

## 230-PTB110 Series Analog Barometers



The **230-PTB110 Barometer** is designed both for accurate barometric pressure measurements at a room temperature and for general environmental pressure monitoring over a wide temperature range.

The PTB110 barometer uses the Vaisala BAROCAP® Sensor, a silicon capacitive absolute pressure sensor developed for barometric pressure measurement applications. The sensor combines the outstanding elasticity characteristics and mechanical stability of single-crystal silicon with the proven capacitive detection principle.

The excellent long-term stability of the barometer minimizes or even removes the need for field adjustment in many applications.

The PTB110 is suitable for a variety of applications, such as environmental pressure monitoring, data buoys, laser interferometers, and in agriculture and hydrology. The compact PTB110 is especially ideal for data logger applications as it has low power consumption. Also an external on/off control is available. This is practical when the supply of electricity is limited.

### Specifications

Operating range:  
 230-PTB1104: 600-1060 mb  
 230-PTB1105: 800-1060 mb  
 Temperature range: -40/+140 °F (-40/+60 °C)  
 Humidity range: Non-condensing  
 Linearity\*  $\pm 0.25$  mb  
 Hysteresis\*  $\pm 0.03$  mb  
 Repeatability\*  $\pm 0.03$  mb  
 Calibration uncertainty\*\*  $\pm 0.15$  mb  
 Accuracy at +20 °C\*\*\*  $\pm 0.3$  mb  
 \* Defined as  $\pm 2$  standard deviation limits of end-point non-linearity, hysteresis error or repeatability error.  
 \*\* Defined as  $\pm 2$  standard deviation limits of inaccuracy of the working standard including traceability to NIST.  
 \*\*\* Defined as the root sum of the squares (RSS) of end-point non-linearity, hysteresis error, repeatability error and calibration uncertainty at room temperature.  
 Total accuracy at  
 +59/+77 °F (+15/+25 °C):  $\pm 0.3$  mb  
 +32/+104 °F (0/+40 °C):  $\pm 0.6$  mb  
 -4/+113 °F (-20/+45 °C):  $\pm 1.0$  mb  
 -40/+140 °F (-40/+60 °C):  $\pm 1.5$  mb  
 Long-term stability:  $\pm 0.1$  mb/year  
 Supply voltage 10-30 Vdc  
 Current consumption: less than 4 mA  
 Output voltage: 0-2.5 Vdc or 0-5 Vdc  
 Resolution: 0.1 mb  
 Load resistance: Minimum 10 kohm  
 Load capacitance: Maximum 47 nF  
 Settling time: 1 s to reach full accuracy after power-up  
 Response time: 500 ms to reach full accuracy after a pressure step  
 Pressure connector: M5 (10-32) internal thread  
 Pressure fitting: Barbed fitting for 1/8"  
 Minimum pressure limit: 0 mb abs  
 Maximum pressure limit 2000 mb abs  
 Electrical connector: Removable connector for 5 wires (AWG 28-16)  
 Terminals  
 Pin 1: external triggering  
 Pin 2: signal ground  
 Pin 3: supply ground  
 Pin 4: supply voltage  
 Pin 5: signal output  
 Housing material (plastic cover): ABS/PC blend  
 Housing classification: IP32  
 Metal mounting plate: Aluminum  
 Dimensions: 3.54" x 2.69" x 1.11" (90 mm x 68.4 mm x 28.1 mm)  
 Weight/Shipping: 3 oz (90 g)/1 lb (.5 kg)  
 Electromagnetic compatibility:  
 Complies with EMC standard EN 61326-1, Generic Environment

### Ordering Information

230-PTB1104	Analog Barometric Pressure Transmitter 600-1060 mb
230-PTB1105	Analog Barometric Pressure Transmitter 800-1060 mb