

BaroVueTM10

Digital Barometer

Perfect for Environmental and Meteorological Applications

User friendly, cost effective, and best-in-class accuracy and stability



Overview

The BaroVueTM10 is a highly accurate barometer that can measure pressures over a range of 500 to 1100 hPa and can be used in a range of applications that includes meteorology and hydrology. This sensor includes our zero downtime recalibration. Other sensors on the market need to be taken offline and sent back to the manufacturer to be recalibrated, often for weeks at a time, causing a loss in valuable data and time, as well as an additional expense.

The sensor card for the BaroVue 10 is pre-calibrated. Replacement sensor cards are also pre-calibrated, requiring only one trip to the field station and no downtime. The design

of the BaroVue 10 allows you to remove and replace your sensor card quickly and easily without either having to disassemble the equipment in the enclosure or having to send the equipment back to the manufacturer.

This featured product was part of the Aconcagua expedition to install a weather station on South America's tallest peak. Learn more about the expedition on our "[Extreme Application Series: Aconcagua page](#)."

Benefits and Features

- Highly reliable measurements (multiple cells)
- Direct-to-digital measurements
- Very low noise
- Integrated identification and diagnostics
- Zero downtime/recalibration
- Easy firmware updates
- Cost effective
- SDI-12 device



Detailed Description

The BaroVue 10 is a low-power, digital barometer (-40 to +60°C) that provides best-in-class accuracy and stability (± 0.1 hPa/yr) over the entire pressure and temperature range. It can run continuously and does not require power cycling unlike other products in this category. The digital output is both SDI-12 and RS-232, which reduces noise and measurement uncertainty compared with analog sensors, and makes the

BaroVue 10 compatible with all Campbell Scientific SDI-12 devices. Moreover, this barometric pressure sensor can be installed and integrated into many new and existing weather stations. The transducers used in the BaroVue 10 are direct-to-digital sensors, and no reconversion takes place inside the barometer.

Specifications

NOTE	These specifications assume the recommended desiccation is used.
Pressure Range	500 to 1100 hPa
Temperature Range	-40° to +60°C
Supply Voltage	9 to 28 Vdc
Elevation	~609.6 m (2,000 ft) below sea level (as in a mine) to 4,572 m (15,000 ft) above sea level
Current Consumption	< 5 mA (active) 200 μA (sleep mode)
Digital Output	SDI-12, RS-232 serial
Pressure Fitting	Barbed fitting for 0.318 cm (0.125 in.)
Dimensions	2.2 x 9.0 x 10.2 cm (0.87 x 3.54 x 4.02 in.)
Weight	226.8 g (0.5 lb)

Accuracy

Calibration Uncertainty	± 0.15 hPa
Uncertainty	± 0.3 hPa (at 20°C)
Total Uncertainty	± 0.5 hPa (at -40° to +60°C)
Long-Term Stability	± 0.1 hPa/yr
Power Supply Rejection	Negligible
Measurement Noise	0.05 hPa (RMS)
Resolution	0.1 hPa

