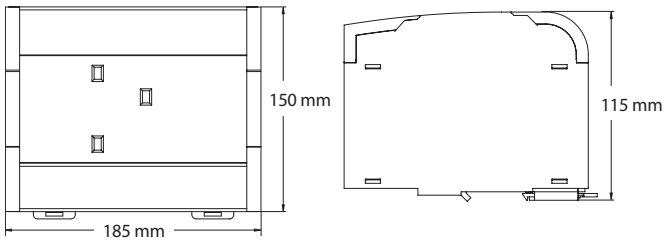
MPPT 100/40 (40 A)

MPPT Charge Controller



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.

As part of the MPM (Modular Power Management) ecosystem the MPPT 100/40 can optionally be combined with other components of the MPM system to provide the highest level of flexibility for your installation.

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
- Mounting to DIN rail

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 Boltage	32 V
Max. PV Voltage	95 V
Min. PV Voltage	17 / 34 V
Max. Usable PV Power	600 W / 1200 W
Max. PV Array 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	Common Negative
Ambient Temperature	-40 to +45 °C
Battery Type	Lead acid (gel, AGM, flooded)
Max. Wire Cross Section	33 mm² (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