RENOGY

ROVER 20A/30A/40A MPPT CHARGE CONTROLLER

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The Renogy Rover MPPT Charge Controller is an intelligent negative ground controller. Built with protections against reverse polarity, short-circuiting, overheating, and more, this MPPT controller is also capable of self-diagnosing itself in the event of an error. Its durable shell protects against general wear and tear, and aluminum heat sink allows for heat dissipation. The Rover can automatically detect 12V/24V systems and can handle various battery options such as GEL and Lithium. Pair this charge controller with the Renogy BT-1 and unlock monitoring features on the Renogy BT-1 APP or view your system's performance in real time via the Renogy DC Home App.

KEY **FEATURES**

- Automatically detects 12V/24V DC system voltages; Deep Cycle Sealed, Gel, Flooded, and Lithium option ready.
- Innovative MPPT technology with high tracking efficiency up to 99% and peak conversion efficiency of 98%.
- Electronic protection against reverse polarity, overcharging, over-discharging, overload, short-circuiting, and reverse current.
- LCD screen with multiple LED indicators for displaying system operation information, customizable parameters, and error codes.
- Features diverse load control; also capable of charging over-discharged lithium batteries.
- Unlock Monitoring features through the new Renogy BT-1 Bluetooth module

RENOGY.COM 2775 EAST PHILADELPHIA ST. ONTARIO, CA 91761

PARAMETERS

	RVR20	RVR30	RVR40
Nominal System Voltage	12/24V	12/24V	12/24V
Rated Load Current	20A	20A	20A
Max Solar Input Voltage	100V DC	100V DC	100V DC
Max Solar Input Power	12V/260W, 24V/520W	12V/400W, 24V/800W	12V/520W, 24V/1040W
Self Consumption		≤ 100mA/12V, ≤ 58mA/24V	
Charge Circuit Voltage Drop	≤ 0.26V		
Discharge Circuit Drop	≤0.15V		
Temperature Compensation	-3mV/°C/2V		
Dimensions	210 x 151 x 59.5mm, 8.27 x 5.94 x 2.34in	238 x 173 x 72.5mm, 9.37 x 6.81 x 2.85in	238 x 173 x 72.5mm, 9.37 x 6.81 x 2.85in
Mounting Oval	7.66 x 4.70mm / 0.30 x 0.18in		
Max Terminal Size	10mm² 8AWG	10mm² 8AWG	10mm² 8AWG
Net Weight	1.4kg / 3.08 lb	1.4kg / 3.08 lb	2.0kg / 4.41 lb
Operating Temperature	-35°C to +45°C , -31°F to 113°F		
Storage Temperature	-35°C to +75°C , -31°F to 167°F		
Humidity Range	≤ 95% (NC)		
Enclosure	IP32		
Altitude	< 3000m		
Communication	RS232		
Certification	FCC Part 15 Class B; CE; RoHS;		

BATTERY CHARGING PARAMETERS

Battery	GEL	SEALED	FLOODED	LI (LFP)	USER
Over-voltage Warning	16V	16V	16V	16V	9-17V
Equalization Voltage	—	14.6V	14.8V	—	9-17V
Boost Voltage	14.2V	14.4V	14.6V	14.4V	9-17V
Float Voltage	13.8V	13.8V	13.8V	—	9-17V
Boost Return Voltage	13.2V	13.2V	13.2V	13.2V	9-17V
Under Voltage Warning	12V	12V	12V	12V	9-17V
Under Voltage Recover	12.2V	12.2V	12.2V	12.2V	9-17V
Low Voltage Disconnect	11V	11V	11V	11V	9-17V
Low Voltage Reconnect	12.6V	12.6V	12.6V	12.6V	9-17V
Equalization Duration	—	2 Hours	2 Hours	—	0-10 Hours
Boost Duration	2 Hours	2 Hours	2 Hours	—	1-10 Hours

*Battery charging parameters in USER mode can be programmed using the Renogy BT App.

**Default charging parameters in LI mode are programmed for 12.8V LFP battery. Before using Rover to charge other types of lithium batteries, set the parameters according to the suggestions from battery manufacturer.

***Parameters are multiplied by 2 for 24V systems.