



## 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<br>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 |
|                       | 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 ~ 45°C)  |             |            |             |             |              |
| SAFETY & EMC (Note 5) | VIBRATION  | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes  |             |            |             |             |              |
|                       | SAFETY STANDARDS   | UL60950-1, TUV EN60950-1, EAC TP TC 004, CCC GB4943.1 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 EN55032 (CISPR32) Class B, EN61000-3-2,-3, EAC TP TC 020, GB9254 Class B, GB17625.1                       |             |            |             |             |              |
| OTHERS                | EMC IMMUNITY   | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A, EAC TP TC 020                        |             |            |             |             |              |
|                       | MTBF   | 224.5K hrs min.    MIL-HDBK-217F (25°C)   |             |            |             |             |              |
|                       | DIMENSION  | 215*115*30mm (L*W*H)  |             |            |             |             |              |
| NOTE                  | PACKING  |   |             |            |             |             |              |
|                       | 0.72Kg; 15pcs/11.8Kg/0.78CUFT  |   |             |            |             |             |              |
|                       | <ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. 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>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. Derating may be needed under low input voltages. Please check the derating curve for more details.</li> <li>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 <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</li> <li>6. For charging related applications, please consult Mean Well for details.</li> <li>7. Strongly recommended that external output capacitance should not exceed 5000uF. (Only for: RSP-200-2.5/-3.3/-4/-5/-7.5/-12/-13.5/-15)</li> <li>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).</li> </ol> |   |             |            |             |             |              |



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- Cooling by free air convection
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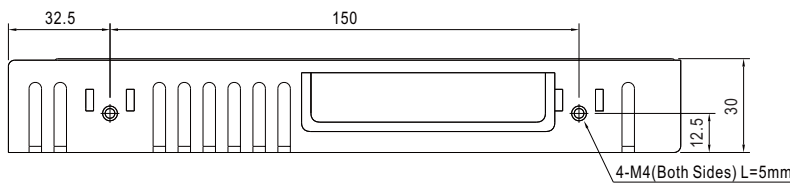
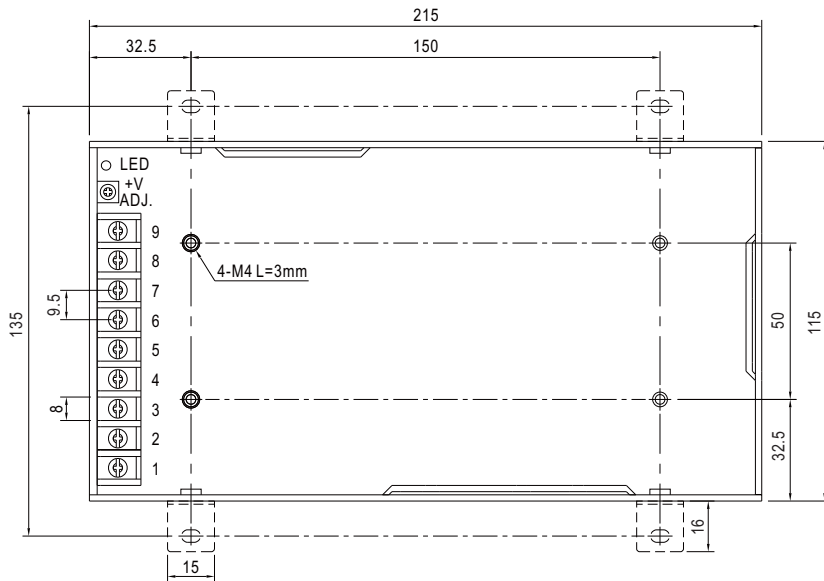


### SPECIFICATION

| 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<br>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 ~ 45°C)  |              |                             |              |              |            |
| SAFETY & EMC (Note 5) | VIBRATION                          | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes  |              |                             |              |              |            |
|                       | SAFETY STANDARDS                   | UL60950-1, TUV EN60950-1, EAC TP TC 004, CCC GB4943.1 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 EN55032 (CISPR32) Class B, EN61000-3-2,-3, EAC TP TC 020, GB9254 Class B, GB17625.1   |              |                             |              |              |            |
| OTHERS                | EMC IMMUNITY                       | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A, EAC TP TC 020  |              |                             |              |              |            |
|                       | MTBF                               | 224.5K hrs min.    MIL-HDBK-217F (25°C)   |              |                             |              |              |            |
|                       | DIMENSION                          | 215*115*30mm (L*W*H)  |              |                             |              |              |            |
| NOTE                  | PACKING                            | 0.72Kg; 15pcs/11.8Kg/0.78CUFT   |              |                             |              |              |            |
|                       |                                    | <ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. 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>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. Derating may be needed under low input voltages. Please check the derating curve for more details.</li> <li>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 <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</li> <li>6. For charging related applications, please consult Mean Well for details.</li> <li>7. Strongly recommended that external output capacitance should not exceed 5000uF. (Only for: RSP-200-2.5/-3.3/-4/-5/-7.5/-12/-13.5/-15)</li> <li>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).</li> </ol> |              |                             |              |              |            |

■ Mechanical Specification

Case No.207B Unit:mm

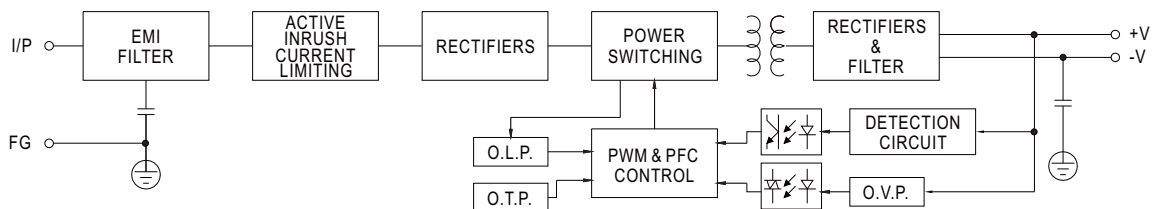


Terminal Pin No. Assignment :

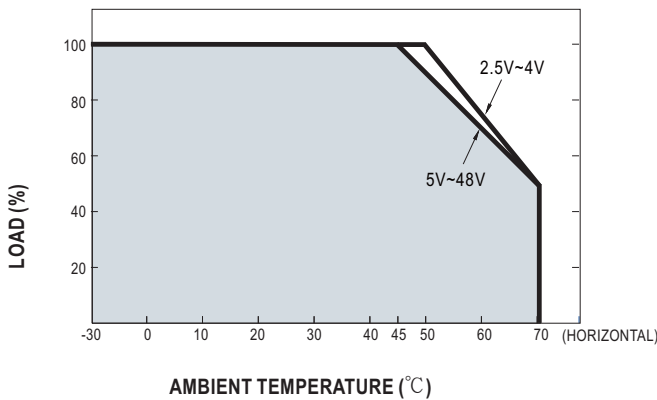
| Pin No. | Assignment | Pin No. | Assignment   |
|---------|------------|---------|--------------|
| 1       | AC/L       | 4~6     | DC OUTPUT -V |
| 2       | AC/N       | 7~9     | DC OUTPUT +V |
| 3       | FG $\perp$ |         |              |

■ Block Diagram

PFC fosc : 100KHz  
PWM fosc : 100KHz



■ Derating Curve



■ Static Characteristics

