PS150
ETL LISTED CLASS 2 POWER SUPPLY

12 V Power Supply with Charging Regulator and 7 Ah Sealed Rechargeable Battery

The PS150 is a 12 Vdc power supply that includes a rechargeable 7 Ah valve-regulated lead-acid (VRLA) battery & charging regulator. Charging power for the PS150 is typically supplied by an unregulated solar panel, AC/AC transformer, or AC/DC converter.
The PS150 provides charging with temperature compensation for optimal charging and battery life. A maximum power point tracking algorithm is incorporated for solar inputs to maximize available solar charging resources.
The PS150 is ETL certified. The ETL Mark is proof of product compliance to North American safety standards.

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 PS150 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 PS150 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 PS150 inputs and outputs.

PS150

Technical 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.)
CHARGE - CHARGE TERMINALS (AC OR DC SOURCE)	
AC	18 to 24 VRMS (internally limited to 1.2 Amps RMS)
DC	16 to 40 Vdc (internally limited to 0.85 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 upon individual charger)
QUIESCENT CURRENT	
No Charge Source Present	160 µA at 13.7 Vdc
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	Vbatt(T) = 13.65 V - (24 mV) x (T - 25) + (0.24 mV) x (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