

# MPPT Solar Charge Controller

## eSmart 3 Series Specification



eSmart3 series is the third generation of eSmart mppt controller, based on eSmart1, eSmart2 series mppt controller, we update the display with back-light LCD display, load control way, connect way, internal structure, reduce the static standby self-consumption, energy saving and more simply for small system.etc. It features an efficient MPPT control algorithm to track the maximum power point of the PV array. Greatly improve the utilization of solar panel. Its intelligent LCD and upper PC display, mostly convenient for customers to check, records and parameter setting. It widely used in off-grid solar system, communication base station solar system, household solar systems, street light solar systems, field monitoring and other fields etc.

**Choose eSmart3, more intelligent in life!**

### Model : eSmart3 series

**System Voltage:** DC12V/24V/36V/48V Automatic Recognition

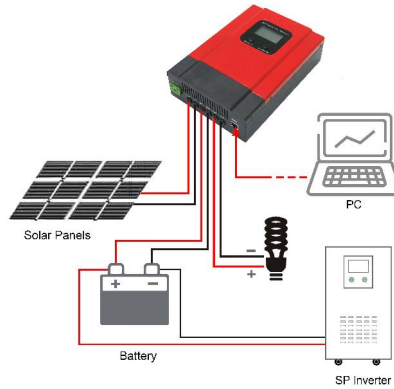
**Rated Current:** 20A 30A 40A 50A 60A

**Maximum PV(voc) Voltage:** DC150V

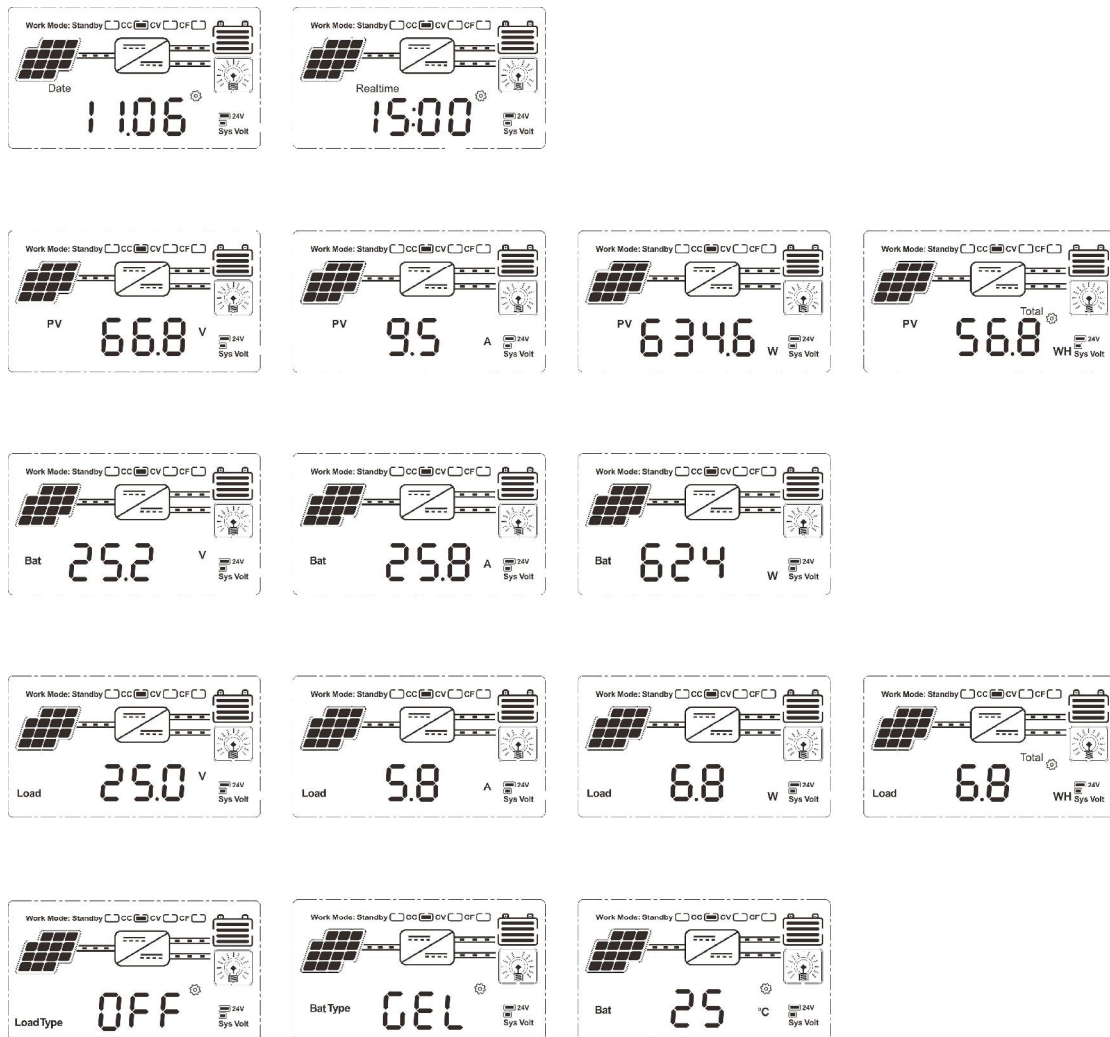
### Features:

- ◆ High efficiency MPPT control algorithm, MPPT efficiency  $\geq 99.5\%$ , whole Machine conversion efficiency upto 98%;
- ◆ 12V/24V/36V/48V system Automatic Recognition , users can use it in different system conveniently.
- ◆ Maximum PV input voltage: **DC150V**
- ◆ Charge mode: three stages (fast charge, constant charge, floating charge). It prolongs service life of the batteries.
- ◆ Discharge mode: ON/OFF mode, PV voltage control mode, Time control, PV & Time control mode.
- ◆ **Recommended battery types: Flooded, Sealed lead acid, Gel battery. Other types of the batteries can also be defined.**
- ◆ Most information could be provide by LCD like: model No., PV input voltage, battery type, battery voltage, charging current, charging power, working status and so on. **Also customer's information like company name, website and logo can be added into Solar Eagle software.**
- ◆ **RS485 communication, we can offer communication protocol also, it's convenient for user's integration management.**
- ◆ CE, RoHS, FCC certifications approved. We can help clients to approve other certifications.
- ◆ **3 years warranty. And 3~10 years extended warranty service also can be provided.**

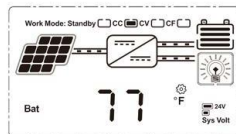
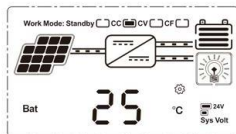
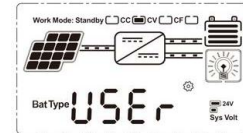
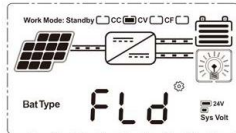
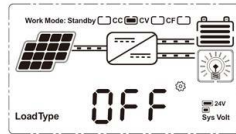
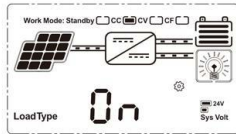
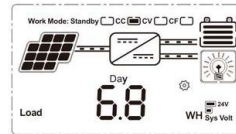
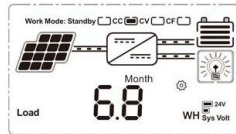
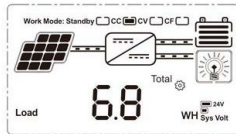
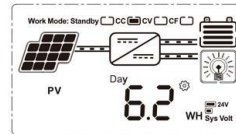
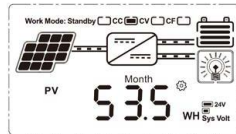
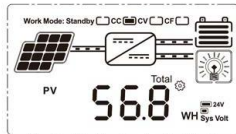
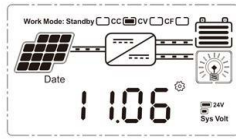
## MPPT Controller connection diagram



## Parameters Display information

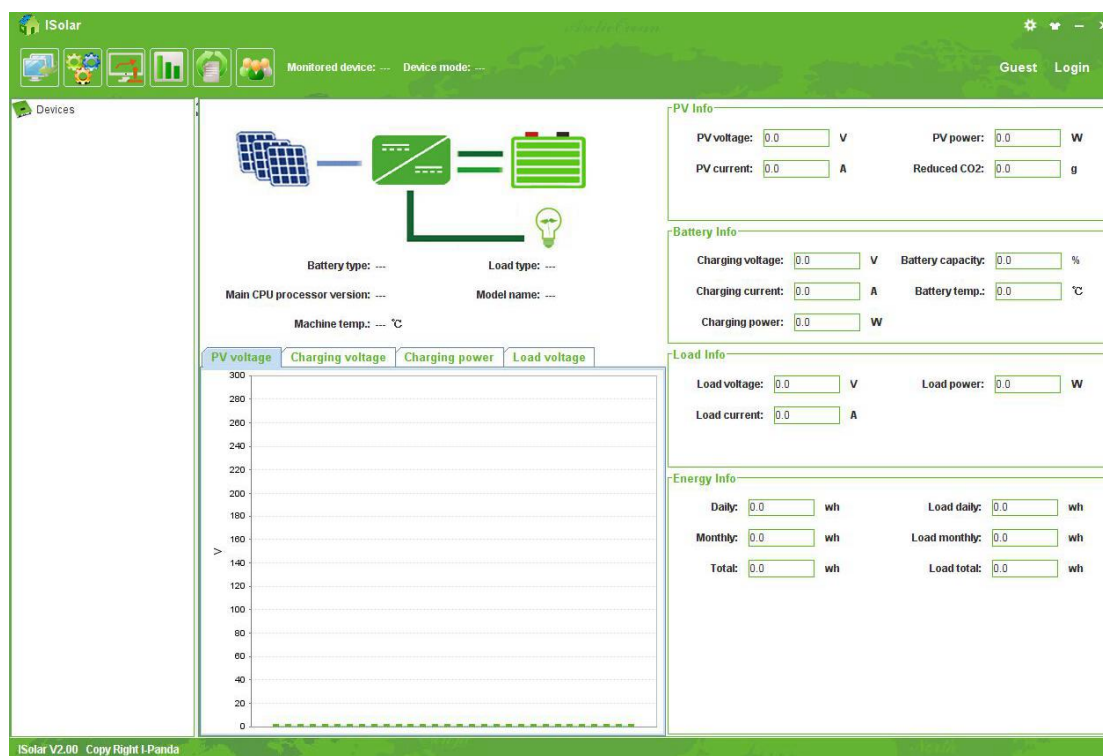


## MPPT controller LCD setting information



On	Mean "ON"	FLd	Mean "FLD"
OFF	Mean "OFF"	GEL	Mean "GEL"
USER	Mean "USER"	SEL	Mean "SEL"

## Upper Computer Software Display



Visual display of charge and discharge status, PV voltage, charge voltage, charge current, and can set the battery type, LOAD output control;

## Parameter

Model		20A	30A	40A	50A	60A
eSmart3-12V/24V/36V/48V-series						
Charge Mode	MPPT(Maximum Power Point Tracking)					
MPPT Efficiency	$\geq 99.5\%$					
System Type	DC12V/24V/36V/48V	Automatic recognition				
<b>Input Characteristic</b>						
PV Max. voltage (VOC)	12V/24V/36V/48V system	150V				
High Input voltage Protection point	12V/24V/36V/48V system	150V				
Rated PV Power	12V system	260W	390W	520W	650W	780W
	24V system	520W	780W	1040W	1300W	1560W
	36V system	780W	1170W	1560W	1950W	2340W
	48V system	1040W	1560W	2080W	2600W	3120W

Charge Characteristic						
Charge Mode	MPPT(Maximum Power Point Tracking)					
Charge Method	3-Stage: constant current(fast charging)-constant voltage-floating charge					
Selectable Battery Types (Default type is Gel battery)	12V/24V/36V/48V system	Flooded, Sealed lead acid, Gel battery (Other types of the batteries also can be defined)				
Rated charge current	12V/24V/36V/48V system	20A	30A	40A	50A	60A
Output Discharge Characteristic						
Output voltage	Based on battery voltage					
The output control	On mode, Off mode, PV voltage control mode, Time control, PV + Time control					
Display/Communication						
LCD display/PC upper (RS485)	System type, PV voltage,charge voltage, charging current, charging power, temperature					
Other Parameters						
Protect function	Yes					
Thermal methods	fan cooling					
Packing Size DxWxH(mm)	289*204*101			306*210*120		
Net Weight (kg)	2.3			2.6		
Gross Weight (kg)	3			3.5		
Type of Mechanical Protection	IP 25					

### Remark:

1. Above is company's standard parameters; any modify , please check our official website;
2. We can customize 72V / 96V and other unconventional MPPT controller to special customers, provide OEM and ODM services.