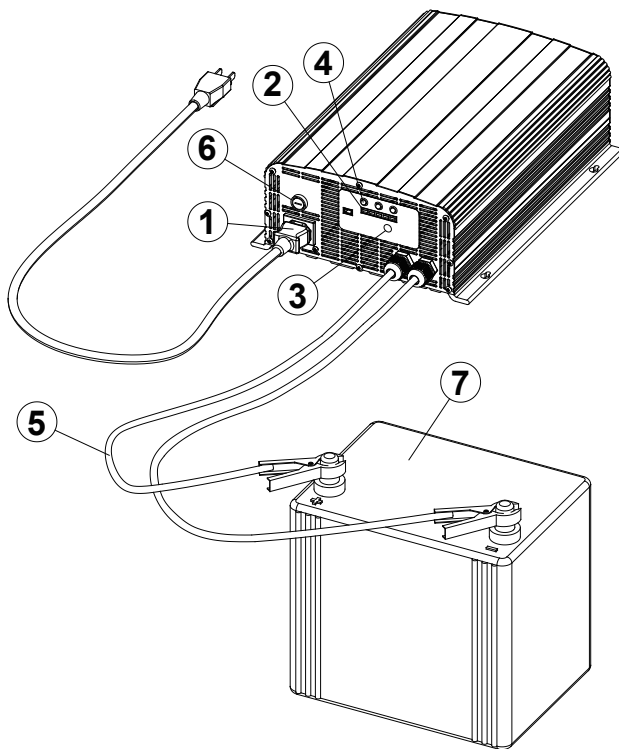# 4 in 1 Battery Charger
User Manual

Ⅰ. Appearance of Structure

1. AC Input Cord
2. LED Display Panel
3. Battery Voltage Selection
4. Status Display
5. DC Output Cord
6. AC Fuse
7. Battery

Ⅱ. User's Guide for 4 in1 Battery Charger

(A) Step of Usage：

Step 1. Please confirm that your electrical supply voltage comply with charger's input voltage before using the battery charger.(90V~130V or 200V~240V)

Step 2. After plug in AC cord, press down key " Battery Voltage Selection " and select the battery voltage you need：

a. When one LED indicator light comes on, it indicates that the charger is charging at 12 volts.

b. When two LED indicator light comes on, it indicates that the charger is charging at 24 volts.

c. When three LED indicator light comes on, it indicates that the charger is charging at 36 volts.

d. When four LED indicator light comes on, it indicates that the charger is charging at 48 volts.

Step 3. After completing step two, then the red wire connects to the positive while the black wire connects to the negative.

Step 4. The LED display's indicator lights will all come on with a indicator beep. Afterward the DC battery will detect available battery power with the corresponding LED battery indicator, then the battery charging process will begin.

(B) Status display light of charger instructed as below：

(a) Usual Indicating light of charger instructed as below：

	Indicator light	**Descreption**
Yellow Light	Lighting Up	It is in Soft Start status, current is charging slowly.
	Slow Flashing frequency	It is in Absorption C.C.(Constant Current) charging status.
	Fast Flashing frequency	It is in Absorption C.V. (Constant Voltage) charging status.
	Super Fast Flashing frequency	It is in Float C.C.(Constant Current) charging status and will become floating status.
Green Light	Slow Flashing frequency	It is in floating status , battery is full.
	Fast Flashing frequency	It is in floating status, battery is full with floating current of < 0.5 A.

(b) Unusual Indicating light of charger instructed as below：

	Indicator Light	**Description**	**Solution**
Red Light	Flash 2 times	It means that the charger isn't correctly connected to battery or the DC fuse is burned.	Please contact your local distributor if the red indicator light still flashes twice after disconnecting the cord.
	Flash 3 times	Charger output voltage is not compatible with the battery.	Please check that the correct charging voltage is selected.
	Flash 4 times	It means that internal inside thermal sensor is short or open circuit.	Please contact your local distributor if the internal thermal sensor is abnormal,
	Flash 5 times	Over temperature protection.	The charger will automatically restart when internal temperature reaches operational temperature range.

(C) Explanation of Usage：

1. When it is charging , it does not effect your configuration if you press the voltage selecting key. Please disconnect the battery if you wish to select a different voltage.

2. When float green light is flashing , it means that the battery is full.

3. Please disconnect the AC cord and DC output cord if you wish to end charging.

Ⅲ. Specification of 4 in 1 charger：

Model No.	HW-1248C1	for 200~240 Vac Input Voltage		
	HW-1248C2	for 90~130 Vac Input Voltage		
Input Frequency	50/60 Hz			
Current (Without Load)	＜0.1A			
Maximum Input Current	＜15A (under)			
Maximum Efficiency in Max. Power	95% (Max)			
Output Voltage	12V	24V	36V	48V
Maximum Ampere Imax	30A	30A	25A	15A
Maximum Output Charging Power	450W	900W	1000W	900W
Charging Range	8~14.8V	16~26.4V	27~39V	40~55V
Average Charging Voltage	14.5V	29.0V	42.6V	56.5V
Floating Charging Voltage	13.8V	27.6V	39.9V	53.2V
Protection Function — Short Circuit Protection	OK			
Protection Function — Reverse Connection Protection	OK			
Protection Function — Over Temperature Protection	OK			
Voltage / Current Precision	＜5%			
Operating Ambiance Temperature	In Full Load : - 20～60℃			
Cool System	Automatic adjust fan according to inner temperature			
Average Temperature in Housing	＜70℃			
Dimensions	300 * 223 * 101 mm			
Weight	4.5 Kg			