

# PWM Solar charge controller with USB output

## LandStar LS-EU series



LS - EU is newly launched an economical solar charge controller of LandStar series, which adopts the most advanced digital technique and operates fully automatically. For the system of nominal voltage of 12/24VDC, the controller can identify them automatically. The Pulse Width Modulation (PWM) battery charging can greatly increase the lifetime of battery. Based on the LS-E series, LS-EU series add a +5V/1.2A USB terminal output, various unique functions and quite easy to use.

### Model overview:

LS0512EU	5A,12V
LS1012EU	10A,12V
LS1024EU	10A,12/24V
LS2024EU	20A,12/24V

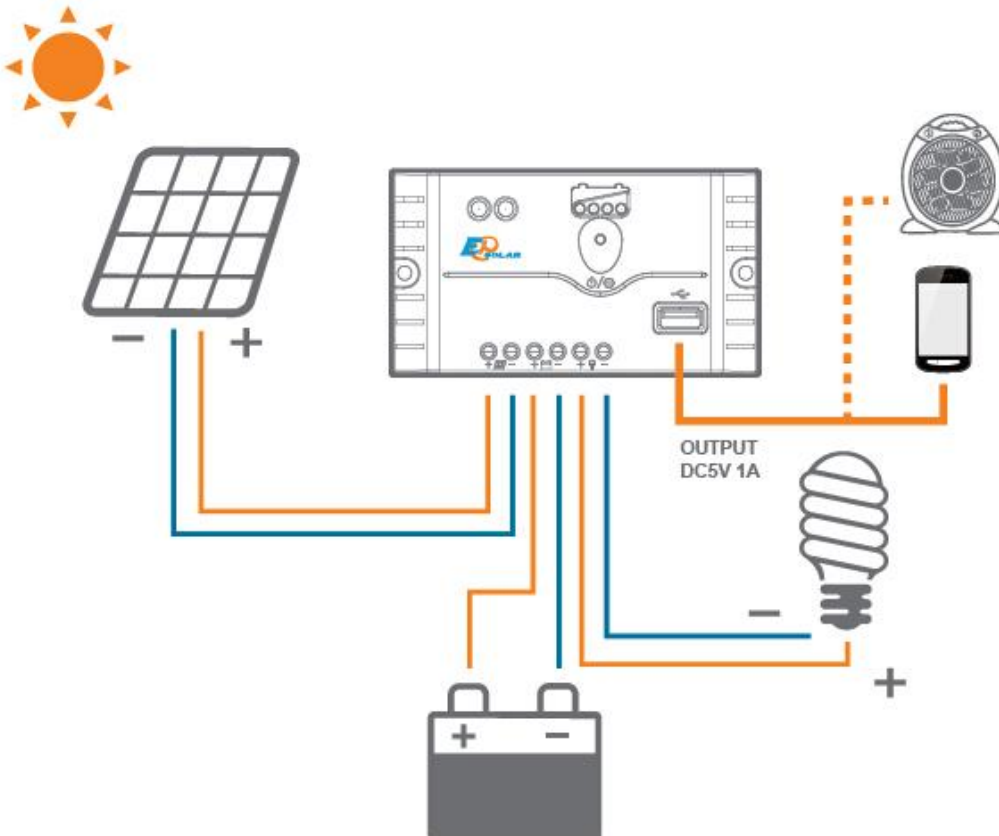


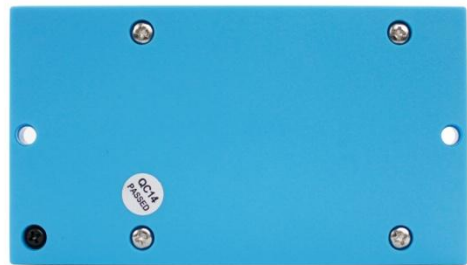
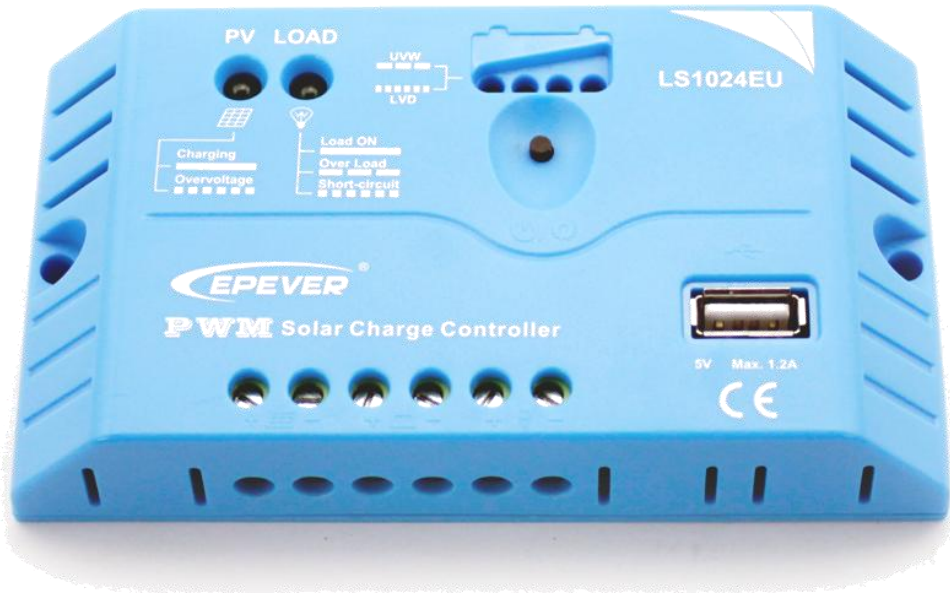
## Features:

- High efficient Series PWM charging, increase the battery lifetime and improve the solar system performance
- Use MOSFET as electronic switch, without any mechanical switch
- LED indicators indicate battery voltage state
- The USB will provide 5VDC which can charge for electronic equipment
- Adopt temperature compensation, correct the charging and discharging parameters automatically and improve the battery lifetime
- Electronic protection: over charging, over discharging, overload, and short circuit
- Reverse protection for battery

## Electronic protections:

- Load overload protection
- Load short circuit protection
- Battery over discharge protection
- Battery reverse polarity protection





## Technical specifications :

Model	LS0512EU	LS1012EU	LS1024EU	LS2024EU
Nominal system voltage	12VDC		12/24VDC	
Rated battery current	5A	10A	10A	20A
Max. battery voltage	16V		32V	
Max. PV open circuit voltage	30V		50V	
Equalize charging voltage	Gel: ----, Sealed: 14.6V, Flooded: 14.8V			
Boost charging voltage	Gel: 14.2V, Sealed: 14.4V, Flooded: 14.6V			
Float charging voltage	Gel / Sealed / Flooded:13.8V			
Low voltage reconnect voltage	Gel / Sealed / Flooded:12.6V			
Low voltage disconnect voltage	Gel / Sealed / Flooded:11.1V			
USB output	5VDC/1.2A			
Charge circuit voltage drop	≤0.26V			
Discharge circuit voltage drop	≤0.15V			
Self-consumption	≤6mA			
Temp. compensation	-5mV/°C/2V (ref)			
Overall dimension(mm)	109.7x65.5x20.8	120.3x67x21.8	120.3x67x21.8	148x85.6x34.8
Mounting dimension	100.9mm	111.5mm	111.5mm	138mm
Mounting hole size	Φ4.5	Φ4.5	Φ4.5	Φ4.5
Terminal	2.5mm <sup>2</sup>	4mm <sup>2</sup>	4mm <sup>2</sup>	6mm <sup>2</sup>
Weight	95g	103g	102g	179.6g
Working temperature	-35°C ~ +55°C			
Storage temperature	-35°C ~ +80°C			
Humidity	≤95% N.C.			
Enclosure	IP20			



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