

FUNCTIONS FOR ELECTRIC PROTECTION

- Overcharge protection
- Deep discharge protection
- Reverse current and polarity protection of load and any combination of solar module and battery
- Automatic electronic fuse
- Short circuit protection of load and module
- Overvoltage protection at module input
- Open circuit protection without battery
- Over temperature and overload protection
- Battery overvoltage shutdown



OPERATION:



SIMPLE
MENU-DRIVEN
OPERATION



PROGRAMMING
BY BUTTONS



MANUAL
LOAD SWITCH

CHARACTERISTICS

- Latest technology high efficiency PWM charging for increased battery lifetime and solar system performance
- 32 bit MCU with high speed and high performance
- Special feature for solar outdoor lighting such as smart dusk to dawn and timer function
- Real time remote monitoring as well as load control mode and adjustments of parameter settings
- Advanced electromagnetic design
- Hi-tech LCD screen with user friendly interface for easy operating
- Complete graphical LCD display for complete menu and programmable operating parameters, fault messages, self-test etc.
- Mosfet as electronic switch without any mechanical switch
- 12 bit Analog-to-Digital (A/D) top-accuracy sampling for precision
- Nominal system voltage automatic recognition
- Suitable for the following battery types: GEL, Flooded and Sealed

SYSTEM TERMINALS

- All the terminals are inside the controller
- 4 arrays terminals for solar panel
- 1 terminal for battery
- 1 terminal for load
- 1 9-pin tel. terminals, for computer or modem.
- 2 output for inverter signal, isolate the switch output signal.
- 2 input for inverter signal, isolate the switch input signal.
- 1 terminal for temperature sensor.

SPECIFICATION

Model No.	HPC20-1224-LCD
Rated Current	20A
Rated Voltage	12/24V AUTO
Maximum Battery Voltage	32V
Maximum PV Voltage	48V
Self-consumption	<18mA maximum
Charge Circuit Voltage Drop	≤0.24V
Discharge Circuit Voltage Drop	≤0.16V
Communication	TTL232 level / RJ45 interface
Terminals	10mm ²
Net Weight	0.4kg

TECHNICAL PARAMETERS AND BATTERY TYPE

	GEL	SEALED	FLOODED
Over Voltage Disconnect Voltage		16V	
Charging Limit Voltage		15.5V	
Over Voltage Reconnect Voltage		15V	
Equalize Charging Voltage	NO	14.6V	14.8V
Boost Charging Voltage	14.2V	14.4V	14.6V
Float Charging Voltage		13.8V	
Boost Reconnect Charging Voltage		13.2V	
Low Voltage Reconnect Voltage		12.6V	
Under Voltage Warning Reconnect Voltage		12.2V	
Under Voltage Warning Voltage		12V	
Low Voltage Disconnect Voltage		11.1V	
Discharging Limit Voltage		10.8V	
Temperature Compensation Coefficient (TEMPCO)*		-30mV/°C/12V (25°C ref)	
Grounding		Negative to the ground	
Working temperature		-20°C~ +55°C	
Storage temperature		-30°C~ +80°C	
Enclosure		IP30	

DIMENSION & SYSTEM ASSEMBLY

