

# MPPT 100/40

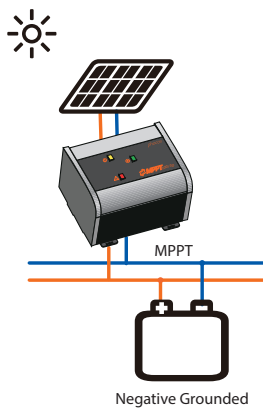
Modular Solar Charge Controller with Maximum Power Point Technology



## Scalable Charge Controlling Solution

- Optimal Charging in ANY condition
- Power+ Current Limiting
- Modular design allows up to 8 parallel controllers for same battery bank

### Build your optimal charge system with MPPT100/40 and the MPM System



With innovative maximum power point tracking technology, Phocos' MPPT 100/40 ensures optimal performance from your solar array at all times and in all weather conditions. The MPPT can yield an energy gain from your PV array (up to 30%).

When a central unit (MCU) is used, up to 8 MPPTs can be used to charge the same battery bank. This allows you to increase your system charging capacity substantially and makes MPPT100/40 and ideal solution for systems up to 9.6 kWp.

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

**Power+™** current limiter allows for over-sizing PV power by up to 50% for winter months

### Fully Protected

- Thermal overload protection and temperature compensation
- Equipped with a short circuit disconnect function

### Flexible Design

- Works in 12 or 24V systems (automatic battery voltage detection)
- Use as a stand alone 40A controller or as part of a modular (MPM) system

### Maximized Charging

- Charges your battery faster by taking excess PV voltage and converting it into additional charge current
- Highest charging efficiency in low irradiation conditions

### Application Examples

- Telecommunication
- Wifi/Repeater Stations
- Oil & Gas
- SCADA Systems
- Solar Home Systems



## Technical Data

Type	MPPT 100/40
System voltage	12/24 V, auto recognition
Nominal charge current	40 A
Max. battery charge current	41 A
Float charge	13.8/27.6 V (77 °F/25 °C)
Main charge	14.4 V/28.8 V (77 °F/25 °C), 0.5 h (daily)
Boost charge / activation	14.4/28.8 V (77 °F/25 °C), 2 h / battery voltage < 12.3/24.6 V
Equalization charge / activation	14.8/29.6 V (77 °F/25 °C), 2 h / battery voltage < 12.1/24.2 V
Max. battery voltage	32 V
Max. PV voltage	95 V
Min. PV voltage	17/34 V
Max. PV input power	600W@12V, 1200 W@24 V
Standby power consumption	< 30 mW at 12 V system voltage (< 2 mA); < 80 mW at 24 V system voltage (< 3 mA)
Temperature compensation	-24 mV/K (12 V); -48 mV/K (24 V)
Power conversion efficiency	Up to 98%
Grounding	Negative grounded
Ambient temperature	-40 °F to 122 °F (-40 °C to +50 °C)
Battery type	Lead acid (GEL, AGM, flooded)
Max. wire cross section	2 AWG (35 mm <sup>2</sup> )
Dimensions (W x H x D)	7.2 x 6 x 4.5 in (185 x 150 x 115 mm)
Weight	3.5 lbs (1.6 kg)
Type of protection	IP20

### Available Accessories



**MCU**  
Modular Control Unit  
Selectable System Voltage:  
12/24/48 V  
Up to 5-Years Datalogging



**MRD**  
Remote Display for MCU  
Display panel current,  
load current, battery voltage,  
Ah, SOC, etc.



**MODCOM**  
Application software for MCU  
communication with computer



**MCS**  
Modular Current Sensor  
Selectable System Voltage: 12/24/48 V  
RS485 socket  
Current measurement range  
50/100/200/400/800 A



**MTS**  
External temperature  
sensor for MCU



**MXI**  
Interface for MCU  
communications with computer  
RS232/USB interface