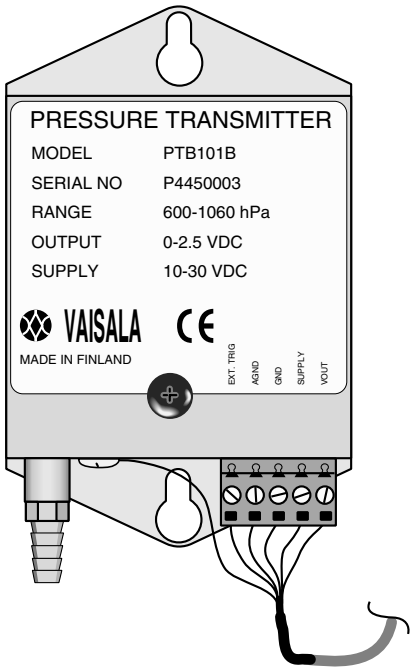
Barometric Pressure Sensor

Model CS105

The CS105 Barometer uses Vaisala's silicon capacitive sensor to measure barometric pressure over a 600 to 1060 millibar range. The CS105 outputs a linear signal of 0 to 2.5 Vdc allowing it to be directly connected to Campbell Scientific dataloggers.

An integral circuit switches 12 volts from the datalogger to the barometer only during measurement, thereby reducing power requirements. Sensor warm-up and measurement time is one second minimum.



The CS105 provides accurate, unattended measurements of barometric pressure over a wide range of elevations.

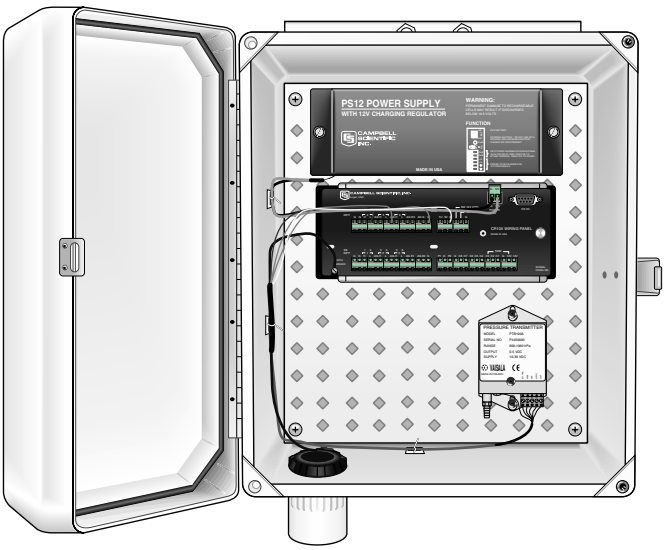
Construction and Mounting

The sensor is housed in an anodized aluminum case fitted with an intake valve for pressure equilibration. Terminal strips provide for datalogger power and signal connections. The barometer is supplied with 2.5' of cable and is intended to mount inside the ENC 12/14 or larger enclosure.

Manufacturer's Specifications

- Total Accuracy[1]: ±0.5 mb @ +20°C
  ±1.5 mb @ 0° to 40°C
  ±2.0 mb @ -20° to +45°C
  ±3.0 mb @ -40° to +60°C
- Linearity: ±0.45 mb
- Hysteresis: ±0.05 mb
- Repeatability: ±0.05 mb
- Calibration Uncertainty: ±0.15 mb
- Long-Term Stability: ± 0.1 mb per year
- Operating Temperatute: -40° to +60° C
- Dimensions: 3.8" x 2.4" x 0.9"
  (9.7 cm x 6.0 cm x 2.2 cm)
- Weight: 3.0 oz (85 g)
  Shipping: 4.1 oz (115g)
- Supply Voltage: 10 to 30 Vdc
- Current Consumption: <4 mA (active)
  <1 µA (quiescent)
- Warm-up Time: 1s

[1]The root sum squared (RSS) of end point non-linearity, hysteresis, repeatability, and calibration uncertainty.



PS12 power supply top, CR10X datalogger, and CS105 inside ENC 12/14 enclosure.

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