

CS106

Barometric Pressure Sensor

The CS106 barometer uses Vaisala's BAROCAP silicon capacitive sensor to measure barometric pressure over a 500 to 1100 millibar range. The CS106 outputs a linear signal of 0 to 2.5 Vdc, allowing it to be directly connected to Campbell Scientific dataloggers. The CS106 is compatible with all of our contemporary dataloggers and many of our retired dataloggers (e.g., CR510, CR10(X), CR23X).

Construction and Mounting

The CS106 is encased in a plastic shell (ABS/PC blend) fitted with an intake valve for pressure equilibration. It includes a 2.5 ft cable and a terminal strip for datalogger power and signal connections. The CS106 is typically mounted next to the datalogger inside an ENC12/14 or larger enclosure. The ENC100 is available for housing the CS106 in its own enclosure.

Ordering Information

Barometric Pressure Sensor

CS106 Vaisala PTB110 Barometer (500 to 1100 mb), with 30 in. cable.

Accessories

The following accessories are used when the barometer will be housed in a different enclosure than the datalogger.

ENC100 6.7 in. by 5.5 in enclosure for housing only the CS106.

CABLE5CBL-L 5-conductor, 24 AWG cable with drain wire and Santoprene jacket. Enter cable length, in feet, after the -L. Must choose a cable termination option (see below).

Cable Termination Options (choose one)

- PT** Cable terminates in pigtails for direct connection to datalogger's terminals.
- PW** Cable terminates in a connector for attachment to a prewired enclosure.



The ENC100 is a very small enclosure that can house one CS106. It includes a backplate, compression fitting, vent, and mounting bracket.



The CS106 includes a switching circuit that allows the datalogger to power the barometer only during measurement, which reduces power consumption. Sensor warm-up and measurement time is one second minimum.

Manufacturer's Specifications

Total Accuracy¹:	±0.3 mb @ +20°C ±0.6 mb @ 0° to 40°C ±1.0 mb @ -20° to +45°C ±1.5 mb @ -40° to +60°C
Linearity:	±0.25 mb
Hysteresis:	±0.03 mb
Repeatability:	±0.03 mb
Calibration Uncertainty:	±0.15 mb
Long-Term Stability:	±0.1 mb per year
Operating Temperature:	-40° to +60°C
Dimensions:	2.7" x 3.8" x 1.1" (6.8 cm x 9.7 cm x 2.8 cm)
Weight:	3.2 oz (90 g)
Supply Voltage:	10 to 30 Vdc
Current Consumption:	<4 mA (active), <1 µA (quiescent)
Settling Time:	1 second to reach full accuracy after power-up
Response Time:	500 ms to reach full accuracy after a pressure step

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

