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 millibar and 800 to 1100 millibar versions also available by special order—contact Campbell Scientific
- Integral switching circuit limits power consumption to the 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 includes a 0.76 m (2.5 ft) 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.
## Ordering Information

**Barometric Pressure Sensor**

| CS100 | Setra 278 Barometer (600 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 CS100. 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 pigtails for direct connection to data-logger's terminals.
- **PW** Cable terminates in a connector for attachment to a Campbell Scientific prewired enclosure.

The CS100 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

- **Accuracy**: ±0.5 mb @ +20°C; ±0.0 mb @ 0°C to 40°C; ±1.5 mb @ -20°C to +50°C; ±2.0 mb @ -40°C 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°C to 60°C
- **Dimensions**: 9.1 x 6.1 x 2.5 cm (3.6 x 2.4 x 1.0 in)
- **Cable Diameter**: 0.8 cm (0.3 in)
- **Cable Length**: 0.8 m (2.5 ft)
- **Weight**: 135 g (4.8 oz)

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