



29290

PS150 12 V Power Supply with Charging Regulator but without a Battery



Offers PS150 Capability without a Battery

Overview

The 29290 is a 12 Vdc power supply that includes a charging regulator. You can supply the charging power for the 29290 via an unregulated solar panel, ac/ac transformer, or ac/dc converter. The 29290 provides charging with temperature

compensation for optimal charging and battery life. A maximum power point tracking algorithm is incorporated for solar inputs to maximize your available solar charging resources.

Benefits and Features

- › Protects against high-amperage and high-voltage damage to power supply
- › Battery reversal protection
- › Allows simultaneous connection of two charging sources (e.g., solar panel, ac wall charger)
- › ETL listed Class 2 power supply

Detailed Description

The 29290 is a micro-controller-based smart charger with temperature compensation that optimizes battery charging and increases the battery's life. Two input terminals enable simultaneous connection of two charging sources. They also incorporate a maximum power point tracking algorithm for solar inputs that maximizes available solar charging resources.

The 29290 has several safety features intended to protect the charging source, battery, charger, and load devices. Battery-reversal protection is included, as well as ESD and surge protection on all of the 29290 inputs and outputs.

Specifications

Operational Temperature	-40° to +60°C (VRLA battery manufacturers state that "heat kills batteries" and recommend operating batteries at ≤ 50°C.)	Dimensions	19.3 x 7.6 x 10.6 cm (7.5 x 3 x 4.2 in.)
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CHARGE - CHARGE Terminals (AC or DC Source)

AC	18 to 24 V RMS (internally limited to 1.2 A RMS)
DC	16 to 40 Vdc (internally limited to 1.2 Adc)

SOLAR Terminals (Solar Panel or Other DC Source)

-NOTE- Battery voltages below 8.7 V may result in < 3.0 A current limit because of fold-back current limit.

Input Voltage Range	15 to 40 Vdc
Maximum Charging Current	4.0 Adc typical (3.2 to 4.9 Adc depending on individual charger)

Quiescent Current

No Charge Source Present	160 µA at 13.7 Vdc
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No Battery Connected 930 µA at 30 V input voltage (ac or dc)

Battery Charging

-NOTE- The "T" represents temperature in degrees Celsius.

FLOAT Charging $V_{batt}(T) = 13.65 - (24 \text{ mV}) \times (T - 25) + (0.24 \text{ mV}) \times (T - 25)^2$

Accuracy ±1% (on charging voltage over -40° to +60°C)

Power Out (+12 Terminals)

Voltage Unregulated 12 V from battery (4.65 A solid-state circuit breaker)

Standards ETL Listed Class 2 power supply

For comprehensive details, visit: www.campbellsci.com/29290 



Campbell Scientific, Inc. | 815 W 1800 N | Logan, UT 84321-1784 | (435) 227-9120 | www.campbellsci.com
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