



WHEN MEASUREMENTS MATTER

CS106

Barometric Pressure Sensor



Wider Pressure Range

Resides inside a weather-proof enclosure

Overview

The CS106 measures barometric pressure for the range of 500 to 1100 mb. 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 (including the CR200(X) series)

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.

questions & quotes:

www.naskr.co.kr



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 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

- › Accuracy¹: ± 0.3 mb @ $+20^{\circ}\text{C}$; ± 0.6 mb @ 0° to 40°C ; ± 1.0 mb @ -20° to $+45^{\circ}\text{C}$; ± 1.5 mb @ -40° to $+60^{\circ}\text{C}$
- › 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
- › Supply Voltage Range: 10 to 30 Vdc
- › Current Consumption: < 4 mA (active); < 1 μA (quiescent)
- › Settling Time: 1 s to reach full accuracy after power-up
- › Response Time: 500 ms to reach full accuracy after a pressure step
- › Operating Temperature Range: -40° to 60°C
- › 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.

