Lumiax
Magic your solar life

MU8415

MPPT Solar charge controller

IoT RS485 Bluetooth

Overview

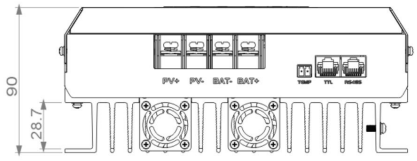
The new generation of MU series controllers is a product developed according to the latest technical standards, representing the latest level of industrial technology development.

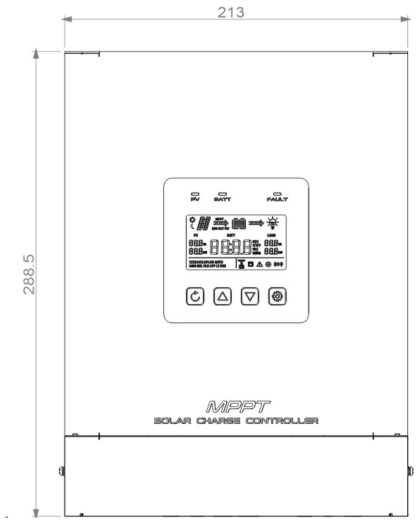
This product has many outstanding features:

- Various tracking algorithms are combined to accurately track the maximum power point in an extremely short time.
- Innovative Maximum Power Point Tracking(MPPT)technology, tracking efficiency > 99.9 %.
- Full digital control technology, charge conversion efficiency up to 98 %.
- The LCD screen dynamically displays the operating data and working status of the device.
- Automatic identification of 12/24/48 V system voltage.
- Equipped with a real-time power statistics and recording function.
- External temperature sensor for more accurate temperature compensation and improved battery service life.
- Built-in over-temperature protection mechanism: when the temperature exceeds the set value, the charging current is derated to reduce the temperature rise of the controller and avoid high-temperature damage to the controller.
- Dual automatic limiting function for rated charging current and charging power.
- Compatible with Liquid, GEL, AGM and Lithium batteries.
- 4-stage charging for lead acid batteries: MPPT, Boost, Equalization, Float.
- Optional IoT wireless communication, Bluetooth communication, or RS485 communication functions.
- Bluetooth communication supports a mobile phone APP, enabling wireless monitoring of the solar charge controller.
- Utilizes a high-performance, ultra-low-power dedicated Bluetooth chip.
- Adopts Bluetooth 4.2 and BLE technology, with a communication range of up to 8 m.
- IoT wireless communication enables remote connection of the controller via IoT/GPRS, eliminating the need for networking and providing convenience and efficiency.
- IoT wireless communication enables remote monitoring and real-time control of the system via WeChat Mini Program and PC.
- IoT wireless communication supports statistics and display of charge/discharge capacity grouped by project and by month.
- Uses the standard Modbus communication protocol based on the RS-485 communication bus, maximizing satisfaction of communication requirements in various applications.
- Comprehensive automatic electronic protection functions.

Dimensions

Unit:mm





Web: www.lumiax.com E-mail: solar@lumiax.com

Technical Data

	Item	MU8415
Battery Parameters	Max Charging Current	80A
	System Voltage	12/24/48V automatic recognition
	Battery Type	Gel, AGM, Liquid, Lithium（default: Gel)
	Max volt on Bat. terminal	65V
	Temp. Compensation	-4.17mV/K per cell (Boost, Equalization)，-3.33mV/K per cell (Float)
Panel Parameters	Max volt on PV terminal *1	170V
	Max input power	1040W/2080W/4160W
	MPPT tracking range *2	（Battery Voltage + 2.0V）~Voc*0.9
	PV Overvoltage Point	173V
System Parameters	Max tracking efficiency	>99.9%
	Max charge conversion	98.0%
	Dimensions	288.5*213*90mm
	Net Weight	4.9Kg
	Self consumption	15~70mA
	Communication	RS485(RJ45 interface)
	Optional	IoT,BLE(Internal/External)
	Grounding	Common Negative
	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.