

### Main Feature of MPPT solar charge controller eSmart(12V24V36V48V,50A-60A)

1□The tracking efficiency is as high as 99.5%.

2□Built-in lithium battery activated wake-up function.

3□RS485 bus, unified integrated management and secondary development.

4□A variety of protection functions, small body is very useful.

### Specification parameter□

eSMART 4 Series		ESF48L50	ESF48L60	ESF48H50	ESF48H60
Reted PV Power	12V system	650W	780W	650W	780W
	24V system	1300W	1650W	1300W	1650W
	36V system	1950W	2340W	1950W	2340W
	48V system	2600W	1320W	2600W	1320W
Rated charge current		50A	60A	50A	60A
Rated load current		30A			
IP(Ingress protection)		IP21			

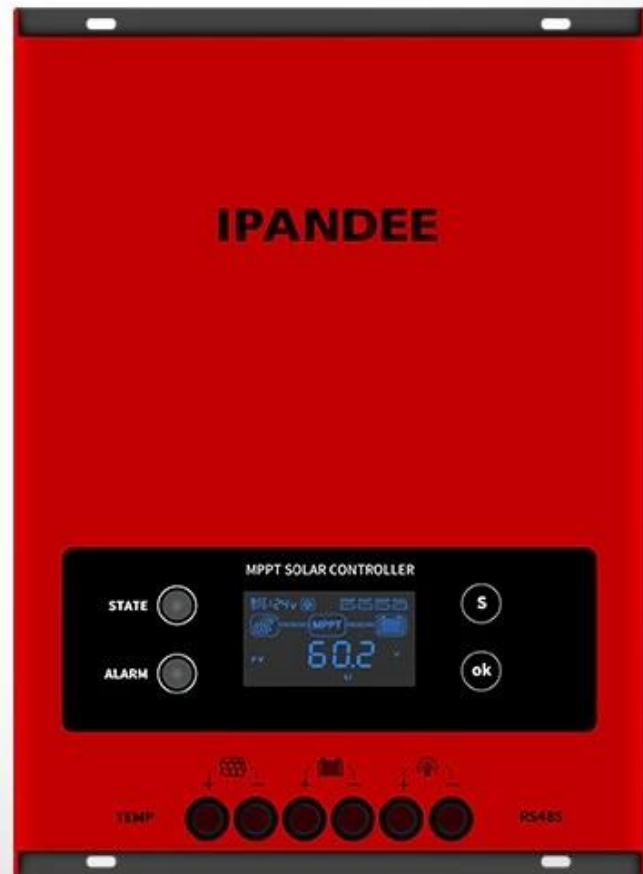
## MPPT solar charge controller

HIGH QUALITY HIGH EFFICIENCY LOW ENERGY CONSUMPTION

# ESMART 4

50A/60A

12V/24V/36V/48V



Up to 98% conversion

Lithium battery wake up

Set your own battery type

High speed mute fan

Multiple protection

Support remote monitoring

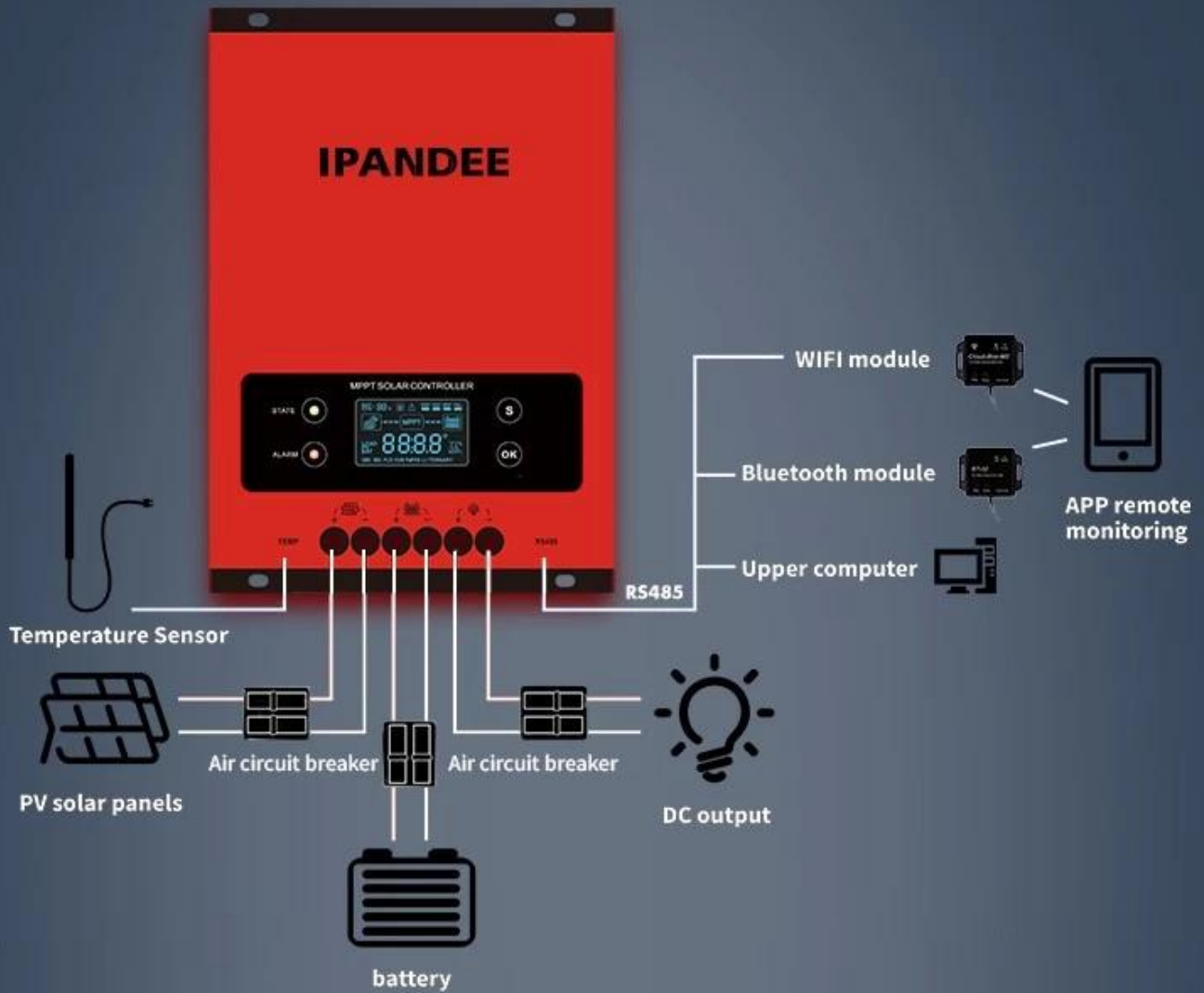


# SIMPLE OPERATION SCREEN



① LCD display	⑤ Temperature sensing wire connector
② Charge status and fault indicators	⑥ Mounting hole for grounding
③ Holes for wiring screws	⑦ RJ45 serial communication interface
④ Input and output power line connectors	⑧ Operation buttons

# SYSTEM CONNECTION DIAGRAM



IT SUPPORTS VARIOUS LEAD-ACID BATTERIES,  
LITHIUM BATTERIES AND OTHER BATTERIES.

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### SUPPORT PHASE CHARGING

Constant current charging → Constant voltage charging → float charge → Equalizing charge

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# SUPPORTS CLOUD REMOTE MONITORING

Cloud monitoring  
knowing the power situation anytime and anywhere



The 8-pin RJ45 interface can select appropriate external devices according to the project configuration to realize external communication modules such as the upper computer, wifi, Bluetooth, 4G, monitoring data instrument, etc., and remotely monitor and set the power consumption through the cloud system.

# OPTIONAL ACCESSORIES



## Cloud - Box - M2 wifi module

This module with router can be used for remote cloud monitoring and parameter setting.

## BT - 02 The bluetooth module

This module can realize medium and short distance mobile APP monitoring and parameter setting and other functions.



## MH-M80 Remote meter

This module can be used for short distance monitoring and setting operations.

## RS485 to USB communication cable

This accessory can be connected to a PC, install the upper computer software for monitoring and setting operations.





# SPECIFICATIONS

		ESF48L50	ESF48L60	ESF48H50	ESF48H60
MPPT efficiency	≥99.5%				
No-load static loss	0.5W~1.2W				
system voltage	Auto				
Cooling method	Fan cooling				
PV Maximum Open Circuit Voltage	150Vdc		200Vdc		
Turn on the charging voltage point	3V higher than battery voltage				
Input low voltage protection point	2V higher than the current battery voltage				
Input overvoltage protection point	150Vdc		200Vdc		
Rated input power	12V system	650W	780W	650W	780W
	24V system	1300W	1560W	1300W	1560W
	36V system	1950W	2340W	1950W	2340W
	48V system	2600W	3120W	2600W	3120W
Applicable battery type	Lead-acid battery / Li-ion battery				
Lithium battery activation function	Optional				
Charge rated current	50A 60A 50A 60A				
charging method	Lead-acid battery: fast charge, equal charge, floating charge; lithium battery: fast charge, equal charge				
load voltage	same battery voltage				
Rated load current	30A				
Load control method	Normally open and normally closed mode/dual period control mode/ light control mode/light control-fixed time control mode				
Display method	High-definition LCD segment code backlight display				
communication method	8-pin RJ45 interface/RS485/support host computer monitoring/ support external Bluetooth, WIFI module expansion to realize app cloud monitoring/support external monitoring header				
Protective function	Input and output over-voltage protection, anti-reverse connection protection, battery drop protection, etc.				
Working temperature	-20°C~+50°C				
Storage temperature	-40°C~+75°C				
IP protection class	IP21				
Maximum wire size	20mm <sup>2</sup>				
Net weight (kg)	1.84				
Gross weight (kg)	2.81				
Product size (mm)	240*166*65				
Packaging size (mm)	299*203*70				

## APPLICATION SCENARIOS



