

HIGH ACCURACY BAROMETRIC PRESSURE TRANSMITTER

FAST RESPONSE AND LONG TERM RELIABILITY



Barometric (Absolute) Pressure Ranges

500-1100 hPa (mb) to
800-1100 hPa (mb)

PX2780 Series



Applications

- ✓ Environmental Monitoring Systems
- ✓ Weather Measurement Systems
- ✓ Environmental Data Logging
- ✓ Laboratory and Test Station Monitoring

The PX2780 high accuracy barometric pressure transducers are designed for applications in industry and science where accuracy, fast dynamic response and long term stability are important. The sensor and electronics are packaged in a rugged stainless steel and polyester case. A removable 5-pin terminal strip makes fast and secure connections. A high accuracy ceramic sensor is coupled with a digital compensation circuit using a custom ASIC to assure consistent accuracy and reliability over a broad range of environmental conditions. There is also a sleep mode where the unit only draws 1 micro amp that allows almost instant turn on/reading for remote applications.

SPECIFICATIONS

Accuracy: See table on next page

Resolution: 0.1 hPa (mb)

Long Term Stability: $<\pm 0.1$ hPa (mb)/year

Warm-Up Time: <1 second

Warm-Up Shift: <0.1 hPa (mb) maximum

Response Time: <100 ms

Proof Pressure: 1500 hPa (mb)



PX2780-600B5V shown
larger than actual size.

Burst Pressure: 2000 hPa (mb)

Storage Temperature: -60 to 120°C
(-76 to 248°F)

Operating Temperature: -40 to 60°C
(-40 to 140°F)

Compensated Range: -40 to 60°C
(-40 to 140°F)

Zero Shift:

Barometric: $<\pm 0.18\%$ full scale/ 50°C
($<\pm 0.2\%$ full scale/ 100°F)

Sensitivity Effects: $<\pm 0.09\%$ full
scale/ 50°C ($<\pm 0.1\%$ full scale/ 100°F)

Excitation: 9.5 to 28 Vdc (3 mA
operate mode, 1 μA sleep mode)
3- or 4-wire circuit

Output: 0 to 5 Vdc

Full Scale Span Setting: ± 5 mV

Zero Setting: ± 5 mV

Output Impedance: $<10 \Omega$

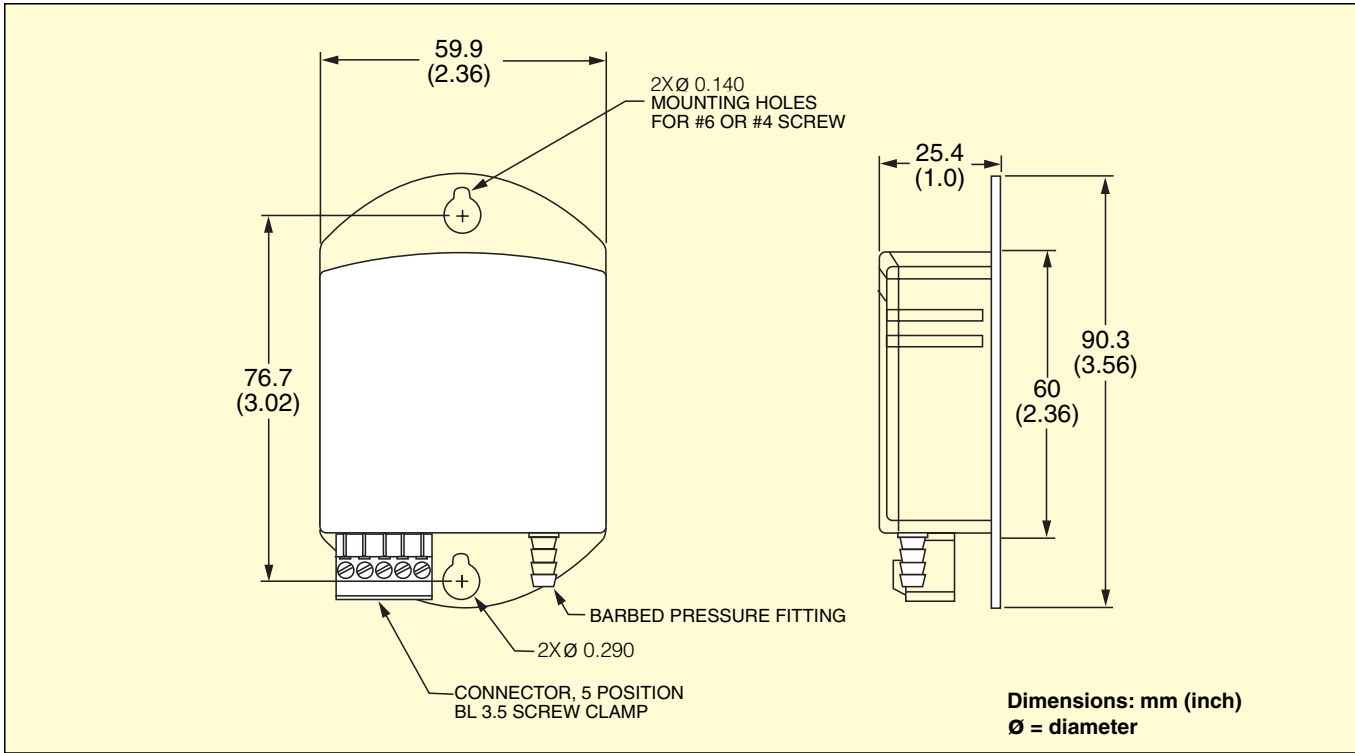
Electrical Connection: Removable
5-pin terminal strip

Pressure Connection: $\frac{1}{8}$ " barbed fitting

Pressure Media: Non-condensing air
or gas

Weight: 137 g (4.8 oz)

Mounting: Mounting plate



DP25B-E shown smaller than actual size. For details visit omega.com/dp25b

ACCURACY [hPa (mbar)] RSS*

TEMPERATURE	RANGE (hPa)		
	500	600	800
20°C (68°F)	±0.6	±0.5	±0.3
0 to 40°C (32 to 104°F)	±1.2	±1.0	±0.6
-20 to 50°C (-4 to 122°F)	±2.0	±1.5	±1
-40 to 60°C (-40 to 140°F)	±2.5	±2.0	±1.5
Non-linearity	±0.5	±0.4	±0.25
Hysteresis	±0.06	±0.05	±0.03
Non-repeatability	±0.04	±0.03	±0.02

* RSS of end point non-linearity, hysteresis, non-repeatability and calibration uncertainty

To Order

MODEL NUMBER	BAROMETRIC RANGES (ABSOLUTE PRESSURE)
PX2780-500B5V	500 to 1100 hPa (mb)
PX2780-600B5V	600 to 1100 hPa (mb)
PX2780-600NB5V	600 to 1060 hPa (mb)
PX2780-800B5V	800 to 1100 hPa (mb)
PX2780-800NB5V	800 to 1060 hPa (mb)

Comes complete with NIST traceable calibration certificate and operator's manual.

Ordering Examples: PX2780-800B5V, high accuracy barometric transmitter with 0 to 5 Vdc output, range 500 to 1100 hPa (mb).

PX2780-600NB5V, high accuracy barometric transmitter with 0 to 5 Vdc output, range 600 to 1060 hPa (mb).