

MPPT Solar Charge Controller

ML2420/ML2430/ML2440/ML4860





Product accessories


Standard : BTS Temperature Sensor
Three-core Communication Wire (ML4860)


Optional : RM-5 Display Screen , BT-1 Bluetooth Module
USB to RS232 cable,GP-2 IoT module
Six-core Communication Wire


Product characteristics


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High energy capture efficiency: advanced maximum power point tracking algorithm can quickly locate the best working point in the I-V curve to significantly improve the system's energy efficiency—30% charging efficiency more than the PWM algorithm.
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MPPT tracking efficiency up to 99.9%, circuit energy conversion efficiency up to 98%, and efficient energy use.*
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Full circuit protection: battery reverses protection, PV reverse protection, PV short-circuit protection, charging overcurrent protection, TVS lightning protection...
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With efficient natural cooling heat dissipation and intelligent derating charging, the unit can still operate stably under extreme temperatures. Use temperature collection probes to improve the life of lead-acid batteries
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Supports MODBUS-TPU communication protocol: it can communicate via the RS485 interface, good expandability to meet diverse needs.
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Support a variety of battery types, and users can program the charging value.
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Automatic recognition of battery voltage range.
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PV current limiting function: When the solar panel's input power is more than the rated input power, it will always charge at the rated input power.
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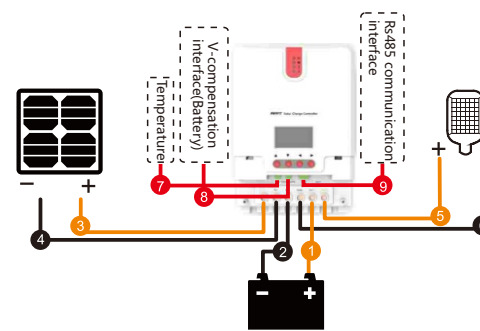
Up to one year of historical data storage time.
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The LCD screen shows running data and the device's status and supports changing parameters by button. Error codes are displayed on the screen when a fault occurs.

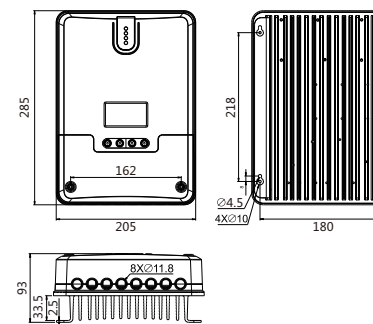
Parameters

Model	ML2420	ML2430	ML2440	ML4830N15	ML4860
System Voltage	12V/24V			12V/24V/36V/48V	
Static power consumption	0.7 ~ 1.2W				
Battery voltage	9~35V			9~70V	9~72V
Maximum input voltage of solar energy (25°C)	100V			145V	
Voltage Range at MPPT (Maximum Power Point)	Battery voltage+2~ 75V			Battery voltage+2 ~ 120V	
Rated charging current	20A	30A	40A	30A	60A
Rated load current	20A				
Maximum capacitive load capacity	10000uF				
PV system maximum input power	260W/12V 520W/24V	400W/12V 800W/24V	520W/12V 1040W/24V	400W/12V 800W/24V 1200W/36V 1600W/48V	800W/12V 1600W/24V 2400W/36V 3200W/48V
Support battery type	AGM Battery, GEL Battery, Flooded Battery, Lithium Battery				
Temperature compensation coefficient	-3mV/°C/2V (default)				
Operating temperature	-35°C ~ +45°C				
Humidity	95% , no condensation				
Protection grade	IP32				
Weight	1.4Kg	2Kg	2Kg	2.3Kg	3.6Kg
Communication mode	RS232			RS232 / RS485	
Product dimensions (L*W*H)	210×151×59.5(mm)	238×173×72.5(mm)		226×182×81(mm)	285×205×93(mm)
Terminal blocks	10mm ² /8AWG			20mm ² /4AWG	
Functional authentication	IEC62509 : 2010				
Safety certification	/			/	ETL
Number of parallel machines	/			16PCS (Recommended within 10PCS)	

Product connection diagram



Technical requirements



Product dimensions : 285*205*93mm
Hole positions : 218*180mm
Hole diameter : ϕ 4.5
Applicable wire : diameter < 11mm