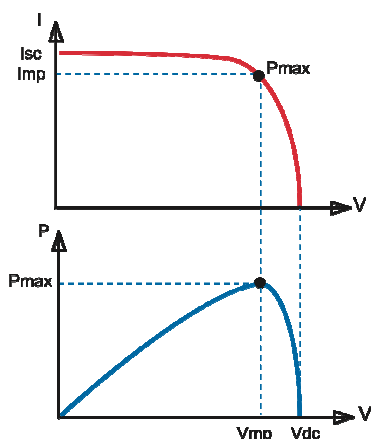


BlueSolar charge controller MPPT 75/50

www.victronenergy.com



Solar charge controller
MPPT 75/50



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} .

Charge current up to 50 A and PV voltage up to 75 V

The BlueSolar 75/50-MPPT charge controller is able to charge a lower nominal-voltage battery from a higher nominal voltage PV array.

The controller will automatically adjust to a 12 or 24V nominal battery voltage.

Ultra-fast 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 MPPT's 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

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.

BlueSolar charge controller	MPPT 75/50
Battery voltage	12/24 V Auto Select
Maximum battery current	50 A
Maximum PV power, 12V 1a,b)	700 W (MPPT range 15 V to 70 V)
Maximum PV power, 24V 1a,b)	1400 W (MPPT range 30 V to 70 V)
Maximum PV open circuit voltage	75 V
Peak efficiency	98 %
Self-consumption	10 mA
Charge voltage 'absorption'	Default setting: 14,4 V / 28,8 V
Charge voltage 'float'	Default setting: 13,8 V / 27,6 V
Charge algorithm	multi-stage adaptive
Temperature compensation	-16 mV / °C resp. -32 mV / °C
Protection	Battery reverse polarity (fuse) Output short circuit Over temperature
Operating temperature	-30 to +60°C (full rated output up to 40°C)
Humidity	95 %, non-condensing
	ENCLOSURE
Colour	Blue (RAL 5012)
Power terminals	13 mm ² / 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
1a) If more PV power is connected, the controller will limit input power to 700W resp. 1400W	
1b) PV voltage must exceed $V_{bat} + 5V$ for the controller to start. Thereafter minimum PV voltage is $V_{bat} + 1V$	