

SMR-MPPT series

MPPT Solar charge controller
(Bluetooth communication)



Functions

SMR-MPPT series solar controller, designed for the use of solar energy systems intelligent programming MPPT controller. The charging efficiency is about 20% higher than the traditional PWM controller, which can drop the cost of the whole system.

- Innovative Maximum Power Point Tracking(MPPT) technology, tracking efficiency >99.9%.
- High charge conversion efficiency up to 97.5% .
- Monitoring of the running status and parameters.
- Dual automatic limit function for rated charging current and charging power.
- Clear and easy to understand charging and discharging, fault indication.
- Suitable for Gel, Liquid, AGM and Lithium battery.
- External temperature sensor with automatic temperature compensation.
- Automatic over-temperature power reduction function .
- Four stage charging: MPPT, boost, equalization, float.
- When BMS power off because of LVD, it can activate the system automatically.
- 0°C Charging Protection(Lithium).
- The communication interface provides external power supply.
- Waterproof IP67, Strong and durable aluminum case.
- Perfect EMC & thermal design.
- Full automatic electronic protect function



MPPT

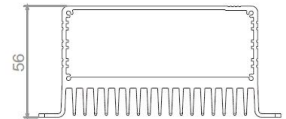
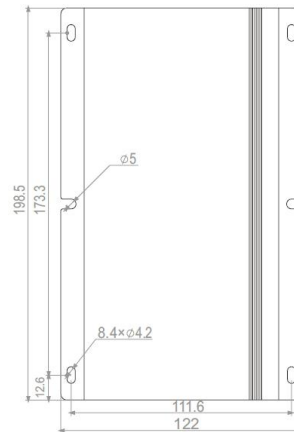


IP67

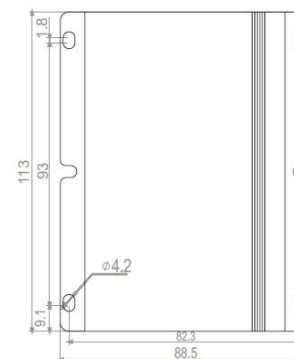


Dimensions

Unit:mm



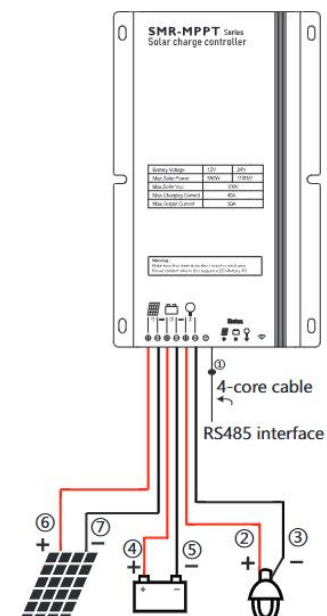
SMR-MPPT40100/
SMR-MPPT3060



SMR-MPPT1060

Electrical connection diagram

The following diagrams provide an overview of the connections and the proper order.



Technical Data

	Item		SMR-MPPT1060
	System Voltage		12V/24V automatical recognition
	Max Charging Current		10A
Battery Parameters	Battery Type		Lithium,Liquid,Gel,AGM(Programmable,default:Lithium)
	Liquid, Gel and AGM	MPPT Charging Voltage	<14.5/29.0V@25°C
		Boost Charging Voltage	14.5/29.0V @25°C
		Equalization Voltage	14.8/29.6V @25°C(Liquid,AGM)
		Float Voltage	13.7/27.4V @25°C
		Low Volt. Disconnect	10.8~11.8V/21.6~23.6V(Default:11.2/22.4V, Programmable)
		Reconnect Voltage	11.4~12.8V/22.8~25.6V(Default:12.2/24.4V, Programmable)
		Overcharge Protect	15.5/31.0V
		Temp. Compensation	-4.17mV/K per cell (Boost, Equalization), -3.33mV/K per cell (Float)
	Lithium	Boost Charging Voltage	10.0~32.0V(Default:14.4V)
		Boost Voltage Reconnect Voltage	9.2~31.8V(Default:14.0V)
		Low voltage disconnect	9.0~30.0V(Default:10.8V)
		Low voltage reconnect	9.6~31.0V(Default:11.8V)
		0°C Charge Protection	Yes, No, Slow(Lithium, default: Yes)
Panel Parameters	Max input power		130/260W
	Max volt on PV terminal		60V *1
	Dusk/Dawn detect volt.		3.0~20.0V(Programmable)
	Day/Night delay time		0~30Min (Programmable)
	MPPT tracking range		(Battery Voltage + 1.0V)~Voc*0.9 *2
Load	Output Current		10A
System Parameters	Max tracking efficiency		>99.9%
	Max charge conversion		97.5%
	Communication mode		Infrared/RS485/Bluetooth
	Self consumption		6~25mA
	Dimensions		113*88.5*24.3mm
	Net weight		370g
	Ambient temperature		-35~+60°C
	Ambient humidity		0~100%RH
	Protection degree		IP67

*1.This value represents the maximum voltage of the solar panel at the minimum operating ambient temperature.

*2.Voc means the open circuit voltage of the solar panel.

*3.Around oblique line value separately on behalf of 12V and 24V system's value.

Technical Data

	Item		SMR-MPPT3060
	System Voltage		12V/24V automatical recognition
	Max Charging Current		30A
Battery Parameters	Battery Type		Lithium,Liquid,Gel,AGM(Programmable,default:Lithium)
	Liquid, Gel and AGM	MPPT Charging Voltage	<14.5/29.0V@25°C
		Boost Charging Voltage	14.5/29.0V @25°C
		Equalization Voltage	14.8/29.6V @25°C(Liquid,AGM)
		Float Voltage	13.7/27.4V @25°C
		Low Volt. Disconnect	10.8~11.8V/21.6~23.6V(Default:11.2/22.4V, Programmable)
		Reconnect Voltage	11.4~12.8V/22.8~25.6V(Default:12.2/24.4V, Programmable)
		Overcharge Protect	15.5/31.0V
		Temp. Compensation	-4.17mV/K per cell (Boost, Equalization), -3.33mV/K per cell (Float)
	Lithium	Boost Charging Voltage	10.0~32.0V(Default:14.4V)
		Boost Voltage Reconnect Voltage	9.2~31.8V(Default:14.0V)
		Low voltage disconnect	9.0~30.0V(Default:10.8V)
		Low voltage reconnect	9.6~31.0V(Default:11.8V)
		0°C Charge Protection	Yes, No, Slow(Lithium, default: Yes)
Panel Parameters	Max input power		400/800W
	Max volt on PV terminal		60V *1
	Dusk/Dawn detect volt.		3.0~20.0V(Programmable)
	Day/Night delay time		0~30Min (Programmable)
	MPPT tracking range		(Battery Voltage + 1.0V)~Voc*0.9 *2
Load	Output Current		30A
System Parameters	Max tracking efficiency		>99.9%
	Max charge conversion		97.5%
	Communication mode		Infrared/RS485/Bluetooth
	Self consumption		10~20mA
	Dimensions		198.5*122*56mm
	Net weight		1780g
	Ambient temperature		-35~+60°C
	Ambient humidity		0~100%RH
	Protection degree		IP67

*1.This value represents the maximum voltage of the solar panel at the minimum operating ambient temperature.

*2.Voc means the open circuit voltage of the solar panel.

*3.Around oblique line value separately on behalf of 12V and 24V system's value.

Technical Data

	Item		SMR-MPPT40100
	System Voltage		12V/24V automatical recognition
	Max Charging Current		40A
Battery Parameters	Battery Type		Lithium,Liquid,Gel,AGM(Programmable,default:Lithium)
	Liquid, Gel and AGM	MPPT Charging Voltage	<14.5/29.0V@25°C
		Boost Charging Voltage	14.5/29.0V @25°C
		Equalization Voltage	14.8/29.6V @25°C(Liquid,AGM)
		Float Voltage	13.7/27.4V @25°C
		Low Volt. Disconnect	10.8~11.8V/21.6~23.6V(Default:11.2/22.4V, Programmable)
		Reconnect Voltage	11.4~12.8V/22.8~25.6V(Default:12.2/24.4V, Programmable)
		Overcharge Protect	15.5/31.0V
		Temp. Compensation	-4.17mV/K per cell (Boost, Equalization), -3.33mV/K per cell (Float)
	Lithium	Boost Charging Voltage	10.0~32.0V(Default:14.4V)
		Boost Voltage Reconnect Voltage	9.2~31.8V(Default:14.0V)
		Low voltage disconnect	9.0~30.0V(Default:10.8V)
		Low voltage reconnect	9.6~31.0V(Default:11.8V)
		0°C Charge Protection	Yes, No, Slow(Lithium, default: Yes)
Panel Parameters	Max input power		550/1100W
	Max volt on PV terminal		100V *1
	Dusk/Dawn detect volt.		3.0~20.0V(Programmable)
	Day/Night delay time		0~30Min (Programmable)
	MPPT tracking range		(Battery Voltage + 1.0V)~Voc*0.9 *2
Load	Output Current		30A
System Parameters	Max tracking efficiency		>99.9%
	Max charge conversion		97.5%
	Communication mode		Infrared/RS485/Bluetooth
	Self consumption		10~20mA
	Dimensions		198.5*122*56mm
	Net weight		1780g
	Ambient temperature		-35~+60°C
	Ambient humidity		0~100%RH
	Protection degree		IP67

*1.This value represents the maximum voltage of the solar panel at the minimum operating ambient temperature.

*2.Voc means the open circuit voltage of the solar panel.

*3.Around oblique line value separately on behalf of 12V and 24V system's value.