

# MPPT 100/40 (40A)

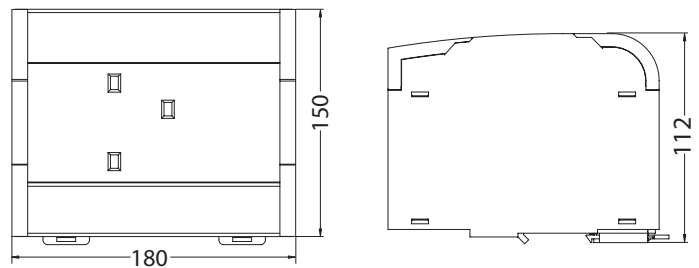
Modular MPPT Charge Controller



phocos



## Technical Drawing



## Product Introduction

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

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

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

## Product Features

- Thermal overload protection and temperature compensation
- Equipped with a short circuit disconnect function
- Works in 12 or 24V systems
- Use as a stand alone 40A controller or part of modular system
- Faster recharging by converting excess PV voltage to charge current
- Highest charging efficiency in low irradiation conditions

## Optional Accessories

### MCU

- Modular Central Unit
- System voltage 12/24/48V selectable

### MXI

- Interface for communication with computer USB interface

### MPS

- Modular Power Switch
- Auto recognition of system voltage 12/24/48V
- Max. charge current: 45/80A versions

### MODCOM

- Application software for MCU communication with computer

### MCS

- Modular Current Sensor
- System voltage 12/24/48V
- RS485 socket
- Current measurement range 50/100/200/400/800A

### MTS

- External temp. sensor for MCU

### MRD

- Remote display for MCU
- Displays panel current, load current and battery voltage, Ah, SOC, etc.

### MXI 232

- Interface for MCU RS232 interface communication with computer

## Technical Data

| Type                           | MPPT 100/40 (40A)  |
|--------------------------------|--|
| System voltage                 | 12/24V auto recognition  |
| Nominal charge current         | 40A  |
| Max. battery charge current    | 41A  |
| Float charge                   | 13.8/27.6V (25 °C)   |
| Main charge                    | 14.4V/28.8V (25 °C), 0.5 h (daily)   |
| Boost charge/activation        | 14.4/28.8V (25 °C), 2 h / battery voltage < 12.3/24.6V                             |
| Equalization charge/activation | 14.8/29.6V (25 °C), 2 h / battery voltage < 12.1/24.2V                             |
| Max. battery voltage           | 32V  |
| Max. PV voltage                | 95V  |
| Min. PV voltage                | 17/34V   |
| Max. PV input power            | 800W/12V, 1600W/24V  |
| Standby power consumption      | < 30 mW at 12 V system voltage (< 2 mA)<br>< 80 mW at 24 V system voltage (< 3 mA) |
| Temperature compensation       | -25 mV/K at 12V; -50 mV/K at 24V   |
| Power conversion efficiency    | Up to 98%  |
| Grounding                      | Negative grounded  |
| Ambient temperature            | -40 to +113oF (-40 to +40C)  |
| Battery type                   | Lead acid(GEL, AGM, flooded)   |
| Wire cross section             | AWG 2/33mm <sup>2</sup>  |
| Dimensions (WxHxD)             | 185 x 150 x 115 mm   |
| Weight                         | 3.5 lbs (1.6 kg)   |
| Type protection                | IP20   |
| Warranty                       | 2 years  |