

IMPORTANT

- **Always connect the batteries first.**
- **Use for 12V battery system only 12V (36 cells) solar panel array.**
- **Use for 24V battery system only 24V (72 cells) solar panel array.**

BlueSolar Charger

12V | 24V | 5A

12V | 24V | 10A

1. DESCRIPTION

1.1 General

The BlueSolar Charger series uses Pulse Width Modulation (PWM) charge voltage control combined with a multistage charge control algorithm. This leads to superior charging and enhanced battery performance. The filtered PWM power control system uses highly efficient and reliable power MOSFET transistors.

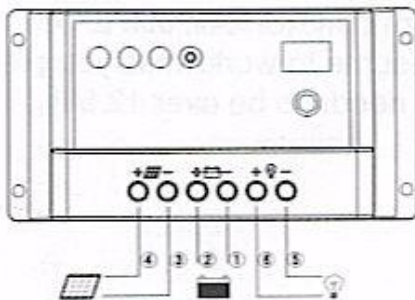
Fully automatic temperature compensation of charge voltage is available to improve charge control and battery performance.

1.2 Features

- ✧ Internal temperature sensor.
- ✧ Three stage battery charging [bulk – absorption – float]
- ✧ Protected against over current.
- ✧ Protected against short circuit.
- ✧ Protected against reverse polarity connection of the solar panels and/or battery.
- ✧ Low voltage load disconnect.

2. INSTALLATION

Important note: Always connect the batteries first.



- Connect wires in order indicated 1-6
- Use with 12V or 24V batteries
- Use with 12V or 24V systems
- Do not exceed Solar and Load ratings

3. LED INDICATORS



Green LED is ON when solar is charging battery. In case of system over voltage green LED blinks.



Green LED is ON when battery level in the right range.

Green LED slowly flashing when battery is full.

Yellow LED is ON when battery level low.



Red LED is ON when load is cut off.

In case of overload the red LED slowly flashing (The load Amp is 1.25 times of rated current for 60 seconds, or the load Amp is 1.5 times of rated current for 5 seconds)



Red LED is fast flashing in case of short-circuits.

Red LED is ON when the push button is ON.
Red LED is OFF when the push button is OFF.

Please note:

1. The load output will cut off in case of over load or short circuit. After the first overload or short circuit the controller will resume to work automatically after 30 seconds. Please check the load and press the start push button to start when it happens again.
2. After over discharge, the load will reconnect automatically when the battery is charged to 13.1V / 26.2V.
3. After over discharge, the load can be reconnected manually by pressing the on/off push button, if the battery voltage exceeds the 12.6V / 25.2V.



4. TO CORRECT PROBLEMS

1. Check wires
2. Reduce load if needed
3. Reset controller

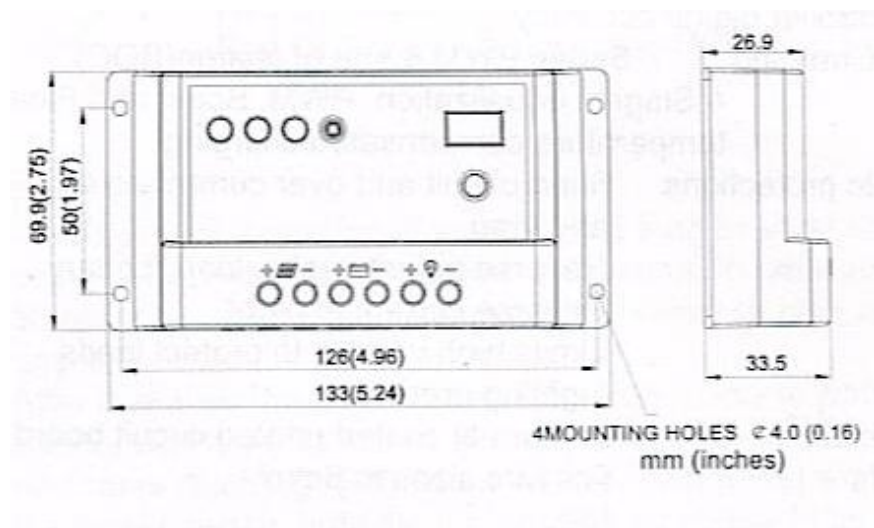
5. SPECIFICATIONS

| BlueSolar 12/24-5 & 12/24-10 | 12V/5A | 12V/10A | 24V/5A | 24V/10A |
|---|-------------------------------------|---------|-------------------------------------|---------|
| Battery Voltage | 12/24V Auto Select* | | | |
| Rated charge current | 5A | 10A | 5A | 10A |
| Recommended solar panel array | 36cell | | 72cell | |
| Automatic load disconnect | Yes (maximum load 10A) | | | |
| Recommended solar panel array | 12V | | 24V | |
| Maximum solar voltage | 28V | | 55V | |
| Self-consumption | 6mA | | | |
| Default settings | | | | |
| Absorption charge (1) | 14.4V | | 28.8V | |
| Float charge (1) | 13.7V | | 27.4V | |
| Load disconnect | 11.1V | | 22.2V | |
| Load reconnect | 12,6V (manual) 13,1V (automatic) | | 25.2V (manual) 26,2V (automatic) | |
| Battery temperature sensor | Yes (Internal sensor) | | | |
| Temperature compensation | -30mV/°C | | -60mV/°C | |
| Protection class | IP20 | | | |
| Enclosure | | | | |
| Terminal size | 6mm ² / AWG10 | | | |
| Weight | 160gr | | | |
| Dimension (h x w x d) | 70x133x33.5 mm | | | |
| Mounting | Vertical wall mount | | Indoor only | |
| Humidity (non condensing) | Max. 95% | | | |
| Operating temperature | -35°C to +55°C (full load) | | | |
| Cooling | Natural convection | | | |
| Standards | | | | |
| Safety | EN60335-1 | | | |
| EMC | EN61000-6-1, EN61000-6-3 | | | |

* For 12V use 36 cells solar panels and for 24V use 72 cells solar panels.



6. MECHANICAL DRAWING



Victron Energy Blue Power

Distributor:

Serial number:

Version : 04

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