



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 > HEP-600C**



**■ Features**

- Charger for lead-acid batteries (flooded, Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese) (Note.1)
- 3 stage charging
- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- No load power consumption <0.5W at remote OFF
- High efficiency up to 95.5%
- Fanless design, cooling by free air convection
- Aluminum case and filling with heat-conducted glue
- Withstand 10G vibration test
- -40 ~ +70°C wide operating range
- Output voltage and output current can be adjusted through internal potentiometer
- Protection: Short circuit / Over voltage / Over temperature
- 3 color LED loading indicator
- Operating altitude up to 5000 meters (Note.5)
- 6 years warranty

**■ Applications**

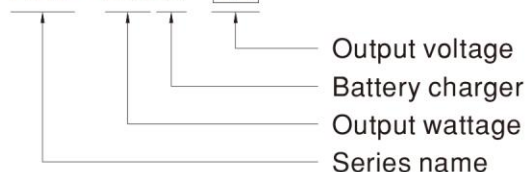
- Suitable for battery charger at harsh environment
- Robotic lawn mower
- Electronic transportation vehicle
- Recreational craft, personal yacht or workboat
- Security network and system
- Telecommunication base station
- Equipments or instruments with back-up battery

**■ Description**

HEP-600C series is an AC-to-DC battery charger providing up to 600W, designed with aluminum case and fully potted by silicone. It features the high efficiency (up to 95.5%), waterproof and low no-load power consumption (<0.5W) at remote OFF. Incorporating state of the art design, the fan-less HEP-600C is capable of working under high-vibration (10G), dusty, humid, and oily environment. Other features include adjustable voltage/current and wide working temperature range (-40~+70°C).

**■ Model Encoding**

**HEP - 600C - 12**





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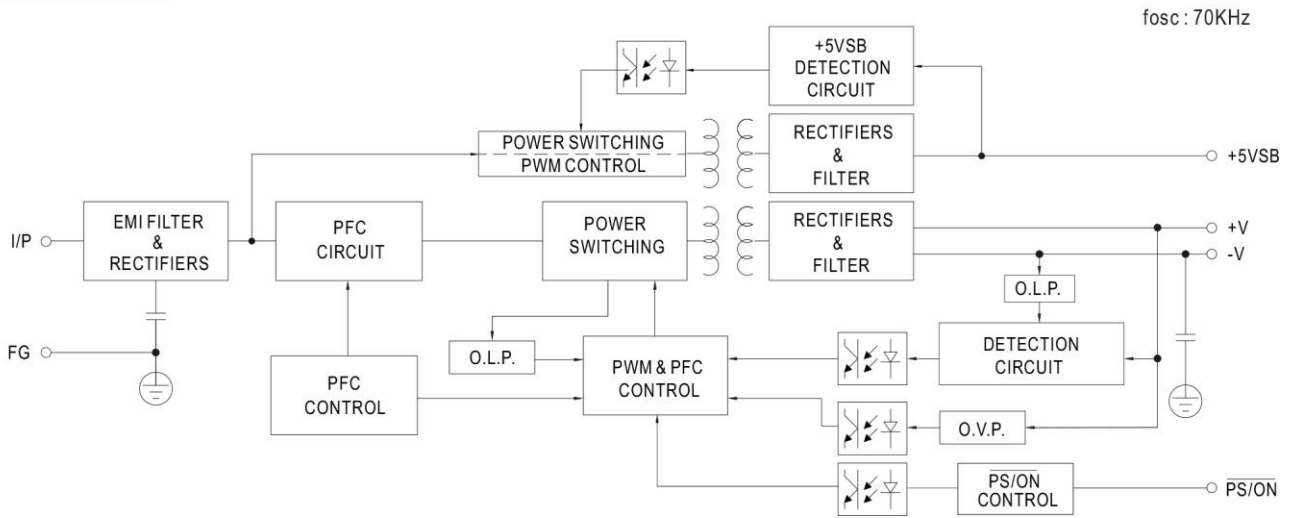
**SPECIFICATION**

MODEL	HEP-600C-12	HEP-600C-24	HEP-600C-48	
OUTPUT	BOOST CHARGE VOLTAGE V <sub>boost</sub>	14.4V	28.8V	57.6V
	FLOAT CHARGE VOLTAGE V <sub>float</sub>	13.6V	27.2V	54.4V
	VOLTAGE ADJ. RANGE	11.5 ~ 15.1V	23 ~ 30.2V	46.1 ~ 60.5V
	CURRENT ADJ. RANGE	17.5 ~ 35A	10.5 ~ 21A	5.2 ~ 10.5A
	RECOMMENDED BATTERY CAPACITY(AMP HOURS)(Note 3)	135 ~ 400AH	70 ~ 210AH	35 ~ 105AH
	BATTERY TYPE	Open & Sealed Lead Acid		
	OUTPUT CURRENT	35A	21A	10.5A
INPUT	VOLTAGE RANGE	85~264VAC (277VAC operational) 120~370VDC(390VDC operational)		
	FREQUENCY RANGE	47 ~ 63Hz		
	POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.95/230VAC, PF>0.93/277VAC at full load		
	EFFICIENCY (Typ.)	93.5%	94.5%	95.5%
	AC CURRENT (Typ.)	7A / 115VAC	3.3A / 230VAC	2.9A / 277VAC
	INRUSH CURRENT (Typ.)	COLD START 70A(t <sub>width</sub> =1010μs measured at 50% I <sub>peak</sub> ) at 230VAC		
	LEAKAGE CURRENT	<0.75mA / 277VAC		
PROTECTION	OVER VOLTAGE	16.5 ~ 20.5V	32.5 ~ 36.5V	68 ~ 73V
		Protection type : Shut down o/p voltage, re-power on to recover		
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover		
FUNCTION	REMOTE ON/OFF CONTROL	Power on : "Hi" >2 ~ 5V or Open circuit Power off : "Low" <0 ~ 0.5V or Short circuit		
	5V STANDBY	5V <sub>sb</sub> : 5V@0.5A ; tolerance ±5%, ripple : 100mVp-p(max.)		
ENVIRONMENT	WORKING TEMP.	-40 ~ +70°C (Refer to "Derating Curve")		
	WORKING HUMIDITY	20 ~ 95% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing		
	TEMP. COEFFICIENT	±0.05%/°C (0 ~ 60°C)		
	VIBRATION	20 ~ 500Hz, 10G 10min./1cycle, 72min. each along X, Y, Z axes		
SAFETY & EMC (Note.4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1, EAC TP TC 004 approved		
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC		
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH		
	EMC EMISSION	Compliance to EN55032 (CISPR32), radiation class A, conduction class B, EN61000-3-2,-3, EAC TP TC 020		
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, EAC TP TC 020		
OTHERS	MTBF	73.1K hrs min. MIL-HDBK-217F (25°C)		
	DIMENSION	280*144*48.5mm (L*W*H)		
	PACKING	3.9Kg; 4pcs/16Kg/0.9CUFT		
NOTE	<ol style="list-style-type: none"> <li>Modification for charger specification may be required for different battery specification.</li> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>This is Mean Well's suggested range. Please consult your battery manufacturer for their suggestions about maximum charging current limitation.</li> <li>The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."</li> <li>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).</li> </ol>			

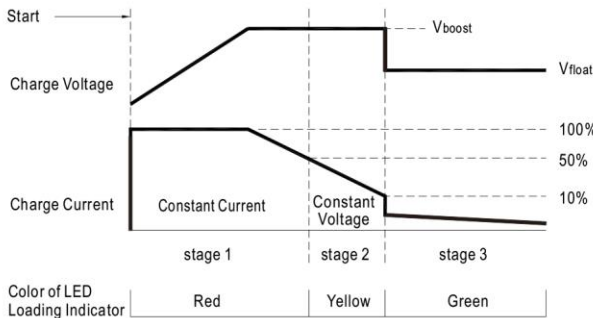


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**Block Diagram**



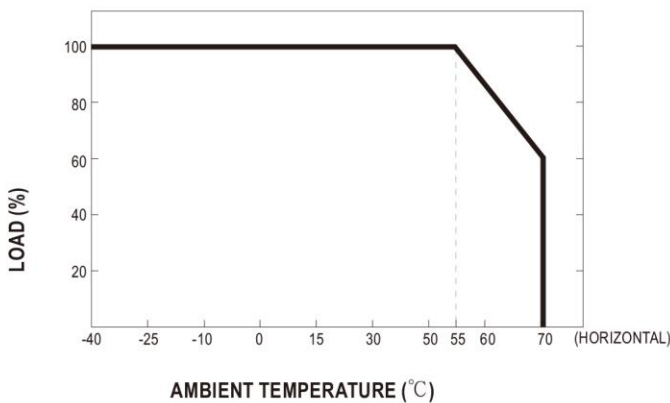
**Charging Curve**



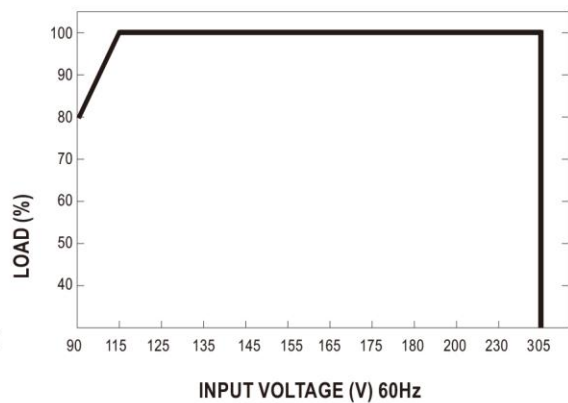
Factory default value:

State	HEP-600C-12	HEP-600C-24	HEP-600C-48
Constant Current	35A	21A	10.5A
Vboost	14.4V	28.8V	57.6V
Vfloat	13.6V	27.2V	54.4V

**Derating Curve**



**Static Characteristics**

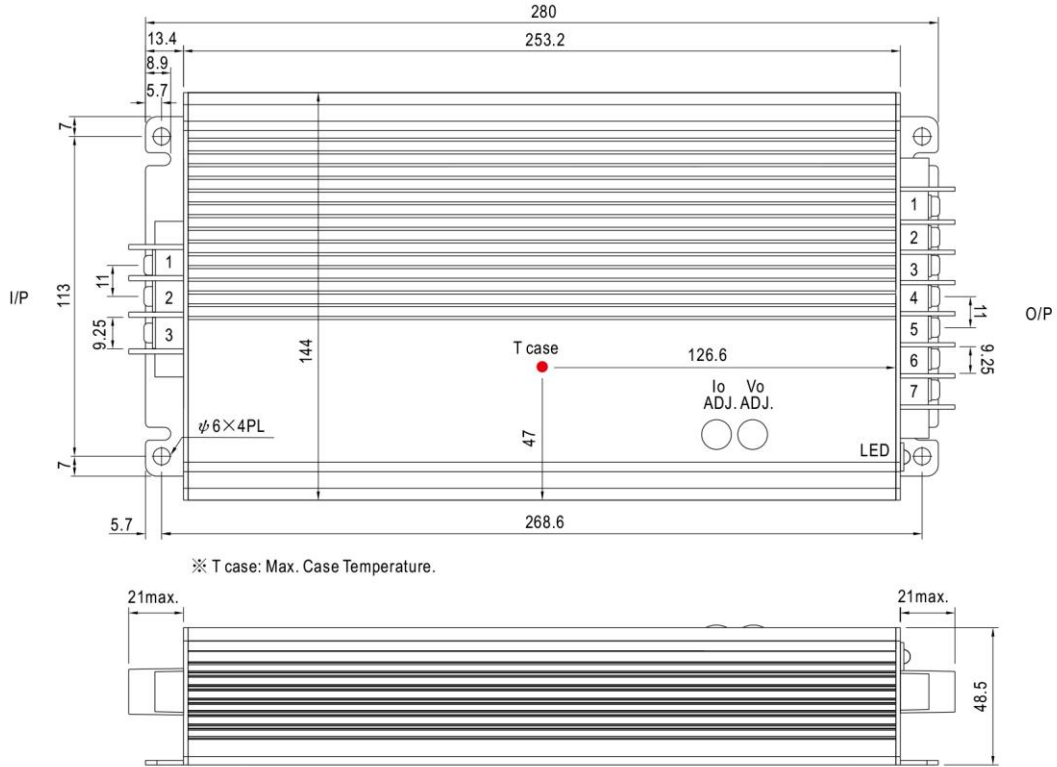




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**Mechanical Specification**

Case No.228A Unit:mm



※ T case: Max. Case Temperature.

※ Output voltage and constant current level can be adjusted through internal potentiometer.  
 (Can access by removing the rubber stopper on the case.)

**AC Input Terminal Pin No. Assignment**

Pin No.	Assignment
1	FG (⊖)
2	AC/L
3	AC/N

**DC Output Terminal Pin No. Assignment**

Pin No.	Assignment	Pin No.	Assignment
1	RC+	4,5	-V
2	RC- & GND	6,7	+V
3	+5V <sub>SB</sub>		