

fangpusun solar charge controller mppt 100-30 /100-50

Ultra-fast Maximum Power Point Tracking (MPPT)

Especially in case of a cloudy sky, when light intensity is changing continuously, an ultra fast MPPTcontroller will improve energy harvest by up to 30% compared to PWM charge controllers and by upto 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 toalocal MPP, which may not be the optimum MPP.The innovative fangpusun 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 eightpreprogrammed algorithms, selectable with a rotagyswitch (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.

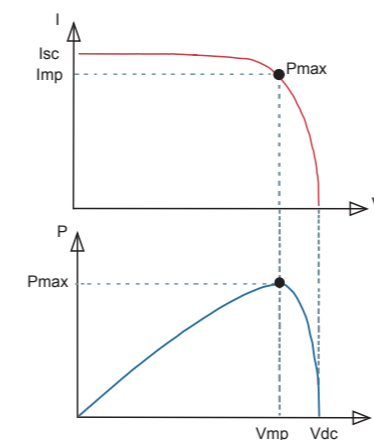
Real-time data display options

- Apple and Android smartphones, tablets and other devices: see the VE.Direct to Bluetooth low energy donegle.
- ColorControl pannel

Certificates

- Compliant with European Standards (CE)
- RoHS compliant
- SGS
- ISO 9001
- Made in China

Fangpusun charge controller	MPPT 100/30	MPPT 100/50
System voltage	12/24 V Auto Select	
Maximum output current	30 A	50 A
Maximum PV power, 12V 1a,b)	440 W (MPPT range 15 V to 80 V)	700 W (MPPT range 15 V to 70 V resp.95V)
Maximum PV power, 24V 1a,b)	880 W (MPPT range 30 V to 80 V)	1400 W (MPPT range 30 V to 70 V resp.95V)
Maximum PV open circuit voltage	100 V	
Maximum efficiency	98 %	
Selfconsumption	10 mA	
Charge voltage 'absorption'	Default setting:14,4 V / 28.8 V (adjustable)	
Charge voltage 'float'	Default setting:13,8 V / 27,6 V(adjustable)	
Charge algorithm	multi-stage adaptive	
Temperature compensation	-16 mV / °C resp.-32 mV / °C	
Protection	Battery reverse polarity (fuse, not user accessible) Output short circuit Over temperature (MPPT 100/50:PV reverse polarity)	
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)	
Terminals(fine / single wire)	13 mm² / AWG 6	
Protection category	IP43 (electronic components), IP22 (connection area)	
Weight	1,25 kg	
Dimensions (X x Y x Z)	130 x 186 x 70 mm	
STANDARDS		
Safety	EN/IEC 62109	
1a) If more PV power is connected, the controller will limit input power to 440W resp. 880 W(MPPT 100/50:700W resp. 1400W)		
1b) PV voltage must exceed Vbat + 5V for the controller to start. Thereafter minimum PV voltage is Vbat + 1V		



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.