HP Series Solar Smart Charge Controller

Solar Charge Controller

Auto 12V/24V | LCD DISPLAY | PWM | | INPUT 55V Max. | over current | | 5V 1A | IP30 |

Features

1. Automatically identify system voltage.

2. Charging procedures for sealed, colloidal and vented lead acid battery and lithium battery are optional.

3. Improved three-stage PWM charging algorithm enables an equalizing charge for the battery regularly or when it is over discharged, effectively preventing battery disequilibrium and vulcanization, and thereby improving battery life (except colloidal, lithium battery).

4. Temperature compensation automatically adjusts charging parameters (except lithium battery which requires an external temperature sensor).

5. Dual battery charge controller is ideal for RV, caravan, ship and other occasions.

6. Two battery simultaneous charging technology.

7. Rich charging modes allow users to easily set the battery charging priority.

8. Provide overcharge, over-discharge, over-temperature protection and reverse polarity protection.

9. Provide rich parameters settings power-down saving function, without the need for repetitive setting.

10. Graphic dot matrix LCD and 2-button man-machine interface.

11. User-friendly dynamic interface for convenient and intuitive operations.

12. Industrial level design meets the requirements of various harsh environments.

13. Backlight display; when a button is pressed, the backlight is turned on, and it will be turned off after a period of time.

14. TVS lightning protection.

Panel Diagram

LCD (with backlight)

Temp sensor (optional)

Button

SOLAR CHARGE CONTROLLER

OPTIONS

SET

BATTERY 1

SOLAR

BATTERY 2

+ − + − + −

Battery 1   Solar panel   Battery 2

Product Detail

TEMP.

▲▼

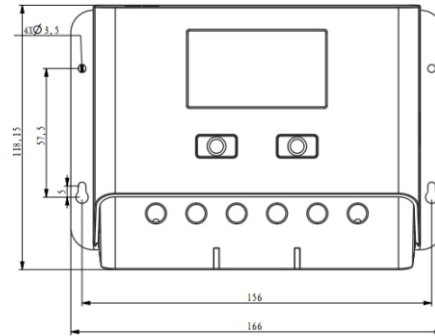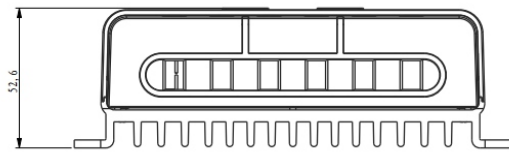Solar Charge Controller

TEMP.

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Solar Charge Controller
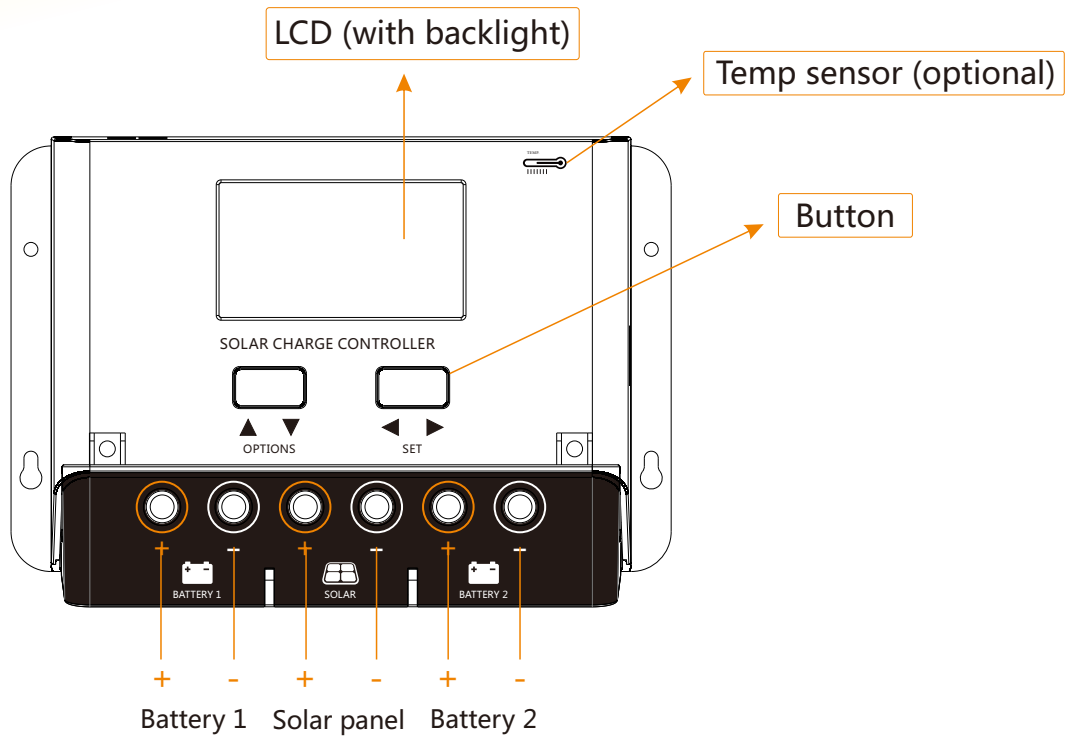
Installation Instructions and Precautions

1. The controller should be installed securely and the dimensions are as follows:

Outline dimensions: 166.0×118.2×52.6(mm)

Installation dimensions: 156×57.5 (mm)

2. Installation hole diameter: 3.5(mm)

State Indicators

| Icons on LCD	Indications	Status	Functions
☀	Identification in the daytime	Steady on	Daytime
☾	Identification in the nighttime	Steady on	Nighttime
▦	Solar panel	Steady on	Solar panel indication
BULK	Charging state	Steady on	Direct charge
BOOST		Steady on	Boost charge
FLOAT		Steady on	Floating charge
EQUATIZE		Steady on	Equalizing charge
🔋	Battery	Quick flash	Battery overvoltage
🔋		Slow flash	Battery over-discharge
🔋	Battery SOC	4 bars	100%
🔋		3 bars	75%
🔋		2 bars	50%
🔋		1 bars	25%
🔋		0 bars	0%

Parameter Details

Model	HP2420_ND				Remarks
Rated current	20A				
System voltage	12V/24V Automatic Identification				Defaulted is Automatic Identification
	Manual set				
Rate power	12V/300W 24V/600W				
Zero load loss	< 25mA/12V ; < 15mA/24V				The higher the system voltage, the smaller the no-load loss.
Solar input voltage	<55V				
Maximum allowable voltage of the battery	<34V				
Battery type	Parameters				
	FLD	SLD	GEL	LI	Default: SLD
Over voltage protection	16.0V				×1/12V ; ×2/24V ;
Equalizing charge voltage	14.8	14.6	-	-	
Boost charge voltage	14.6	14.4	14.2	14.4	
Floating voltage	13.8	13.8	13.8	-	
Charge return voltage	13.2V				
Over discharge return voltage	12.6V (Settable via button)				
Over discharge voltage	11.0V (Settable via button)				
Equalizing charge interval	30 days		-	-	
Equalizing charge time	1H		-	-	
Boost charge time	2H			-	
Temperature compensation	-3.0mV/℃/2V			-	
Operating temperature	-25℃～+55℃ ;				
Over-temperature protection	When the temperature is higher than 60°C, turn off charging function and it will restore below 55°C.				
IP rating	IP30				
Weight	700g				
Protections	Solar panel reverse connection protection, battery reverse connection protection, battery open circuit protection, charging over-current protection, and controller over-temperature protection.				
Dimensions	166.0×118.2×52.6(mm)				