

MPPT 100/40 (40 A)

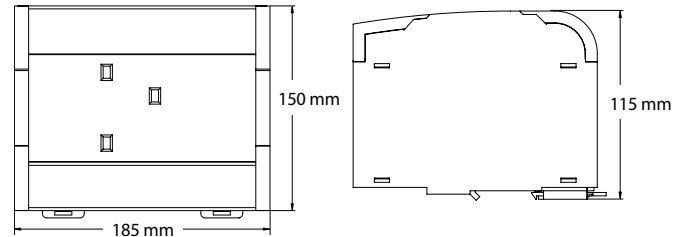
MPPT Charge Controller



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 24 V systems
- Use as a stand alone 40 A controller or part of modular system (MCU required)
- 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 12/24/48 V selectable

MXI

- Interface for communication with computer USB interface

MPS

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

MODCOM

- Application software for MCU communication with computer

MCS

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

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 communication with computer via RS232 interface

Technical Data

| Type | MPPT 100/40 (40A) |
|-----------------------------|--|
| 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 (25 °C) |
| Main Charge | 14.4/28.8 V (25 °C), 0.5 h daily |
| Boost Charge | 14.4/28.8 V (25 °C), 2 h Activation battery voltage < 12.3/24.6 V |
| Equalization Charge | 14.8/29.6 V (25 °C), 2 h Activation battery voltage < 12.1/24.2 V (at least every 30 days) |
| Max. Battery Voltage | 32 V |
| Max. PV Voltage | 95 V |
| Min. PV Voltage | 17/34 V |
| Max. PV Input Power | 800 W/1600 W |
| Standby Power Consumption | < 30 mW (< 2 mA) / < 80 mW (< 3 mA) |
| Temperature Compensation | -25 mV/K (12 V); -50 mV/K (24 V) |
| Power Conversion Efficiency | Up to 98% |
| Grounding | Negative grounded |
| Ambient Temperature | -40 to +45°C |
| Battery Type | Lead acid (gel, AGM, flooded) |
| Wire Cross Section | 33 mm ² (AWG 2) |
| Dimensions (WxHxD) | 185 x 150 x 115 mm / 7.3 x 6 x 4.5 in |
| Weight | 1.6 kg / 3.5 lbs |
| Ingress Protection | IP20 |
| Certificates | CE compliant, RoHS compliant |
| Warranty | 5 years |