



E-Star Power Development Co., Ltd. (E-STAR)  
 1F., No.40, Juren Ln., Sec. 2, Sanmin Rd., Banciao Dist., New Taipei City  
 22069, Taiwan (R.O.C.)  
 Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

**600W Battery Charger Power supply > PB-600**



■ Features :

- Charger for lead-acid batteries (flooded, Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese) (Note.1)
- 2/3/8 stage charging (Note 5)
- Built-in battery rescue function
- Controlled by microprocessor
- Universal AC input / Full range
- Built-in active PFC function PF>0.95
- Protection: Reverse polarity / Short circuit / Over voltage / Over temperature
- 3 color LED loading indicator
- Built-in remote ON-OFF control
- Built-in temperature compensation function
- Built-in fan speed control (depends on charging current)
- 3 years warranty



**SPECIFICATION**

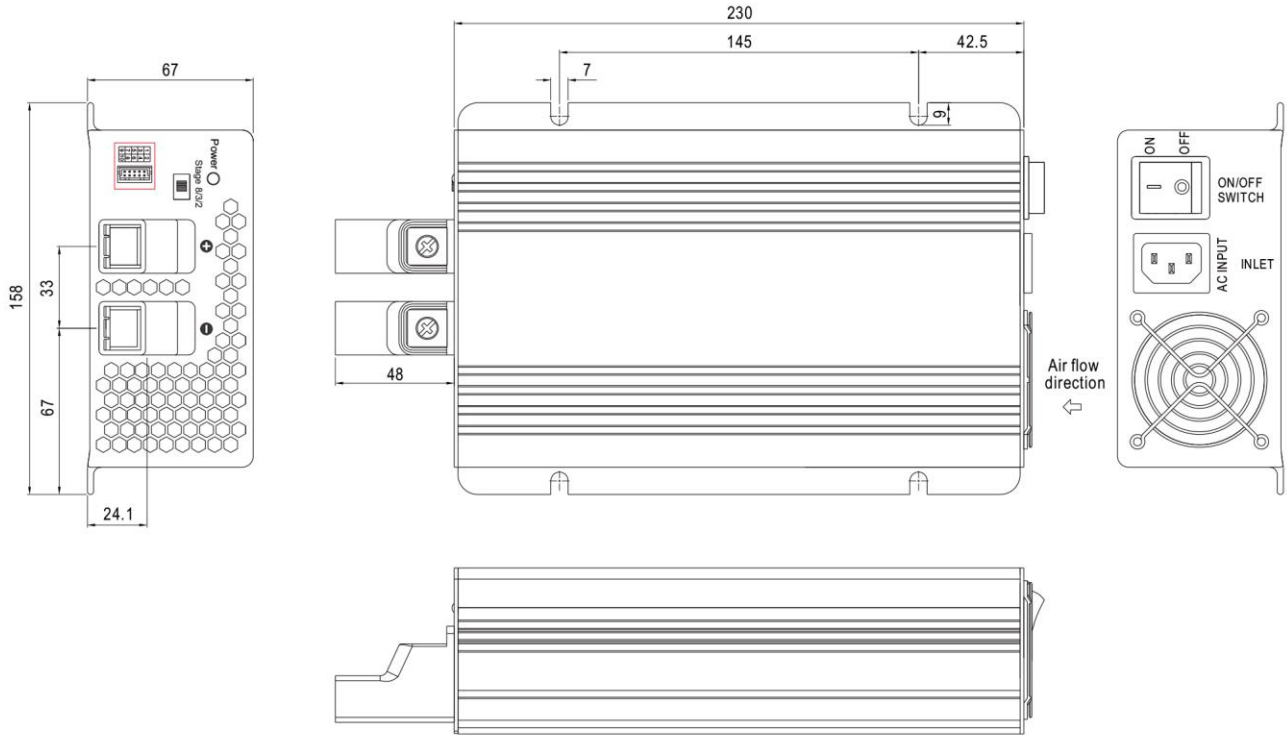
MODEL	PB-600-12	PB-600-24	PB-600-48	
OUTPUT	BOOST CHARGE VOLTAGE Vboost	14.4V	28.8V	57.6V
	FLOAT CHARGE VOLTAGE Vfloat	13.8V	27.6V	55.2V
	RECOMMENDED BATTERY CAPACITY(AMP HOURS)(Note 4)	135 ~ 400AH	70 ~ 210AH	35 ~ 105AH
	BATTERY TYPE	Open & Sealed Lead Acid		
	OUTPUT CURRENT	40A	21A	10.5A
INPUT	VOLTAGE RANGE	90 ~ 264VAC 127 ~ 370VDC		
	FREQUENCY RANGE	47 ~ 63Hz		
	POWER FACTOR (Typ.)	0.95/230VAC	0.98/115VAC at full load	
	EFFICIENCY (Typ.)	86%	87%	89%
	AC CURRENT (Typ.)	6.8A/115VAC	3.4A/230VAC	
	INRUSH CURRENT (Typ.)	25A/115VAC	50A/230VAC	
	LEAKAGE CURRENT	<3.5mA / 240VAC		
PROTECTION	OVER VOLTAGE	16 ~ 18V	32 ~ 35V	64.5 ~ 69.5V
	OVER TEMPERATURE	Protection type : Shut down o/p voltage, re-power on to recover		
FUNCTION	REMOTE CONTROL	Protection type : Shut down o/p voltage, recovers automatically after temperature goes down		
	REMOTE CONTROL	Open: Normal work Short: Stop Charging		
	LEAKAGE CURRENT FROM BATTERY (Typ.)	1mA		
	FAST CHARGE	2 / 3 / 8 stage selectable		
	CHARGER OK	Relay contact (RY15)		
	OUTPUT OK	Relay contact (RY13)		
ENVIRONMENT	TEMPERATURE SENSE	By NTC		
	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")		
	WORKING HUMIDITY	20 ~ 90% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing		
	TEMP. COEFFICIENT	±0.05%/°C (0 ~ 50°C)		
SAFETY & EMC (Note 3)	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes		
	SAFETY STANDARDS	UL1012, TUV EN60335-1, EN60335-2-29 (except for 48V), EN62368-1(48V only), EAC TP TC 004 approved		
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC		
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH		
	EMC EMISSION	Compliance to EN55032 class B (CISPR32), EN61000-3-2,-3, EAC TP TC 020		
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024; light industry level, criteria A, EAC TP TC 020		
	MTBF	135.6K hrs min. MIL-HDBK-217F (25°C)		
	DIMENSION	230*158*67mm(L*W*H)		
NOTE	PACKING	2.2Kg; 6pcs/14.2Kg/1.76CUFT		
	NOTE	1. Modification for charger specification may be required for different battery specification. 2. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 3. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 4. This is Mean Well's suggested range. Please consult your battery manufacturer for their suggestions about maximum charging current limitation. 5. Please choose the "3 stage" selection when the charger is used to charge the batteries and power the loads in the same time. 6. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).		



**600W Battery Charger Power supply > PB-600**

**Mechanical Specification**

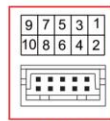
Case No.805C Unit:mm



※ LED Loading Indicator Status Table

Status		Steady	Flashing
● Red	Red	Abnormal status	
● Orange	Orange		Charging
● Green	Green	Full	Charging

※ Control Pin No. Assignment(CN100) : HRS DF11-10DP-2DS or equivalent



CN100

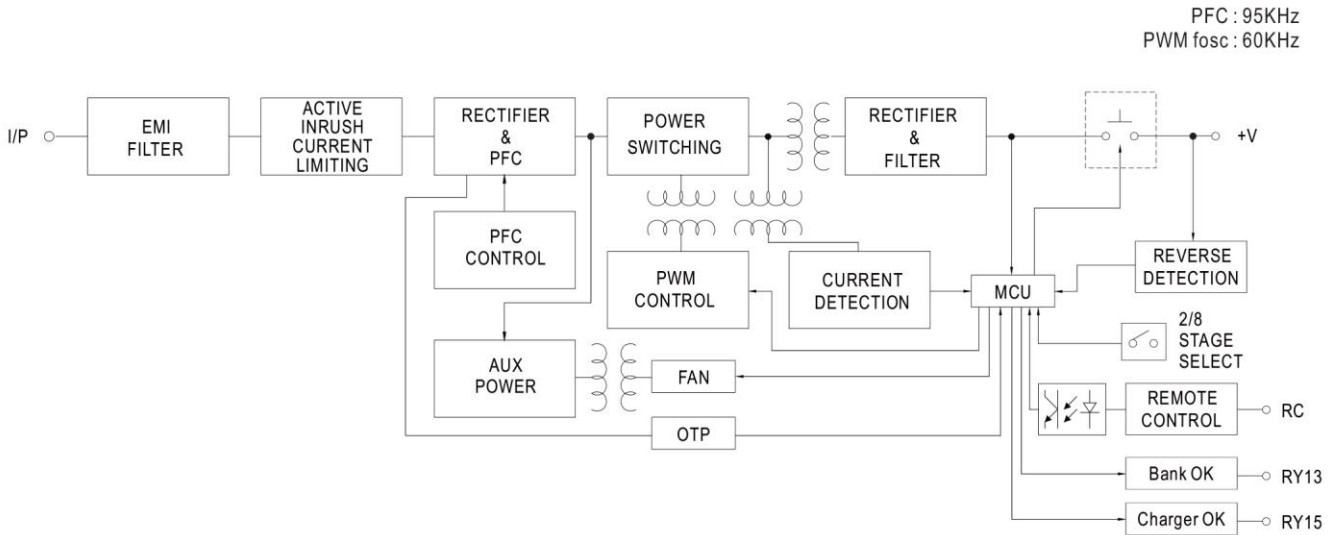
Mating Housing	HRS DF11-10DS or equivalent
Terminal	HRS DF11-**SC or equivalent

Pin No.	Function	Description
1,2	RY13	RY13 : Battery Bank OK relay. Relay contact rating(max.) : 30V/1A resistive. ; "Short" when the battery is full, "Open" when the battery is still charging.
5,6	RY15	RY15 : Charger OK relay. Relay contact rating(max.) : 30V/1A resistive. ; "Short" when the unit is working properly, "Open" when the unit is failure or the protection function is activating.
7	GND	NTC / GND : Temperature sense
8	NTC(5KΩ) RTH	Temperature sensor comes along with the charger can be connected to the unit to allow temperature compensation of the charging voltage
9,10	RC- / RC+	Remote ON/OFF function. Turn the output on and off by electrical or dry contact between pin 10 (RC+) and pin 9(RC-). "Open" : Normal work ; "Short" : Stop charging

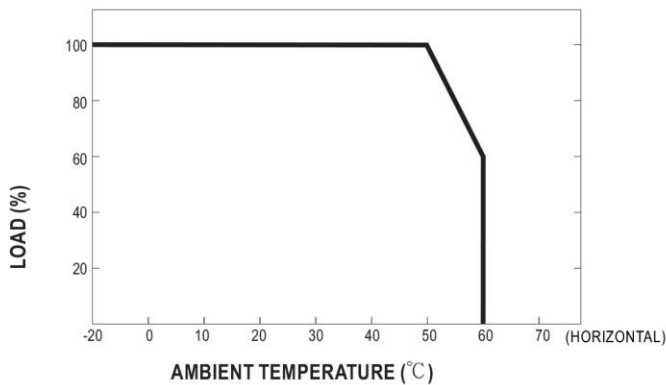


**600W Battery Charger Power supply > PB-600**

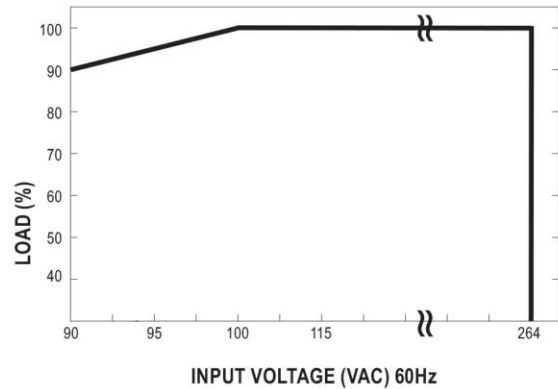
**Block Diagram**



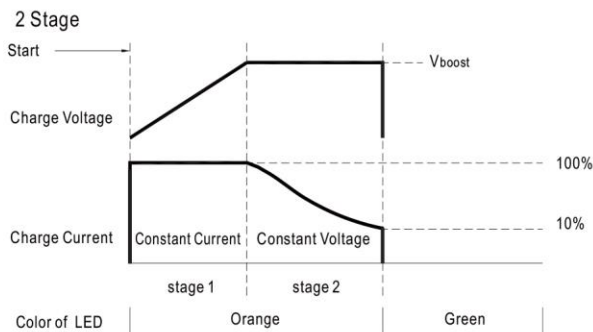
**Derating Curve**



**Static Characteristics**

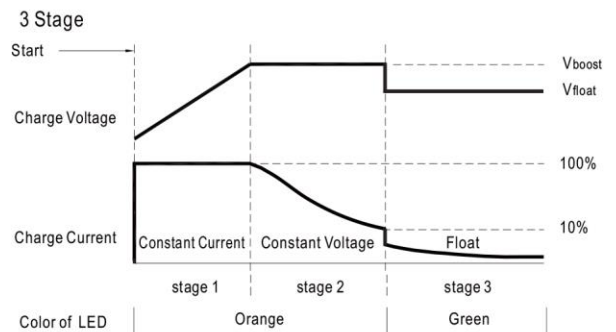


**Charging Curve**



State	PB-600-12	PB-600-24	PB-600-48
Constant Current	40A	21A	10.5A
Vboost	14.4V	28.8V	57.6V

© Suitable for lead-acid batteries (flooded, Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese).

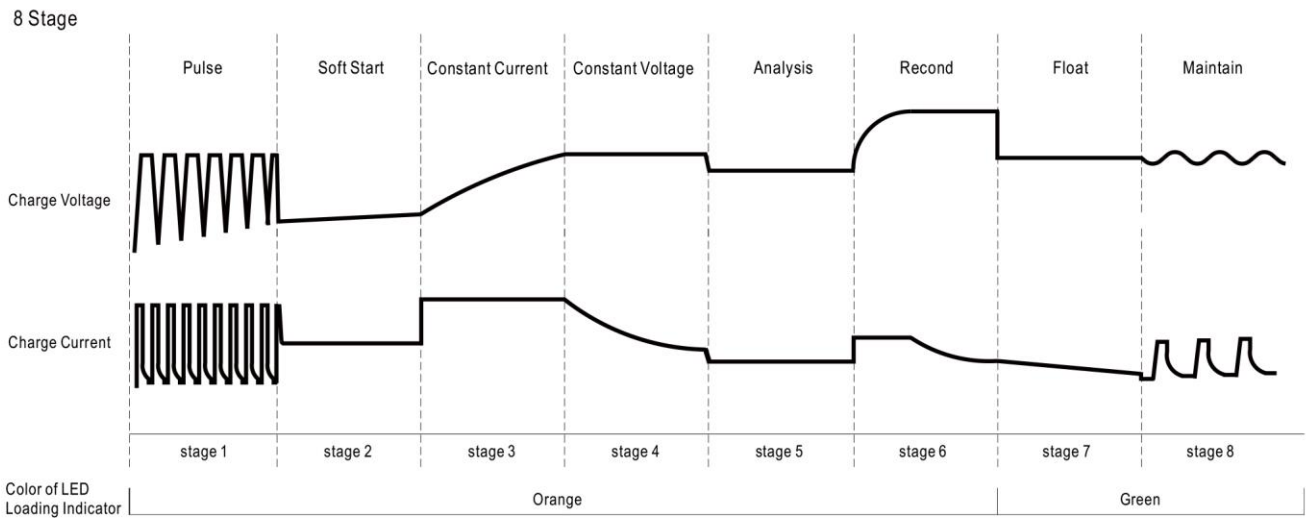


State	PB-600-12	PB-600-24	PB-600-48
Constant Current	40A	21A	10.5A
Vboost	14.4V	28.8V	57.6V
Vfloat	13.8V	27.6V	55.2V

© Suitable for lead-acid batteries (flooded, Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese).



**600W Battery Charger Power supply > PB-600**



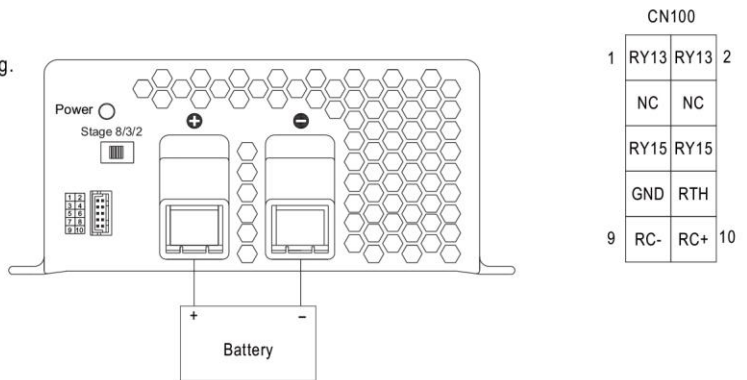
- ◎ Suitable for lead-acid batteries (flooded, Gel and AGM).
- ◎ "stage 1"(Pulse) and "stage 2"(Soft Start) provide battery rescue function.

**2,3, or 8 stage charging select**

(1) The charger features user selectable 2,3, or 8 stage charging. The charging profile is selected by moving the slide switch on the back panel.

Switch	Charging mode
Right	2 stage charging
Middle	3 stage charging
Left	8 stage charging

(2) Please choose the "3 stage" selection when the charger is used to charge the batteries and power the loads in the same time.

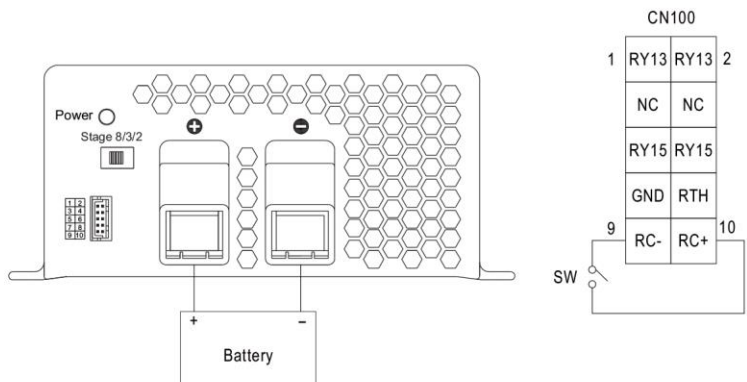


**Function Manual**

**1. Remote Control**

The charger can be turned ON/OFF by using the "Remote Control" function.

Between RC+(pin10) and RC-(pin9)	Charging
SW Open	ON
SW Short	OFF

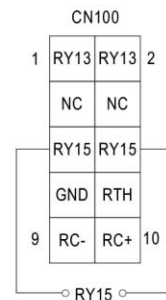
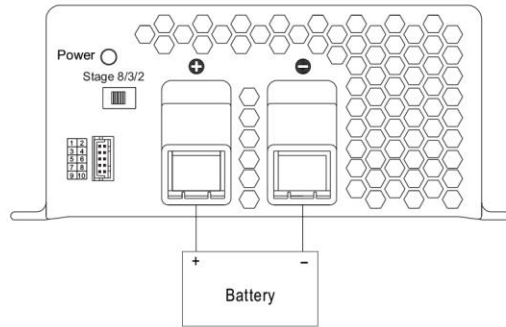




**600W Battery Charger Power supply > PB-600**

**2.Charger OK Relay(RY15)**

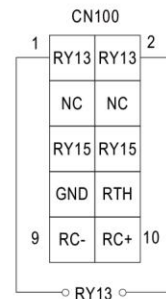
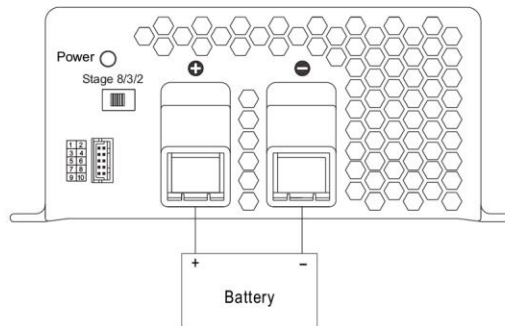
Charger	Between pin5 and pin6(RY15)
Work normally	ON (Short)
Failure or protection function activated	OFF (Open)



**3.Output OK Relay (RY13)**

**1.Bank OK (RY13)**

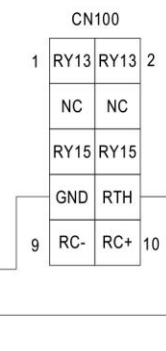
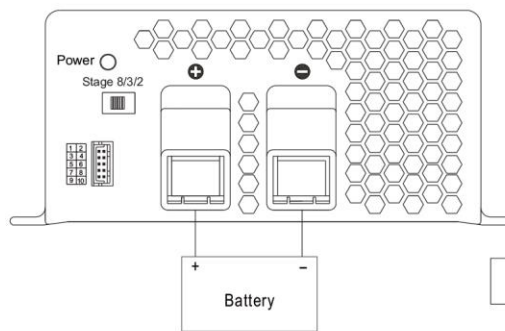
Bank	Between pin1 and pin2(RY13)	Color of LED
Battery Full	ON (Short)	Green
Charging	OFF (Open)	Orange



**4.Temperature compensation**

Temperature sensor comes along with the charger can be connected to the unit to allow temperature compensation of the charging voltage.

If the sensor is not used, the charger still works normally.



The temperature sensor can either be attached to the battery or placed in its surrounding environment.