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MEAN WELL

200W Single Output with PFC Function

# RSP-200 series

## Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- High efficiency up to 90%
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- 1U low profile 30mm
- Optional conformal coating models (RSP-200-□CC)
- LED indicator for power on
- 3 years warranty

## SPECIFICATION

| MODEL | | RSP-200-2.5 | RSP-200-3.3 | RSP-200-4 | RSP-200-5 | RSP-200-7.5 | RSP-200-12 |
|---|---|---|---|---|---|---|---|
| OUTPUT | DC VOLTAGE | 2.5V | 3.3V | 4V | 5V | 7.5V | 12V |
| | RATED CURRENT | 40A | 40A | 40A | 40A | 26.7A | 16.7A |
| | CURRENT RANGE | 0 ~ 40A | 0 ~ 40A | 0 ~ 40A | 0 ~ 40A | 0 ~ 26.7A | 0 ~ 16.7A |
| | RATED POWER | 100W | 132W | 160W | 200W | 200.25W | 200.4W |
| | 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.) | 79.5% | 81.5% | 84% | 85.5% | 89% | 89% |
| | AC CURRENT (Typ.) | 2A/115VAC 1.1A/230VAC | | | 2.5A/115VAC | 1.3A/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 ~ 3.5V | 3.8 ~ 4.62V | 4.5 ~ 5.6V | 5.75 ~ 7V | 9.4 ~ 10.9V | 13.8 ~ 16.2V |
| | | Protection type : Shut down o/p voltage, re-power on to recover | | | | | |
| | OVER TEMPERATURE | Shut down o/p voltage, recovers automatically after temperature goes down | | | | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +70℃ (Refer to "Derating Curve") | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85℃, 10 ~ 95% RH | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/℃ (0 ~ 45℃) | | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes | | | | | |
| SAFETY & EMC (Note 5) | SAFETY STANDARDS | UL60950-1, TUV EN60950-1 ,CCC GB4943 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℃/ 70% RH | | | | | |
| | EMC EMISSION | Compliance to EN55022 (CISPR22) Class B, EN61000-3-2,-3,GB9254 class B,GB17625.1 | | | | | |
| | EMC IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A | | | | | |
| OTHERS | MTBF | 224.5K hrs min. MIL-HDBK-217F (25℃) | | | | | |
| | DIMENSION | 215*115*30mm (L*W*H) | | | | | |
| | PACKING | 0.72Kg; 15pcs/11.8Kg/0.78CUFT | | | | | |

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 derating curve for more details.
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)
6. For charging related applications, please consult Mean Well for details.

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- LED indicator for power on
- 3 years warranty

## SPECIFICATION

| MODEL | | RSP-200-13.5 | RSP-200-15 | RSP-200-24 | RSP-200-27 | RSP-200-36 | RSP-200-48 |
|---|---|---|---|---|---|---|---|
| OUTPUT | DC VOLTAGE | 13.5V | 15V | 24V | 27V | 36V | 48V |
| | RATED CURRENT | 14.9A | 13.4A | 8.4A | 7.5A | 5.56A | 4.2A |
| | CURRENT RANGE | 0 ~ 14.9A | 0 ~ 13.4A | 0 ~ 8.4A | 0 ~ 7.5A | 0 ~ 5.56A | 0 ~ 4.2A |
| | RATED POWER | 201.15W | 201W | 201.6W | 202.5W | 200.16W | 201.6W |
| | 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.) | 89% | 89.5% | 89.5% | 89% | 90% | 90% |
| | AC CURRENT (Typ.) | 2.5A/115VAC 1.3A/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 |
| | | Protection type : Shut down o/p voltage, re-power on to recover | | | | | |
| | OVER TEMPERATURE | Shut down o/p voltage, recovers automatically after temperature goes down | | | | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +70℃ (Refer to "Derating Curve") | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85℃, 10 ~ 95% RH | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/℃ (0 ~ 45℃) | | | | | |
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| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH | | | | | |
| | EMC EMISSION | Compliance to EN55022 (CISPR22) Class B, EN61000-3-2,-3,GB9254 class B,GB17625.1 | | | | | |
| | EMC IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A | | | | | |
| OTHERS | MTBF | 224.5K hrs min. MIL-HDBK-217F (25℃) | | | | | |
| | DIMENSION | 215*115*30mm (L*W*H) | | | | | |
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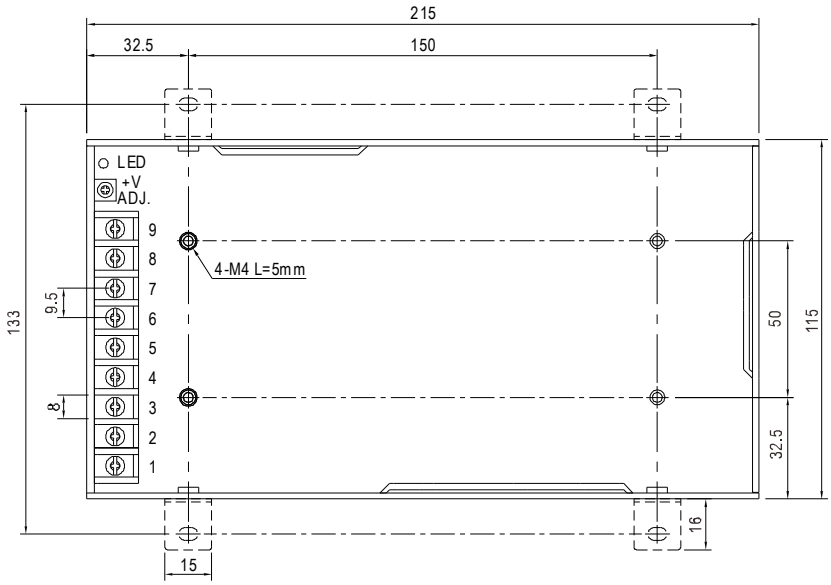
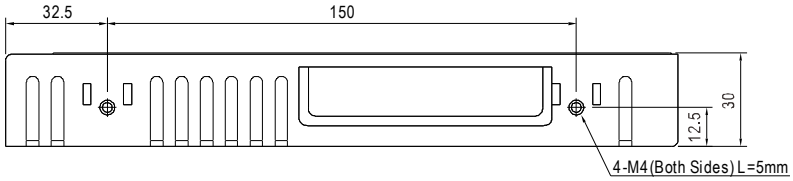
## ■ Mechanical Specification

Case No.207B Unit:mm



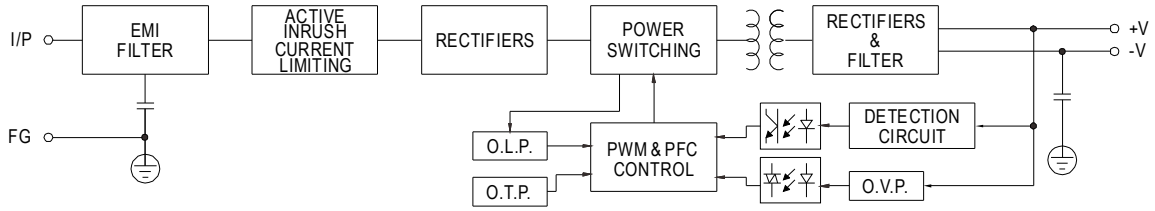




Terminal Pin No. Assignment :

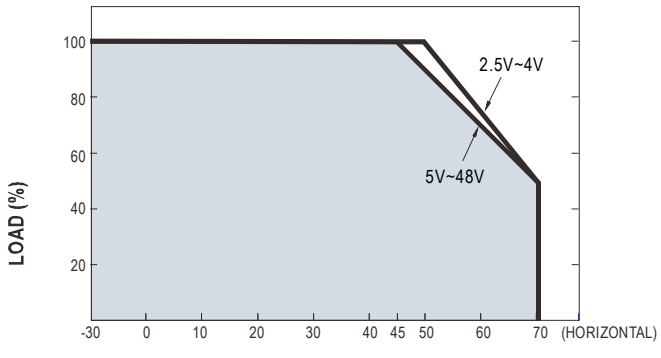
| Pin No. | Assignment | Pin No. | Assignment |
|---|---|---|---|
| 1 | AC/L | 4~6 | DC OUTPUT -V |
| 2 | AC/N | 7~9 | DC OUTPUT +V |
| 3 | FG ⏚ | | |

## ■ Block Diagram

PFC fosc : 100KHz
PWM fosc : 100KHz

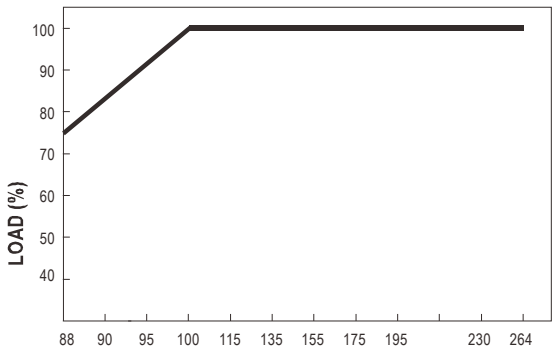



## ■ Derating Curve




AMBIENT TEMPERATURE (°C)

## ■ Static Characteristics




INPUT VOLTAGE (VAC) 60Hz