



Wider Pressure Range

Resides inside a weather-proof enclosure

Overview

The CS106 measures barometric pressure for the range of 500 to 1100 hPa. This range equates to from below sea level (as in a mine) to over 15,000 feet above sea level. Designed for use in

environmental applications, the CS106 is compatible with all Campbell Scientific dataloggers.

Benefits and Features

- › Optimized to mount in Campbell Scientific enclosures
- › Low power consumption
- › Three-year warranty
- › Integral switching circuit limits power consumption to the measurement cycle
- › Compatible with all Campbell Scientific dataloggers

Technical Description

The CS106 uses Vaisala's BAROCAP silicon capacitive sensor to measure barometric pressure. It is encased in a plastic shell (ABS/PC blend) fitted with an intake valve for pressure equilibration.

The CS106 outputs a linear signal of 0 to 2.5 Vdc, which allows the barometer to be directly connected to a Campbell Scientific datalogger. An internal switching circuit allows the logger to power the CS106 only during measurement, which reduces power usage.



Ordering Information

Barometric Pressure Sensor

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

Accessories

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

ENC100 17 cm (6.7 in) by 14 cm (5.5 in) enclosure for housing only the CS106. Includes a backplate, compression fitting, vent, and mounting bracket.

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 pigtailed for direct connection to the datalogger's terminals.
- PW** Cable terminates in a connector for attachment to a Campbell Scientific prewired enclosure.



The CS106 is typically mounted next to the datalogger inside an ENC12/14 or larger enclosure. The ENC100 (shown above) is available for housing the barometer in its own enclosure.

Manufacturer's Specifications

- › Pressure Range: 500 to 1100 hPa (mBar)
- › Operating Temperature Range: -40° to 60°C
- › Accuracy¹: ±0.3 hPa @ +20°C; ±0.6 hPa @ 0° to 40°C; ±1.0 hPa @ -20° to +45°C; ±1.5 hPa @ -40° to +60°C
- › Linearity: ±0.25 hPa
- › Hysteresis: ±0.03 hPa
- › Repeatability: ±0.03 hPa
- › Calibration Uncertainty: ±0.15 hPa
- › Long-Term Stability: ±0.1 mb per year
- › Supply Voltage Range: 10 to 30 Vdc
- › Current Consumption: < 4 mA (active); < 1 µA (quiescent)
- › Output Voltage Range: 0 to 2.5 Vdc
- › Settling Time: 1 s to reach full accuracy after power-up
- › Response Time: 500 ms to reach full accuracy after a pressure step
- › Dimensions: 6.8 x 9.7 x 2.8 cm (2.7 x 3.8 x 1.1 in)
- › Cable Diameter: 0.8 cm (0.3 in)
- › Weight: 90 g (3.2 oz)

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



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October 19, 2017