



Dual Battery Solar Controller

User Manual



Models:

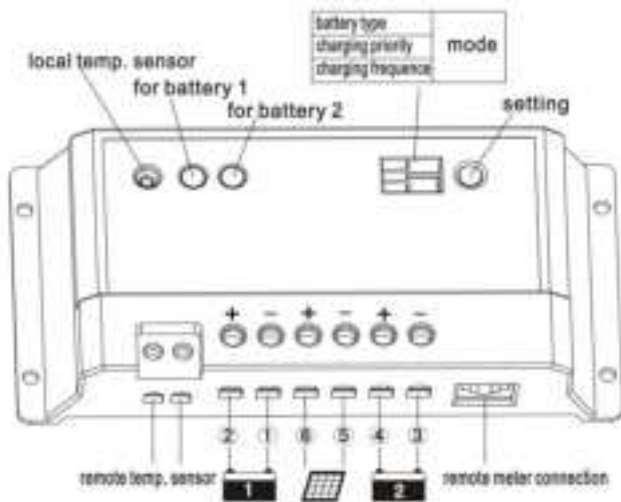
EPIPDB-COM-10

EPIPDB-COM-20

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1. Appearance



WARNING

Do not install the controller in humid, salt spray, corrosion, greasy, flammable, explosive, dust accumulative, or other severe environments.

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

Icon	Function
	Connect with battery #1.
	Connect with battery #2.
	Connect with the PV array.
Remote temp. sensor (Optional)	Remotely measure the battery temperature to regulate the battery voltage.

Local temp. sensor	Measure ambient temperature.
For battery 1	Indicate battery #1 charging status and error.
For battery 2	Indicate battery #2 charging status and error.
Remote meter connection	Connect with a remote meter.

Note: No RTS; the controller measures ambient temperature by the local temp. sensor. While the controller will obtain data from the RTS automatically after the RTS is connected.

EIPDB-COM series are common-negative controllers. Negative terminals of the PV array and batteries can be grounded simultaneously, or any negative terminal is grounded. According to the practical application, the negative terminals of the PV array and batteries can also be ungrounded. However, the grounding terminal on the controller shell must be grounded. It can shield electromagnetic interference and avoid electric shock to the human body.

 CAUTION	Using a common-negative controller for common-negative systems, such as the RV system, is recommended. The controller may be damaged if a common-positive controller is used and the positive electrode is grounded in the common-negative system.
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2. Mode setting

battery type	mode
charging priority	
charging frequency	

Three LEDs flash, and each LED indicates different specifications. Choose

the LED according to the following information, and then press the button for 5 seconds until the number flashes. And then, choose one number you need and leave it, and the number will be saved.

1. 1st LED is for the battery type setting.

1st LED	Battery type
1	Sealed battery
2	Gel battery
3	Flooded battery

2. 2nd LED is for the charging priority setting. Set the percentage for battery #1, and the controller will automatically calculate the rest percentage for battery #2.

2nd LED	Battery #1 charging percentage	Battery # 2 Charging percentage
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: During the normal charging process, the controller charges the battery per the set percentage. If one battery is fully charged (such as battery #1), more charge current will be diverted to the other battery (battery #2). The controller automatically returns to the setting percentage when battery #1 is low voltage.

When the controller detects only one battery, all the charging current will go

to this battery automatically.

3. 3rd LED is for the charging frequency setting.

3 rd LED	PWM charging frequency
0	25Hz(pre-set)
1	50Hz
2	100Hz

3. Troubleshooting

No.	LED Status	Troubleshooting
1	LED blinking	Short circuit. Please check whether the PV and battery connection is correct.
2	LED slowly flashing	Fully charged
3	LED ON	In charging
4	LED frequent flashing	No charging or any battery is detected.
5	LED OFF	No battery or system over voltage.

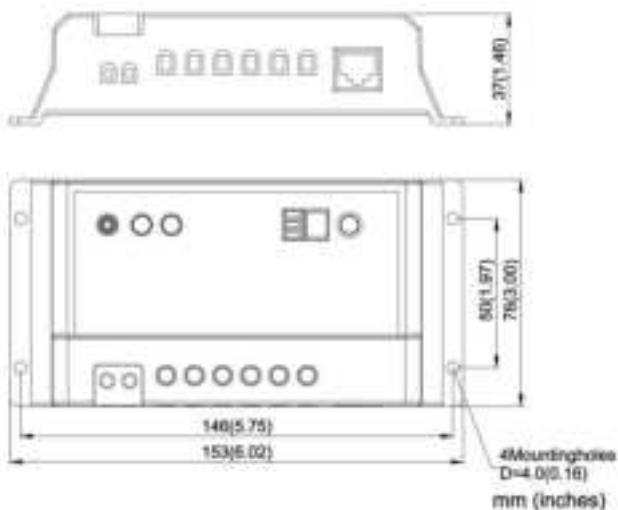
4. Technical information

Model	EIPDB-COM-10	EIPDB-COM-20
Nominal system voltage	12/24VDC Auto	
Rated charge current	10A	20A
Battery Type	Sealed; Gel; Flooded	
Equalize charging voltage	Sealed: 14.6V; Gel: No; Flooded: 14.8V	
Boost charging voltage	Sealed: 14.4V; Gel: 14.2V; Flooded: 14.6V	
Float charging voltage	Sealed/Gel/Flooded: 13.8V	
Maximum solar voltage	30V(12V System); 55V(24V System)	

Battery voltage range	8 ~ 15V
Boost time	120 minutes
Self-consumption	4mA at night; 10mA at charging
Communication port	8-PIN RJ-45
Temp. compensation	-5mV/°C/2V
Terminals	4mm ²
Environment temperature	-35°C ~ +55°C
Net weight	250g

Note: The above parameters are measured in the condition of a 12V system. Please double the values in the 24V system.

5. Mechanical drawing



Version Number: V3.1

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