



320W Switching Power Supply for Harsh Environment

HEP-320 series



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 95%
- 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

■ Applications

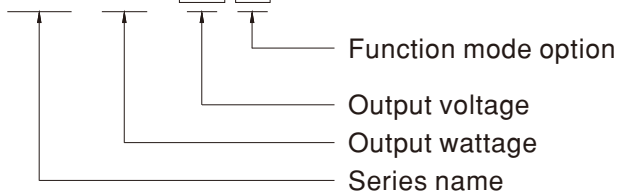
- Outdoor telecommunication equipment
- Outdoor electronic signage and billboard
- Petroleum plant or mine shaft facility

■ Description

HEP-320 is a 320W 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 95%, enabling HEP-320, with a fanless design, perfectly work between -55°C and +70°C under free air convection.

■ Model Encoding

HEP - 320 - 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**

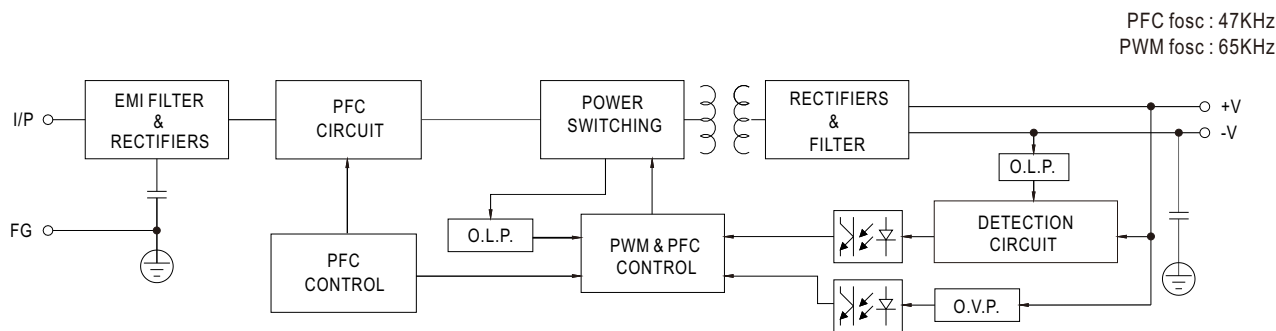
| MODEL | | HEP-320-12 | HEP-320-15 | HEP-320-24 | HEP-320-36 | HEP-320-48 | HEP-320-54 |
|--------------|---|--|----------------|----------------|-------------|-------------|--------------|
| OUTPUT | DC VOLTAGE | 12V | 15V | 24V | 36V | 48V | 54V |
| | RATED CURRENT | 22A | 19A | 13.34A | 8.9A | 6.7A | 5.95A |
| | RATED POWER | 264W | 285W | 320.16W | 320.4W | 321.6W | 321.3W |
| | RIPPLE & NOISE (max.) <small>Note.2</small> | 150mVp-p | 150mVp-p | 150mVp-p | 250mVp-p | 250mVp-p | 350mVp-p |
| | VOLTAGE ADJ. RANGE <small>Note.5</small> | 10.8 ~ 13.5V | 13.5 ~ 17V | 21 ~ 26V | 32 ~ 39V | 43 ~ 52V | 49 ~ 58V |
| | CURRENT ADJ. RANGE <small>Note.5</small> | 11 ~ 22A | 9.5 ~ 19A | 6.67 ~ 13.34A | 4.45 ~ 8.9A | 3.35 ~ 6.7A | 2.97 ~ 5.95A |
| | VOLTAGE TOLERANCE <small>Note.3</small> | ± 3.0% | ± 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 <small>Note.6</small> | 2500ms,80ms/115VAC 500ms,80ms/230VAC at full load | | | | | |
| | HOLD UP TIME (Typ.) | 15ms at full load 230VAC /115VAC | | | | | |
| INPUT | VOLTAGE RANGE <small>Note.4</small> | 85~264VAC (277VAC operational) 120~370VDC(390VDC operational) | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | |
| | POWER FACTOR (Typ.) | PF>0.98/115VAC, PF>0.95/230VAC, PF>0.94/277VAC at full load | | | | | |
| | EFFICIENCY (Typ.) | 91% | 92.5% | 94% | 94% | 94.5% | 95% |
| | AC CURRENT (Typ.) | 3.5A / 115VAC | 1.65A / 230VAC | 1.45A / 277VAC | | | |
| | INRUSH CURRENT(Typ.) | COLD START 70A at 230VAC | | | | | |
| | LEAKAGE CURRENT | <0.75mA / 277VAC | | | | | |
| PROTECTION | OVER CURRENT | 105 ~ 125% Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | | | |
| | SHORT CIRCUIT | Hiccup mode, recovers automatically after fault condition is removed | | | | | |
| | OVER VOLTAGE | 14 ~ 17V | 17.5 ~ 21V | 27 ~ 33V | 40 ~ 46V | 53.5 ~ 60V | 59 ~ 65V |
| | | Protection type : Shut down and latch off o/p voltage, re-power on to recover | | | | | |
| | OVER TEMPERATURE | Shut down and latch off o/p voltage, re-power on to recover | | | | | |
| ENVIRONMENT | WORKING TEMP. | -55 ~ +70℃ (Refer to "Derating Curve") | | | | | |
| | WORKING HUMIDITY | 20 ~ 95% RH non-condensing | | | | | |
| | STORAGE TEMP., HUMIDITY | -60 ~ +80℃, 10 ~ 95% RH non-condensing | | | | | |
| | TEMP. COEFFICIENT | ± 0.03%/℃ (0 ~ 60℃) | | | | | |
| | VIBRATION | 20 ~ 500Hz, 10G 12min./1cycle, period for 72min. each along X, Y, Z axes | | | | | |
| SAFETY & EMC | SAFETY STANDARDS <small>Note.8</small> | UL62368-1,IEC62368-1, IP65 (or IP68 for HEP-320 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℃ / 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), criteria A, EAC TP TC 020 | | | | | |
| OTHERS | MTBF | 154.2K hrs min. MIL-HDBK-217F (25℃) | | | | | |
| | DIMENSION | 252*90*43.8mm (L*W*H) | | | | | |
| | PACKING | 1.88Kg; 8pcs/16Kg/0.92CUFT | | | | | |
| NOTE | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltages. Please check the static characteristics for more details. 5. A-type only. 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. 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. 8. The water protection level test for the IP68 rating is performed 1000mm below the surface of the water for 1 month. 9. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft). ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx | | | | | | |



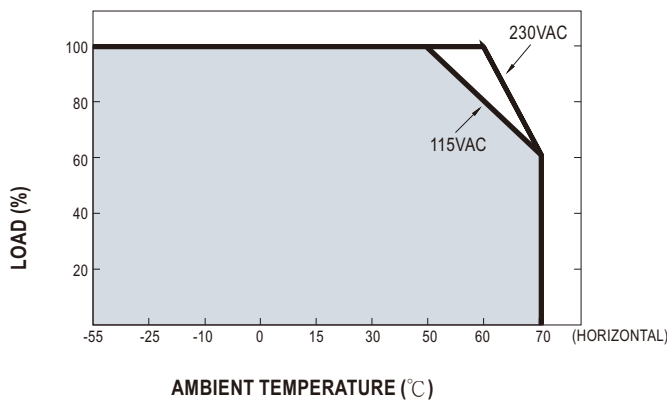
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HEP-320 series

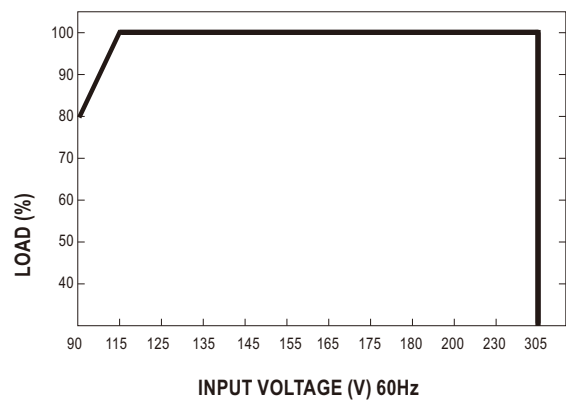
■ Block Diagram



■ Derating Curve



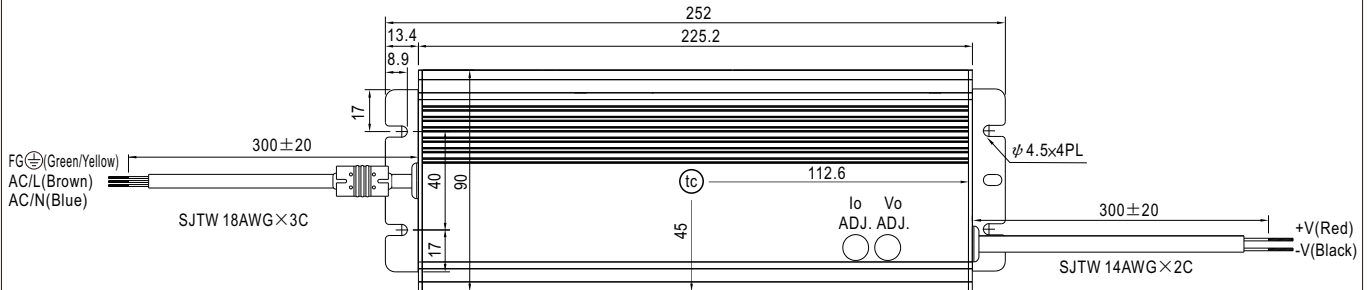
■ Static Characteristics



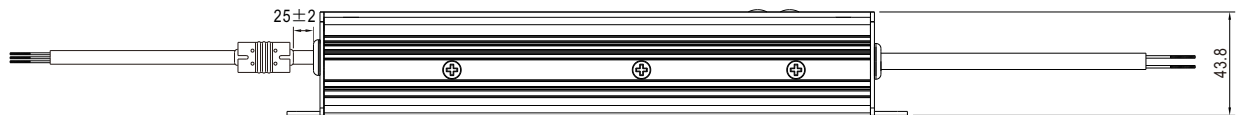
Case No.202A Unit:mm

Mechanical Specification

A-Type: HEP-320- _A(standard model)

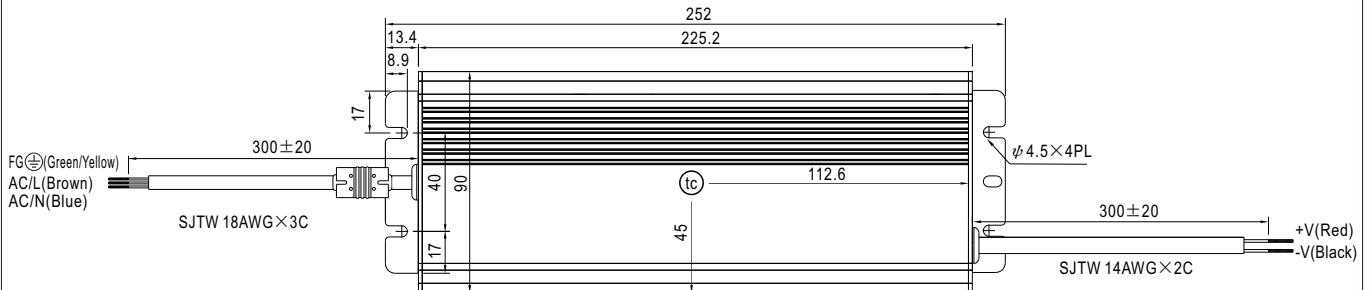


• t_c : Max. Case Temperature

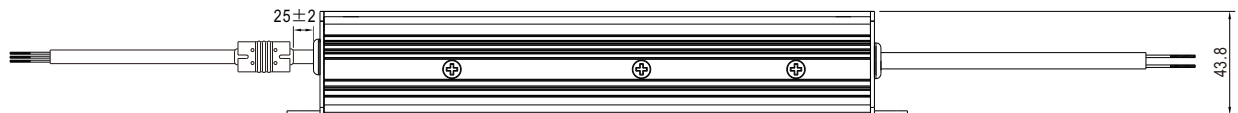


※ IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.
(Can access by removing the rubber stopper on the case.)

Blank-Type: HEP-320(optional model)



• t_c : Max. Case Temperature



※IP68 rated. Cable for I/O connection.

Installation Manual

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