

Smart-MPPT series

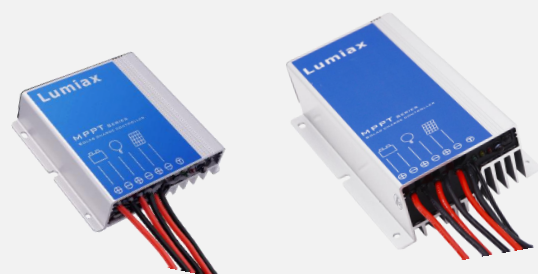
MPPT Solar charge controller



MPPT



IP67



SMR-MPPT1050

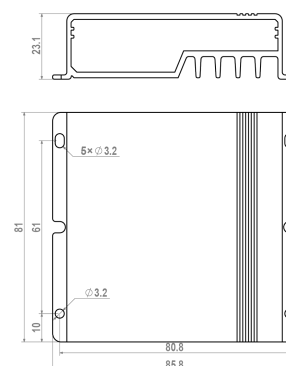
SMR-MPPT1575
SMR-MPPT2075



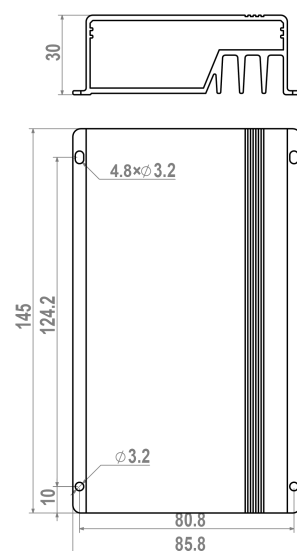
SMR-MPPT1575-RS485
SMR-MPPT2075-RS485

Dimensions

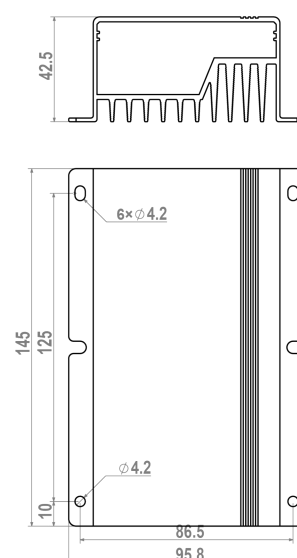
Unit:mm



SMR-MPPT1050



SMR-MPPT1575



SMR-MPPT2075

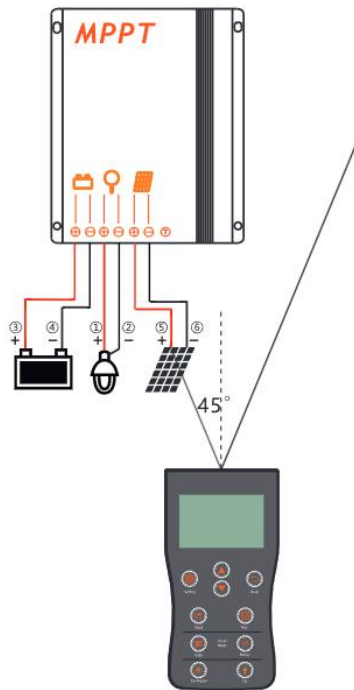
Functions

Smart-MPPT series intelligent MPPT solar controller is programmable , waterproof and well-suited for a wide range of solar systems. The charging efficiency of this controller is higher than a traditional PWM controller, helping to get the most out of the solar panel.

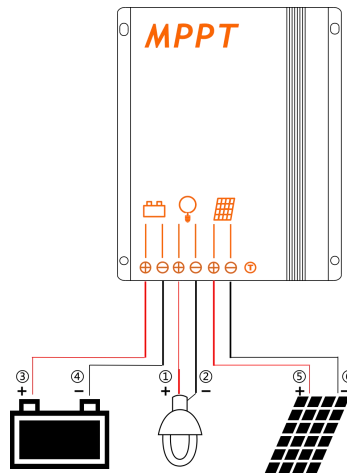
It comes with a number of outstanding features, such as:

- Innovative Maximum Power Point Tracking(MPPT) technology, tracking efficiency >99.9%
- High charge conversion efficiency up to 96.5%
- Multiple load output modes are available
- Use high performance, ultra-low power consumption Bluetooth dedicated chip
- Adopt Bluetooth 5.0 and BLE technology
- Suitable for Gel, Liquid, AGM and Lithium battery
- Four stage charging: MPPT, boost, equalization, float
- 0°C Charging Protection(Lithium)
- When BMS power off because of LVD, it can activate the system automatically
- Day/Night threshold can adjust automatically
- Waterproof IP67, Strong and durable aluminum case
- Full automatic electronic protect function

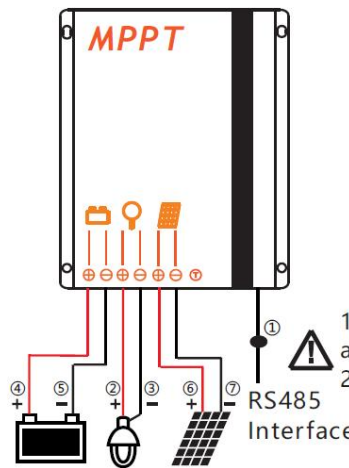
Remote controller



Settings can be changed using the "SU10G" infrared remote programmer. For detailed instructions and settings, please see the SU10G programmer remote manual.



The following diagram provides an overview of the terminals. Please make sure to follow the proper order of connection.



Wire	RS485
Brown	Battery +
Black	GND
Blue	RS485-A
Green	RS485-B

1. The connectors with electricity are prohibited to connect together!
2. GND is not connected to B-.

RS485
Interface

Technical Data

	Item	SMR-MPPT1050	SMR-MPPT1575	SMR-MPPT2075	
Battery Parameters	Max Charging Current		10A	15A	20A
	System Voltage		12V	12V/24V automatical recognition	
	Max input power		130W	200W/400W	260W/520W
	Max volt on Bat. Terminal		25V	35V	
	Battery Type		Lithium, Liquid, Gel, AGM (Programmable, default: Gel)		
	Liquid, Gel, AGM	MPPT Charging Voltage	<14.5V@25°C	<14.5/29V@25°C	
		Boost Voltage	14.5V @25°C	14.5/29V @25°C	
		Equalization Voltage	14.8V @25°C	14.8/29.6V @25°C (Liquid, AGM)	
		Float Voltage	13.7V@25°C	13.7/27.4V @25°C	
		Low Volt. Disconnect	10.8~11.8V(Default: 11.0V)	10.8~11.8V/21.6~23.6V(Default: 11.0/22.0V)	
		Reconnect Voltage	11.4~12.8V(Default: 12.0V)	11.4~12.8V/22.8~25.6V(Default: 12.0/24.0V)	
		Overcharge Protect	15.5V	15.5/31.0V	
		Temp. Compensation	-4.17mV/K per cell (Boost, Equalization), -3.33mV/K per cell (Float)		
	Lithium	Charging voltage target	10.0~17.0V(Default: 14.4V)	10.0~32.0V(Programmable,Default: 14.4V)	
		Charging voltage recovery	9.2~16.8V(Default: 14.0V)	9.2~31.8V(Programmable,Default: 14.0V)	
		Low voltage disconnect	9.0~15.0V(Default: 10.8V)	9.0~30.0V(Programmable,Default: 10.8V)	
		Low voltage reconnect	9.6~16.0V(Default: 11.8V)	9.6~31.0V(Programmable,Default: 11.8V)	
		0°C Charging protection	Yes, No, Slow(Default: Yes)		
Panel Parameters	Max volt on PV terminal *1	45V	55V		
	Dusk/Dawn detect volt.	3.0~8.0V	3.0~20.0V (Programmable)		
	Day/Night delay time	0~30Min (Programmable)			
	MPPT tracking range	(Battery Voltage + 1.0V)~Voc*0.9 *2			
	Max tracking efficiency	>99.9%			
Load	Output Current	10A	15A	20A	
System Parameters	Max charge conversion	96.5%	97.5%		
	Self consumption	6mA			
	Dimensions	81*85.8*23.1mm	145*85.8*30mm	145*95.8*42.5mm	
	Weight	260g	600g	730g	
	Ambient temperature	-35~+60°C			
	Ambient humidity	0~100%RH			
	Protection degree	IP67			
	Max Altitude	4000m			

*1.PV panel Voc can not exceed this value, otherwise it will damage the controller

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

Technical Data

	Item	SMR-MPPT1050-BT	SMR-MPPT1575-BT	SMR-MPPT2075-BT	
Battery Parameters	Max Charging Current		10A	15A	20A
	System Voltage		12V	12V/24V automatical recognition	
	Max input power		130W	200W/400W	260W/520W
	Max volt on Bat. Terminal		25V	35V	
	Battery Type		Lithium, Liquid, Gel, AGM (Programmable, default: Gel)		
	Liquid, Gel, AGM	MPPT Charging Voltage	<14.5V@25°C		<14.5/29V@25°C
		Boost Voltage	14.0~14.8V @25°C		28~29.6V(Default:14.5/29V@25°C)
		Equalization Voltage	14.0~15.0V @25°C		28~30V(Default:14.8/29.6V@25°C)(Liquid, AGM)
		Float Voltage	13.0~14.5V@25°C		26~29V(Default:13.7/27.4V@25°C)
		Low Volt. Disconnect	10.8~11.8V		10.8~11.8V/21.6~23.6V(Default: 11.2/22.4V)
		Reconnect Voltage	11.4~12.8V		11.4~12.8V/22.8~25.6V(Default: 12.0/24.0V)
		Overcharge Protect	15.5V		15.5/31.0V
		Temp. Compensation	-4.17mV/K per cell (Boost, Equalization), -3.33mV/K per cell (Float)		
	Lithium	Charging voltage target	10.0~17.0V		10.0~32.0V(Programmable)
		Charging voltage recovery	9.2~16.8V		9.2~31.8V(Programmable)
		Low voltage disconnect	9.0~15.0V		9.0~30.0V(Programmable)
		Low voltage reconnect	9.6~16.0V		9.6~31.0V(Programmable)
		0°C Charging protection	Yes, No, Slow(Default: Yes)		
Panel Parameters	Max volt on PV terminal *1		45V	55V	
	Dusk/Dawn detect volt.		3.0~8.0V	3.0~20.0V (Programmable)	
	Day/Night delay time		0~30Min (Programmable)		
	MPPT tracking range		(Battery Voltage + 1.0V)~Voc*0.9 *2		
	Max tracking efficiency		>99.9%		
Load	Output Current	10A	15A	20A	
System Parameters	Max charge conversion		96.5%	97.5%	
	Self consumption		10mA	12mA	
	Dimensions		81*85.8*23.1mm	145*85.8*30mm	145*95.8*42.5mm
	Weight		260g	600g	730g
	Ambient temperature		-35~+60°C		
	Ambient humidity		0~100%RH		
	Protection degree		IP67		
	Max Altitude		4000m		

*1.PV panel Voc can not exceed this value, otherwise it will damage the controller

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

Technical Data

	Item	SMR-MPPT1050-RS485	SMR-MPPT1575-RS485	SMR-MPPT2075-RS485	
Battery Parameters	Max Charging Current		10A	15A	20A
	System Voltage		12V	12V/24V automatical recognition	
	Max input power		130W	200W/400W	260W/520W
	Max volt on Bat. Terminal		25V	35V	
	Battery Type		Lithium, Liquid, Gel, AGM (Programmable, default: Gel)		
	Liquid, Gel, AGM	MPPT Charging Voltage	<14.5V@25°C		<14.5/29V@25°C
		Boost Voltage	14.0~14.8V/28.0~29.6V(Default: 14.5/29.0V@25°C, Programmable)		
		Equalization Voltage	14.0~15.0V/28.0~30.0V(Default: 14.8/29.6V@25°C, Liquid/AGM, Programmable)		
		Float Voltage	13.0~14.5V/26.0~29.0V(Default: 13.7/27.4V@25°C, Programmable)		
		Low Volt. Disconnect	10.8~11.8V/21.6~23.6V; SOC1~5(Default: 11.2/22.4V, Programmable)		
		Reconnect Voltage	11.4~12.8V/22.8~25.6V(Default: 12.0/24.0V, Programmable)		
		Overcharge Protect	15.5V	15.5/31.0V	
		Temp. Compensation	-4.17mV/K per cell (Boost, Equalization), -3.33mV/K per cell (Float)		
	Lithium	Charging voltage target	10.0~17.0V	10.0~32.0V(Lithium, Programmable)	
		Charging voltage recovery	9.2~16.8V	9.2~31.8V(Lithium, Programmable)	
		Low voltage disconnect	9.0~15.0V	9.0~30.0V(Lithium, Programmable)	
		Low voltage reconnect	9.6~16.0V	9.6~31.0V(Lithium, Programmable)	
		0°C Charging protection	Yes, No, Slow(Default: Yes)		
Panel Parameters	Max volt on PV terminal *1		45V	55V	
	Dusk/Dawn detect volt.		3.0~8.0V	3.0~20.0V (Programmable)	
	Day/Night delay time		0~30Min (Programmable)		
	MPPT tracking range		(Battery Voltage + 1.0V)~Voc*0.9 *2		
	Max tracking efficiency		>99.9%		
Load	Output Current	10A	15A	20A	
System Parameters	Max charge conversion		96.5%	97.5%	
	Self consumption		6~8mA		
	Dimensions		81*85.8*23.1mm	145*85.8*30mm	145*95.8*42.5mm
	Weight		260g	600g	730g
	Ambient temperature		-35~+60°C		
	Ambient humidity		0~100%RH		
	Protection degree		IP67		
	Max Altitude		4000m		

*1.PV panel Voc can not exceed this value, otherwise it will damage the controller

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