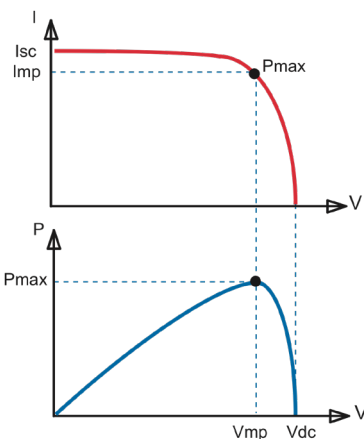


# BlueSolar Charge Controller MPPT 150/35

www.victronenergy.com



Solar Charge Controller  
MPPT 150/35



## Maximum Power Point Tracking

### Upper curve:

Output current (I) of a solar panel as function of output voltage (V). The Maximum Power Point (MPP) is the point Pmax along the curve where the product  $I \times V$  reaches its peak.

### Lower curve:

Output power  $P = I \times V$  as function of output voltage. When using a PWM (not MPPT) controller the output voltage of the solar panel will be nearly equal to the voltage of the battery, and will be lower than  $V_{mp}$ .

## Ultrafast Maximum Power Point Tracking (MPPT)

Especially in case of a cloudy sky, when light intensity is changing continuously, an ultra-fast MPPT controller will improve energy harvest by up to 30% compared to PWM charge controllers and by up to 10% compared to slower MPPT controllers.

## Advanced Maximum Power Point Detection in case of partial shading conditions

If partial shading occurs, two or more maximum power points may be present on the power-voltage curve.

Conventional MPPTs tend to lock to a local MPP, which may not be the optimum MPP.

The innovative BlueSolar algorithm will always maximize energy harvest by locking to the optimum MPP.

## Outstanding conversion efficiency

No cooling fan. Maximum efficiency exceeds 98%. Full output current up to 40°C (104°F).

## Flexible charge algorithm

Fully programmable charge algorithm (see the software page on our website), and eight preprogrammed algorithms, selectable with a rotary switch (see manual for details).

## Extensive electronic protection

Over-temperature protection and power derating when temperature is high.

PV short circuit and PV reverse polarity protection.

PV reverse current protection.

## Internal temperature sensor

Compensates absorption and float charge voltage for temperature.

## Real-time data display options

- Color Control GX or other GX devices: see the **Venus** documents on our website.
- A smartphone or other Bluetooth-enabled device: VE.Direct Bluetooth Smart dongle needed.



BlueSolar Charge Controller	MPPT 150/35
Battery voltage	12 / 24 / 48V Auto Select (software tool needed to select 36V)
Rated charge current	35A
Nominal PV power 1a, b)	12V: 500W / 24V: 1000W / 36V: 1500W / 48V: 2000W
Max. PV short circuit current 2)	40A
Maximum PV open circuit voltage	150V absolute maximum coldest conditions 145V start-up and operating maximum
Maximum efficiency	98%
Self-consumption	12V: 20 mA 24V: 15 mA 48V: 10mA
Charge voltage 'absorption'	Default setting: 14,4 / 28,8 / 43,2 / 57,6V (adjustable)
Charge voltage 'float'	Default setting: 13,8 / 27,6 / 41,4 / 55,2V (adjustable)
Charge algorithm	multi-stage adaptive (eight pre-programmed algorithms)
Temperature compensation	-16 mV / -32 mV / -64 mV / °C
Protection	PV reverse polarity Output short circuit Over-temperature
Operating temperature	-30 to +60°C (full rated output up to 40°C)
Humidity	95%, non-condensing
Data communication port	VE.Direct See the data communication white paper on our website
<b>ENCLOSURE</b>	
Colour	Blue (RAL 5012)
Power terminals	13 mm <sup>2</sup> / AWG6
Protection category	IP43 (electronic components), IP22 (connection area)
Weight	1,25 kg
Dimensions (h x w x d)	130 x 186 x 70 mm
<b>STANDARDS</b>	
Safety	EN/IEC 62109-1, UL 1741, CSA C22.2
1a) If more PV power is connected, the controller will limit input power.	
1b) PV voltage must exceed Vbat + 5V for the controller to start. Thereafter minimum PV voltage is Vbat + 1V.	
2) A PV array with a higher short circuit current may damage the controller.	