

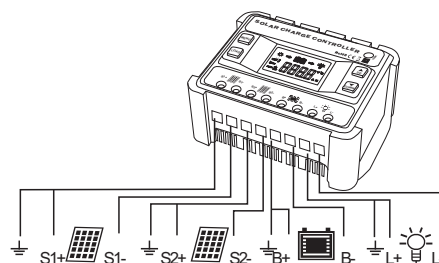
# ENS Series PWM Solar Charge Controller with LCD

## DESCRIPTION

The solar charge controller is one of key components of the PV off-grid solar system; our ENS series PWM solar controller can adopt different charge way baded on different batteries and the environment. It is designed with big clear LCD display with 4 bottoms to change different screens. Double solar panel inputs applied makes it more reliable, and the bottom aluminum radiation can make its work properly when the unit is hot.

## FEATURES

- 1.Pulse Width Modulation Technology, which offers the good efficiency of your PV system.
- 2.Automatically detects 12/24V or 24/48V system voltage.
- 3.A big LCD screen display one main window and 7 different sub windows: battery voltage, PV charge current, Load discharge current, total PV charge Ah, total PV discharge Ah, the setting of constant voltage charging, the setting of low voltage disconnect, the setting of low voltage reconnect
- 4.The constant voltage charge, low voltage disconnect and reconnect data setttable by user.
- 5.External temperature sensor
- 6.Temperature-compensated, three-stage I-U curve charge regulation
- 7.Full electronic protection (reverse polarity, over-current, short-circuit, over temperature, current drawback, lightning etc.)
- 8.Highest efficiency
- 9.Positive ground
- 10.Dual terminals for solar panel input
- 11.Battery type can be: GEL, AGM and solar battery etc.



## SPECIFICATIONS

Model	ENS12/24-20D	ENS12/24-30D	ENS12/24-40D	ENS12/24-50D	ENS12/24-60D
Normal voltage	12/24V, automatic recognition				
Nominal battery charge current	20A	30A	40A	50A	60A
Max. PV input power	300W@12V	450W@12V	600W@12V	750W@12V	900W@12V
	600W@24V	900W@24V	1200W@24V	1500W@24V	1800W@24V
Max.solar input voltage Voc	<30V/48V				
Min.solar input voltage Vmp	>16V/32V				
Power conversion efficiency	Max. 90%				
Standby power consumption	<15mA	<15mA	<20mA	<20mA	<20mA
Length≤1m charge loop drop	<0.25V				
Length≤1m discharge loop drop	<0.05V				
Temperature compensation	-3 mv/cell *K				
LCD screen display	Battery voltage, PV charge current, Load discharge current, total PV charge Ah, total PV discharge Ah, the setting of constant voltage charging, the setting of low voltage disconnect, the setting of low voltage reconnect				
Buttons	MENU, LOAD( ON/OFF), UP, DOWN				
Ambient temperature range	-40 to +50℃				
Case protection	IP22				
Float charge	13.8V/27.6V				
Constant voltage charge	14.6V( 14~15V setttable ) / 29.2V (28~30V setttable)				
Low disconnect voltage	11V( 10.4~11.4V setttable) / 22V( 20.8~22.8V setttable)				
Low reconnect voltage	12.8V( 12.2~13.2V setttable) / 25.6V( 24.4~26.4V setttable)				
Grounding	Positive grounding				
Battery type	GEL,AGM, Solar battery etc.				
Dimensions(L*W*H)	172*126*75mm				
Weight(kg)	0.66	0.66	0.77	0.77	0.77
QTY/Ctn	18pcs/box.41.5*40*27cm				
N.W./Ctn	11.9		13.9		
G.W./Ctn	14.7		16.8		

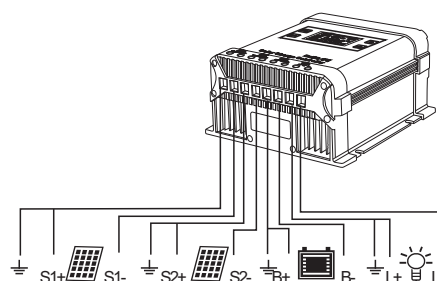
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## SPECIFICATIONS

Model	ENS12/24-80D
Normal voltage	12/24V, automatic recognition
Nominal battery charge current	60A
Max. PV input power	1300W@12V 2600W@24V
Max.solar input voltage Voc	<30V/48V
Min.solar input voltage Vmp	>16V/32V
Power conversion efficiency	Max. 90%
Standby power consumption	<20mA
Length≤1m charge loop drop	<0.25V
Length≤1m discharge loop drop	<0.05V
Temperature compensation	-3 mv/cell *K
LCD screen display	Battery voltage, PV charge current, Load discharge current, total PV charge Ah, total PV discharge Ah, the setting of constant voltage charging, the setting of low voltage disconnect, the setting of low voltage reconnect
Buttons	MENU, LOAD( ON/OFF), UP, DOWN
Ambient temperature range	-40 to +50℃
Case protection	IP22
Float charge	13.8V/27.6V
Constant voltage charge	14.6V( 14~15V settable ) / 29.2V (28~30V settable)
Low disconnect voltage	11V( 10.4~11.4V settable) / 22V( 20.8~22.8V settable)
Low reconnect voltage	12.8V( 12.2~13.2V settable) / 25.6V( 24.4~26.4V settable)
Grounding	Positive grounding
Battery type	GEL,AGM, Solar battery etc.
Dimensions(L*W*H)	199*177.3*93mm
Weight(kg)	1.52
QTY/Ctn	12pcs/box.58.5*23*45cm
N.W./Ctn	18.2
G.W./Ctn	21.3

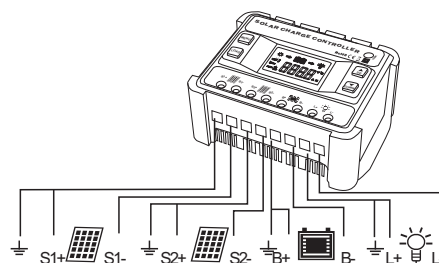
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## SPECIFICATIONS

Model	ENS24/48-20D	ENS24/48-30D	ENS24/48-40D
Normal battery charge voltage	24/48V, automatic recognition		
Nominal battery charge current	20A	30A	40A
Max. PV input power	600W@24V	900W@24V	1200W@24V
	1200W@48V	1800W@48V	2400W@48V
Max.solar input voltage Voc	<60V/96V		
Min.solar input voltage Vmp	>32V/64V		
Power conversion efficiency	Max. 90%		
Standby power consumption	<15mA	<15mA	<20mA
Length≤1m charge loop drop	<0.25V		
Length≤1m discharge loop drop	<0.05V		
Temperature compensation	-3 mv/cell *K		
LCD screen display	Battery voltage, PV charge current, Load discharge current, total PV charge Ah, total PV discharge Ah, the setting of constant voltage charging, the setting of low voltage disconnect, the setting of low voltage reconnect		
Buttons	MENU, LOAD( ON/OFF), UP, DOWN		
Ambient temperature range	-40 to +50℃		
Case protection	IP22		
Float charge	27.6V/55.2V		
Constant voltage charge	29.2V (28~30V settable)/ 58.4V (56~60V settable)		
Low disconnect voltage	22V( 20.8~22.8V settable) / 44V( 41.6~45.6V settable)		
Low reconnect voltage	25.6V( 24.4~26.4V settable) / 51.2V(48.8~52.8V settable)		
Grounding	Positive grounding		
Battery type	GEL,AGM, Solar battery etc.		
Dimensions(L*W*H)	172*126*75mm		
Weight(kg)	0.66	0.66	0.77
QTY/Ctn	18pcs/box.41.5*40*27cm		
N.W./Ctn(kg)	11.9	11.9	13.9
G.W./Ctn(kg)	14.7	14.7	16.8

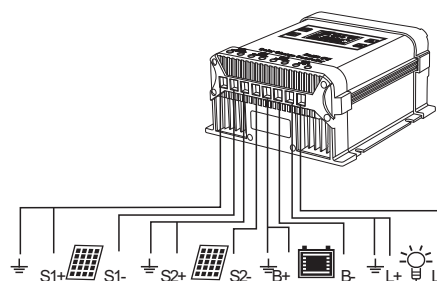
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## SPECIFICATIONS

Model	ENS24/48-50D	ENS24/48-60D	ENS24/48-80D
Normal battery charge voltage	24/48V, automatic recognition		
Nominal battery charge current	50A	60A	80A
Max. PV input power	1500W@24V	1800W@24V	2600W@24V
	3000W@48V	3600W@48V	5200W@48V
Max.solar input voltage Voc	<60V/96V		
Min.solar input voltage Vmp	>32V/64V		
Power conversion efficiency	Max. 90%		
Standby power consumption	<20mA	<20mA	<20mA
Length≤1m charge loop drop	<0.25V		
Length≤1m discharge loop drop	<0.05V		
Temperature compensation	-3 mv/cell *K		
LCD screen display	Battery voltage, PV charge current, Load discharge current, total PV charge Ah, total PV discharge Ah, the setting of constant voltage charging, the setting of low voltage disconnect, the setting of low voltage reconnect		
Buttons	MENU, LOAD( ON/OFF), UP, DOWN		
Ambient temperature range	-40 to +50℃		
Case protection	IP22		
Float charge	27.6V/55.2V		
Constant voltage charge	29.2V (28~30V settable)/ 58.4V (56~60V settable)		
Low disconnect voltage	22V( 20.8~22.8V settable) / 44V( 41.6~45.6V settable)		
Low reconnect voltage	25.6V( 24.4~26.4V settable) / 51.2V(48.8~52.8V settable)		
Grounding	Positive grounding		
Battery type	GEL,AGM, Solar battery etc.		
Dimensions(L*W*H)	199*177.3*93mm		
Weight(kg)	1.52		
QTY/Ctn	12pcs/box.58.5*23*45cm		
N.W./Ctn(kg)	18.2		
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