

HONEYWELL PRECISION BAROMETER (HPB)



The Honeywell Precision Barometer (HPB) offers outstanding value to instrument builders that require accurate and stable barometric measurements in real-world conditions. The HPB uses proven silicon sensor technology with microprocessor-based signal compensation, eliminating the need to insulate or temperature-regulate the barometer. The HPB has a pressure range of 500 to 1200 hPa. The HPA, intended for altimeter applications, provides a pressure range of 0 to 17.6 psia.

FEATURES & BENEFITS

HIGH ACCURACY

- ± 0.4 hPa max from -40 to 85°C .
- $\pm 0.03\%$ FS max from -40 to 85°C .

PERFORMANCE SPECIFICATION GUARANTEED OVER -40 TO 85°C

- HPB, ± 0.4 hPa; HPA, $\pm 0.03\%$ FS Max.

MULTIPLE INTERFACE OPTION

EASY INTERFACE, PLUG-AND-PLAY FOR YOUR SYSTEM REQUIREMENTS

- RS-232 receives commands and sends data to a single serial port of a computer.
- RS-485 up to 89 units can be connected to a two-wire multidrop bus. most dry gas media.

PROVEN HONEYWELL TECHNOLOGY

STABLE AND RELIABLE

- Honeywell has been building the world's highest performance silicon pressure sensors for over thirty years.

POTENTIAL APPLICATIONS

- AWOS Weather Systems
- Remote Meteorological Station
- Ocean Data Buoys
- Environmental Data Logging
- Secondary Air Data
- Altimeters

ISO-
9001

ISO-
14001

SPECIFICATIONS

PERFORMANCE⁽¹⁾

Total Error Band	(from -40 to 85°C)
HPB200	±0.4 hPa maximum
HPA200	±0.03% FS maximum
Temperature	±1°C (at sensing element)
Temperature Range	Operating: -40 to 85°C (-40 to 185°F) Storage: -55 to 90°C (-67 to 194°F) Sample Rate(3): 8.33ms to 51.2 min
Resolution	0.0011% FS ⁽⁴⁾
Response Delay	(1000/update rate) +1ms, minimum 17ms
Long Term Stability⁽⁶⁾	HPB: 0.25 hPa max per year HPA: 0.02% FS max per year

MECHANICAL

Pressure Ranges	HPB: 500 to 1200 hPa (1 hPa = 1 mbar) HPA: 0 to 17.6 psia
Pressure Units⁽³⁾	atm, bar, cmwc, ftwc, hPa, inHg, inwc, kg/cm ² , KPa, mBar, mmHg, MPa, mwc, psi, user, lcom, pfs
Media Compatibility	Suitable for non-condensing, non-corrosive, and non-combustible gases
Weight	5 oz. (142 gm) without fittings

ELECTRICAL

Output	RS-232, RS-485
Power Requirements	Supply Voltage: 5.5 to 30 VDC
Operating Current	35 mA maximum
Baud Rate⁽³⁾	1200, 2400, 4800, 9600, 14400, 19200, 28800
Bus Addressing⁽³⁾	Address up to 89 units

ENVIRONMENTAL⁽²⁾

Humidity Sensitivity	Negligible
Acceleration Sensitivity	Negligible
Mechanical Shock	1500g, 0.5ms half sine
Temp Shock	24 1-hour cycles, -40 to 85°C
Vibration	0.5in or 20G's, 20Hz – 2KHz

(1) Accuracy is the sum of worst-case linearity, repeatability, hysteresis, thermal effects, and calibration errors from -40 to 85°C. Calibration is traceable to NIST.

(2) Mechanical Shock tested per MIL-STD-883D, M2002.3, Cond. B. Vibration tested per MILSTD- 883D, M2007.2, Cond. A.

(3) User Configurable.

(4) Best resolution obtained with PFS (percent full scale) pressure units.

(5) Demonstration kit includes unit, power supply/data cable (120V), demonstration software, and user manual.

(6) Beyond max. total error band when continuously powered at 25±10°C, <90%RH and 28 to 32 inHg atmospheric pressure.

ORDERING INFORMATION

PRESSURE CONNECTION

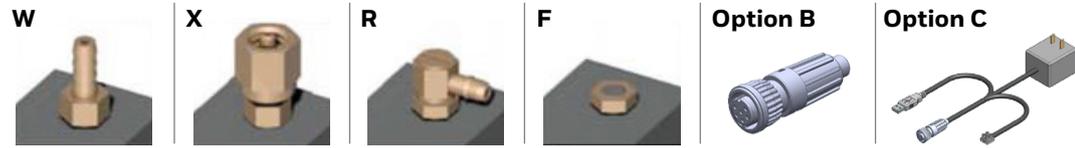
HPB	Barometer Application, 500 to 1200 hPa (1 hPa = 1 mbar)
HPA	Altimeter Application, 0 to 17.6 psia
	ACCURACY
	200
	BAROMETER
	±0.4 hPa max
	ALTIMETER
	±0.03% FS max

PRESSURE CONNECTION	
W	Brass barbed (1/8 inch ID tubing)
X	Brass Swagelok™ (1/8 inch female)
R	Brass barbed, right angle (1/8 inch ID tubing)
F	Filter (blocks debris)

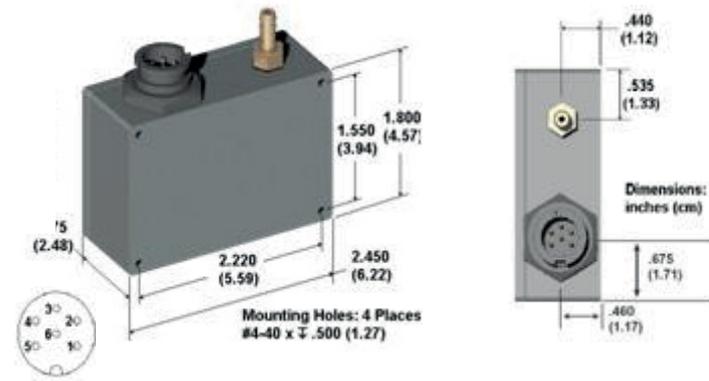
OUTPUTS	
2D	RS-232
5D	RS-485

ELECTRICAL CONFIGURATION AND CONNECTION	
A	6-pin plastic connector
OPTIONS	
B	Mating Connector (See Below)
C	Power Supply/Data Cable

HPB	200	W	2D	A	-B
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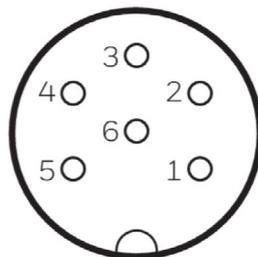


DIMENSIONS



CONNECTOR PINOUTS

PIN	SIGNAL NAME
1	RS-232 (TD)/RS-485(B)
2	RS-232 (TD)/RS-485(A)
3	Case Ground
4	Common Ground (GND)
5	DC Power In (+)
6	N/C



For more information

For more information on Honeywell's Precision Pressure Transducers, contact us at 1-800-601-3099 (International: 1-602-365-3099).

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**THE
FUTURE
IS
WHAT
WE
MAKE IT**

Honeywell