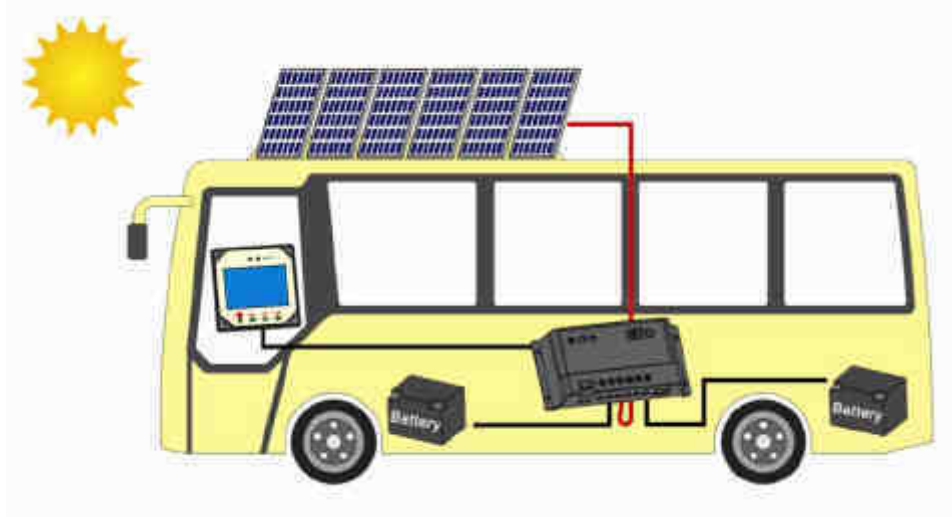


INSTRUCTION MANUAL

Dual-Battery Controller

10A & 20A - 12V/24V solar controller

For Motorhome Caravans and Boats



RATINGS 12/24V auto voltage selection

12V or 24V auto-voltage selection, 10Amp

12V or 24V auto-voltage selection, 20Amp

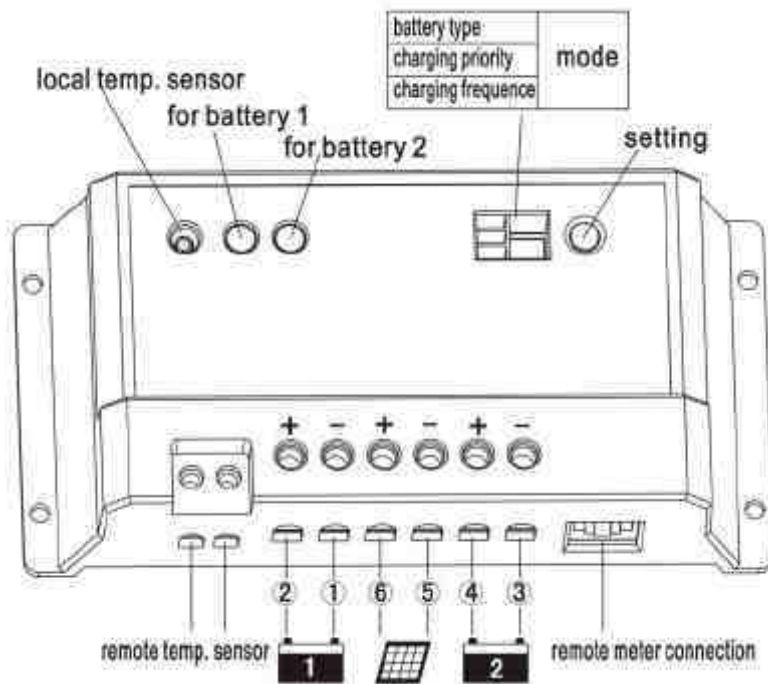
NOTES: For use with solar panels only

TECHNICAL INFORMATION

Setpoint	Sealed battery	Flooded battery	Gel battery
Regulation voltage	14.2V	14.4V	14.6V
Boost voltage	14.4V	14.6V	14.8V
Float voltage	13.7V	13.7V	13.7V
Maximum solar voltage	30V(or 55V)		
Battery voltage range	1-15V		
Boost time	30 minutes		
Self-consumption	4mA at night, 10mA at charging		
Meterbus connection	8-pin RJ-45		
Temp. compensation	-30mV/12V		
Terminals	4mm ²		
Temperature	-35° to +55°		

Note: all the data is for 12V, for 24V, please use 2x.

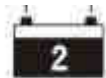
Major feature of dual-battery controller:



(Note: connect the components as the 1-6)



Connect with the battery #1



Connect with the battery #2



Connect with the PV.

Remote temp. sensor

A connection point for RTS (option) to remotely monitor battery temperature.

Local temp. sensor

Measures ambient temperature. Battery regulation is adjusted accordingly.

For battery 1

Provides charging, battery status and errors

For battery 2

Provides charging, battery status and errors

Remote meter connection

A communication port for the remote meter.

Note: where there is no RTS, the controller calculate the data received from the local temp. sensor. The controller will use the RTS automatically when it is connected.

SETTING MODE:

battery type	mode
charging priority	
charging frequency	

Three LED's flashing, each LED can be used to configure your settings, choose the appropriate LED (see below), and then press the switch for 5 seconds until the number flashes, choose the number required, and leave it. The number you set will be saved.

- 1st led is the battery type setting,

Number shows	Battery type
1	Sealed battery
2	Gel battery
3	Flooded battery

- 2nd led is for charging priority, only set the percentage you want for battery #1, the controller will automatically calculate the rest for battery #2.

Number shows	Battery #1 charging	Battery # 2 charging
0	0%	100%
1	10%	90%
2	20%	80%
3	30%	70%
4	40%	60%
5	50%	50%
6	60%	40%
7	70%	30%
8	80%	20%
9	90%(pre-set)	10%

Note: in the normal charging status, the controller will divide the charge equally. When battery #1 is fully charged, more charge current will be diverted to battery #2, and then automatically return to charging battery #1 when its voltage is low.

When the controller detects there is only battery #1, all the charging will go to battery #1 automatically.

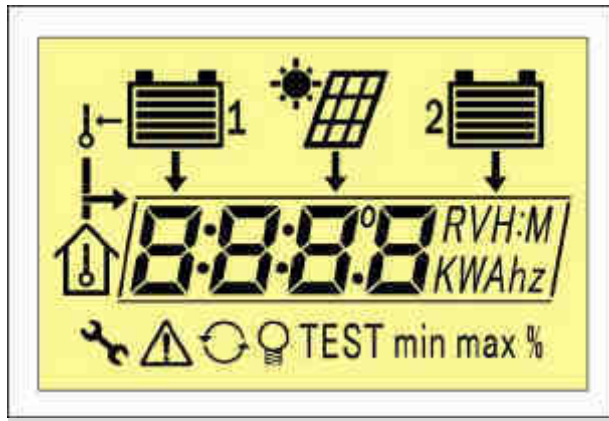
- 3rd led is for charging frequency.

Number shows	PWM Charging frequency
0	25Hz(pre-set)
1	50Hz
2	100Hz

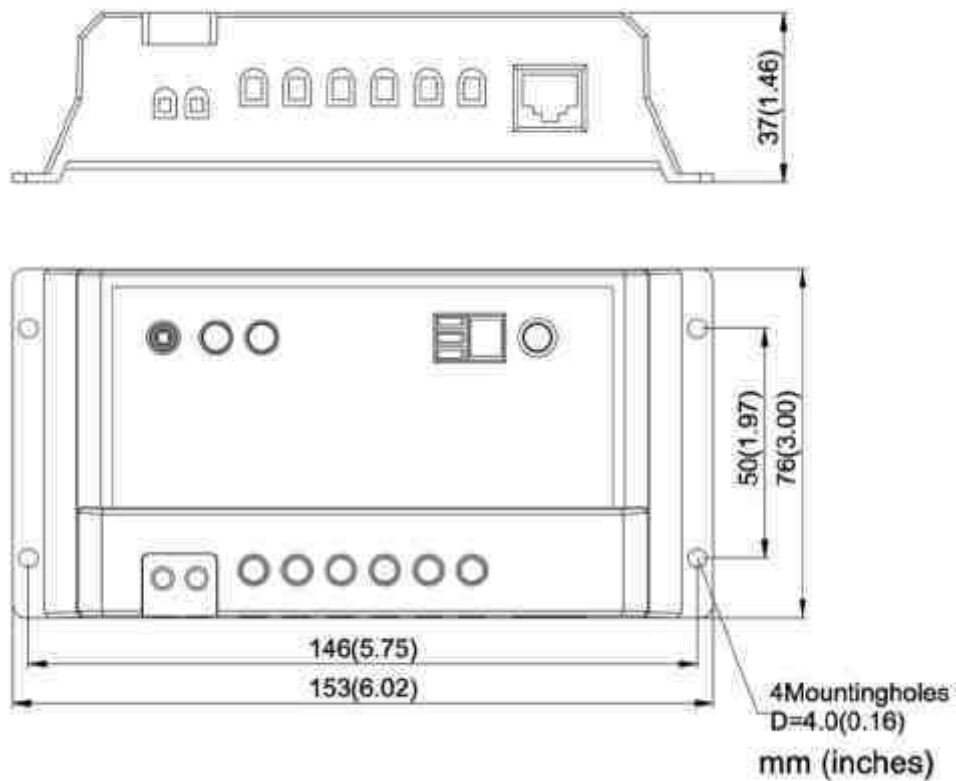
TROUBLESHOOTING:

1. LED blinking, short circuit, check the PV and battery, and make sure that they are in correct connection.
2. LED slowly flashing, fully charged.
3. LED ON, on charging
4. LED frequent flashing, no charging, and there is battery
5. LED OFF, no battery or over voltage.

REMOTE METER DISPLAY:



MECHANICAL DRAWING:



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