

Solar Controller / Battery Charger

MODEL: RS-PWM10WP

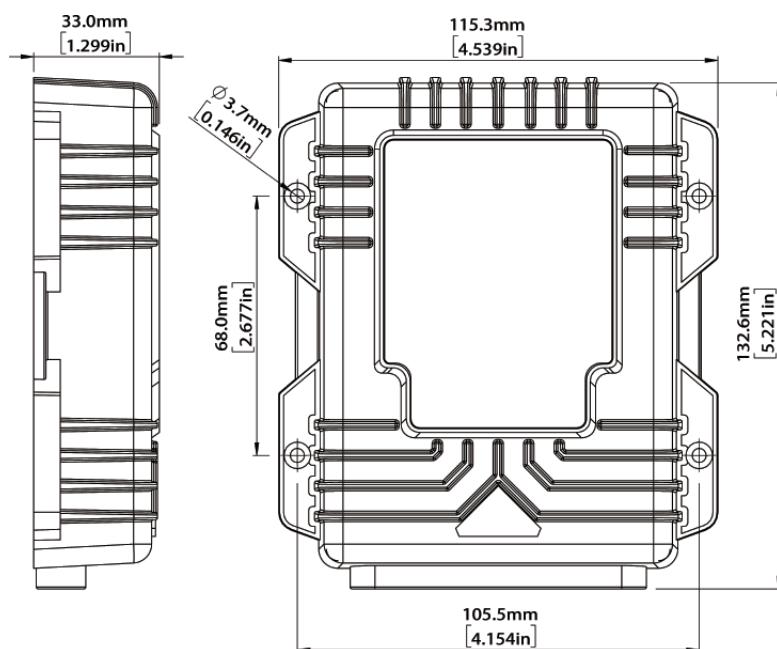
FEATURES AND ADVANTAGES

- PWM technology, switching control by MOSFET
- Common Positive Grounding connection
- High efficiency and low power consumption
- Battery type setting and battery condition indication
- Smart charging control
- Charging time management
- LED indication for the battery condition and charging statuses
- Digital display charging parameters and battery settings
- Automatically active to Lithium battery against BMS protection
- Thermal protection
- Over voltage protection, Short circuit protection, Reverse polarity protection
- No sparks
- Waterproof
- Solid-duty cables
- Corrosion-resistant terminals and connectors
- Conformal coating supplied to the inside board against moisture
- Includes a port for external battery temperature sensor (BTS - optional)
- Suitable for most of the rechargeable Lead acid battery, including Flooded (WET), AGM, GEL, Calcium battery and Lithium batteries
- Designed according to CE standard, EMC, FCC compliance



MOUNTING THE DEVICE

The quickest and easiest way to mount the unit is to use the four plastic spacers and self-tapping screws supplied and mount the unit to a flat surface.



SPECIFICATION

ELECTRICAL PARAMETERS

Rated Solar Panel Amps	Max. 10AMP
Normal Input Solar Cell Array Voltage	15-22VDC
Max. Solar Cell Array Voltage (Output Has no Load)	25VDC
The Controller Lowest Operating Voltage at Solar or Battery Side	8VDC
Standby Current Consumption at Night	5mA
Maximum Voltage Drop-Solar Panel to Battery	0.25VDC

CHARGING CHARACTERISTICS

Minimum Battery Starts Charging Voltage	3VDC
Soft Start Charging Voltage	3-10±0.2VDC
Soft Start Charging Current (50% PWM Duty)	Up to 5AMP
Bulk Charge	By the maximum rated current
Absorption Charging Voltage at 25°C	
- Gel Type Battery	14.1±0.2VDC
- AGM Type Battery (Default Setting)	14.4±0.2VDC
- WET Type Battery	14.7±0.2VDC
- Calcium Type Battery	14.9±0.2VDC
- LTO Battery	14.0±0.2VDC
- LFP Battery	14.4±0.2VDC
Absorption Transits to Equalizing or Float Condition:	
- Charging Current Drops to	1.5±0.1AMP
- or Absorption Charging Timer Timed out	4 Hours
Equalization Charging Active (Only for WET or Calcium Battery)	
- Battery Voltage Discharged to Less Than	10±0.2VDC
- Automatic Equalizing Charging Periodical	28 Day
Equalization Charging Voltage at 25°C	15.5±0.2VDC
Equalization Charging Timer Timed out	2 Hours
Float Voltage (GEL, WET, Calcium, AGM battery) at 25°C	13.6±0.2VDC
Restart Voltage for LTO Battery	13.2±0.2VDC
Restart Voltage for LFP Battery	13.4±0.2VDC
Voltage Control Accuracy	±0.1%
Battery Temperature Compensation Coefficient	-24 mV/°C
Temperature Compensation Range	-20~+50 °C (-4°F to 122°F)

PROTECTION

Over Temperature Protection During Charging	65°C (149°F)
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ELECTRICAL PARTS

Input Output Terminal	M5 terminals
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PHYSICAL PARAMETERS

Controller Material	Plastic, Standard ABS
Power Terminal Maximum Stranded Wire Size	#10 AWG stranded- 5 mm ²
Power Terminal Torque	Up to 17 in-lb (1.9 N·m)
Mounting	Vertical wall mounting
IP Grade	IP65
Net Weight	Approx. 300g/0.66lb

ENVIRONMENTAL CHARACTERISTICS

Operating Temperature	-25 ~ 50°C / -13~122 °F
Storage Temperature	-40 ~ 85°C / -40~185 °F
Operating Humidity Range	100% no condensation