



600W Single Output Battery Charger

HEP-600C series



■ Features

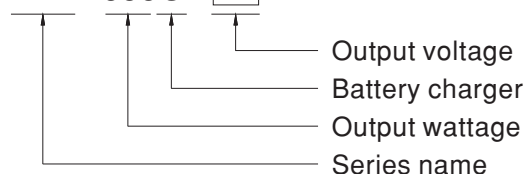
- Charger for lead-acid batteries (flooded, Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese) (Note.1)
- 3 stage charging
- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- No load power consumption <0.5W at remote OFF
- High efficiency up to 95.5%
- 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

■ 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



■ Applications

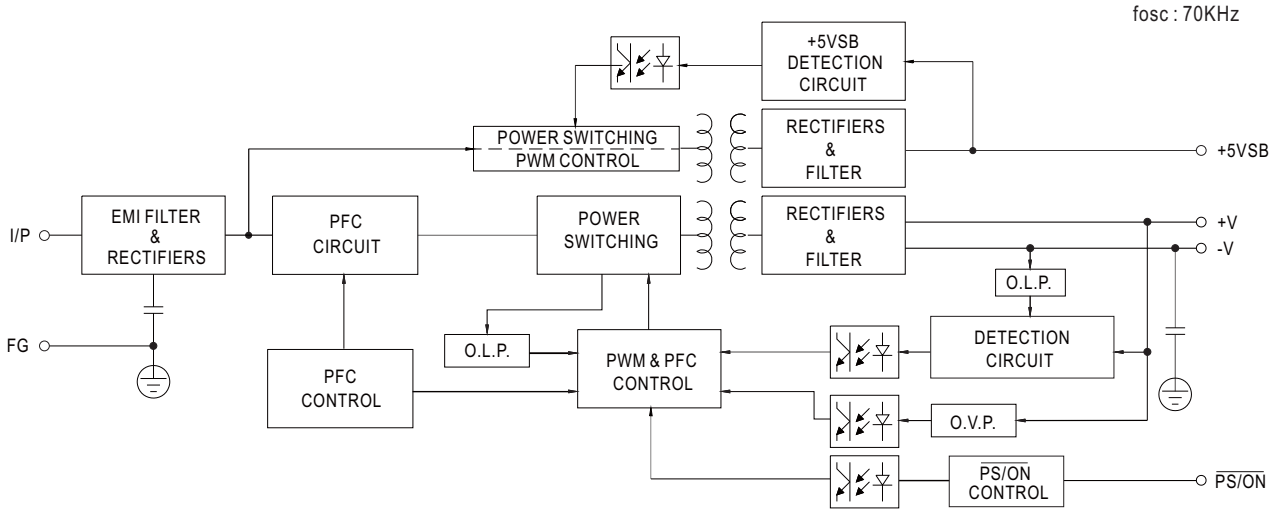
- Suitable for battery charger at harsh environment
- Robotic lawn mower
- Electronic transportation vehicle
- Recreational craft, personal yacht or workboat
- Security network and system
- Telecommunication base station
- Equipments or instruments with back-up battery



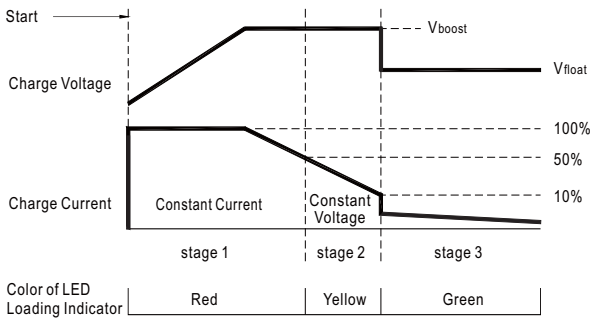
SPECIFICATION

| MODEL | HEP-600C-12 | HEP-600C-24 | HEP-600C-48 | |
|-----------------------|--|---|---------------|---------------|
| OUTPUT | BOOST CHARGE VOLTAGE V _{boost} | 14.4V | 28.8V | 57.6V |
| | FLOAT CHARGE VOLTAGE V _{float} | 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 | 90 ~ 305VAC 127 ~ 431VDC | | |
| | 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 _{width} =1010μs measured at 50% I _{peak}) 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 _{sb} : 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, criteria A, 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"> 1. Modification for charger specification may be required for different battery specification. Please contact battery vendor and MEAN WELL for details. 2. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 3. This is Mean Well's suggested range. Please consult your battery manufacturer for their suggestions about maximum charging current limitation. 4. 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." (as available on http://www.meanwell.com) 5. 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). | | | |

Block Diagram



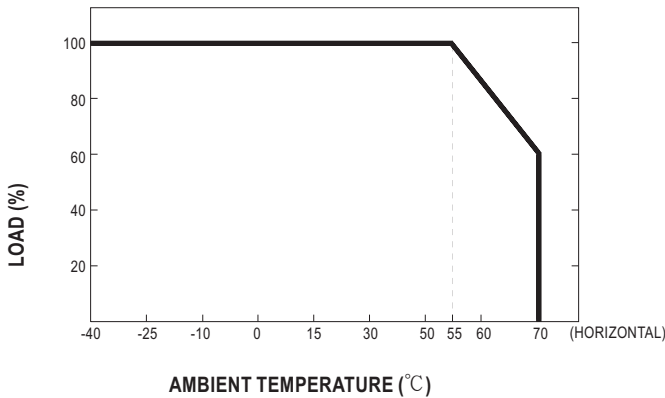
Charging Curve



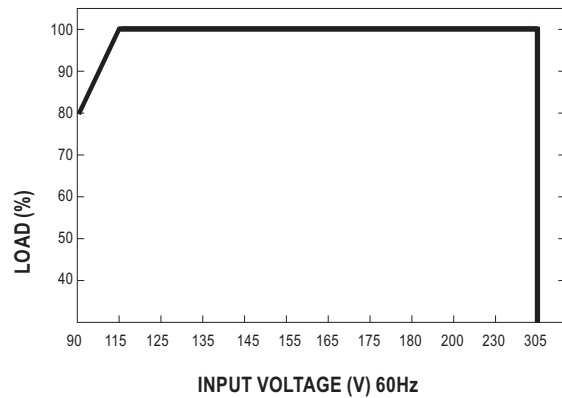
Factory default value:

| 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



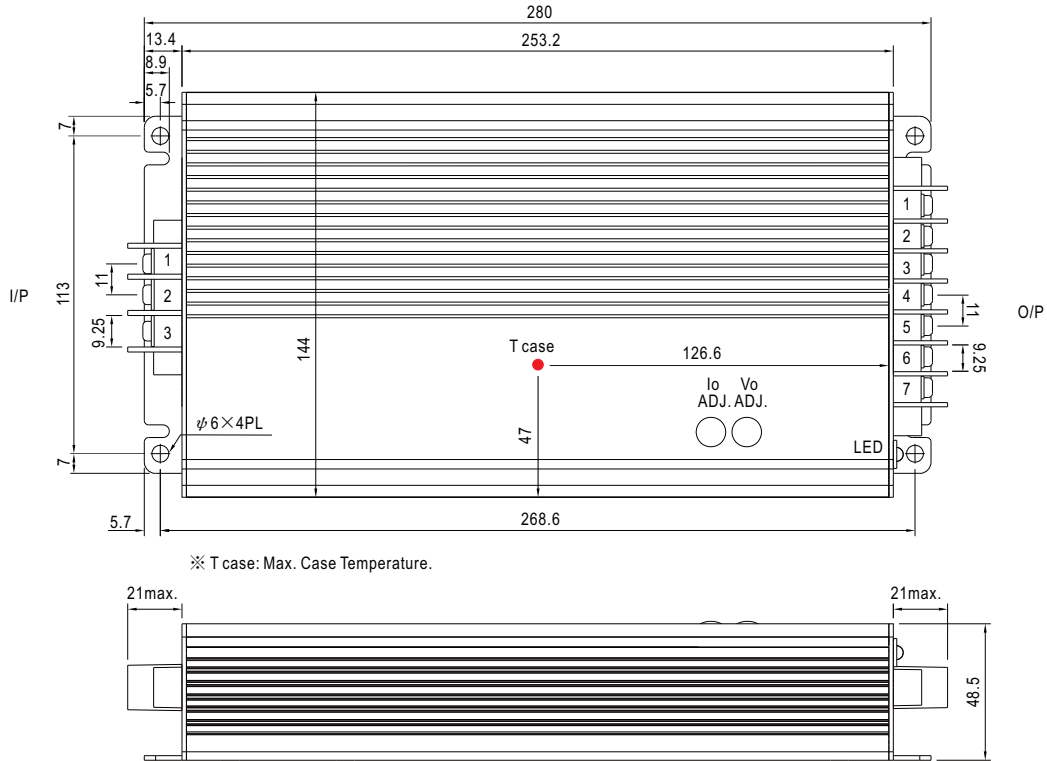
Static Characteristics



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 _{SB} | | |