eSmart3 series is the third generation of eSmart mppt controller, combined with the second generation of high conversion efficiency, back-light LCD display, control mode, connect way, internal structure etc. features, also optimized the following points:

1.Increase all kinds of protection function to be used more reassuring.

2.Add the LOAD sampling to be used more clear of output load.

3.Wider PV Input voltage than eSmart2, so it suitable for more kinds of PV modules

4. Reduce the static standby self-consumption, energy saving and more simply for small system.
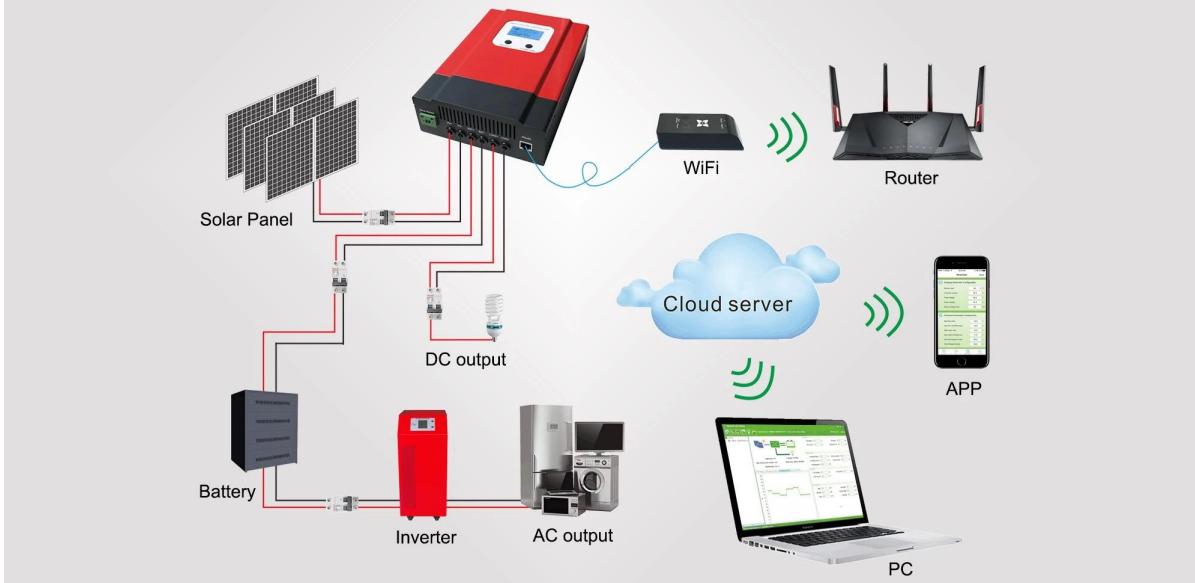
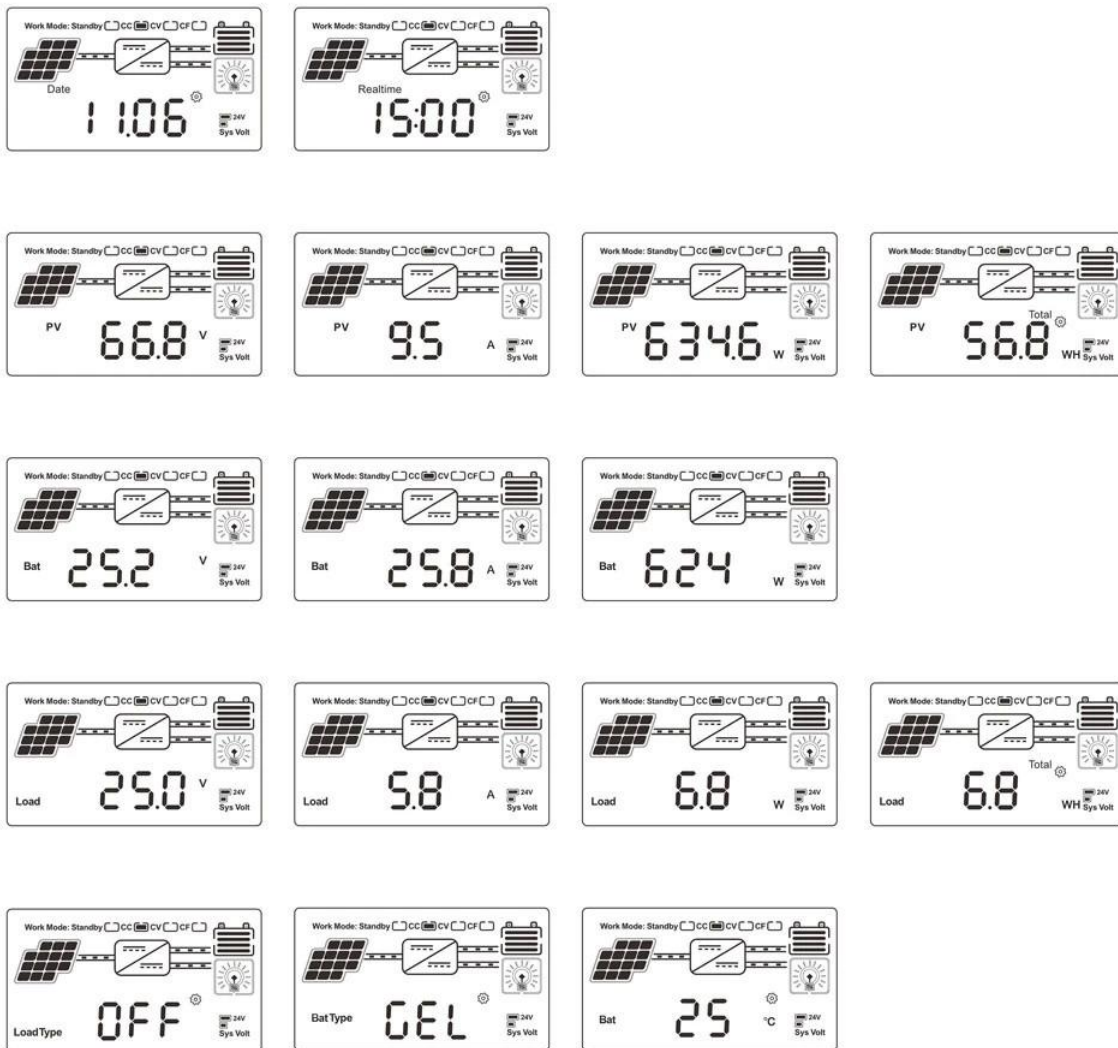Choose eSmart3, more intelligent in life!
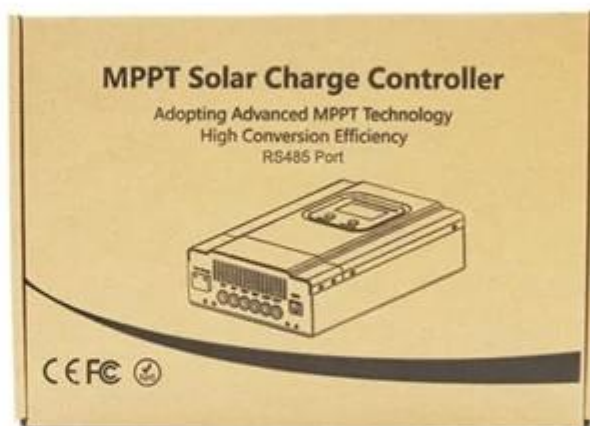
Features:

1.It has an efficient MPPT algorithm, MPPT efficiency ≥99.5% and converter efficiency up to 98%.

2.Charge mode: three stages (constant current, constant voltage, floating charge), it prolongs service life of the batteries.

3.Four types of load mode selection: ON/OFF, PV voltage control, Dual Time control, PV+Time control .

4.Battery system voltage automatic recognition.

5.Three kinds of commonly used lead-acid battery (Seal\Gel\Flooded) parameter settings fcan be selected by the user, and the user can also customize the parameters for other battery charging.

6.It has a current limiting charging function. When the power of PV is too large, the controller automatically keeps the charging power, and the charging current will not exceed the rated value.

7.High definition LCD display function to check the device running data and working status, also can support modify the controller display parameter.

8.RS485 communication, we can offer communication protocol to convenient user's integrated management and secondary development.

9.Support PC software monitoring and WiFi module to realize APP cloud monitoring.

10.CE, RoHS, FCC certifications approved, we can assist clients to pass various certifications.

11.3 years warranty, and 3~10 years extended warranty service also can be provided.
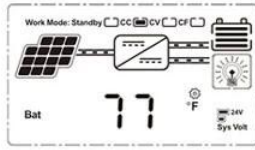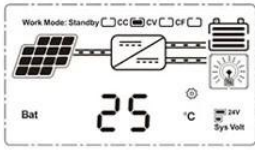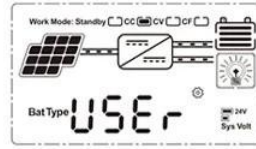
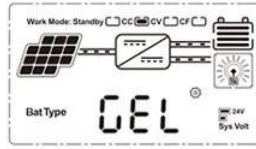## MPPT Controller connection diagram

Off Grid Solar System CPU

Parameters Display & Setting information

Date **11.06**

Realtime **15:00**

PV **66.8** V

PV **9.5** A

PV **634.6** W

PV **56.8** Total WH

Bat **25.2** V

Bat **25.8** A

Bat **624** W

Load **25.0** V

Load **5.8** A

Load **6.8** W

Load **6.8** Total WH

LoadType **OFF**

BatType **GEL**

Bat **25** ℃

LCD display information

Display panels showing:

- Date: 11.06
- Date: 12.05
- Realtime: 15:00
- Realtime: 14:20
- PV Total: 56.8 WH
- PV Month: 53.5 WH
- PV Day: 6.2 WH
- Load Total: 6.8 WH
- Load Month: 6.8 WH
- Load Day: 6.8 WH
- Load Type: On
- Load Type: OFF
- Load Type: USEr
- Bat Type: FLd
- Bat Type: SEL
- Bat Type: GEL
- Bat Type: USEr
- Bat: 25 °C
- Bat: 77 °F
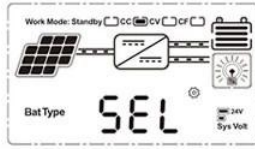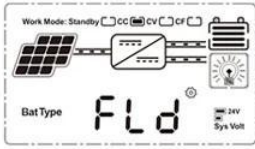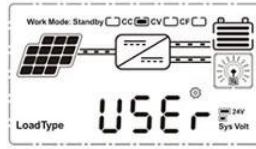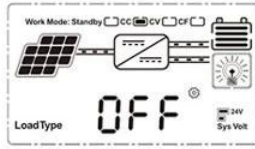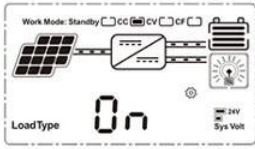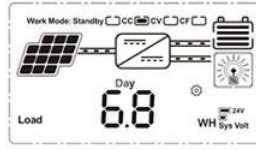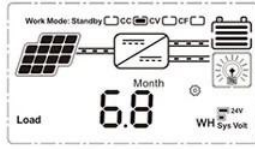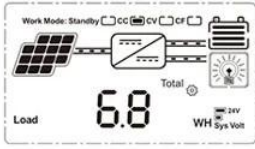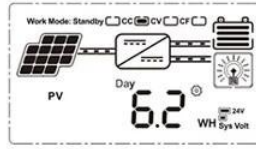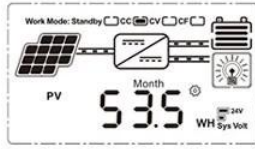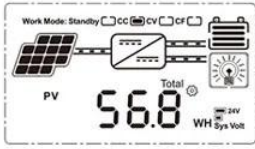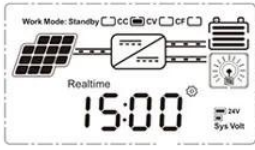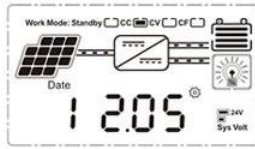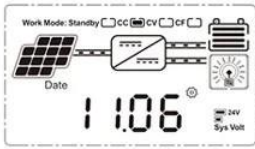
On — Mean "ON"	FLd — Mean "FLD"
OFF — Mean "OFF"	GEL — Mean "GEL"
USEr — Mean "USER"	SEL — Mean "SEL"

Set the battery type and LOAD control mode

Upper Computer Software & Test Software
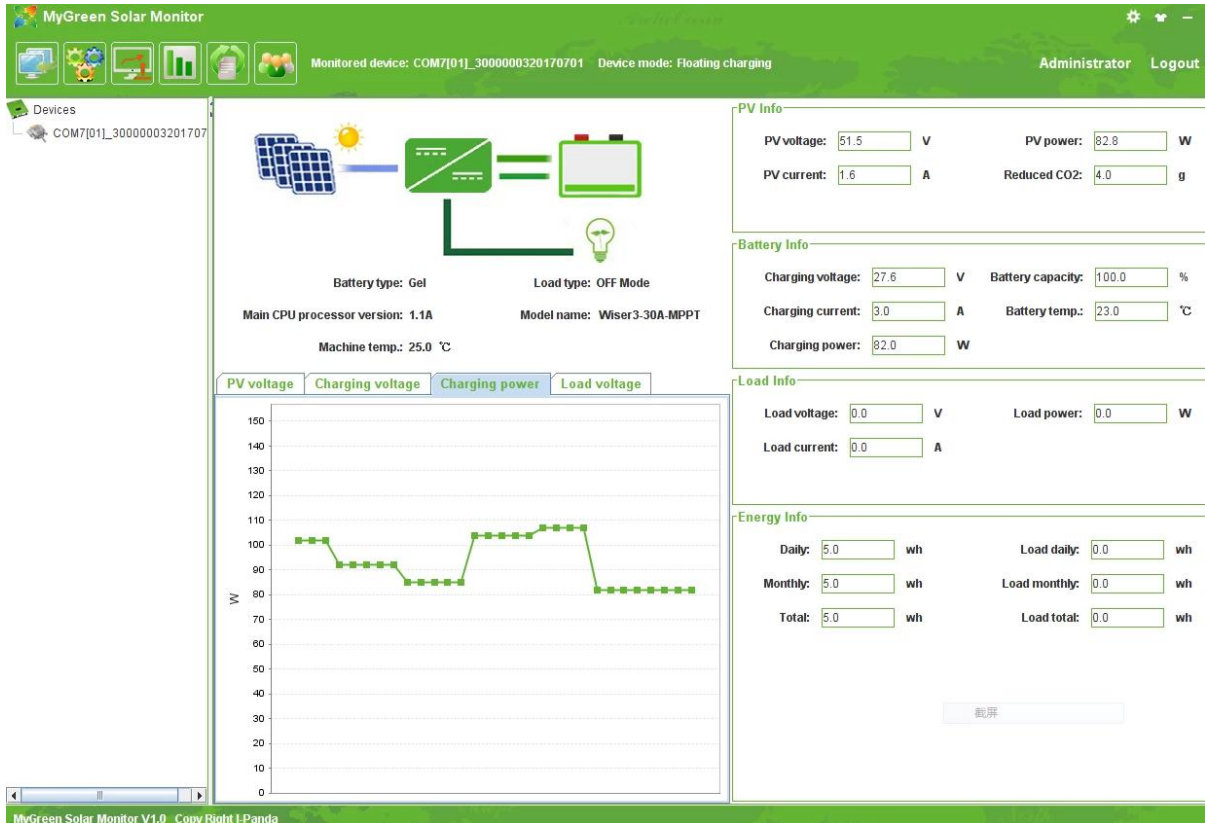
PC software_SolarEagle

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

Parameter

eSmart3 series		40A		Start the charge voltage point	Battery voltage + 3V
Product category	Controller Properties	MPPT (maximum power point tracking)			
	MPPT efficiency	≥99.5%			
	Standby power	0.5W~1.2W			
	System voltage	Automatic recognition			
	Heat-dissipating method	Intelligent fan cooling			
Input Characteristics	Max.PV input voltage(VOC)	DC150V			
	Low input voltage protection point	Battery voltage + 2V			
	Over voltage protection point	DC150V			
	Rated PV power	12V system	520W		
		24V system	1040W		
		36V system	1560W		
		48V system	2080W		
	Selectable Battery Types	Sealed lead acid, Gel battery, Flooded (Other types of the batteries also can be defined)	(Default Gel battery)		
Charge Characteristics	Charge rated Current	40A			
	Charging Method	3-Stage: constant current(fast charging)-constant voltage-floating charge			
LOAD Characteristics	Load voltage	The same as the battery voltage			
	Load rated current	40A			
	Load control mode	On\Off mode, PV voltage control mode,Dual-time control mode, PV + Time control mode			
Display & Communication	Display mode	High-definition LCD segment code backlight display			
	Communication mode	8-pin RJ45 port/RS485/support PC software monitoring/support WiFi module to realize APP cloud monitoring			
Other Parameters	Protect function	Input-output over \ under voltage protection, Prevention of connection reverse protection,battery shedding protection etc.			
	Operation Temperature	-20℃~+50℃			
	Storage Temperature	-40℃~+75℃			
	IP(Ingress protection)	IP21			
	Max. connection size	20mm2			
	Net Weight (kg)	2.3			
	Gross Weight (kg)	3			
	Product Size（mm）	240*168*66			
	Packing Size(mm)	289*204*101			

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.