Multifunctional 12v/24v/36v/48v 40a solar controller with lcd display

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!

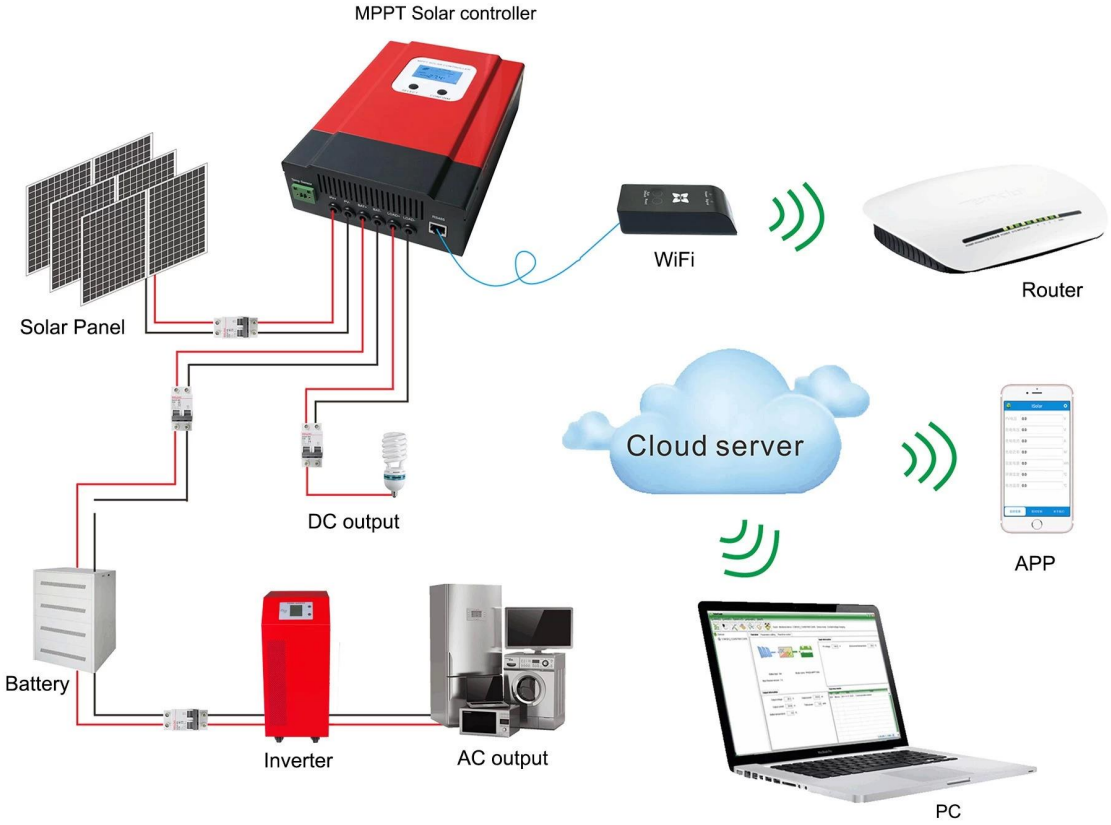
MPPT SOLAR CONTROLLER
SELECT
CONFIRM
Power
Signal
Exit
Default
Reset

Features

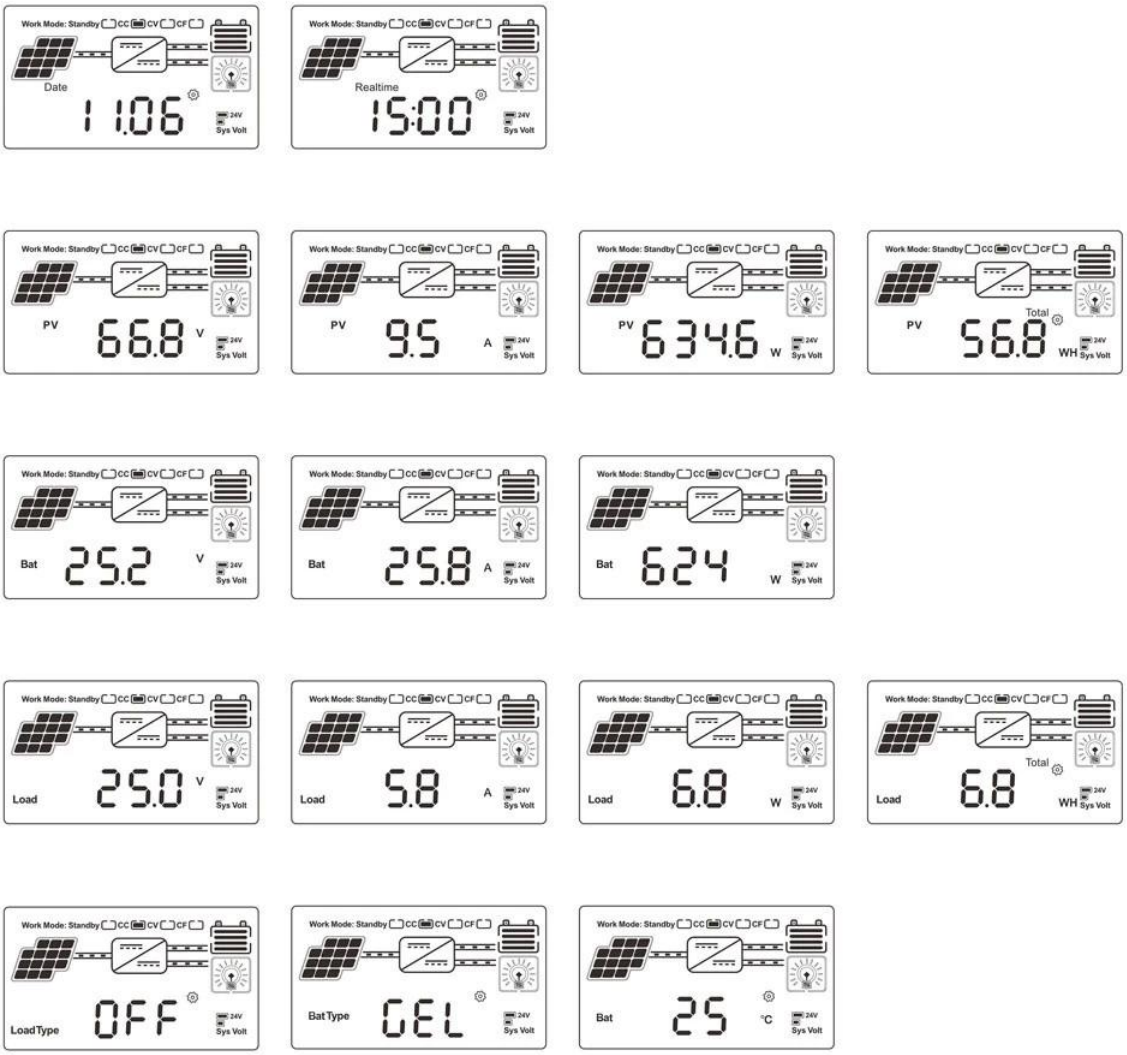
1.It has an efficient MPPT algorithm, MPPT efficiency ≥99.5%□and converter efficiency up to 98%.
2.Charge mode: three stages (constant current, constant voltage, floating charge), it prolongs service life of the batteries.
3.Four types of load mode selection: ON/OFF, PV voltage control, Dual Time control, 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

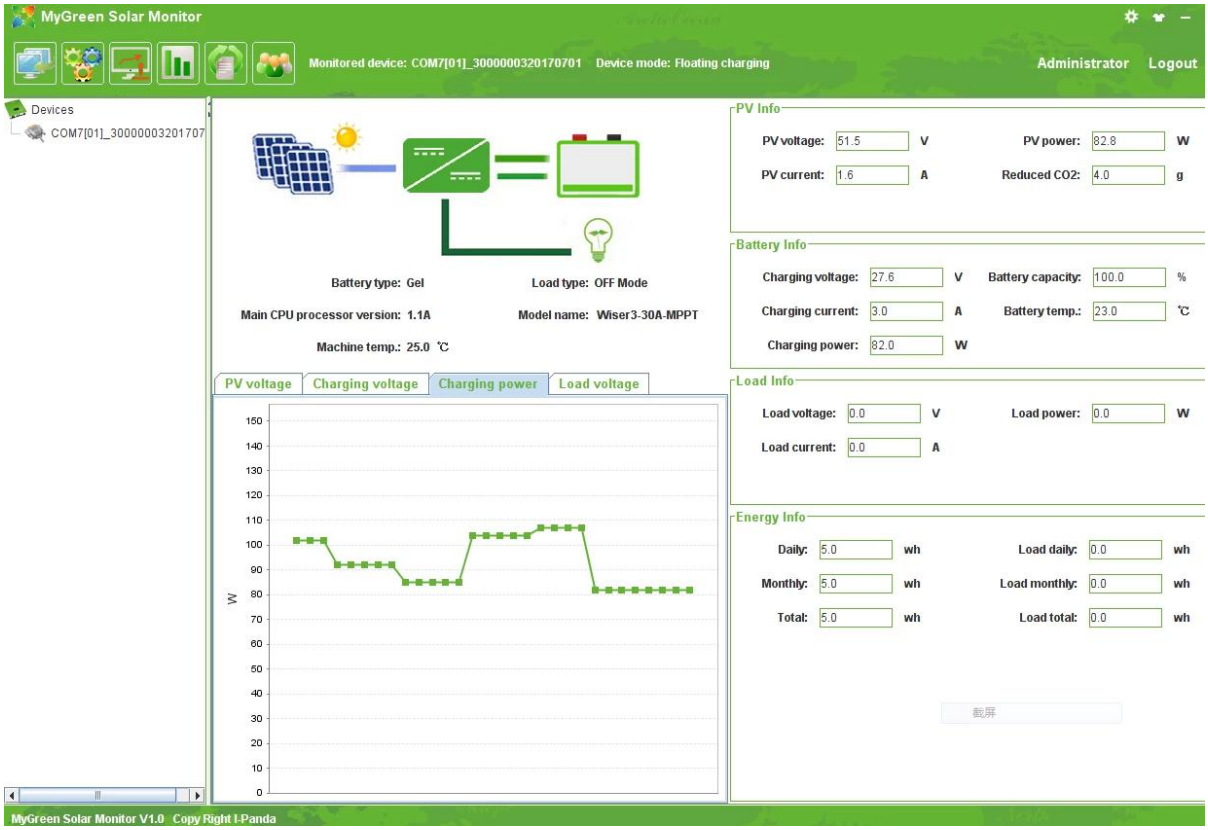


LCD display information

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
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
Charge Characteristics	Selectable Battery Types		Sealed lead acid, Gel battery, Flooded (Other types of the batteries also can be defined)
	(Default Gel battery)	Start the charge voltage point	Battery voltage + 3V
	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.