

HP Series Smart Solar Charge Controller

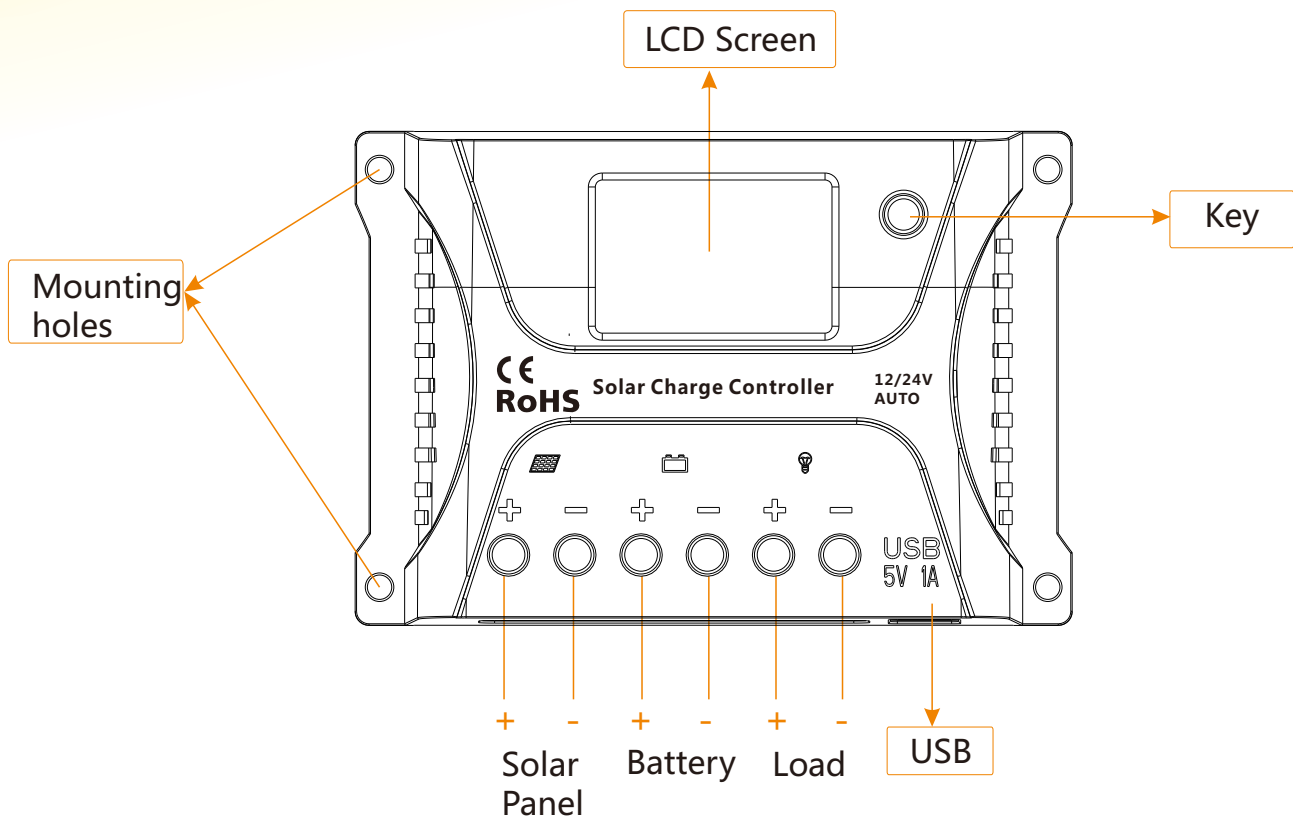
SR-HP2410/2420



Product Features

1. 12V/ 24 V system voltages are automatically recognized.
2. An upgraded 3-stage PWM charging algorithm is adopted. Application of an equalizing charging to the battery periodically or when over discharged, can effectively prevent the battery from non-equalization and sulfuration, thus extending the battery's service life.
3. With temperature compensation employed, charging parameters can be automatically adjusted.
4. A wide range of load working modes facilitate the product's application to different types of load.
5. The product provides overcharge, over-discharge, overload protection, as well as short-circuit protection.
6. By virtue of an advanced load starting method, large-capacitance loads can be started smoothly.
7. The product provides a dot matrix graphic LCD screen and a human-machine interface with a key.
8. The user-friendly design of browser and dynamic interfaces ensure convenient and intuitive operations.
9. Boasting an industrial grade design, the product can function well in various tough conditions.
10. TVS lightning protection is adopted.

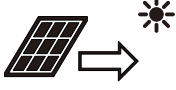


Panel Structure



Product Detail

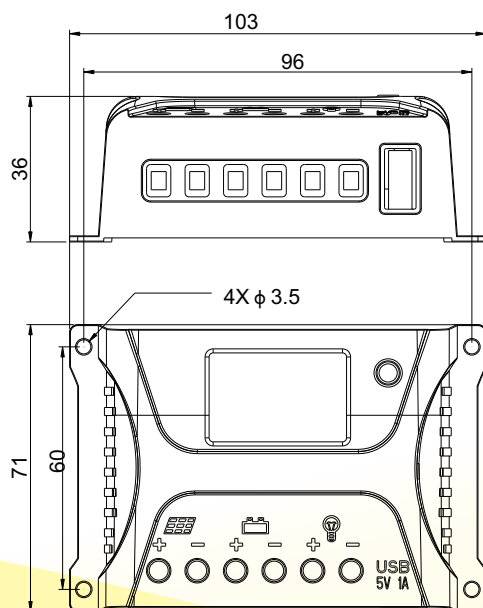


State Indicators

LCD Icon	Indicated Object	State
	Daytime or charging	Steady on
	Night recognition	Steady off
	Load short circuit or overload	Quick flashing
	Load switched on	Steady on
	Load switched off	Steady off
	Normal battery	All on
	Over discharge	Only the outline flashes
	Overvoltage	3 dashes flashing

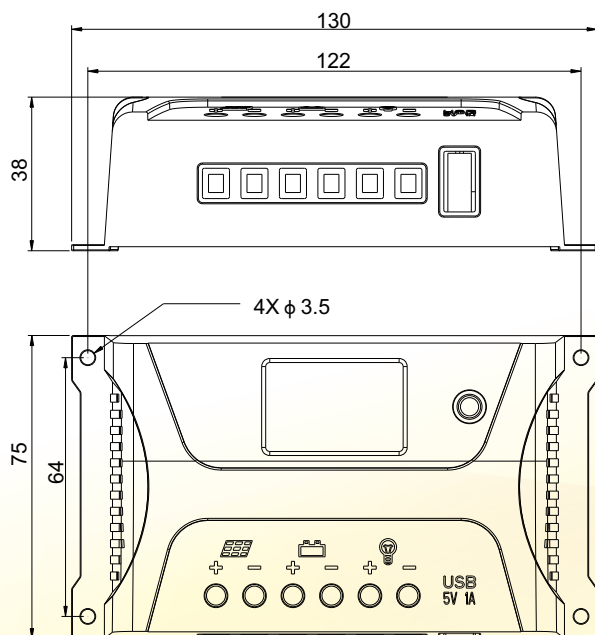
Installation Instructions and Precautions

HP2410 External dimensions: 103×71×36(mm)
 Installation dimensions: 96×60 (mm)
 Installation hole diameter: 3.5(mm)



HP2410

HP2420 External dimensions: 130×75×38 (mm)
 Installation dimensions: 122×64(mm)
 Installation hole diameter: 3.5(mm)



HP2420

Parameter Details

Model	HP2410	HP2420
Rated current	10A	20A
System voltage	Automatic recognition of 12 V/ 24 V	
No-load loss	< 5mA/12V; < 9mA/24V	
Max. Solar energy input voltage	<55V	
Max. voltage at the battery end	<35V	
Overvoltage protection	17.0V; ×2/24V;	
Equalizing charging voltage	14.6V; ×2/24V;	
Boost charging voltage	14.4V; ×2/24V;	
Floating charging voltage	13.8V; ×2/24V;	
Charging recovery voltage	13.2V; ×2/24V;	
Over-discharge recovery voltage	12.6V; ×2/24V;	
Over-discharge voltage	11.1V; ×2/24V;	
Equalizing charging interval	7days	
Equalizing charging time	1H	
Boost charging time	2H	
Temperature compensation	-3.0mV/°C/2V	
Light control voltage	Light control on 5V, ×2/24V; light control off 6V, set value plus 1V	
Light control judgment time	1minute	
Operating temperature	-25°C to +55°C ;	
IP protection degree	IP30	
Net weight	100g	160g
Protection functions	Solar panel short circuit and reverse-connection protection	
	Over-temperature, overload and short circuit protection	
Dimensions	103×71×36(mm)	130×75×38(mm)

HP Series Smart Solar Charge Controller

SR-HP2430/2440/2450/2460/4830/4840

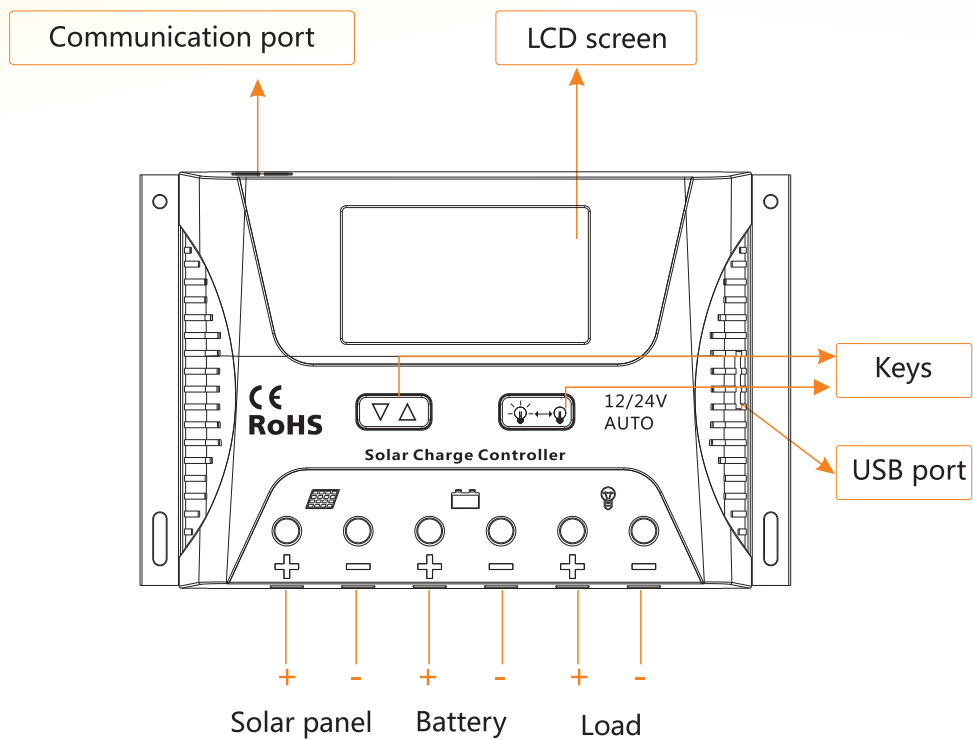


HP2430/2440 only

Product Features

1. Except HP4840 /30, 12V/ 24 V system voltages are automatically recognized.
2. Charging program options for sealed, GEL and flooded lead-acid batteries and lithium batteries are available.
3. An upgraded 3-stage PWM charging algorithm is adopted. Application of an equalizing charge to the battery periodically or when over discharged, can effectively prevent the battery from non-equalization and sulfuration, thus extending the battery's service life (with the exception of GEL and lithium batteries).
4. With temperature compensation employed, charging parameters can be automatically adjusted (with the exception of lithium batteries).
5. A wide range of load working modes facilitate the product's application to different types of street lights and monitoring devices.
6. The product provides overcharge, over-discharge, overload protection, as well as short-circuit and reverse-connection protection.
7. By virtue of an advanced load starting method, large-capacitance loads can be started smoothly.
8. A range of parameter settings and power-down saving functions are available ,thus requiring no repeated setting.
9. The product provides a dot matrix graphic LCD screen and a human-machine interface with 2 keys.
- 10.The user-friendly design of browser and dynamic interfaces ensures convenient and intuitive operations.
11. (An optional communication function) provides a RJ12 data port (output of TTL232 level or bluetooth signals), with the data adopting the standard Modbus protocol, and can be used together with our upper computer monitoring software.
12. Boasting an industrial grade design, the product can function well in various tough conditions.
- 13.TVS lighting protection is adopted.














Panel Structure



Product Detail



State Indicators

LCD Icon	Indicated Object	State	Meaning
	Day recognition	Steady on	Day time
	Night recognition	Steady on	Night time
	Solar panel	Steady on	Solar panel indication
BOOST	Charging state	Steady on	Boost charging
FLOAT		Steady on	Floating charging
EQUATIZE		Steady on	Equalizing charging
	Battery	Quick flashing	Battery overvoltage
		Slow flashing	Battery over-discharge
	Battery SOC	4 dashes	100%
		3 dashes	75%
		2 dashes	50%
		1 dash	25%
		0 dash	0%
	Load	Steady on	Load turned on
		Steady on	Load turned off
		Quick flashing	Overload or short -circuit protection

Parameter Details

Model	HP2430/2440		HP2450/2460	HP4830/4840	Remarks
Rated current	30A/40A		50A/60A	30A/40A	
System voltage	Automatic recognition of 12V/24V			48V	
No-load loss	< 13mA/12V ; < 15mA/24V			<20mA	
Max. Solar energy input voltage	<55V			<110V	
Max. voltage at the battery end	<34V			<68V	
Battery type	Parameters				Default SLD
	Flooded FLD	Sealed SLD	GEL GEL	Lithium LI	
Overvoltage protection	16.0V				×1/12V ; ×2/24V ; ×4/48V ;
Equalizing charging voltage	14.8V	14.6V	—	—	
Boost charging voltage	14.6V	14.4V	14.2V	14.4V	
Floating charging voltage	13.8V	13.8V	13.8V	—	
Charging recovery voltage	13.2V				
Over-discharge recovery voltage	12.5V (settable with the keys)				
Over-discharge voltage	11.0V (settable with the keys)				
Equalizing charging interval	30days		—	—	
Equalizing charging time	1H		—	—	
Boost charging time	2H			—	
Temperature compensation	-3.0mV/°C/2V			—	
Light control voltage	Light control on 5V, light control off 6 V (light control on plus 1 V)				×1/12V ; ×2/24V ; ×4/48V ;
Light control judgment time	10minutes				
USB function	Yes	No		No	
Operating temperature	-25°Cto+55°C ;				
IP protection degree	IP30				
Net weight	390g	650g		650g	
Protection functions	attery reverse connection protection, solar panel reverse connection protection, reverse charging protection at night				
	Charging overload protection, overcurrent protection , short circuit protection				
Dimensions	164.0×103.5×47.0(mm)	189.27×127.2×54.0 (mm)		189.27×127.2×54.0 (mm)	