



## ■ Features

- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- High efficiency up to 93%
- Fanless design, cooling by free air convection
- -55~+70°C wide operating range
- Aluminum case and filling with heat-conducted silicone
- IP65 design, optional IP68 rated model available
- Meet 6KV surge immunity level
- Withstand 10G vibration test
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Operating altitude up to 5000 meters (Note.9)
- 6 years warranty

## ■ Applications

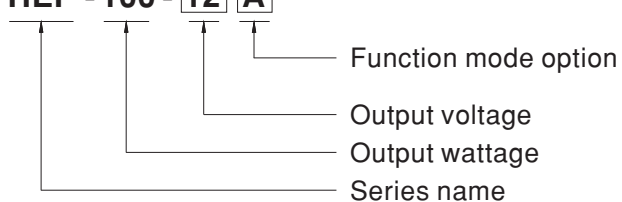
- Outdoor telecommunication equipment
- Outdoor electronic signage and billboard
- Petroleum plant or mine shaft facility

## ■ Description

HEP-100 is a 100W industrial AC/DC power supply featuring the outstanding capability to operate under highly humid, dusty, oily, and high-vibration harsh environment. The entire series is housed with the aluminum case and fully potted with heat-conducted silicone. Thanks to state-of-the-art design, the working efficiency is up to 93%, enabling HEP-100 perfectly work between -55°C and +70°C under free air convection.

## ■ Model Encoding

HEP - 100 - 12 A



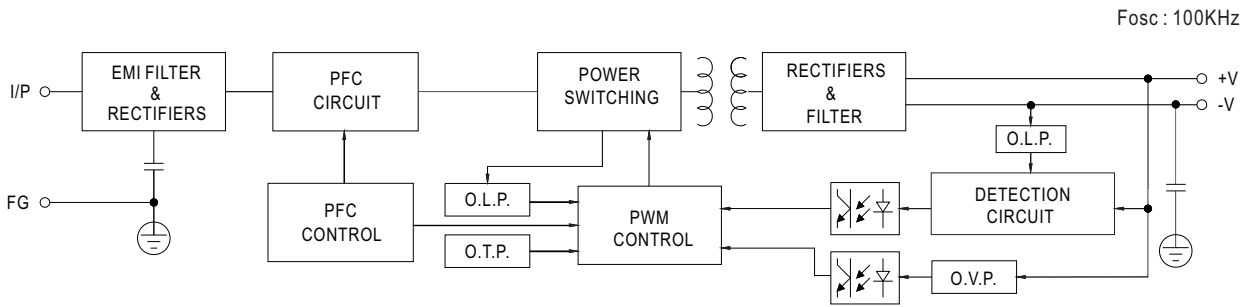
{ A : Standard model, IP65, Vo and Io level can be adjusted through internal potentiometer.  
 Blank : Optional model, IP68, with fixed Vo and Io level.



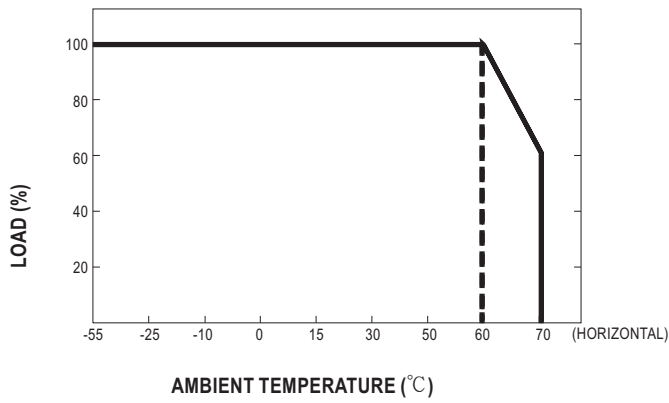
**SPECIFICATION**

| MODEL               |  | HEP-100-12□  | HEP-100-15□    | HEP-100-24□   | HEP-100-36□  | HEP-100-48□ | HEP-100-54□ |
|---------------------|--|--|----------------|---------------|--------------|-------------|-------------|
| OUTPUT              | DC VOLTAGE   | 12V  | 15V            | 24V           | 36V          | 48V         | 54V         |
|                     | RATED CURRENT  | 8.34A  | 6.67A          | 4A            | 2.65A        | 2A          | 1.77A       |
|                     | RATED POWER  | 100.08W  | 100.05W        | 96W           | 95.4W        | 96W         | 95.58W      |
|                     | RIPPLE & NOISE (max.) Note.2   | 120mVp-p   | 150mVp-p       | 150mVp-p      | 200mVp-p     | 200mVp-p    | 200mVp-p    |
|                     | VOLTAGE ADJ. RANGE Note.5  | 10.8 ~ 13.5V   | 13.5 ~ 17V     | 22 ~ 27V      | 33 ~ 40V     | 43 ~ 53V    | 49 ~ 58V    |
|                     | CURRENT ADJ. RANGE   | Can be adjusted by internal potentiometer for A type only  |                |               |              |             |             |
|                     |  | 5 ~ 8.34A  | 4 ~ 6.67A      | 2.5 ~ 4A      | 1.65 ~ 2.65A | 1.25 ~ 2A   | 1.1 ~ 1.77A |
|                     | VOLTAGE TOLERANCE Note.3   | ±1.0%  | ±1.0%          | ±1.0%         | ±1.0%        | ±1.0%       | ±1.0%       |
|                     | LINE REGULATION  | ±0.5%  | ±0.5%          | ±0.5%         | ±0.5%        | ±0.5%       | ±0.5%       |
|                     | LOAD REGULATION  | ±2.0%  | ±1.5%          | ±0.5%         | ±0.5%        | ±0.5%       | ±0.5%       |
|                     | SETUP, RISE TIME Note.7  | 1200ms,50ms/115VAC 500ms,50ms/230VAC at full load  |                |               |              |             |             |
| HOLD UP TIME (Typ.) | 16ms at full load 230VAC /115VAC   |  |                |               |              |             |             |
| INPUT               | VOLTAGE RANGE Note.4   | 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.)  | 92%  | 92%            | 93%           | 93%          | 93%         | 93%         |
|                     | AC CURRENT (Typ.)  | 1.2A / 115VAC  | 0.55A / 230VAC | 0.5A / 277VAC |              |             |             |
|                     | INRUSH CURRENT(Typ.)   | COLD START 60A at 230VAC   |                |               |              |             |             |
|                     | LEAKAGE CURRENT  | <0.75mA / 277VAC   |                |               |              |             |             |
| PROTECTION          | OVERLOAD   | 105 ~ 125%   |                |               |              |             |             |
|                     |  | Protection type : Constant current limiting, recovers automatically after fault condition is removed |                |               |              |             |             |
|                     | SHORT CIRCUIT  | Constant current limiting, recovers automatically after fault condition is removed                   |                |               |              |             |             |
|                     | OVER VOLTAGE   | 14 ~ 17V   | 18 ~ 21V       | 28 ~ 34V      | 41 ~ 46V     | 54 ~ 63V    | 59 ~ 65V    |
|                     |  | Protection type : Shut down o/p voltage with auto-recovery or re-power on to recovery                |                |               |              |             |             |
| OVER TEMPERATURE    | Shut down o/p voltage, recovers automatically after temperature goes down  |  |                |               |              |             |             |
| ENVIRONMENT         | WORKING TEMP.  | -55 ~ +70°C (Refer to "Derating Curve")  |                |               |              |             |             |
|                     | WORKING HUMIDITY   | 20 ~ 95% RH non-condensing   |                |               |              |             |             |
|                     | STORAGE TEMP., HUMIDITY  | -60 ~ +85°C, 10 ~ 95% RH   |                |               |              |             |             |
|                     | TEMP. COEFFICIENT  | ±0.03%/°C (0 ~ 60°C)   |                |               |              |             |             |
|                     | VIBRATION  | 20 ~ 500Hz, 10G 12min./1cycle, period for 72min. each along X, Y, Z axes                             |                |               |              |             |             |
| SAFETY & EMC        | SAFETY STANDARDS Note.6  | UL60950-1, IP65 (or IP68 for HEP-100 Blank type) approved ; design refer to TUV EN60950-1            |                |               |              |             |             |
|                     | 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 EN55022 (CISPR22) Class B, EN61000-3-2,-3  |                |               |              |             |             |
|                     | EMC IMMUNITY   | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level (surge 6KV), criteria A        |                |               |              |             |             |
| OTHERS              | MTBF   | 164.7K hrs min. MIL-HDBK-217F (25°C)   |                |               |              |             |             |
|                     | DIMENSION  | 220*68*38.8mm (L*W*H)  |                |               |              |             |             |
|                     | PACKING  | 1.12Kg; 12pcs/14.4Kg/0.8CUFT   |                |               |              |             |             |
| NOTE                | <ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>Derating may be needed under low input voltages. Please check the static characteristics for more details.</li> <li>A type only.</li> <li>Safety and EMC design refer to EN60598-1, CNS15233, GB7000.1, FCC part18.</li> <li>Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.</li> <li>The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.</li> <li>The ambient temperature derating of 3.5°C/1000m is needed for operating altitude greater than 2000m(6500ft).</li> <li>The water protection level test for the IP68 rating is performed 1000mm below the surface of the water for 1 month.</li> </ol> |  |                |               |              |             |             |

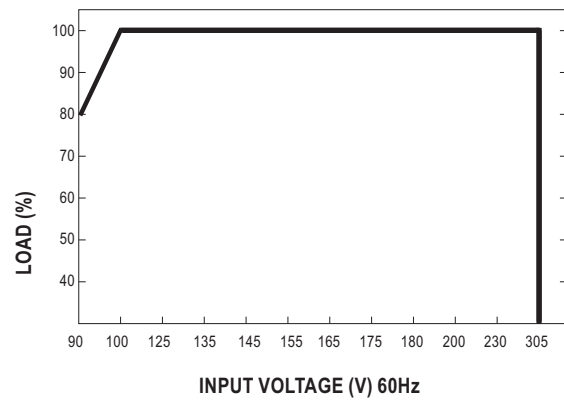
■ Block Diagram



■ Derating Curve



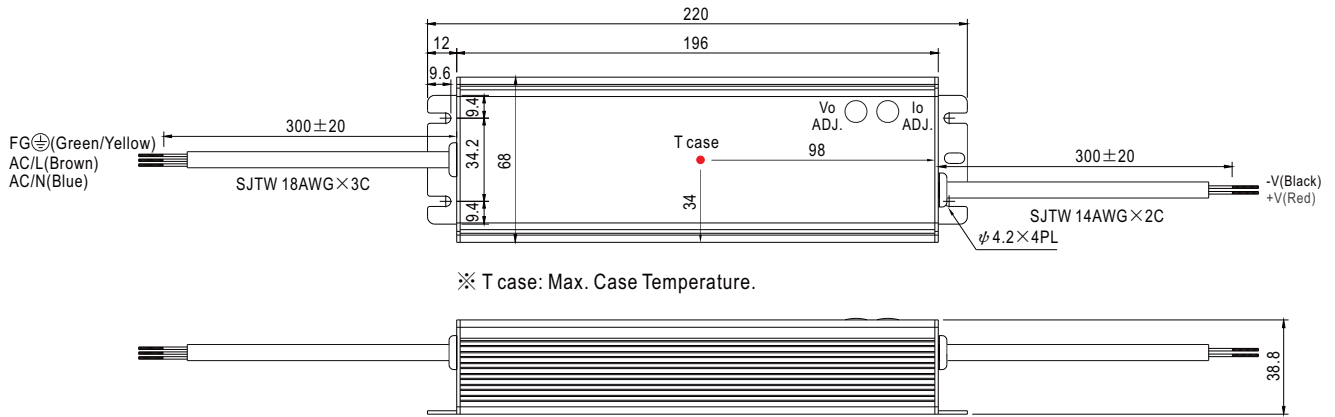
■ Static Characteristics



**Mechanical Specification**

Case No.994A Unit:mm

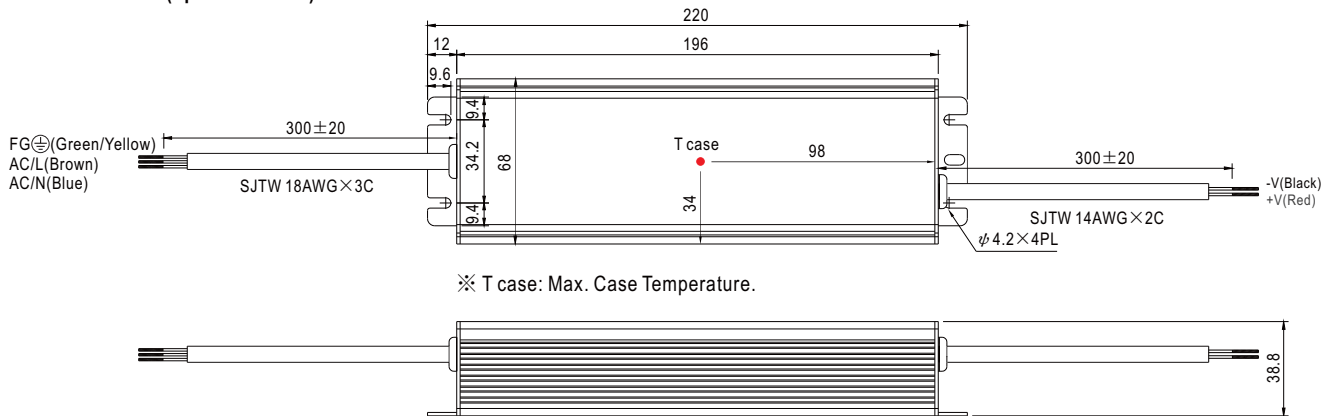
**A Type: HEP-100- A(standard model)**



※ T case: Max. Case Temperature.

※ IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.  
(Can access by removing the rubber stopper on the case.)

**Blank: HEP-100(optional model)**



※ T case: Max. Case Temperature.

※ IP68 rated. Cable for I/O connection.

**Installation Manual**

Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>