



# Solar Energy

Systems for Solar Resource Assessment, Power Performance, and Advanced Monitoring



Campbell Scientific offers automated data-acquisition systems specifically designed for solar monitoring applications. Preconfigured systems, designed to meet CAISO standards for solar telemetry, are available for photovoltaic and concentrated solar technology

projects of all sizes. Our engineers work closely with the customer to design highly customized stations, advanced research and development stations, and custom application programming interfaces (API) for data collection.

## MAJOR SYSTEMS

	Measurements		Datalogger	Power	Communications
	Typical	Optional			
<p><b>SOLAR800</b> Complete MET Solution for Solar Resource Assessment</p> 	<p>Global Horizontal Irradiance (GHI), Plane-of-Array Irradiance (POA), air temperature, wind speed, wind direction, precipitation, solar position</p>	<p>relative humidity, barometric pressure</p>	<p>CR800</p>	<p>AC, DC, or solar</p>	<p>Modbus, cellular, email, DNP3, FTP</p>
<p><b>SOLAR1000*</b> Operational Met Station for Solar Energy Producing Utilities</p> 	<p>Global Horizontal Irradiance (GHI), Plane-of-Array Irradiance (POA), back-of-solar panel temperature, wind speed, wind direction, air temperature, relative humidity, barometric pressure, precipitation, solar position</p>	<p>DC current and voltage (string and/or module), visibility, electric field, cloud height, short circuit current, module soiling, surface moisture</p>	<p>CR1000, CR800, CR3000</p>	<p>AC, DC, or solar</p>	<p>Modbus, cellular, email, DNP3, FTP, TCP/IP, fiber optic, radio, serial, field display, satellite, Wi-Fi</p>
<p><b>SOLAR1000-SCE*</b> Operational Met Station for Solar Energy Producing Utilities; meets CAISO, SCE compatible</p> 	<p>Global Horizontal Irradiance (GHI), Plane-of-Array Irradiance (POA), diffuse radiation, back-of-solar panel temperature, wind speed, wind direction, air temperature, relative humidity, barometric pressure, precipitation, solar position</p>	<p>DC current and voltage (string and/or module), visibility, electric field, cloud height, short circuit current, module soiling, surface moisture</p>	<p>CR1000, CR3000</p>	<p>AC, DC, or solar</p>	<p>Modbus, cellular, email, DNP3, FTP, TCP/IP, fiber optic, radio, serial, field display, satellite, Wi-Fi</p>

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	Measurements		Datalogger	Power	Communications
	Typical	Optional			
<p><b>CSP100*</b> Highest accuracy solar monitoring solution with 2-axis sun tracker</p> 	<p>Direct Normal Irradiance (DNI), Diffuse Horizontal Irradiance (DIFF), Global Horizontal Irradiance (GHI), wind speed, wind direction, air temperature, relative humidity, barometric pressure, precipitation, solar position</p>	<p>visibility, cloud height, spectral irradiance</p>	<p>CR1000, CR3000</p>	<p>AC, DC, or solar</p>	<p>Modbus, cellular, email, DNP3, FTP, TCP/IP, fiber optic, radio, serial, field display, satellite, Wi-Fi</p>
<p><b>RSR100</b> Rotating Shadow-band Radiometer</p> 	<p>Global Horizontal Irradiance (GHI), Diffuse Horizontal Irradiance (DIFF), Plane-of-Array Irradiance (POA), Direct Normal Irradiance (DNI), back-of-module temperature (BOM), solar position/air mass, wind speed, wind direction, air temperature, relative humidity, barometric pressure, precipitation</p>	<p>string current and voltage</p>	<p>CR1000 CR800</p>	<p>AC, DC, or solar</p>	<p>Modbus, cellular, email, DNP3, FTP, TCP/IP, fiber optic, radio, serial, field display, satellite, Wi-Fi</p>
<p><b>SMP100</b> Solar module performance solutions, including Soiling</p> 	<p>module current, module voltage, back-of-panel temperature, short-circuit current, wind speed, irradiance, solar position</p>	<p>string current and voltage, spectral irradiance</p>	<p>CR1000 CR800</p>	<p>AC, DC, or solar</p>	<p>Modbus, cellular, email, DNP3, FTP, TCP/IP, fiber optic, radio, serial, field display, satellite, Wi-Fi</p>
<p><b>SOLAR300</b> Small to Medium Commercial Solar Monitoring Solution</p> 	<p>Global Horizontal Irradiance (GHI), Plane-of-Array Irradiance (POA), back-of-solar panel temperature, wind speed, wind direction</p>	<p>relative humidity, barometric pressure</p>	<p>CR300</p>	<p>AC, DC, or solar</p>	<p>Modbus, multidrop, cellular, TCP/IP, fiber optic, radio, satellite, Wi-Fi</p>
<p><b>UTILITY-MET100*</b> Utility-Grade Weather Station for SCADA Operations</p> 	<p>air temperature, relative humidity, wind speed, wind direction, precipitation, barometric pressure, solar radiation</p>	<p>back-of-solar panel temperature</p>	<p>CR1000</p>	<p>AC, DC, or solar</p>	<p>Modbus, multidrop, cellular, TCP/IP, fiber optic, radio, satellite, Wi-Fi</p>

\*Please note: Campbell Scientific Australia are unable at this time to provide mounting structure shown, however can recommend trusted integrators and partners who can assist in installation of solution.