1-800-831-9889
www.richsolar.com
support@richsolar.com
5550 Jurupa St, Ontario, CA 91761

Solar Controller / Battery Charger

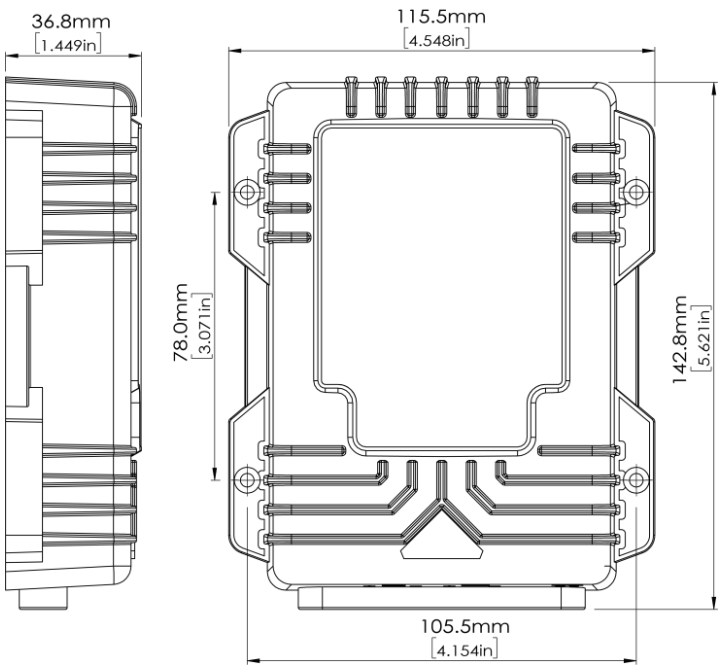
MODEL: RS-PWM30WP

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 statues
- 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.



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SPECIFICATION

ELECTRICAL PARAMETERS	**Rated Solar Panel Amps**	Max. 30/40A
	Normal Input Solar Cell Array Voltage	15-22 VDC
	Max. Solar Cell Array Voltage (Output Has no Load)	Max. 25 VDC
	The Controller Lowest Operating Voltage at Solar or Battery Side	8 VDC
	Standby Current Consumption at Night	5 mA
	Maximum Voltage Drop-Solar Panel to Battery	0.25 VDC
CHARGING CHARACTERISTICS	**Minimum Battery Starts Charging Voltage**	3 VDC
	Soft Start Charging Voltage	3-10 ±0.2 VDC
	Soft Start Charging Current (50% PWM Duty)	Up to 15/20 AMP
	Bulk Charge	By the max. tated current
	Absorption Charging Voltage at 25℃	
	- Gel Type Battery	14.1 ±0.2 VDC
	- AGM Type Battery (Default Setting)	14.4 ±0.2 VDC
	- WET Type Battery	14.7 ±0.2 VDC
	- Calcium Type Battery	14.9 ±0.2 VDC
	- LTO Battery	14.0 ±0.2 VDC
	- LFP Battery	14.4 ±0.2 VDC
	Absorption Transits to Equalizing or Float Condition:	
	- Charging Current Drops to	1.5 ±0.1 AMP
	- or Absorption Charging Timer Timed out	4h
	Equalization Charging Active (Only for WET or Calcium Battery)	
	- Battery Voltage Discharged to Less Than	10 ±0.2
	- Automatic Equalizing Charging Periodical	28 Day
	Equalization Charging Voltage at 25℃	15.5 ±0.2 VDC
	Equalization Charging Timer Timed out	2h
	Float Voltage (GEL, WET, Calcium, AGM battery) at 25℃	13.6 ±0.2 VDC
	Restart Voltage for LTO Battery	13.2 ±0.2 VDC
	Restart Voltage for LFP Battery	13.4 ±0.2 VDC
	Voltage Control Accuracy	±0.1 %
	Battery Temperature Compensation Coefficient	-24 mV/*C
	Temperature Compensation Range	-20~+50℃
PROTECTION	**Against Reverse Polarity or Short Circuit at Panel or Battery**	/
	No Reverse Current From Battery to Solar at Night	/
	Over Temperature Protection During Charging	65℃
ELECTRICAL PARTS	**Input Output Terminal**	M5 terminals
PHYSICAL PARAMETERS	**Controller Material**	Plastic, Standard ABS
	Power Terminal Maximum Stranded Wire Size	#10 AWG stranded- 5 mm²
	Power Terminal Torque	Up to 17 in-lb (0.2n-m)
	Mounting	Vertical wall mounting
	IP Grade	IP65
	Net Weight	Approx. 300g
ENVIRONMENTAL CHARACTERISTICS	**Operating Temperature**	-25 ~ 50℃ / -13 ~ 122 ℉
	Storage Temperature	-40 ~ 85℃ / -40 ~ 185 ℉
	Operating Humidity Range	100% no condensation