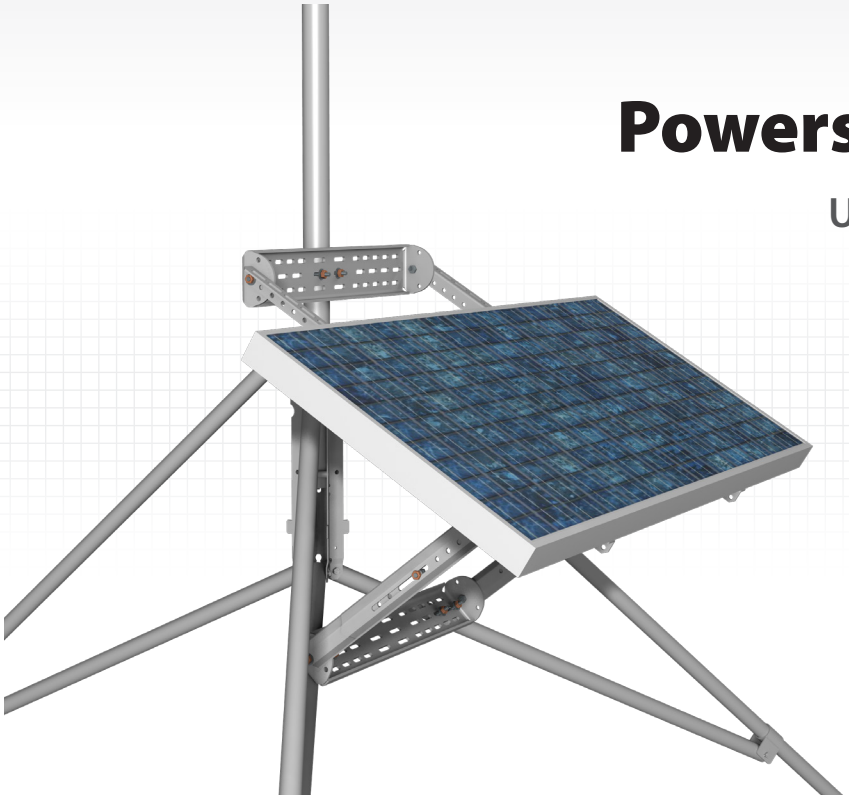
CAMPBELL SCIENTIFIC
WHEN MEASUREMENTS MATTER

SP90-L

90 W Solar Panel



Powers Remote Systems

Useful at sites far from ac sources

Overview

The SP90 90 W solar panel is a photovoltaic power source capable of recharging batteries. It is used in CO_2 Bowen Ratio, CO_2 Eddy Covariance, or other systems that require high-power solar panels. The SP90 allows unattended operation of systems in remote locations, far from ac electrical sources.

This solar panel needs to be used with either a 18529 Morningstar SunSaver regulator or a CH200 Smart Charge Controller. One SP90 can be connected to the SOLAR charge input of the 18529 SunSaver regulator or CH200 to provide a peak charge of 90 W. Two SP90 solar panels can be wired in parallel to the charge inputs of the SunSaver 18529 regulator to provide a peak charge of 180 W.

Regulators

18529 MorningStar SunSaver

The 18529 Morning Star SunSaver limits charging current to approximately 10 A, has a quiescent current drain of approximately 8 mA, and can charge sealed batteries such as our BP12, BP24 and BP84 or flooded batteries.

CH200 Smart Charge Controller

The CH200 limits charging current to approximately 3.6 A, has a quiescent current drain of only 0.3 mA and can precisely charge the following battery families: EnerSys Genesis NP Series (includes our BP12 and BP24), EnerSys Cyclone Series, Concorde Sun Xtender Series (includes our BP84 and PS84) or a custom battery.

Mounting

The SP90 includes the 31107 Extended Mounting Kit for attaching the solar panel to a Campbell Scientific tripod or tower. The 31107 positions the solar panel approximately 25 cm (10 in) from the tripod or tower, which reduces shadows from other components and guy wires. The zenith angle indicator and the slotted supports simplify installation. The 31107 began shipping with the solar panel in October 2014. This kit may be purchased separately to retrofit existing solar panels.

Ordering Information

Solar Panel

SP90-L 90 W Solar Panel with user-specified cable length. Enter length, in feet, after the -L. A 20 ft length is typical; maximum length is 50 ft. Must choose a cable termination option (see below).

Cable Termination Option (choose one)

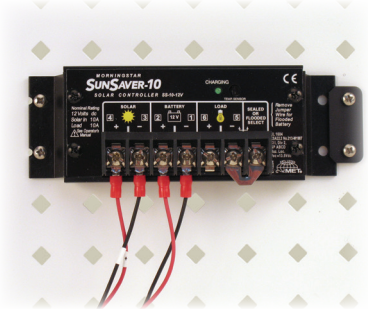
-PT Cable terminates in spade lugs for connection to the 18529 regulator or CH200 Smart Charge Controller.

-PW Cable terminates in a connector that attaches to a prewired enclosure.

Regulators

18529 Morning Star SunSaver-10 10A 12V Regulator with 15 ft Battery Cable

CH200 12 Vdc Charging Regulator



18529 Morning Star SunSaver

CH200

Above shows the regulators available for use with the SP90. The regulators must be housed in an environmental enclosure.

Specifications[a]

- Maximum Power: 90 W (180 W peak power when two SP90s are connected to one 18529 regulator)
- Voltage at Peak: 17.9 V
- Current at Peak: 5.0 A
- Dimensions: 120.9 x 53.7 x 5.0 cm (47.6 x 21.1 x 2.0 in)
- Weight: 7.7 kg (17.0 lb)
- Maximum Wind Speed Rating[b]: 50 m s^{-1} (112 mph)

[a]Solar panel characteristics assume 1 kW m^{-2} illumination and 25°C solar panel temperature. Individual panels may vary up to 10%. The output panel voltage increases as the panel temperature decreases.

[b]Assumes the 31107 Extended Mounting Kit is used to mount the SP90 to an adequately anchored tripod or tower.