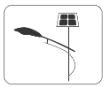
Lumiax
Magic your solar life

MPPT-DC series

MPPT Solar charge controller

MPPT1060-DC120G
MPPT1060-DC80G

MPPT30100-DC260G

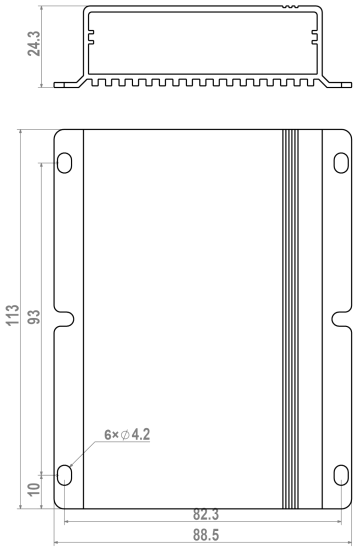


MPPT

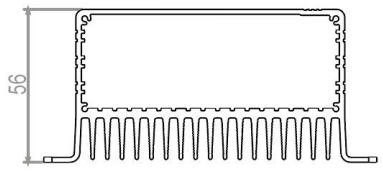
IP67

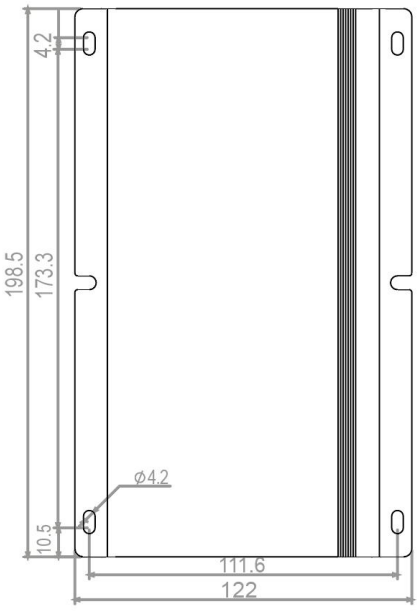
Dimensions

Unit:mm



MPPT1060-DC120G
MPPT1060-DC80G





MPPT30100-DC260G

Description of Function

MPPT-DC series intelligent MPPT solar controller is programmable and especially for boost mode LED solar street light system. It includes constant current driver function. 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 97.7% .
- Constant current output, adjustable output current, resolution of 0.05A.
- Five stage time and power adjustment, power adjustable from 0 to 100%.
- When the battery level is low, automatic power reduction operation can be set.
- 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℃ Charging Protection(Lithium).
- Waterproof IP67, Strong and durable aluminum case.
- Perfect EMC & thermal design.
- Full automatic electronic protect function.

Electrical connection diagram

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

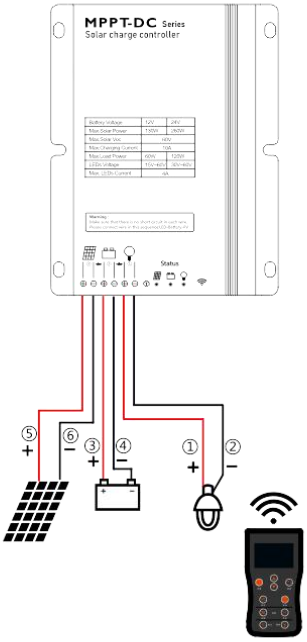


Figure 1. 2.4G remote control communication

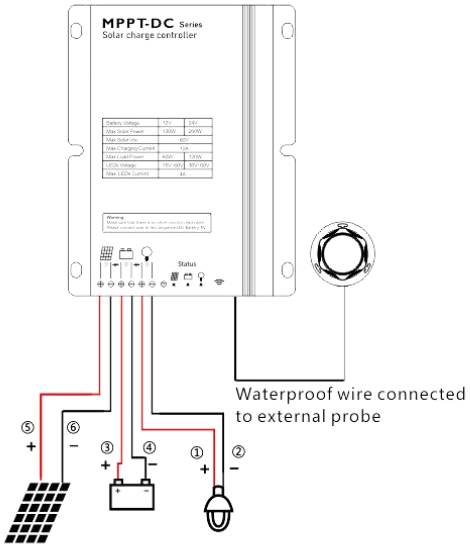


Figure 2. Infrared/microwave induction

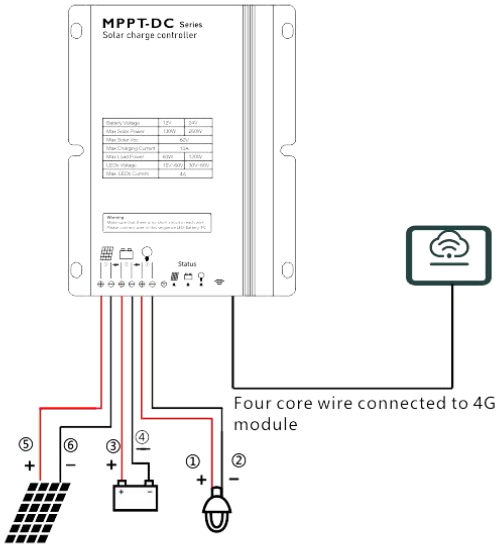


Figure 3. 4G iot module communication

Technical Data

	Item		MPPT1060-DC80G/GV/GR	MPPT1060-DC120G/GV/GR
	Controller type		G: 2.4G communication/GV: 2.4G communication+microwave induction/GR: 2.4G communication+infrared induction	
Battery Parameters	System Voltage		12V	12V/24V automatical recognization
	Max Charging Current		10A	
	Max volt on Bat. Terminal		25V	35V
	Battery Type		Liquid, Gel, AGM and Lithium (Programmable, default: Lithium)	
	Liquid, Gel, AGM	MPPT Charging Voltage	<14.5V@25℃	<14.5/29.0V@25℃
		Boost Voltage	14.5/29.0V @25℃	
		Equalization Voltage	14.8/29.6V @25℃ (Liquid, AGM)	
		Float Voltage	13.7/27.4V @25℃	
		Low Volt. Disconnect	10.8~11.8V/21.6~23.6V (Programmable,default: 11.2V/22.4V)	
		Reconnect Voltage	11.4~12.8V/22.8~25.6V (Programmable,default: 12.0V/24.0V)	
		Overcharge Protect	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 (Programmable, default: 14.4V)	10.0~32.0V (Programmable, default: 12.6V)
		Charging voltage recovery	9.2~16.8V (Programmable, default: 14.0V)	9.2~31.8V (Programmable, default: 12.4V)
		Low voltage disconnect	9.0~15.0V (Programmable, default: 10.8V)	9.0~30.0V (Programmable, default: 9.0V)
		Low voltage reconnect	9.6~16.0V (Programmable, default: 11.8V)	9.6~31.0V (Programmable, default: 9.8V)
		0℃ Charging protection	Yes, Slow, No (Programmable)	
Panel Parameters	Max volt on PV terminal		60V *1	
	Max input power		130W	130W/260W
	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 Parameters	Output Power		10~80W	10~60W/20~120W
	Output Voltage		15~60V	15~60V/35~60V
	Current setting range		0.1~4.0A ((Programmable)	
	Min current		50mA (Dimming)	
	Current precision		≤2%±30mA	
	Dimming		0~100% (Programmable)	
	Voltage of start dimming		11.8~12.5V (Gel,AGM and Liquid); 10.0~17.0V (Lithium)	11.8~12.5V/23.6~25.0V (Gel,AGM and Liquid); 10.0~32.0V (Lithium)
	Dimming percentage		1~40% (Programmable)	
System Parameters	Max tracking efficiency		>99.9%	
	Max charge conversion		97.5%	
	Max LED driver efficiency		96.5%	
	Communication mode		Infrared/2.4G/IOT	
	Induction mode		Infrared Human Sensing/Microwave Sensing	
	Self consumption		6-25mA	
	Dimensions		113*88.5*24.3mm	
	Weight		370g	
	Ambient temperature		-35~+60℃	
	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		MPPT30100-DC260G/GV/GR
	Controller type		G: 2.4G communication/GV: 2.4G communication+microwave induction/GR: 2.4G communication+infrared induction
Battery Parameters	System Voltage		12V/24V automatical recognization
	Max Charging Current		30A
	Max volt on Bat. Terminal		35V
	Battery Type		Liquid, Gel, AGM and Lithium (Programmable, default: Lithium)
	Liquid, Gel, AGM	MPPT Charging Voltage	<14.5/29.0V@25℃
		Boost Voltage	14.5/29.0V @25℃
		Equalization Voltage	14.8/29.6V @25℃ (Liquid, AGM)
		Float Voltage	13.7/27.4V @25℃
		Low Volt. Disconnect	10.8~11.8V/21.6~23.6V (Programmable,default: 11.2V/22.4V)
		Reconnect Voltage	11.4~12.8V/22.8~25.6V (Programmable,default: 12.0V/24.0V)
		Overcharge Protect	15.5/31.0V
		Temp. Compensation	-4.17mV/K per cell (Boost, Equalization), -3.33mV/K per cell (Float)
	Lithium	Charging voltage target	10.0~32.0V (Programmable, default: 14.4V)
		Charging voltage recovery	9.2~31.8V (Programmable, default: 14.0V)
		Low voltage disconnect	9.0~30.0V (Programmable, default: 10.8V)
		Low voltage reconnect	9.6~31.0V (Programmable, default: 11.8V)
		0℃ Charging protection	Yes, Slow, No (Programmable)
Panel Parameters	Max volt on PV terminal		100V *1
	Max input power		400W/800W
	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 Parameters	Output Power		10~130W/20~260W
	Output Voltage		15~75V
	Current setting range		0.1~7.0A
	Min current		100mA (Dimming)
	Current precision		≤2%±30mA
	Dimming		0~100% (Programmable)
	Voltage of start dimming		11.8~12.5V/23.6~25.0V (Gel,AGM and Liquid); 10.0~32.0V (Lithium)
	Dimming percentage		1~40% (Programmable)
System Parameters	Max tracking efficiency		>99.9%
	Max charge conversion		97.5%
	Max LED driver efficiency		96.5%
	Communication mode		Infrared/2.4G/IOT
	Induction mode		Infrared Human Sensing/Microwave Sensing
	Self consumption		15~18mA
	Dimensions		198.5*122*56mm
	Weight		1920g
	Ambient temperature		-35~+60℃
	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.