



## Standard Barometer

Resides inside a weather-proof enclosure

### Overview

The CS100 measures barometric pressure for the range of 600 to 1100 hPa (mBar). This range equates to from below sea level (as in a mine) up to 12,000 feet above sea level. Designed for

use in environmental applications, the CS100 is compatible with all Campbell Scientific data loggers.

### Benefits and Features

- ▶ Optimized to mount in Campbell Scientific enclosures
- ▶ Low power consumption
- ▶ Three-year warranty
- ▶ 500 to 1100 hPa (mBar) and 800 to 1100 hPa (mBar) versions also available by special order—contact Campbell Scientific
- ▶ Integral switching circuit limits power consumption to measurement cycle

### Detailed 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 (2.5 ft) cable and a terminal strip for data logger 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 includes an internal switching circuit that allows the data logger to power the barometer only during measurement, which reduces power usage.

### Specifications

Measurement Description	Barometric pressure	Long-Term Stability	±0.1 hPa per year
Signal Type/Output	Analog voltage	Response Time	< 100 ms
-NOTE-	1 hPa = 1 mBar	Resolution	±0.01 hPa
Pressure Range	600 to 1100 hPa	Excitation	9.5 to 28 Vdc

Elevation	~609.6 m (2,000 ft) below sea level (as in a mine) to 3,657.6 m (12,000 ft) above sea level
Accuracy	<ul style="list-style-type: none"> <li>› ±1.5 hPa (@ -20° to +50°C)</li> <li>› ±2.0 hPa (@ -40° to +60°C)</li> <li>› Accuracy refers to the root sum squared (RSS) of end point non-linearity, hysteresis, repeatability, and calibration uncertainty.</li> <li>› ±0.5 hPa (@ +20°C)</li> <li>› ±1.0 hPa (@ 0° to 40°C)</li> </ul>
Linearity	±0.4 hPa
Hysteresis	±0.05 hPa
Repeatability	±0.03 hPa

Signal Output	0 to 2.5 Vdc
Warm-up Time	< 1 s
External Trigger Voltage	<ul style="list-style-type: none"> <li>› 3 to 28 Vdc (operating mode)</li> <li>› 0 Vdc (sleep mode)</li> </ul>
Current Consumption	<ul style="list-style-type: none"> <li>› &lt; 3 mA (active)</li> <li>› &lt; 1 µA (sleep mode)</li> </ul>
Temperature Range	-40° to +60°C
Cable Diameter	0.8 cm (0.3 in.)
Cable Length	0.8 m (2.5 ft)
Dimensions	9.1 x 6.1 x 2.5 cm (3.6 x 2.4 x 1.0 in.)
Weight	135 g (4.8 oz)

For comprehensive details, visit: [www.campbellsci.com/cs100](http://www.campbellsci.com/cs100) 



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