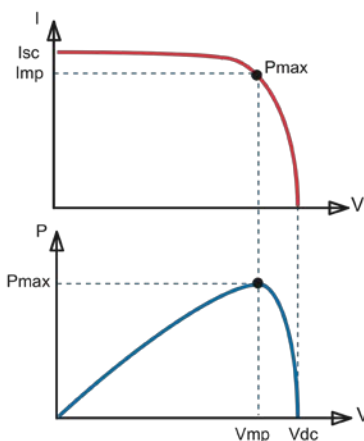# BlueSolar charge controller MPPT 75/10, 75/15 & MPPT 100/15

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Solar charge controller MPPT 75/15

Ultra fast Maximum Power Point Tracking (MPPT)
Especially in case of a clouded 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.

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 preset voltage.
Alternatively, an intelligent battery management algorithm can be chosen: see BatteryLife.
The load output is short circuit proof.
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.

BatteryLife: intelligent battery management
When a solar charge controller is not able to recharge the battery to its full capacity within one day, the result is often that the battery will be continually be cycled between a "partially charged" state and the "end of discharge" state. This mode of operation (no regular full recharge) will destroy a lead-acid battery within weeks or months.
The BatteryLife algorithm will monitor the state of charge of the battery and, if needed, day by day slightly increase the load disconnect level (i. e. disconnect the load earlier) until the harvested solar energy is sufficient to recharge the battery to nearly the full 100%. From that point onwards the load disconnect level will be modulated so that a nearly 100% recharge is achieved about once every week.
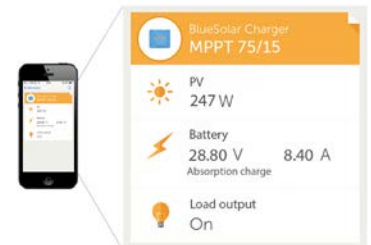
Programmable battery charge algorithm
See the software section on our website for details

Day/night timing and light dimming option
See the software section on our website for details

Real-time data display options
- Apple and Android smartphones, tablets and other devices: see the VE.Direct to Bluetooth low energy dongle
- ColorControl panel

BlueSolar Charger
MPPT 75/15
PV 247 W
Battery 28.80 V 8.40 A
Absorption charge
Load output On

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 x V reaches its peak.

Lower curve:
Output power P = I x 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 Vmp.

BlueSolar charge controller	MPPT 75/10	MPPT 75/15	MPPT 100/15
Battery voltage	12/24 V Auto Select		
Rated charge current	10 A	15 A	15 A
Maximum PV power, 12V 1a,b)	135 W	200 W	200 W
Maximum PV power, 24V 1a,b)	270 W	400 W	400 W
Automatic load disconnect	Yes, maximum load 15 A		
Maximum PV open circuit voltage	75 V		100 V
Peak efficiency	98 %		
Self consumption	10 mA		
Charge voltage 'absorption'	14,4 V / 28,8 V (adjustable)		
Charge voltage 'float'	13,8 V / 27,6 V (adjustable)		
Charge algorithm	multi-stage adaptive		
Temperature compensation	-16 mV / °C resp. -32 mV / °C		
Continuous/peak load current	15A / 50A		
Low voltage load disconnect	11,1 V / 22,2 V or 11,8 V / 23,6 V or BatteryLife algorithm		
Low voltage load reconnect	13,1 V / 26,2 V or 14 V / 28 V or BatteryLife algorithm		
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		
Data communication port	VE.Direct See the data communication white paper on our website		
ENCLOSURE			
Colour	Blue (RAL 5012)		
Power terminals	6 mm² / AWG10		
Protection category	IP22 (connection area)		
Weight	0,5 kg		
Dimensions (h x w x d)	100 x 113 x 40 mm		
STANDARDS			
Safety	EN/IEC 62109		

1a) If more PV power is connected, the controller will limit input power to the stated maximum.
1b) PV voltage must exceed Vbat + 5V for the controller to start.
Thereafter minimum PV voltage is Vbat + 1V

victron energy BLUE POWER