RENOGY
TRUSTED ENERGY SOLUTIONS

12/24V 50A & 60A Dual Input Battery Charger

On-Board with MPPT

RBC2150DS-21B/RBC2160DS-21B

Description

Renogy DC-DC with MPPT battery charger delivers reliable, efficient charging for vehicles in harsh environments. This battery charger supports both 12V and 24V systems and features solar-priority dual-source charging, using solar energy first while maintaining up to 60A output when solar is limited. This upgraded charging logic restores batteries faster and reduces alternator load.

With IP67-rated waterproof and dustproof protection, ultra-low standby consumption, and real-time monitoring via the Renogy App and ONE Core, the battery charger ensures safe, intelligent, and stable charging for RVs, 4x4s, boats, and other vehicles.



Key Features

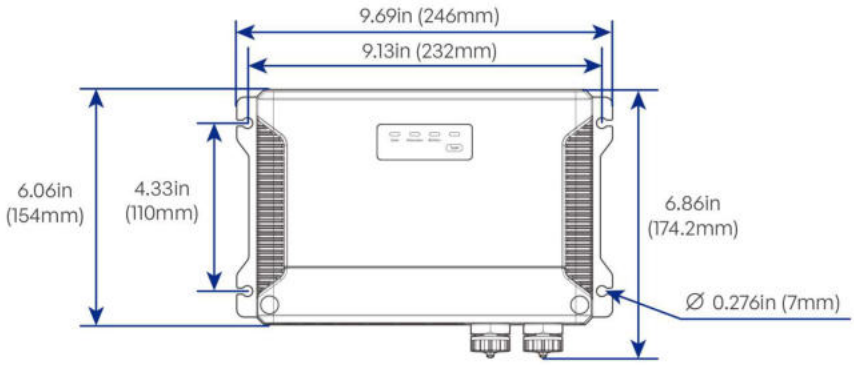
- **Solar-Priority Dual-Source Charging**
  Prioritizes solar energy while still delivering up to 60A when solar input is low.
- **Smart Monitoring & Control**
  Supports Bluetooth and CAN for real-time monitoring via the Renogy App, ONE Core, or Vision 7.
- **IP67 Waterproof & Dustproof**
  Ensures safe operation in wet or dusty environments; ideal for off-road, marine, or exposed-vehicle use.
- **High Compatibility & Engine Protection**
  Works with both 12 & 24V systems and Bulk & Boost logic, supporting traditional and Smart (Euro 6) alternators while safeguarding the starter battery.
- **Ultra-Efficient Power Saving**
  Ultra-low 20mA standby helps preserve the starter battery, while the built-in clock tracks charge data with precise, minute-level accuracy.

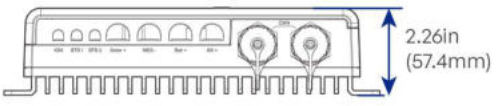
Recommended Accessories



Renogy One Core (RSHGWSN-WO2W)
An all-in-one solution for local/remote energy monitoring and analysis.

Product Dimensions





Technical Specifications

Electrical Data

Model	RBC2150DS-21B	RBC2160DS-21B
Battery Type	AGM/SLD, GEL, FLD, LI, User	AGM/SLD, GEL, FLD, LI, User
System Voltage	12V/24V to 12V/24V	12V/24V to 12V/24V
Rated Charge Current	50A@12V; 25A@24V	60A@12V; 30A@24V
Rated Charge Power	750W	900W
Alternator Input Voltage Range	9V to 30V DC	9V to 30V DC
Auxiliary Battery Charging Power	750W	900W
Max. Solar Input Voltage	50V	50V
Max. Solar Input Power	750W	900W
Output Voltage Range	9V to 32V DC	9V to 32V DC
Output Power	750W	900W
Max. Charging Efficiency	For 12V Batteries: ≥94%; For 24V Batteries: ≥92%	For 12V Batteries: ≥94%; For 24V Batteries: ≥92%
Temperature Compensation	-3mV / °C/ 2V	-3mV / °C/ 2V
Self Consumption	<20mA (Low Power Mode)	<20mA (Low Power Mode)

General Data

Communication	Built-in Bluetooth, RV-C	Built-in Bluetooth, RV-C
Operating Temperature Range	-13°F to 158°F / -25°C to 70°C	-13°F to 158°F / -25°C to 70°C
Storage Temperature Range	-40°F to 176°F / -40°C to 80°C	-40°F to 176°F / -40°C to 80°C
Humidity Range	0% to 95% RH (No Condensation)	0% to 95% RH (No Condensation)
Cooling	Natural Cooling	Natural Cooling
Ingress Protection	IP67	IP67
Altitude	3,500m	3,500m
Dimensions	9.69 x 6.06 x 2.24in / 246 x 154 x 57mm	9.69 x 6.06 x 2.24in / 246 x 154 x 57mm
Weight	5.51 lbs / 2.5kg	5.51 lbs / 2.5kg
Certification	CE, FCC, RCM, R10	CE, FCC, RCM, R10
Warranty	5-Year	5-Year
Package Contents	12/24V 50A Dual Input Battery Charger x1	12/24V 60A Dual Input Battery Charger x1
	Quick Guide x1	Quick Guide x1
	Mounting Screw x4	Mounting Screw x4
	Temperature Sensor (24AWG, 3m) x4	Temperature Sensor (24AWG, 3m) x4
	IGN Signal Wire (24AWG, 5m) x1	IGN Signal Wire (24AWG, 5m) x1
	Warranty Card x1	Warranty Card x1

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These data sheets can be found in the downloads section of our website, www.renogy.com.