

# BlueSolar PWM Charge Controller-LCD&USB 12/24V & 48V

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## Liquid crystal display

For status monitoring and set-up

## Load output

Over-discharge of the battery can be prevented by connecting all loads to the load output. The load output will disconnect the load when the battery has been discharged to a pre-set voltage.

Some loads (especially inverters) can best be connected directly to the battery, and the inverter remote control connected to the load output. A special interface cable may be needed, please see the manual. The connect and disconnect voltages are adjustable.

## Day/night timing of the load output

This option allows for a pre-set ON-time after dusk.

## Programmable battery charge algorithm

Preprogrammed algorithms for AGM, GEL, Flooded or LiFePO4 batteries (with internal BMS only)

## Two 5 Volt USB outputs

Maximum current (both outputs combined): 2A



BlueSolar Charge Controllers  
LCD&USB 12/24-5/10/20



BlueSolar Charge Controllers  
LCD&USB 12/24-30 & 48-10/20/30

| BlueSolar PWM Charge Controller  | 12/24-5   | 12/24-10 | 12/24-20             | 12/24-30  | 48-10                  | 48-20 | 48-30 |
|--|---|----------|----------------------|---|------------------------|-------|-------|
| Battery Voltage  | 12/24 V with automatic system voltage detection |          |                      |   | 48V                    |       |       |
| Rated charge current   | 5A  | 10A      | 20A                  | 30A   | 10A                    | 20A   | 30A   |
| Automatic load disconnect  | Yes   |          |                      |   |                        |       |       |
| Maximum solar voltage  | 28V / 55V (1)                                   |          |                      |   | 100V (1)               |       |       |
| Self-consumption   | < 10 mA   |          |                      |   |                        |       |       |
| Load output  | Manual control + low voltage disconnect +timer  |          |                      |   |                        |       |       |
| Protection   | Battery reverse polarity (fuse)                 |          | Output short circuit |   | Over temperature       |       |       |
| Overload protection  | Shut down after 60 s in case of 130% load       |          |                      |   |                        |       |       |
|  | Shut down after 5 s in case of 160% load        |          |                      |   |                        |       |       |
|  | Short circuit: immediate shut down              |          |                      |   |                        |       |       |
| Grounding  | Common positive                                 |          |                      |   |                        |       |       |
| Operating temp. range  | -35 to +60°C (full load)                        |          |                      |   |                        |       |       |
| Humidity (non-condensing)  | Max 95%   |          |                      |   |                        |       |       |
| <b>BATTERY</b>   |   |          |                      |   |                        |       |       |
| Charge voltage 'absorption'  | Factory setting: 14,4V / 28,8V                  |          |                      |   | Factory setting: 57,6V |       |       |
| Charge voltage 'float' (2)   | Factory setting: 13,7V / 27,4V                  |          |                      |   | Factory setting: 54,8V |       |       |
| Low voltage load disconnect  | Factory setting: 11,2V / 22,4V                  |          |                      |   | Factory setting: 44,8V |       |       |
| Low voltage load reconnect   | Factory setting: 12,6V / 25,2V                  |          |                      |   | Factory setting: 50,4V |       |       |
| <b>USB</b>   |   |          |                      |   |                        |       |       |
| Voltage  | 5V  |          |                      |   |                        |       |       |
| Current  | 2A (total from 2 outputs)                       |          |                      |   |                        |       |       |
| <b>ENCLOSURE</b>   |   |          |                      |   |                        |       |       |
| Protection class   | IP20  |          |                      |   |                        |       |       |
| Terminal size  | 6 mm <sup>2</sup> / AWG10                       |          |                      | 16mm <sup>2</sup> / AWG6  |                        |       |       |
| Weight   | 0,15kg  |          |                      | 0,3kg   |                        |       |       |
| Dimensions (h x w x d)   | 96 x 169 x 36 mm<br>(3.8 x 6.7 x 1.4 inch)      |          |                      | 101x184x47mm<br>(4.0 x 7.4 x 1.8 inch)  |                        |       |       |
| <b>STANDARDS</b>   |   |          |                      |   |                        |       |       |
| Safety   | EN60335-1, IEC 62109-1                          |          |                      |   |                        |       |       |
| EMC  | EN 61000-6-1, EN 61000-6-3, ISO 7637-2          |          |                      |   |                        |       |       |
| 1) For 12V use 36 cell solar panels<br>For 24V use 72 cell solar panels or 2x 36 cell in series<br>For 48V use 2x 72 cell solar panels or 4x 36 cell in series |   |          |                      | 2) The controller switches to the lower float voltage level 2 hours after the absorption voltage has been reached.<br>Whenever the battery voltage becomes lower than 13V, a new charge cycle is triggered. |                        |       |       |