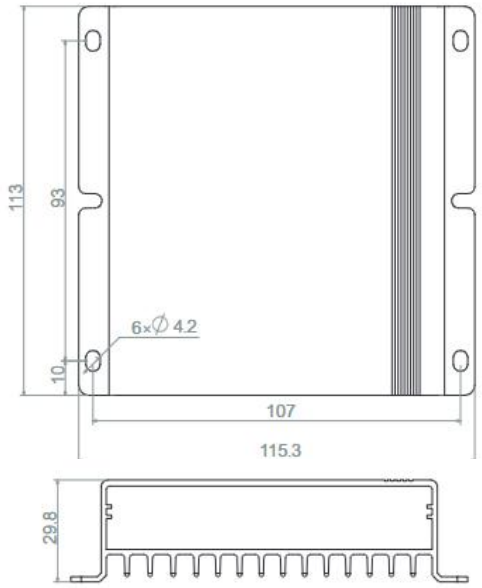
MPPT1060-DC120HG

MPPT Solar charge controller

MPPT | Auto 12V/24V | IP67 | Auto dimming | Infrared remote control

Dimensions

Unit:mm



Description of Function

MPPT1060-DC120HG 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 97.7% .
- 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.
- The battery and mains power (DC) complement each other, and the load power supply priority can be set. The controller automatically switches between the two according to the setting to ensure the normal operation of the load.
- 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.

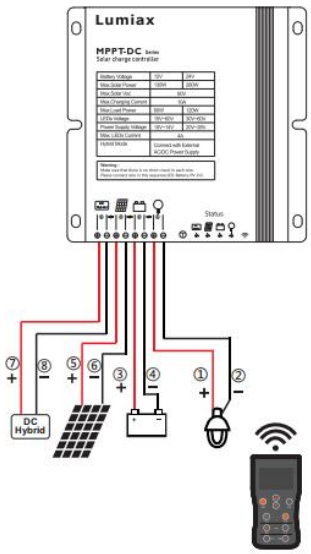


Figure 1. 2.4G remote control communication

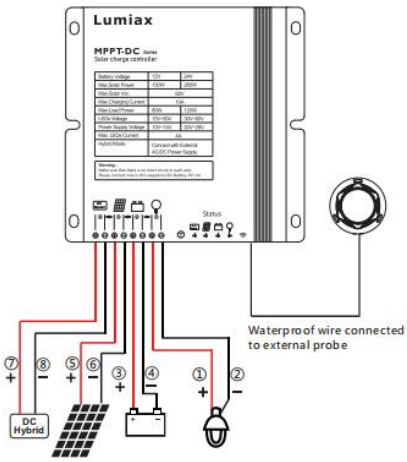


Figure 2. Infrared/microwave induction

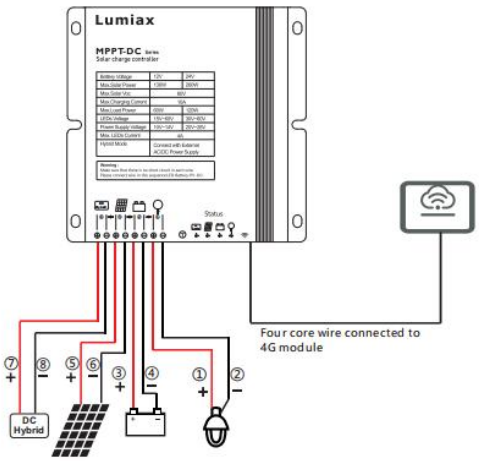


Figure 3. 4G iot module communication

Technical Data

	Item	Standard product	**MPPT1060-DC120HG**
		Suffix description	G: 2.4G wireless remote control (default infrared remote control without suffix); GV: 2.4G remote control+microwave induction; GR: 2.4G remote control+infrared sensing;
Battery Parameters	System Voltage		12V/24V automatical recognization
	Max Charging Current		10A
	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		60V *1
	Max input power		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
Mains	Mains mode		External DC power supply
	Power supply voltage		10V~14V(12V system); 20V~28V(24V system)
Load Parameters	Output Power		10~60W/20~120W
	Output Voltage		15~60V/35~60V
	Current setting range		0.1~4.0A ((Programmable)
	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		2.4G
	Induction mode		Infrared Human Sensing/Microwave Sensing
	Self consumption		6~23mA
	Dimensions		113*115.3*29.8mm
	Weight		520g
	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.