

Barometric Pressure Sensor

Model CS100



The CS100 provides accurate, unattended measurements of barometric pressure over a wide range of elevations.

The CS100 Barometer uses Setra's Setraceram™ capacitive sensor and IC analog circuit to measure barometric pressure over a 600 to 1100 millibar range. The CS100 outputs a linear signal of 0 to 2.5 Vdc allowing it to be directly connected to Campbell Scientific dataloggers. Sensor warm-up and measurement time is one second minimum. The sensor features a built in power switch to minimise power use between measurements.

Construction and Mounting

The sensor is housed in a stainless steel and polyester case fitted with an 1/8" barbed fitting for pressure connection. A removable terminal strip provides for datalogger power and signal connections. The barometer is supplied with

75cm of cable and is intended to mount inside an ENC 12/14 or larger enclosure.

"High Altitude" Version

Campbell Scientific offers a version of the CS100 that measures barometric pressure over a 500 to 1100 millibar range. Contact us for more information.

High Reliability

The CS100 comes with a 3 year warranty.

Specifications

Total Accuracy¹:

- ±0.5 mb @ +20°C
- ±1.0 mb @ 0° to 40°C
- ±1.5 mb @ -20° to +50°C
- ±2.0 mb @ -40° to +60°C

Linearity: ±0.4 mb

Hysteresis: ±0.05 mb

Repeatability: ±0.03 mb

Resolution: ±0.01 mb

Long-Term Stability: ±0.1 mb per year

Response time: <100 ms

Operating Temperature: - 40° to +60°C

Dimensions: 9.1 cm x 6.1 cm x 2.5 cm (3.6" x 2.4" x 1.0")

Weight: 135 g (4.8 oz)

Excitation: 9.5 to 28 Vdc

Current Consumption: <3 mA (active), <1 µA (sleep mode)

Warm-up time: <1 s

CE Compliant

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

These are sensor errors only. Please refer to the relevant datalogger datasheets to consider the likely total measurement errors and resolution.

June 2005

