



**ECENER**  
Off-Grid Solar  
System

## Solar Household Series

### ML/MC/HP/LC/Accessories

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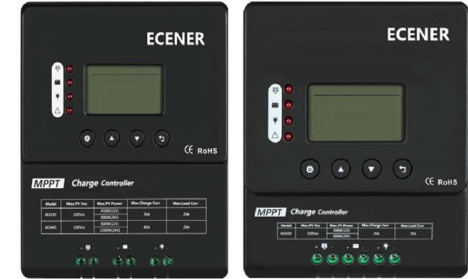
### Maximum Power Point Tracking (MPPT) Solar Charge Controller

#### ML2420/ML2430/ML2440/ML4860



#### Product Accessories

RM-5 display, BT-1 Bluetooth module, USB to RS232 cable, BTS temperature sensor.



#### Product Characteristics

- 30% higher than PWM mode
- Full-range electronic protection functions
- Modbus protocol
- 12/24V identification
- historical data storage
- MPPT tracking efficiency is up to 99.9%
- Built-in temperature detection
- lead-acid batteries/lithium batteries.
- Current-limiting charging mode
- LCD display

#### Product Parameters

Model	ML2420	ML2430	ML2440	ML4860
System Voltage	12V/24V		12V/24V/36V/48V	
Static power consumption	0.7 - 1.2W			
Battery voltage	9-35V		9-72V	
Maximum input voltage of solar energy (25°C)	100V		145V	
Voltage Range at MPP (Maximum Power Point)	Battery voltage +2- 75V			Battery voltage +2 - 120V
Rated charging current	20A	30A	40A	60A
Rated load current	20A			
PV system maximum input power	260W/12V 520W/24V	400W/12V 800W/24V	550W/12V 1100W/24V	800W/12V 1600W/24V 2400W/36V 3200W/48V
Support battery type	Lead-acid batteries, gel batteries, open batteries, lithium batteries			
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	
Communication mode	RS232		RS232 / RS485	
Product dimensions	210 × 151 × 59.5(mm)	238 × 173 × 72.5(mm)	238 × 173 × 72.5(mm)	285 × 205 × 93(mm)
Terminal blocks	10mm <sup>2</sup> /8AWG		20mm <sup>2</sup> /4AWG	
Functional authentication	IEC62509 : 2010			

### Maximum Power Point Tracking (MPPT) Solar Charge Controller

#### ML2420N10/ML2430N10/ML2440N10/ML4830N15/ML4860N15



#### Product Accessories

RM-5 display, BT-1 Bluetooth module, USB to RS232 cable, BTS temperature sensor.



#### Product Characteristics

- 30% higher than PWM mode
- Full-range electronic protection functions
- Modbus protocol
- 12/24V identification
- historical data storage
- MPPT tracking efficiency is up to 99.9%
- Built-in temperature detection
- lead-acid batteries/lithium batteries.
- Current-limiting charging mode
- LCD display

#### Product Parameters

Model	ML2420N10	ML2430N10	ML2440N10	ML4830N15	ML4860N15
System Voltage	12V/24V		12V/24V/36V/48V		
Static power consumption	0.7 - 1.2W				
Battery voltage	9-35V		9-72V		
Maximum input voltage of solar energy (25°C)	100V		145V		
Voltage Range at MPP (Maximum Power Point)	Battery voltage +2- 75V				Battery voltage +2 - 120V
Rated charging current	20A	30A	40A	30A	60A
Rated load current	20A				
PV system maximum input power	260W/12V 520W/24V	400W/12V 800W/24V	550W/12V 1100W/24V	400W/12V 800W/24V 1200W/36V 1600W/48V	800W/12V 1600W/24V 2400W/36V 3200W/48V
Support battery type	Lead-acid batteries, colloidal batteries, open-ended batteries, lithium batteries				
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	
Communication mode	RS232		RS232 / RS485		
Product dimensions	210 × 151 × 59.5(mm)	238 × 173 × 72.5(mm)	238 × 173 × 72.5(mm)	226 × 182 × 81(mm)	285 × 205 × 93(mm)
Terminal blocks	10mm <sup>2</sup> /8AWG		20mm <sup>2</sup> /4AWG		
Functional authentication	IEC62509 : 2010				

### MPPT Solar Charge Controller

#### MC2420N10/MC2430N10/MC2440N10/MC2450N10



#### Product Accessories

RM-6 display, BT-2 Bluetooth module, USB to TTL cable, BTS temperature sensor.



#### Product Characteristics

- 30% higher than PWM mode
- Full-range electronic protection functions
- Modbus protocol
- 12/24V identification
- historical data storage
- MPPT tracking efficiency is up to 99.9%
- Built-in temperature detection
- lead-acid batteries/lithium batteries.
- Current-limiting charging mode

#### Product Parameters

Model	MC2420N10	MC2430N10	MC2440N10	MC2450N10
System voltage	12V/24V			
Static power consumption	0.12W			
Maximum input voltage of solar energy (25°C)	100V			
Voltage Range at MPP (Maximum Power Point)	Battery voltage +2- 75V			
Charging current	20A	30A	40A	50A
Solar panel power (12V battery)	260W	400W	520W	680W
Solar panel power (24V battery)	520W	800W	1040W	1320W
Support battery type	Lead-acid batteries, colloidal batteries, open-ended batteries, lithium batteries			
Temperature compensation coefficient	-3mV/°C/2V			
Operating temperature range	-35°C -60°C			
Humidity	95%, no condensation			
Protection grade	IP32			
Weight	650g	830g	1040g	1335g
Communication mode	TTL(3.3V)			
Product Dimensions	150x156x62 (mm)	150x156x68 (mm)	183x127x66 (mm)	183x127x70 (mm)
Terminal blocks	10mm <sup>2</sup> /8AWG			
Functional authentication	IEC62509 : 2010			

## PWM Solar Charge Controller

HP2410/HP2420/HP2420S/HP2430/HP2440/HP2450/HP2460



### Product Characteristics



Full-range electronic protection functions



Built-in temperature detection



12/24V identification



lead-acid batteries/lithium batteries.



LCD display



5V 1A output.

### Product Parameters

Model	HP2410	HP2420	HP2420S	HP2430	HP2440	HP2450	HP2460
System voltage	12V/24V						
Static power consumption	0.06~0.36W						
Battery voltage	9~35V						
Maximum input voltage of solar energy (25°C)	55V						
Rated charging current	10A	20A	20A (current sampling)	30A	40A	50A	60A
Temperature compensation coefficient	-3mV/°C/2V(default)						
Operating temperature range	-25°C~55°C						
Humidity	95%, no condensation						
Protection grade	IP30						
Weight	100g	160g	160g	300g	390g	650g	650g
Product dimensions	103x71x36(mm)	130x75x38(mm)	130x75x38(mm)	180x104x47(mm)	190x104x47(mm)	189x127x54 (mm)	189x127x54 (mm)
Terminal blocks	4mm <sup>2</sup> /10AWG			10mm <sup>2</sup> /8AWG			

## PWM Solar Charge Controller

HP2430N/HP2440N/HP2440ND



### Product Characteristics



Full-range electronic protection functions



Built-in temperature detection



12/24V identification



lead-acid batteries/lithium batteries.



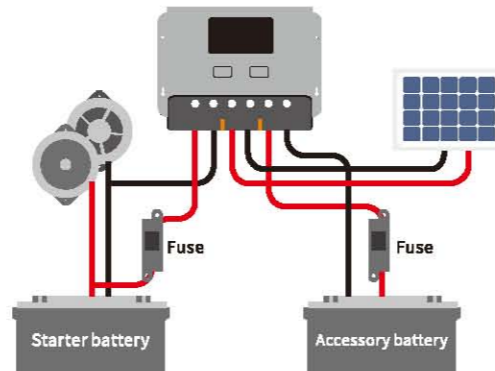
LCD display



5V 1A output.

### Product Parameters

Model	HP2430N	HP2440N	HP2440ND
System voltage	12V/24V		
Static power consumption	0.26~0.36W		
Battery voltage	9~35V		
Maximum input voltage of solar energy (25°C)	55V		
Rated charging current	30A	40A	20A ( Double batteries, 20A each )
Temperature compensation coefficient	-3mV/°C/2V(default)		
Operating temperature range	-25°C~55°C		
Humidity	95%, no condensation		
Protection grade	IP30		
Weight	700g		
Product dimensions	166 × 118 × 53(mm)		



## MPPT Solar Charge Controller

LC2430N10H



### Product Characteristics



PowerCatcher™ MPPT technology



Load Voltage Stabilization



Common Negative Design



TTL&485 Communication

### Product Parameters

Model	LC2430N10H
System voltage	12V/24V
Static power consumption	0.3~0.5W
Battery voltage	9V~35V
Maximum PV Open-Circuit Voltage	92V (25°C); 95V (Minimum Ambient Temperature)
Voltage Range at MPP (Maximum Power Point)	Accumulator Voltage +2V ~ 72V
Rated charging current	30A
Maximum PV Input Power	400W/12V; 800W/24V
Charging Conversion Efficiency	≤98%
MPPT Tracking Efficiency	>99%
Load Constant Voltage Output Voltage	12V/24V (optional)
Load Rated Power	100W
Temperature compensation coefficient	-3mV/°C/2V(default)
Operating temperature	-35°C ~ +65°C
Protection grade	IP32
Weight	1200g
Communication mode	TTL Serial Communication, Isolated 485 Serial Communication
Altitude	≤ 3000m
Product Dimensions	183 × 122.5 × 67.5(mm)

## Accessories

### Product Characteristics



BT-1



BT-2



Wireless monitoring function available by APP



TTL&RS232



Bluetooth

### Product Parameters

Model	BT-1	BT-2
input voltage	5V~12V	
standby power	0.04W	
Operating power	0.05W	
Communication distance	≤15m	
Serial port baud rate	Fixed baud rate 9600bps	
Communication mode	RS232	TTL
Interface type	RJ12	PH2.0-4
Cable length	3m	1.5m
Product Dimensions	68 × 51 × 15.5 ( mm )	87.3 × 38 × 15.5 ( mm )
Operating temperature	-20°C~75°C	
Net weight	120g	

Mobile phone Bluetooth software download path:  
 1. Download on our official website: Service Support - Download Center - Bluetooth APP software, which can be downloaded to mobile client by scanning code or downloaded to computer client.  
 2. Mobile app download: Enter "SRNE" in the APP Store and search for "Solar app" to download the app.



RM-5



RM-6

### Product Characteristics



LCD display



TTL&RS232

### Product Parameters

Model	RM-5	RM-6
Applicable controller model	ML series	MC series
input voltage	12V	5V~12V
Static power consumption	< 0.3W	< 0.03W
Operational power	< 0.42W	< 0.04W
Fixed baud rate	9600bps	
Communication mode	RS232	TTL
Interface type	RJ12	PH2.0-4
Cable length	2m	1.5m
Operating temperature	-35°C ~ +65°C	
Humidity	95%, no condensation	
Protection grade	IP32	IP32
Weight	500g	90g
Product Dimensions	116 × 116 × 48(mm)	105 × 56 × 12(mm)