Honeywell Precision Barometer
HPB

The Honeywell Precision Barometer (HPB) offers outstanding value to instrument builders requiring 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.

APPLICATIONS:
- AWOS Weather Systems
- Remote Meteorological Stations
- Ocean Data Buoys
- Environmental Data Logging
- Secondary Air Data
- Altimeters

FEATURES AND BENEFITS

- High Accuracy
  ±0.4 hPa max from -40 to 85°C
  ±0.03% FS max from -40 to 85°C

- Multiple Interface Options

- Proven Honeywell Technology

- Two-tiered accuracy including temperature errors over -40 to 85°C
  - HPB, ±0.4 hPa or ±0.8 hPa; HPA, ±0.03% or ±0.06% FS Max.
  - Simplifies System Design – there is no need to insulate, temperature-regulate or provide additional signal compensation.

- Easy Interface, Plug-and-Play for your system requirements.
  - TTL – for lowest power consumption (33 milliwatts)
  - 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.

- Stable and Reliable – Honeywell has been building the world’s highest performance silicon pressure sensors for over thirty years.
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**SPECIFICATIONS**

**Performance Specifications**

| Total Error Band | HPB200: ±0.4 hPa maximum | HPA100: ±0.8 hPa maximum |
| HPB100: ±0.8 hPa maximum | HPA200: ±0.03% FS maximum |
| HPB200: ±0.4 hPa maximum | Temperature: ±1°C (at sensing element) |

**Response Delay:**

1000/updatedate rate + 1 ms, minimum 17 ms

**Long Term Stability:**

- HPB: 0.25 hPa max per year
- HPA: 0.02% FS max per year

**Pressure Units:** atm, bar, cmwc, ftwc, hPa, inHg, inwc, kg/cm², KPa, mBar, mmHg, MPa, mwc, psi, user, icon, psl

**Media Compatibility:** Suitable for non-condensing, non-corrosive, and non-combustible gases.

**Weight:** 5 oz. (142 gm) without fittings

**Electrical Specifications**

- **Output:** TTL, RS-232, RS-485
- **Power Requirements:** TTL Supply Voltage: 6 to 26 VDC, RS-232, RS-485 Supply Voltage: 5.5 to 30 VDC
- **Operating Current:** RS-232/RS-485: 17-30mA; TTL: 6-9 mA
- **Baud Rate:** 1200, 2400, 4800, 9600, 14400, 19200, 28800
- **Bus Addressing:** Address up to 89 units.

**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 – 2K Hz

(1) Accuracy is the sum of worst case linearity, repeatability, hysteresis, thermal effects and calibration error 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 MIL-STD-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, TTL-to-RS-232 converter (TTL only), 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.

**Find out more**

For more information on Honeywell's Precision Pressure Transducers visit us online at [www.pressuresensing.com](http://www.pressuresensing.com) or contact us at 1-800-601-3099 (International: 1-602-365-3099). Customer Service Email: D&Sorders@honeywell.com.

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