



MPPT Maximum Power Point Tracker

Innovative Maximum Power Point Tracking technology increases system efficiency and reduces system cost.

- **Maximum power point tracking technology**

With innovative maximum power point tracking technology, Phocos' MPP tracker ensures maximum performance from your solar array at all times and in any weather conditions. The MPPT can yield energy gain of 10%-25% from your PV system.

MPPT includes a sweep-function which runs through the whole solar panel voltage range once every 2h to find the point of the absolute maximum power output.

- **Use solar panels for grid-feed-in systems**

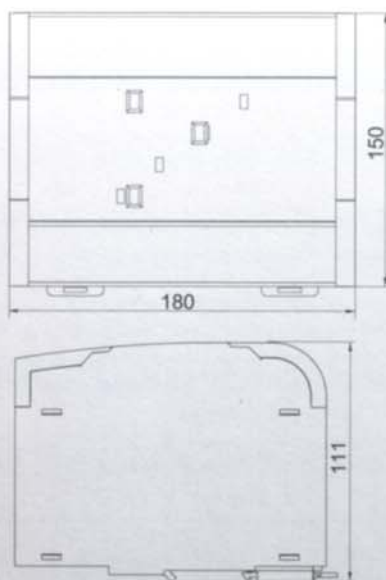
The possibility to use less expensive grid-feed-in solar panels with up to 95V open circuit voltage for 12V or 24V stand-alone-systems will significantly reduce cost of the total system.

- **3 stage I-U curve charge regulation**

The temperature-compensated three-stage I-U curve charge regulation algorithm significantly extends the life span of your battery.

- **Parallel Operation of Multiple MPPTs***

Up to 16 MPPTs can be operated in parallel enabling you to increase your system capacity substantially. Parallel operation is accomplished by designating one controller as the "Master Controller". Charge regulation for each controller in multiple MPPT systems is controlled by the Master Controller via data bus.



Technical Data	MPPT100/20
Nominal voltage	12/24V, automatic recognition
Max. solar input voltage Voc	95V
Max. battery charge current	20A
Power conversion efficiency	up to 97%
Standby power consumption	<30mW@12V system voltage(<2mA) <80mW@24V system voltage(<3mA)
Temperature compensation	-4mV/cell*K
Max. wire size	32mm ² (AWG#2)
Ambient temperature range	-25°C to +50°C
Weight	1581g



Panel Data

Vo=21.5V
IsC=4.9A
VmPP=17V
ImPP=4.4A
PmPP=75Wp



Working Point

Panel	Controller
V _{BAT} =12V	P _{Charge} =54W
I _{Charge} =4.5A	V _{BAT} =12V
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V _{BAT} =17V	P _{Charge} =72W
I _{Charge} =4.4A	V _{BAT} =12V



Battery

I_{Charge}=4.5A

I_{Charge}=6A

The comparison between MPPT and traditional controller shows that the energy output of the panel is up to 30% higher with the use of MPPT. This leads to an average increase of about 15%.

* Future function