



Solar200

Solar Monitoring Station



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For commercial installations and distributed solar monitoring applications

Common Measurements

- Solar radiation (plane-of-array)
- Solar radiation (global)
- Air temperature
- Back-of-panel temperature
- Wind speed
- Wind direction

Overview

The Solar200 is an economic solar monitoring platform designed for commercial rooftop or other small to medium solar installations, as well as distributed solar resource monitoring. This turnkey system includes the hardware and software necessary to monitor the critical environmental parameters of any solar installation: solar irradiance, wind speed, wind direction, air temperature, and back-of-panel temperature.

Interfacing to the Solar200 is simple and can be accomplished with Campbell Scientific's Loggernet software that includes a Real-Time Monitoring dashboard. The Solar200's data also can be obtained via the Modbus protocol over an RS-485 interface, making connection to existing systems simple and easy. As with all Campbell Scientific products, the Solar200 is built for long-term unattended monitoring, with a focus on ruggedness, reliability, and measurement excellence.

Benefits and Features

- › High reliability and longevity with a Campbell Scientific CR200X Measurement and Control Datalogger
- › Easy, turn-key installation
- › Factory fabrication, programming, and testing minimizes field wiring errors, reduces deployment time, and eliminates system programming
- › Battery-back system enables continuous data collection, even during power outages and network failure
- › Easy and flexible data retrieval
- › Retains the powerful, modular nature of the Campbell Scientific product line allowing for user-defined modifications and customization

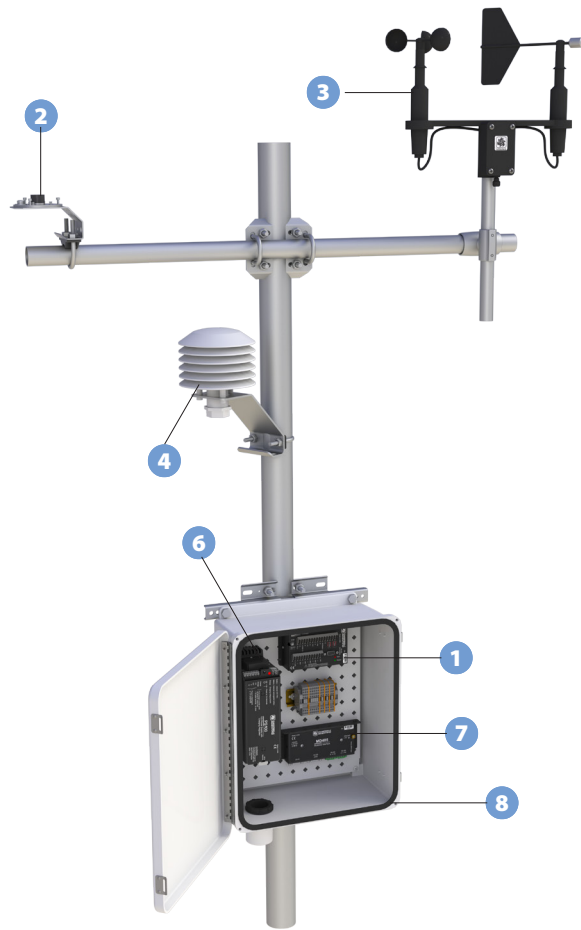
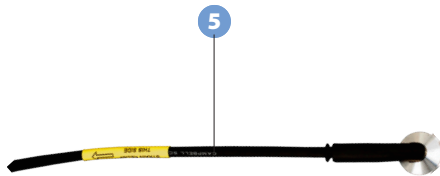
specs, questions, & quotes: 435.227.9030

www.campbellsci.com



Default Components

- 1 CR200X Datalogger
- 2 SP-212 Pyranometer
- 3 03002 Wind Sentry Set
- 4 109 Temperature Probe in 6-plate radiation shield
- 5 110PV Surface Mount Thermistor
- 6 PS100 12 Vdc, 7 A h Power Supply
- 7 MD485 Multidrop Modem
- 8 ENC10/12 Environmental Enclosure



Specifications

- › Power Requirements: 15 to 28 Vdc or 18 Vac RMS
- › Current Drain: 0.2 mA quiescent, 3mA active
- › Protocols Supported: Modbus, Pakbus (over RS-232, RS-485)
- › Enclosure Classification: NEMA 4X

CR200X Datalogger

- › Scan Rate: 1 Hz
- › Operating Temperature: -40° to +50°C

SP-212 Apogee Pyranometer

- › Absolute Accuracy: $\pm 5\%$
- › Uniformity: $\pm 3\%$
- › Repeatability: $\pm 1\%$
- › Spectral Range: 380 to 1120 nanometers
- › Responsivity: Responsivity = 2 mV per $W\ m^{-2}$
- › Response Time: $< 1\ ms$
- › Long Term Drift: $< 3\%$ per year
- › Operating Temperature: -40° to 60°C

03002 RM Young Wind Sentry

- › Anemometer Accuracy: $\pm 0.5\ m/s$ (1.1 mph)
- › Anemometer Range: 0 to 50 m/s (112 mph)
- › Wind Vane Accuracy: $\pm 5^\circ$

109 Campbell Scientific Temperature Probe

- › Tolerance: $\pm 0.2^\circ C$ over 0° to 70°C range
- › Measurement Range: -50° to +70°C

110PV Campbell Scientific Surface Mount Thermistor

- › Temperature Uncertainty: $\pm 1^\circ C$
- › Measurement Range: -40° to +135°C

