



Standard Barometer

Resides inside weather proof enclosure

Overview

The CS100 measures barometric pressure for the range of 600 to 1100 mb. 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 dataloggers.

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

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 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 datalogger to power the barometer only during measurement, which reduces power consumption.

Specifications

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

Resolution	±0.01 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"> ▶ ±1.5 hPa (@ -20° to +50°C) ▶ ±2.0 hPa (@ -40° to +60°C)

- › Accuracy refers to the root sum squared (RSS) of end point non-linearity, hysteresis, repeatability, and calibration uncertainty.
- › ± 0.5 hPa (@ +20°C)
- › ± 1.0 hPa (@ 0° to 40°C)

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	› 3 to 28 Vdc (operating mode) › 0 Vdc (sleep mode)
Current Consumption	› < 3 mA (active) › < 1 μ A (sleep mode)
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.eu/cs100 



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