



320W Single Output with PFC Function

RSP-320 series

Dimension

| | | | | |
|------|---|------|---|-----------|
| L | * | W | * | H |
| 215 | * | 115 | * | 30 mm |
| 8.46 | * | 4.53 | * | 1.18 inch |

User's Manual



■ **Features**

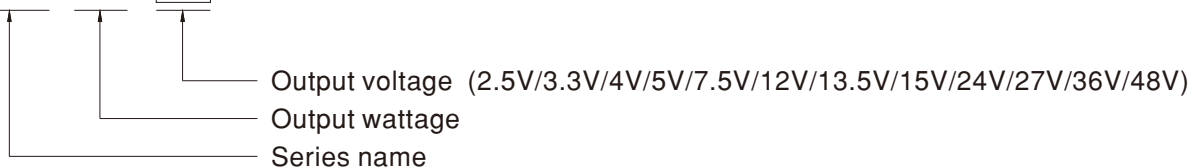
- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 90%
- Forced air cooling by built-in DC Fan with fan speed control function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Optional conformal coating
- LED indicator for power on
- 3 years warranty

■ **Description**

RSP-320 is a 320W single output enclosed type AC/DC power supply. This series operates for 88~264VAC input voltage and offers the models with the DC output mostly demanded from the industry. Each model is cooled by the built-in fan with fan speed control, working for the temperature up to 70°C.

■ **Model Encoding / Order Information**

RSP - 320 - 24



■ **Applications**

- Factory control or automation apparatus
- Test and measurement instrument
- Laser related machine
- Burn-in facility
- RF application

■ **GTIN CODE**

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

SPECIFICATION

| MODEL | | RSP-320-2.5 | RSP-320-3.3 | RSP-320-4 | RSP-320-5 | RSP-320-7.5 | RSP-320-12 |
|-----------------------|---|---|-------------|-----------------------------|--------------|-------------|--------------|
| OUTPUT | DC VOLTAGE | 2.5V | 3.3V | 4V | 5V | 7.5V | 12V |
| | RATED CURRENT | 60A | 60A | 60A | 60A | 40A | 26.7A |
| | CURRENT RANGE | 0 ~ 60A | 0 ~ 60A | 0 ~ 60A | 0 ~ 60A | 0 ~ 40A | 0 ~ 26.7A |
| | RATED POWER | 150W | 198W | 240W | 300W | 300W | 320.4W |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 100mVp-p | 100mVp-p | 150mVp-p | 150mVp-p | 150mVp-p |
| | VOLTAGE ADJ. RANGE | 2.35 ~ 2.85V | 2.97 ~ 3.8V | 3.7 ~ 4.3V | 4.5 ~ 5.5V | 6 ~ 9V | 10 ~ 13.2V |
| | VOLTAGE TOLERANCE Note.3 | ±2.0% | ±2.0% | ±2.0% | ±2.0% | ±2.0% | ±1.0% |
| | LINE REGULATION | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.3% |
| | LOAD REGULATION | ±1.5% | ±1.5% | ±1.0% | ±1.0% | ±1.0% | ±0.5% |
| | SETUP, RISE TIME | 1500ms, 50ms/230VAC 3000ms, 50ms/115VAC at full load | | | | | |
| HOLD UP TIME (Typ.) | 8ms at full load 230VAC /115VAC | | | | | | |
| INPUT | VOLTAGE RANGE Note.4 | 88 ~ 264VAC 124 ~ 370VDC | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | |
| | POWER FACTOR (Typ.) | PF>0.95/230VAC | | PF>0.98/115VAC at full load | | | |
| | EFFICIENCY (Typ.) | 75.5% | 79.5% | 81% | 83% | 88% | 88% |
| | AC CURRENT (Typ.) | 2.7A/115VAC | 1.5A/230VAC | | 4A/115VAC | 2A/230VAC | |
| | INRUSH CURRENT (Typ.) | 20A/115VAC | 40A/230VAC | | | | |
| | LEAKAGE CURRENT | <1mA / 240VAC | | | | | |
| PROTECTION | OVERLOAD | 105 ~ 135% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | | | |
| | OVER VOLTAGE | 2.88 ~ 3.38V | 3.8 ~ 4.5V | 4.5 ~ 5.3V | 5.75 ~ 6.75V | 9.4 ~ 10.9V | 13.8 ~ 16.2V |
| | OVER TEMPERATURE | Shut down o/p voltage, recovers automatically after temperature goes down | | | | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +70°C (Refer to "Derating Curve") | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85°C, 10 ~ 95% RH | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 50°C) | | | | | |
| SAFETY & EMC (Note 5) | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes | | | | | |
| | SAFETY STANDARDS | UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004, CCC GB4943.1, BSMI CNS14336-1, AS/NZS 60950.1 approved | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC | | | | | |
| | 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, CNS13438, GB9254 Class B, GB17625.1 | | | | | |
| OTHERS | EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, light industry level, EAC TP TC 020 | | | | | |
| | MTBF | 1826.4K hrs min. Telcordia SR-332 (Bellcore) ; 192.9K hrs min. MIL-HDBK-217F (25°C) | | | | | |
| | DIMENSION | 215*115*30mm (L*W*H) | | | | | |
| | PACKING | 0.9Kg; 15pcs/14.5Kg/0.67CUFT | | | | | |
| NOTE | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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 derating curve for more details. 5. 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) 6. For charging related applications, please consult Mean Well for details. 7. Strongly recommended that external output capacitance should not exceed 5000uF. (Only for: RSP-320-2.5/-3.3/-4/-5/-7.5/-12/-13.5/-15) 8. 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). ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx | | | | | | |


320W Single Output with PFC Function
RSP-320 series
SPECIFICATION

| MODEL | RSP-320-13.5 | RSP-320-15 | RSP-320-24 | RSP-320-27 | RSP-320-36 | RSP-320-48 | |
|-----------------------|--|---|--------------|-----------------------------|--------------|--------------|------------|
| OUTPUT | DC VOLTAGE | 13.5V | 15V | 24V | 27V | 36V | 48V |
| | RATED CURRENT | 23.8A | 21.4A | 13.4A | 11.9A | 8.9A | 6.7A |
| | CURRENT RANGE | 0 ~ 23.8A | 0 ~ 21.4A | 0 ~ 13.4A | 0 ~ 11.9A | 0 ~ 8.9A | 0 ~ 6.7A |
| | RATED POWER | 321.3W | 321W | 321.6W | 321.3W | 320.4W | 321.6W |
| | RIPPLE & NOISE (max.) Note.2 | 150mVp-p | 150mVp-p | 150mVp-p | 200mVp-p | 220mVp-p | 240mVp-p |
| | VOLTAGE ADJ. RANGE | 12 ~ 15V | 13.5 ~ 18V | 20 ~ 26.4V | 26 ~ 31.5V | 32.4 ~ 39.6V | 41 ~ 56V |
| | VOLTAGE TOLERANCE Note.3 | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% |
| | LINE REGULATION | ±0.3% | ±0.3% | ±0.2% | ±0.2% | ±0.2% | ±0.2% |
| | LOAD REGULATION | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% |
| | SETUP, RISE TIME | 1500ms, 50ms/230VAC 3000ms, 50ms/115VAC at full load | | | | | |
| HOLD UP TIME (Typ.) | 8ms at full load 230VAC /115VAC | | | | | | |
| INPUT | VOLTAGE RANGE Note.4 | 88 ~ 264VAC 124 ~ 370VDC | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | |
| | POWER FACTOR (Typ.) | PF>0.95/230VAC | | PF>0.98/115VAC at full load | | | |
| | EFFICIENCY (Typ.) | 88% | 88.5% | 89% | 89% | 89.5% | 90% |
| | AC CURRENT (Typ.) | 4A/115VAC 2A/230VAC | | | | | |
| | INRUSH CURRENT (Typ.) | 20A/115VAC 40A/230VAC | | | | | |
| | LEAKAGE CURRENT | <1mA / 240VAC | | | | | |
| PROTECTION | OVERLOAD | 105 ~ 135% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | | | |
| | OVER VOLTAGE | 15.7 ~ 18.4V | 18.8 ~ 21.8V | 27.6 ~ 32.4V | 32.9 ~ 38.3V | 41.4 ~ 48.6V | 58.4 ~ 68V |
| | OVER TEMPERATURE | Shut down o/p voltage, recovers automatically after temperature goes down | | | | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +70°C (Refer to "Derating Curve") | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85°C, 10 ~ 95% RH | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 50°C) | | | | | |
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| | 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, CNS13438, GB9254 Class B, GB17625.1 | | | | | |
| OTHERS | EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, light industry level, EAC TP TC 020 | | | | | |
| | MTBF | 1826.4K hrs min. Telcordia SR-332 (Bellcore) ; 192.9K hrs min. MIL-HDBK-217F (25°C) | | | | | |
| | DIMENSION | 215*115*30mm (L*W*H) | | | | | |
| | PACKING | 0.9Kg; 15pcs/14.5Kg/0.67CUFT | | | | | |
| 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 derating curve for more details.</p> <p>5. The power supply is considered a component which will be installed into a final equipment. 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)</p> <p>6. For charging related applications, please consult Mean Well for details.</p> <p>7. Strongly recommended that external output capacitance should not exceed 5000uF. (Only for: RSP-320-2.5/-3.3/-4/-5/-7.5/-12/-13.5/-15)</p> <p>8. 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> | | | | | | |

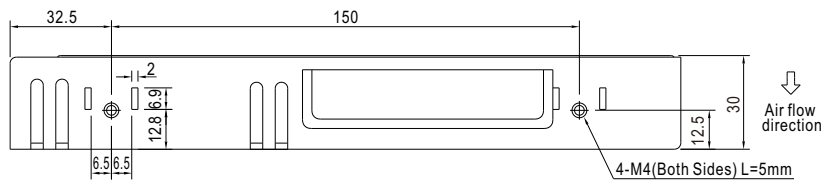
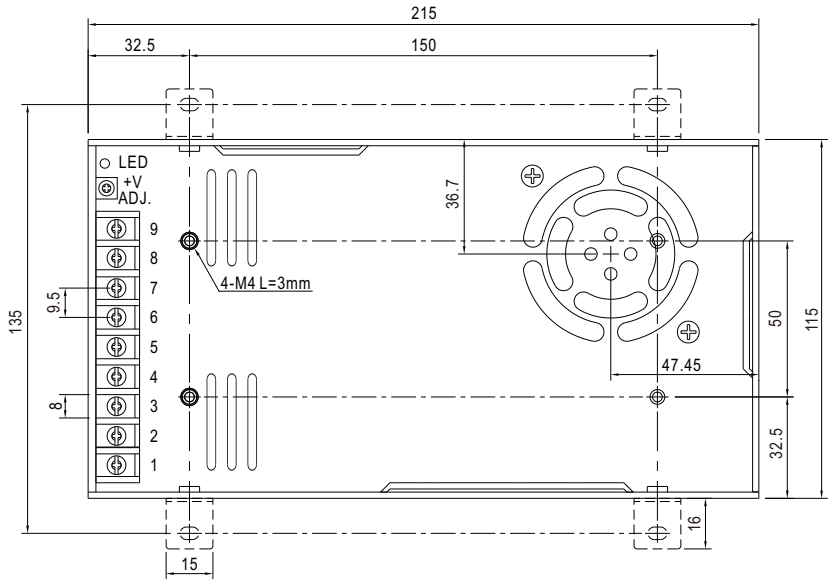


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RSP-320 series

Mechanical Specification

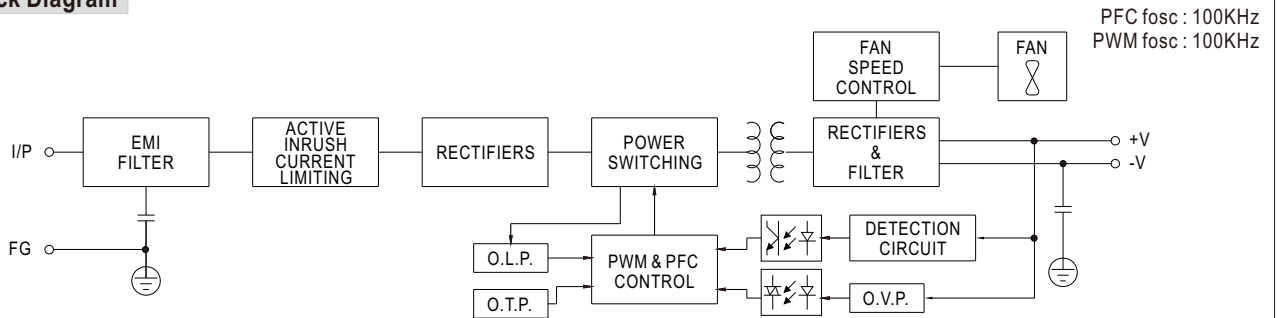
Case No.207A Unit:mm



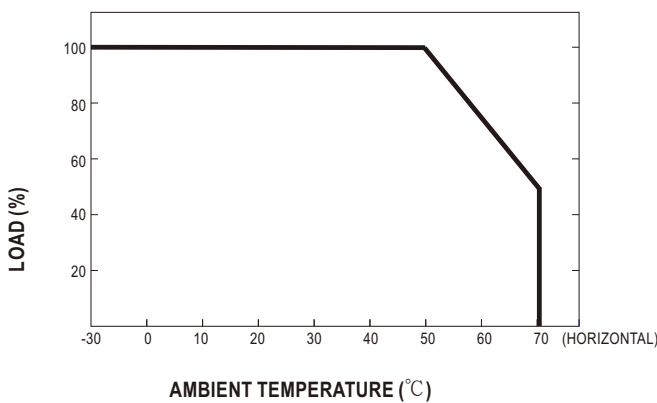
Terminal Pin No. Assignment :

| Pin No. | Assignment | Pin No. | Assignment |
|---------|------------|---------|--------------|
| 1 | AC/L | 4~6 | DC OUTPUT -V |
| 2 | AC/N | 7~9 | DC OUTPUT +V |
| 3 | FG \perp | | |

Block Diagram



Derating Curve



Static Characteristics

