | ± 3% of span minimum |
| | | Span Adjustability | ± 5% of span minimum |
| | | Circuitry | Supply return and signal common |

General Electrical Specifications

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|--------------------|--|
| Transducer type | Four active arm bonded strain gage |
| Circuit Protection | Reverse polarity protection |
| CE Marked | Conforms IEC standards EN 55011:1991 Class A and EN 50082-2:1995 |

Current Output Specifications

| | |
|------------------|--------------------------|
| Current Output | 4-20mA |
| Current Limiting | 28mA typical |
| Supply Voltage | 10 to 30 VDC unregulated |

Mechanical Specifications

| | |
|-------------------|-------------------------------------|
| Pressure range | See Pressure Table |
| Negative Pressure | Usable to full vacuum |
| Pressure Limit | 150% F.S. without calibration shift |
| Burst Pressure | Greater than 300% F.S. |
| Wetted Material | 316 S.ST. |
| Weight | 4 ounces (approx.) |

