



Accurate, unattended measurements

of barometric pressure over wide range of elevations

More info: +44(0) 1509 828 888

www.campbellsci.eu/cs100

Overview

The CS100 Barometer uses Setra's Setraceram™ capacitive sensor and IC analogue 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. The minimum sensor warm-up and measurement time is one second. The sensor features a built in power switch to minimise power use between measurements.

Benefits and Features

- › Optimized to mount in Campbell Scientific enclosures
- › Low power consumption
- › Three year warranty, CE compliant
- › 500 to 1100 millibar and 800 to 1100 millibar versions also available by special order
- › Integral switching circuit limits power consumption to the measurement cycle

Specifications

- › 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
- › Excitation: 9.5 to 28 Vdc
- › Current consumption: < 3 mA (active); < 1 µA (sleep mode)
- › Warm up time: < 1 s
- › Operating temperature range: -40° to 60°C
- › Dimensions: 9.1 x 6.1 x 2.5 cm
- › Cable diameter: 0.8 cm
- › Cable length: 0.8 m
- › Weight: 135 g

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.

Technical description

The CS100 is a Campbell Scientific version of Setra's model 278 barometer. It uses Setra's Setraceram capacitive sensor and IC analog circuit to measure barometric pressure. The CS100 includes a 0.76 m cable and a terminal strip for datalogger power and signal connections.

The CS100 is encased in a stainless steel and polyester case fitted with an 1/8 in. barbed fitting for pressure connection. It has an internal switching circuit that allows the logger to power the barometer only during measurement, which reduces power usage.

Note: The cable attached to the sensor is optional, in Europe, and if required can be ordered as a length of CABLE5CBL-L.