





ES-MPPT 12/24V, 20A/30A/40A

MPPT solar charge controller

High efficiency solar charge regulators consist of advanced MPPT (maximum power point detectors) controllers for autonomous photovoltaic systems. ES-MPPT have an intelligent tracking algorithm that maximizes solar energy harvesting from photovoltaics.

• Features

- > High efficiency MPPT control algorithm, MPPT efficiency ≥ 99.5%, whole Machine conversion efficiency upto 98%;
- > 12V/24V system Automatic Recognition, users can use it in different system conveniently.
- Maximum PV input voltage: 100VDC(15A, 20A), 150VDC (30A, 40A,5 0A)
- > 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.
- > Recommended battery types: sealed lead acid, vented, gel, NiCd battery. Other types of the batteries can also be defined.

MPPT Controller connection diagram

- Most information could be provided by LCD like: system type., 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.
- > RS232 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.

SP Inverter

> 2 years warranty. And 3~10 years extended warranty service also can be provided.



* Specifications could be subject to change without any prior notice.

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*This version replaces all previous ones

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• Technical Characteristics

Model DC12V/24V system 20A 30A 40A Charge mode MPPT (maximum power point tracking) MPPT efficiency ≥99.5% System type 12V/24V Automatic Recognition • INPUT CHARACTERISTICS UNICAL DECISION	Model Charge mode MPPT efficiency System type	DC12V/24V system	20A	30A	40A
System Description Charge mode MPPT(maximum power point tracking) MPPT efficiency ≥99.5% System type 12V/24V Automatic Recognition	Charge mode MPPT efficiency System type	system			
Charge mode MPPT (maximum power point tracking) MPPT efficiency ≥99.5% System type 12V/24V Automatic Recognition	Charge mode MPPT efficiency System type				
MPPT efficiency ≥99.5% System type 12V/24V Automatic Recognition INPUT CHARACTERISTICS 12V/24V DC100V DC150V	MPPT efficiency System type		MPPT(maximum power point tracking)		
System type 12V/24V Automatic Recognition • INPUT CHARACTERISTICS DC100V DC150V • Mac DV array Max (MDC) 12V/24V DC100V DC150V	System type			≥99.5%	
• INPUT CHARACTERISTICS		12V/24V		Automatic Recognition	
$M_{\text{even}} = M_{\text{even}} = M_{even} = $	• INPUT CHARACTERISTICS	121/241/	D.01.001/	DC1E0V	DC1F0V
	Max PV array Voc (VDC)	120/240	DC100V	10/	DC150V
Start the charging voltage point	Start the charging voltage point	120		180	
High input voltage protection point	High input voltage protection point	240	DC100V	32V DC150V	
High input voltage recovery point 12V/24V DC150V DC150V DC150V	High input voltage recovery point	120/240		DC150V	DC130V
Pated BV power 12V/24V 260W 390W 520W	Pated DV newer	120/240	26014	390W	E2014/
Rated PV power 120 2000 55000 52000 240 52000 78000 104000	Rated PV power	120	52010	780\\/	104014
• CHARGE CHRECTRESTICS	CHARGE CHRECTRESTICS	240	52070	70000	1040 W
Selectable Battery Types Sealed lead-acid batteries, Vented batteries Gel, NiCd battery (Other types of the batteries also can be defined)	Selectable Battery Types	12V/24V	Sealed lead-acid batteries, Vented batteries Gel, NiCd battery (Other types of the batteries also can be defined)		
Three stages charge: constant current(MPPT)			Three stages charge: constant current(MPDT)		
Charge method 12V/24V constant voltage, floating charge	Charge method	12V/24V		constant voltage, floating charge	,
Charge rated current 12V/24V 20A 30A 40A	Charge rated current	12V/24V	20A	30A	40A
• OUTPUT DISCHARGE CHARACTERISTICS	OUTPUT DISCHARGE CHARACTERISTICS				
USB (Total for 2 USB output) DC5V 3A	USB (Total for 2 USB output)			DC5V 3A	
LOAD output voltage Based on battery voltage	LOAD output voltage		Based on battery voltage		
Max. DC Load current 30A	Max. DC Load current		30A		
Output control mode ON/OFF mode, PV voltage control mode	Output control mode		ON/OFF mode, PV voltage control mode		
Output control set way Controller button or PC software	Output control set way		Controller button or PC software		
• DISPLAY	• DISPLAY				
LCD Display System type, PV voltage, charge voltage, charging current,	LCD Display		System	type, PV voltage, charge voltage, charging current,	
charging power, temperature etc.			charging power, temperature etc.		
PC software RS232	PC software			RS232	
• OTHER PARAMETERS	• OTHER PARAMETERS				
Protection function Yes (Over voltage, low voltage, over temperature, over load, Short circuit protection etc.)	Protection function		Yes (Over voltage, low voltage, over temperature, over load, Short circuit protection etc.)		
Cooling mode Auto cool	Cooling mode			Auto cool	
Type of Mechanical Protection IP 30	Type of Mechanical Protection			IP 30	
Measurement DxWxH (mm) 200*110*66 243*155*79 243*155*7 243*155*7	Measurement DxWxH (mm)		200*110*66	243*155*79	243*155*79
Packing DxWxH (mm) 249*144*105 289*189*113 299*199*11	Packing DxWxH (mm)		249*144*105	289*189*113	289*189*112
N.W. (KG) 0.9 1.8 1.8	N.W. (KG)		0.9	1.8	1.8
G.W. (KG) 1.3 2.2 2.2	G.W. (KG)		1.3	2.2	2.2

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