



240W Switching Power Supply for Harsh Environment

HEP-240 series

User's Manual



IP65 IP68 (optional)

UL62368-1 TPTC004 IEC62368-1



■ Features

- Universal AC input / Full range(up to 305VAC)
- Built-in active PFC function
- High efficiency up to 93.5%
- 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
- Operating altitude up to 5000 meters (Note.8)
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 6 years warranty (Note.10)

■ Applications

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

■ GTIN CODE

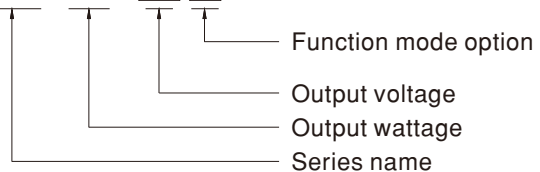
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

■ Description

HEP-240 is a 240W industrial AC/DC power supply featuring the outstanding capability to operate under a harsh environment with high dust density, humidity, vibration and altitude. The entire series is housed with a robust aluminum case and fully potted with heat-conducted silicone. Thanks to state-of-the-art design, the working efficiency is up to 93.5%, enabling HEP-240, with a fanless design, perfectly work between -55°C and +70°C under free air convection.

■ Model Encoding

HEP - 240 - 15 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.

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SPECIFICATION

| MODEL | | HEP-240-12□ | HEP-240-15□ | HEP-240-24□ | HEP-240-36□ | HEP-240-48□ | HEP-240-54□ | |
|-------------------------|---|---|---------------|--------------------------------|--------------|--------------|--------------|--|
| OUTPUT | DC VOLTAGE | 12V | 15V | 24V | 36V | 48V | 54V | |
| | RATED CURRENT | 16A | 15A | 10A | 6.7A | 5A | 4.45A | |
| | RATED POWER | 192W | 225W | 240W | 241.2W | 240W | 240.3W | |
| | RIPPLE & NOISE (max.) Note.2 | 150mVp-p | 150mVp-p | 150mVp-p | 250mVp-p | 250mVp-p | 350mVp-p | |
| | VOLTAGE ADJ. RANGE Note.5 | 11.2 ~ 12.8V | 14 ~ 16V | 22.4 ~ 25.6V | 33.5 ~ 38.5V | 44.8 ~ 51.2V | 50 ~ 57V | |
| | CURRENT ADJ. RANGE | Can be adjusted by internal potentiometer for A type only | | | | | | |
| | | 8 ~ 16A | 7.5 ~ 15A | 5 ~ 10A | 3.3 ~ 6.7A | 2.5 ~ 5A | 2.23 ~ 4.45A | |
| | VOLTAGE TOLERANCE Note.3 | ±2.5% | ±2.0% | ±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.6 | 1000ms,80ms/115VAC 500ms,80ms/230VAC at full load | | | | | | | |
| HOLD UP TIME (Typ.) | 15ms at full load 230VAC /115VAC | | | | | | | |
| INPUT | VOLTAGE RANGE Note.4 | 85~264VAC (277VAC operational) | | 120~370VDC(390VDC operational) | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | |
| | POWER FACTOR (Typ.) | PF>0.98/115VAC, PF>0.95/230VAC, PF>0.92/277VAC at full load | | | | | | |
| | EFFICIENCY (Typ.) | 90% | 90% | 92.5% | 92.5% | 93% | 93.5% | |
| | AC CURRENT (Typ.) | 12V | 2A / 115VAC | 1.05A / 230VAC | 0.9A/277VAC | | | |
| | | 15~54V | 2.5A / 115VAC | 1.3A / 230VAC | 1.1A/277VAC | | | |
| | INRUSH CURRENT(Typ.) | COLD START 75A at 230VAC | | | | | | |
| LEAKAGE CURRENT | <0.75mA / 277VAC | | | | | | | |
| PROTECTION | OVER CURRENT | 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 | 13.5 ~ 18V | 17.5 ~ 21.5V | 27 ~ 34V | 43 ~ 49V | 55 ~ 63V | 60 ~ 67V | |
| | Protection type : Shut down and latch off o/p voltage, re-power on to recover | | | | | | | |
| 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 ~ +80°C, 10 ~ 95% RH non-condensing | | | | | | |
| | 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.8 | UL62368-1, IEC62368-1, IP65 (or IP68 for HEP-240 Blank-Type), EAC TP TC 004 approved; Design refer to BS EN/EN62368-1 | | | | | | |
| | 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 BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020 | | | | | | |
| | EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, light industry level (surge 6KV), EAC TP TC 020 | | | | | | |
| OTHERS | MTBF | 2008.7K hrs min. Telcordia SR-332 (Bellcore); 171.3Khrs min. MIL-HDBK-217F (25°C) | | | | | | |
| | DIMENSION | 244.2*68*38.8mm (L*W*H) | | | | | | |
| | PACKING | 1.3Kg; 12pcs/16.6Kg/0.84CUFT | | | | | | |
| NOTE | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Derating may be needed under low input voltages. Please check the static characteristics for more details.</p> <p>5. A-Type only.</p> <p>6. 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.</p> <p>7. 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.</p> <p>8. The water protection level test for the IP68 rating is performed 1000mm below the surface of the water for 1 month.</p> <p>9. Refer to warranty statement.</p> <p>10. 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).</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p> | | | | | | | |

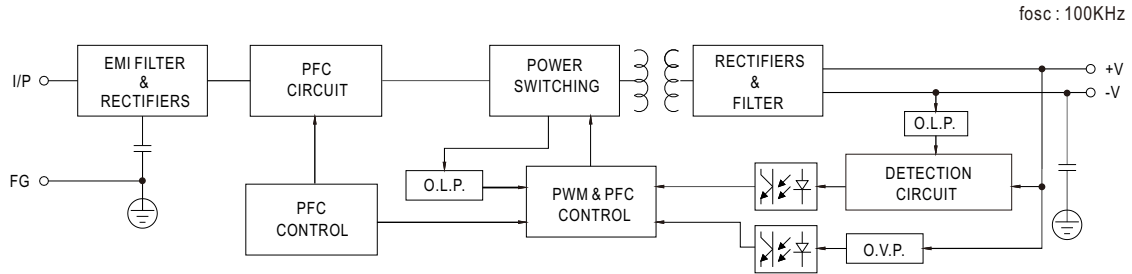
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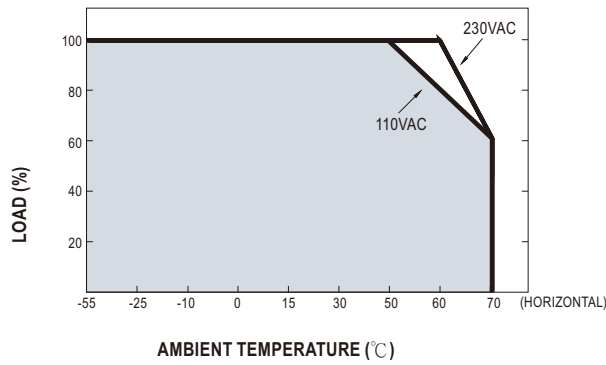
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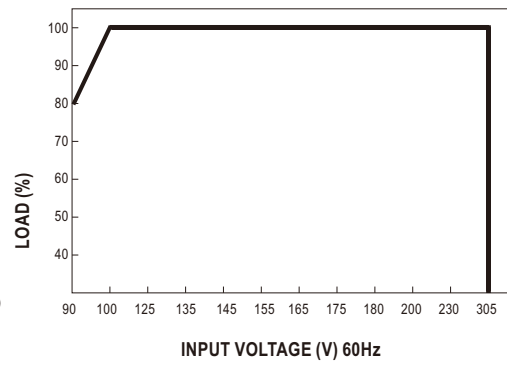
■ Block Diagram



■ Derating Curve



■ Static Characteristics



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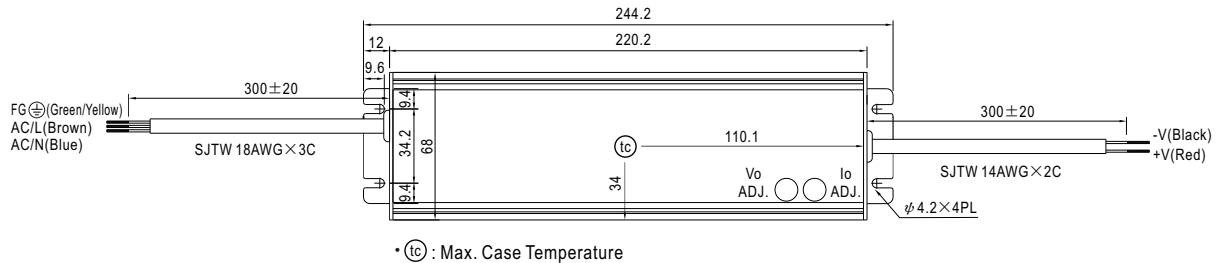
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Mechanical Specification

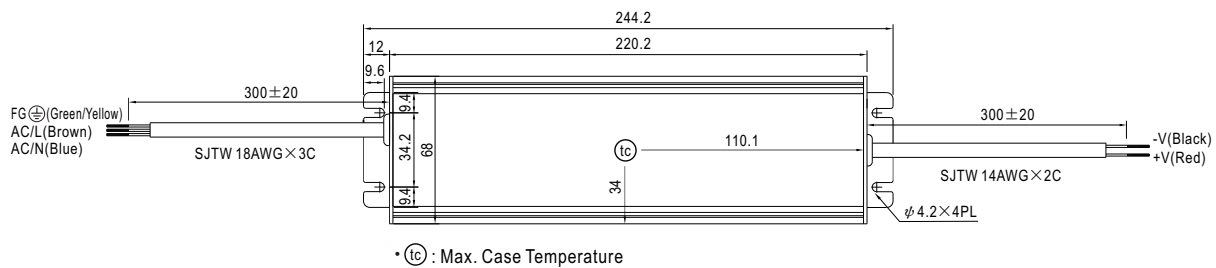
Case No.994H Unit:mm

A-Type: HEP-240-_A(standard model)



※ 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-Type: HEP-240(optional model)



※ IP68 rated. Cable for I/O connection.

Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>

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