

## 1. DESCRIPTION

### 1.1 General

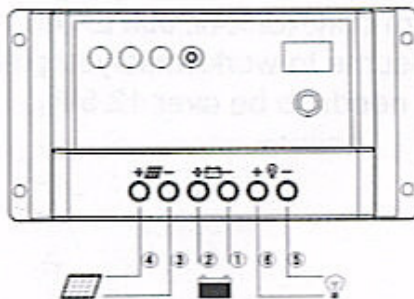
Series pass Pulse Width Modulation (PWM) charge voltage control combined with a multistage charge control algorithm leads to superior charging and enhanced battery performance. The filtered PWM power control system uses highly efficient and reliable power MOSFET transistors.

Fully automatic temperature compensation of charge voltage is available to further improve charge control and battery performance. The optional battery temperature sensor is built for long term reliability.

### 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.
- ✧ With low voltage load disconnect output.

## 2. INSTALATION





- 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 Max output current 10A

### 3. LED INDICATORS



Green ON when solar is charging battery. Green blink in case of system over voltage.



Green ON when battery level in the right range. Green slowly flashing when battery level full. Yellow ON when battery level low. Red ON when load cut off.

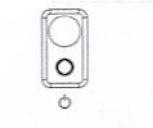


Red slowly flashing in case of over load.

(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 fast flashing in case of short-circuit.

Red ON when the push button is ON. Red 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 when the battery is charged to 13.1V. (for 24V, use 2x)
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.

## 4. TO CORRECT PROBLEMS

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

## 5. SPECIFICATIONS

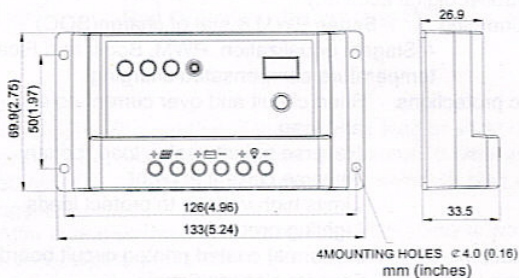
BlueSolar	BlueSolar 12/24-10	
	12V	24V
Battery Voltage	12/24V Auto Select	
Rated charge current	10A	
Automatic load disconnect	Yes (maximum load 10A)	
Recommended solar panel array	12V	24V
Maximum solar voltage	55V	
Self-consumption	6mA	
Default settings		
Absorption charge (1)	14.4V	28.8V
Float charge (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 <sup>2</sup> / 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	





# Victron Energy Blue Power

## 6. MECHANICAL DRAWING



Version : 01

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