



## Duo Battery MPPT Charging controller

Duo MPPT charge controller is made for charging two batteries (shown as BATT1 and BATT2 below) at the same time in a solar system. The device recognizes the start battery (BATT2) system voltage automatically, and trickle charges the battery when the conditions are satisfied.

The controller comes with IP33 protection level, which is waterproof and dustproof. Multiple protection features ensure the solar system safety, stability, and lifetime.

### Features

- 99.5% guaranteed Maximum Power Point
- True MPPT technology
- Wider range MPP operation voltage
- Charging power & current limitation(BATT1)
- Three-stage charging mode to enhance BATTERY life.
- 100% charging and discharging in operation environmental temperature range.
- LED and LCD display units selectable.
- AES control signal for car refrigerator to avoid energy waste.
- Standard Modbus protocol, and RS485 (5V/200mA) communication



### Operation

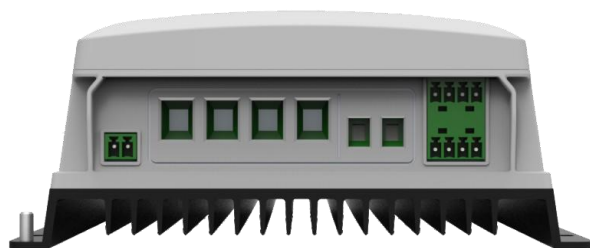
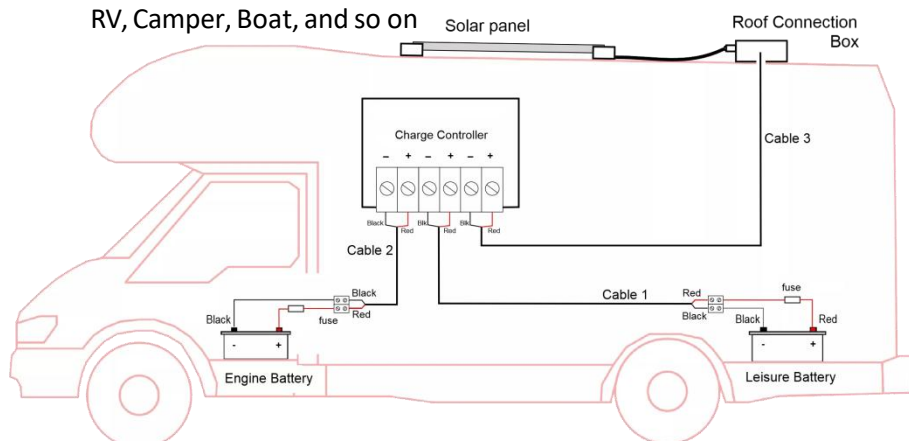
Via LED/LCD.

### Protections

Battery overcharge, over discharge,  
Reverse connection of the PV and battery

### Applications

RV, Camper, Boat, and so on





## Technical specifications

Item	DR1206N-DDB DR1206N-DDS	DR2210N-DDB DR2210N-DDS	DR3210N-DDB DR3210N-DDS
BATT1 rated voltage	12/24VDC		
BATT2 rated voltage	12/24VDC Auto		
Rated Charge Current	10A	20A	30A
Battery InputVoltage Range	8.5～32V		
Max. PVOpen Circuit Voltage	60V(At min. operating environmenttemp.) 46V(At 25℃ environment temp.)	100V(At min. operating environmenttemp.) 92V(At 25℃ environment temp.)	
MPP Voltage Range	(Battery Voltage+2V)～36V	(Battery Voltage+2V)～72V	
Rated Charge Power	130W/12V 260W/24V	260W/12V 520W/24V	390W/12V 780W/24V
Max. conversion efficiency	97.40%	97.50%	98%
Full load efficiency	97%	96%	96%
Self-consumption	12mA/12V;8mA/24V 4mA/12V;3mA/24V(Low-power mode)	26mA/12V;15mA/24V 19mA/12V;10mA/24V(Low-power mode)	
Temperature compensate coefficient①	－3mV/℃/2V(default)		
Grounding	Common negative		
BATT2Full voltage	13.8V/12V;27.6V/24V(default)		
BATT2 Charge return voltage	13V/12V;26V/24V(default)		
AES signal port②	5VDC/Max.200mA(3.81-4P)		
RS485 com. port②			
Com. baud rate③	115200(default)		
LCD backlighttime④	60S(default)		
Mechanical Parameters			
Item	DR1206N-DDB DR1206N-DDS	DR2210N-DDB DR2210N-DDS	DR3210N-DDB DR3210N-DDS
Dimension	227.2×143×58.1mm	243.7×158×63mm	247.2×165×68.5mm
Mounting dimension	160×134mm	180×149mm	180×156mm
Mounting hole size	φ5mm		
Terminal	12AWG/4mm²(BATT1) 12AWG/4mm²(BATT2)	6AWG/16mm²(BATT1) 12AWG/4mm²(BATT2)	
Recommended cable size	12AWG/4mm²(BATT1) 12AWG/4mm²(BATT2)	10AWG/6mm²(BATT1) 12AWG/4mm²(BATT2)	8AWG/6mm²(BATT1) 12AWG/4mm²(BATT2)
Weight	0.8kg	1.1kg	1.4kg
Environmental Parameters			
Item	DR1206/2210N-DDB DR1206/2210N-DDS	DR3210N-DDB DR3210N-DDS	
Working environment temperature(100% input and output)	- 20℃～+50℃(DDS) - 30℃～+50℃(DDB)	- 20℃～+45℃(DDS) - 30℃～+45℃(DDB)	
Storage temperature range	-30℃～+80℃		
Relative humidity	≤95%, N.C		
Enclosure	IP33 3-protection against solid objects: protected against solids objects over 2.5mm. 3-protected against sprays to 60°from the vertical.		
Pollution degree	PD2		