Lumiax
Magic your solar life

MC series

MPPT Solar charge controller

MC2010/2006-W
MC4010-W
MC6010/6015-W

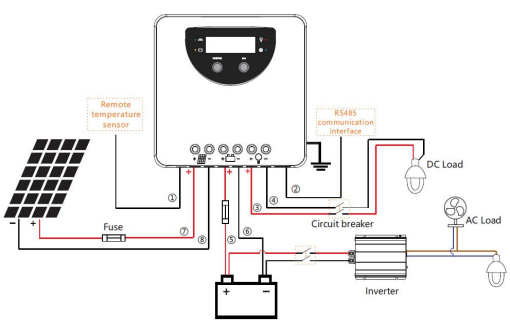
IoT RS485 Bluetooth

Overview

Magicube series solar controller is based on an advanced maximum power point tracking (MPPT) technology developed, dedicated to the solar system, the controller conversion efficiency up to 97.5%.

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

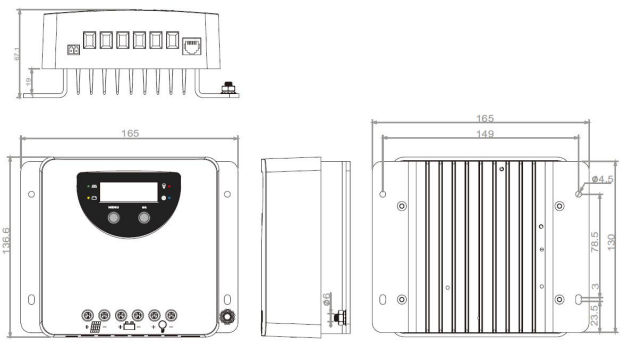
- 12/24/36/48V automatic recognition
- Optional APP version for Bluetooth communication
- Real-time energy statistics function
- A combination of multiple tracking algorithms enables tracking the maximum power point quickly and accurately
- Innovative Max Power Point Tracking(MPPT) technology, tracking efficiency >99.9%
- Full digital technology, high charge conversion efficiency up to 97.5%
- LCD display design, read operating data and working condition easily
- Flexible System battery selection: Liquid, Gel, AGM and Lithium
- Extends battery life through accurate remote temperature sensor
- Controller is protected against over-temperature due to built-in power reduction function
- Four stages battery charging process: MPPT, boost, equalization, float
- Dual automatic protection to avoid exceeding the rated charging power and current
- Multiple load control modes: Always on, Dusk to Dawn, Evening and Manual
- IoT wireless communication or Bluetooth communication functions optional
- With the wireless communication function of the IoT, the controller can be connected remotely through IoT/GPRS
- Monthly charging data can be calculated and displayed by grouping and graphs
- Based RS-485 standard Modbus protocol with RJ11 interface to maximize the communication needs of different occasions.
- Full automatic electronic protect function for increased charge controller availability



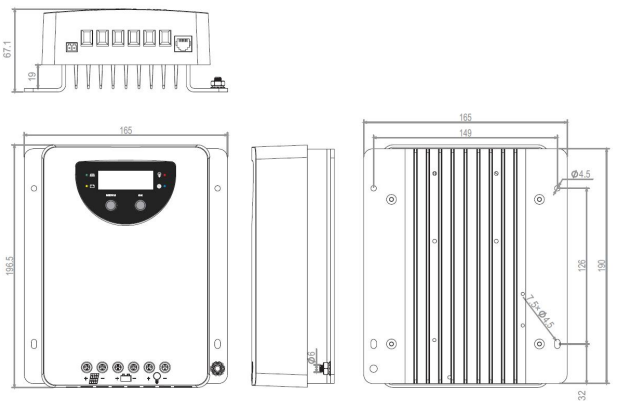
Dimensions

Unit:mm

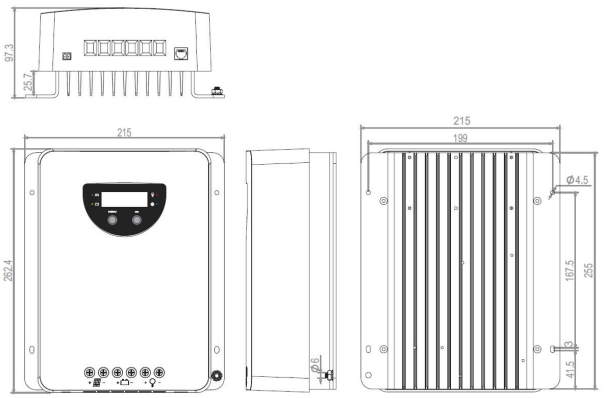
MC2010/2006-W



MC4010-W

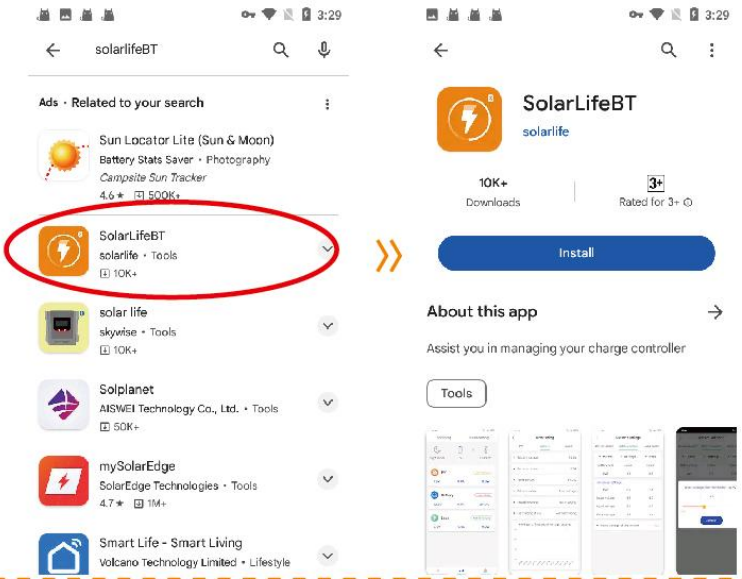


MC6010/6015-W

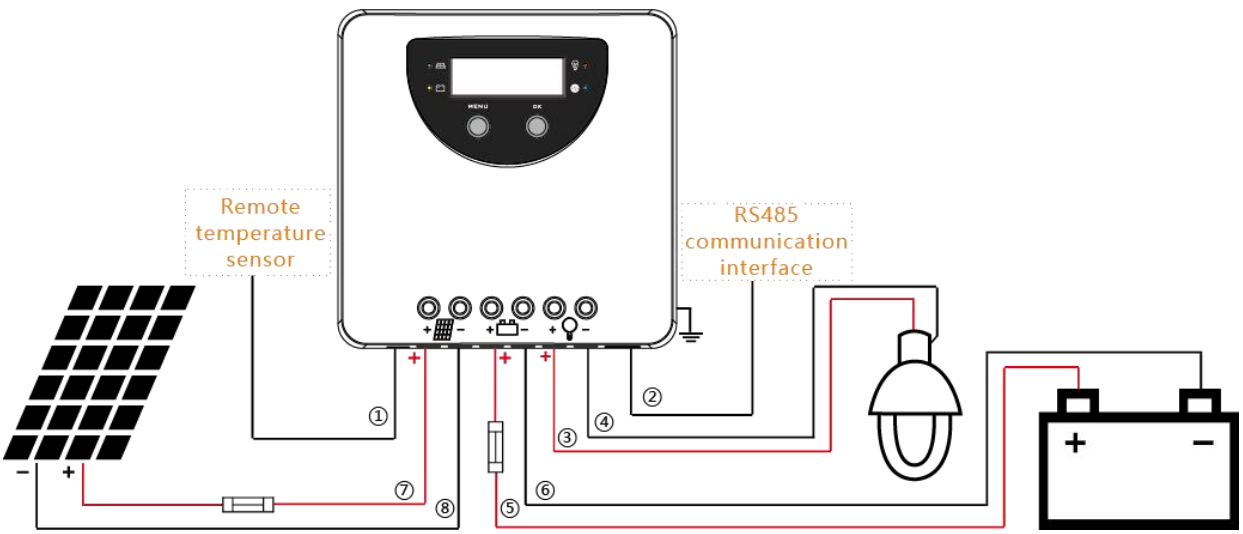


APP download

For Android Phone, download “SolarLife BT” in Google Play Store.



For iPhone, download “SolarLife BT” in Apple APP Store.



Technical Data

	Item		MC2010-W	MC2006-W	MC4010-W	MC6010-W
Battery Parameters	Max Charging Current		20A		40A	60A
	System Voltage		12/24V automatic recognition			
	Battery Type		Gel, AGM, FLD, Lithium（default: Gel)			
	Max volt on Bat. terminal		35V			
	Gel, AGM, Liquid	MPPT Charging Voltage	before boost or equalization charging stage(default: 14.5/29V)			
		Boost Voltage	14.0~14.8/28.0~29.6V @25℃(default: 14.5/29.0V)			
		Equalization Voltage	14.0~15.0/28.0~30.0V@25℃(default: 14.8/29.6V)(FLD, AGM)			
		Float Voltage	13.0~14.5/26.0~39.0V @25℃(default: 13.7/27.4V)			
		Low Volt. Disconnect	10.8~11.8V/21.6~23.6V(default: 11.2/22.4V)			
		Reconnect Voltage	11.4~12.8V/22.8~25.6V（default: 12.0/24.0V)			
		Overcharge Protect	15.8/31.3V			
		Temp. Compensation	-4.17mV/K per cell (Boost, Equalization)， -3.33mV/K per cell (Float)			
	Lithium	Charging target voltage	10.0~32.0V(Lithium, default: 14.4V)			
		Charging recovery voltage	9.2~31.8V(Lithium, default: 14.0V)			
		Low voltage disconnect	9.0~30.0V(Lithium, default: 10.6V)			
		Low voltage reconnect	9.6~31.0V(Lithium, default: 12.0V)			
Panel Parameters	Max volt on PV terminal *1		100V	60V	100V	
	Max input power		260W/520W		520W/1040W	750W/1500W
	Day/Night threshold		3.0~10.0/6.0~20.0V(Default: 8/16V)			
	MPPT tracking range *2		（Battery Voltage + 2.0V）~Voc*0.9			
Load Parameters	Output Current		20A		30A	
	Load mode		Always on, Street lamp, User-defind Mode(default: Always on)			
System Parameters	Max tracking efficiency		>99.9%			
	Max charge conversion		97.5%			
	Dimensions		136.6*165*67.1mm		196.5*165*67.1mm	262.5*186.5*97.5mm
	Weight		860g		1.345Kg	2.5Kg
	Self consumption		≤22mA			≤20mA
	Communication		RS485(RJ11 interface)			
	Optional		IoT，BLE(Internal/External)			
	Grounding		Common Negative			
	Power terminals		6AWG(16mm2)			
	Ambient temperature		-20~+45℃			
	Storage temperature		-25~+70℃			
	Ambient humidity		≤95% RH，No condensation			
	Protection degree		IP32			

*1. Maximum solar panel voltage at minimum ambient operating temperature

*2. Voc: PV-Module open circuit voltage

*3. Slash separate values for 12V and 24V nominal system voltage

Technical Data

	Item		MC6015
Battery Parameters	Max Charging Current		60A
	System Voltage		12/24/36/48V automatic recognition
	Battery Type		Gel, AGM, FLD, Lithium (default: Gel)
	Max volt on Bat. terminal		65V
	Gel, AGM, Liquid	MPPT Charging Voltage	before boost or equalization charging stage
		Boost Voltage	14.0~14.8/28~29.6/42~44.4/56~59.2V@25℃(default:14.5/29/43.5/58V)
		Equalization Voltage	14.0~15.0/28~30/42~45/56~60V@25℃(default:14.8/29.6/44.4/59.2V)(FLD, AGM)
		Float Voltage	13.0~14.5/26~29/39~43.5/52~58V@25℃(default:13.7/27.4/41.1/54.8V)
		Low Volt. Disconnect	10.8~11.8/21.6~23.6/32.4~35.4/43.2~47.2V(default:11.2/22.4/33.6/44.8V)
		Reconnect Voltage	11.4~12.8/22.8~25.6/34.2~38.4/45.6~51.2V(default:12/24/36/48V)
		Overcharge Protect	15.8/31.3/46.8/62.3V
		Temp. Compensation	-4.17mV/K per cell (Boost, Equalization), -3.33mV/K per cell (Float)
	Lithium	Charging target voltage	10.0~64.0V(Lithium, default: 29.4V)
		Charging recovery Volt.	9.2~63.8V(Lithium, default: 28.7V)
		Low voltage disconnect	9.0~60.0V(Lithium, default: 21.0V)
		Low voltage reconnect	9.6~62.0V(Lithium, default: 22.4V)
Panel Parameters	Max volt on PV terminal *1		150V
	Max input power		750W/1500W/2250W/3000W
	Day/Night threshold		3.0~10.0/6.0~20.0/9.0~30.0/12.0~40.0V(Default: 8/16/24/32V)
	MPPT tracking range *2		(Battery Voltage + 2.0V) ~Voc*0.9
Load Parameters	Output Current		30A
	Load mode		Always on, Street lamp, User-defind Mode(default: Always on)
System Parameters	Max tracking efficiency		>99.9%
	Max charge conversion		97.5%
	Dimensions		262.4*215*97.2mm
	Weight		3.07Kg
	Self consumption		≤20mA
	Communication		RS485(RJ11 interface)
	Optional		IoT,BLE(Internal/External)
	Grounding		Common Negative
	Power terminals		6AWG(16mm2)
	Ambient temperature		-20~+45℃
	Storage temperature		-25~+70℃
	Ambient humidity		≤95% RH, No condensation
	Protection degree		IP32

*1. Maximum solar panel voltage at minimum ambient operating temperature

*2. Voc: PV-Module open circuit voltage

*3. Slash separate values for 12V, 24V, 36V and 48V nominal system voltage