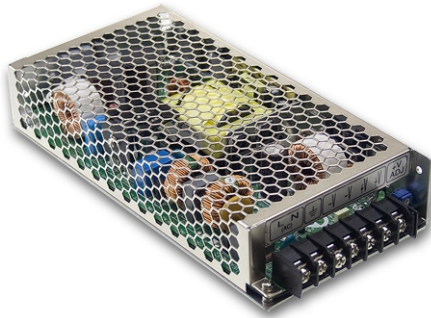




## 200W Single Output with PFC Function

# HRP-200 series



### ■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- High efficiency up to 89%
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- 1U low profile 38mm
- Built-in remote sense function
- 5 years warranty

User's Manual



### ■ GTIN CODE

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



AS/NZS 62368.1 UL62368-1 BS EN/EN62368-1 TPTC004 IEC62368-1

### SPECIFICATION

| MODEL                 | HRP-200-3.3   | HRP-200-5  | HRP-200-7.5 | HRP-200-12                  | HRP-200-15   | HRP-200-24   | HRP-200-36   | HRP-200-48   |              |
|-----------------------|---|--|-------------|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| OUTPUT                | DC VOLTAGE  | 3.3V   | 5V          | 7.5V                        | 12V          | 15V          | 24V          | 36V          | 48V          |
|                       | RATED CURRENT   | 40A  | 35A         | 26.7A                       | 16.7A        | 13.4A        | 8.4A         | 5.7A         | 4.3A         |
|                       | CURRENT RANGE   | 0 ~ 40A  | 0 ~ 35A     | 0 ~ 26.7A                   | 0 ~ 16.7A    | 0 ~ 13.4A    | 0 ~ 8.4A     | 0 ~ 5.7A     | 0 ~ 4.3A     |
|                       | RATED POWER   | 132W   | 175W        | 200.3W                      | 200.4W       | 201W         | 201.6W       | 205.2W       | 206.4W       |
|                       | RIPPLE & NOISE (max.) Note.2  | 80mVp-p  | 90mVp-p     | 100mVp-p                    | 120mVp-p     | 150mVp-p     | 150mVp-p     | 250mVp-p     | 250mVp-p     |
|                       | VOLTAGE ADJ. RANGE  | 2.8 ~ 3.8V   | 4.3 ~ 5.8V  | 6.8 ~ 9V                    | 10.2 ~ 13.8V | 13.5 ~ 18V   | 21.6 ~ 28.8V | 28.8 ~ 39.6V | 40.8 ~ 55.2V |
|                       | VOLTAGE TOLERANCE Note.3  | ±2.0%  | ±2.0%       | ±2.0%                       | ±1.0%        | ±1.0%        | ±1.0%        | ±1.0%        | ±1.0%        |
|                       | LINE REGULATION   | ±0.5%  | ±0.5%       | ±0.5%                       | ±0.3%        | ±0.3%        | ±0.2%        | ±0.2%        | ±0.2%        |
|                       | LOAD REGULATION   | ±1.5%  | ±1.0%       | ±1.0%                       | ±0.5%        | ±0.5%        | ±0.5%        | ±0.5%        | ±0.5%        |
|                       | SETUP, RISE TIME  | 1000ms, 50ms/230VAC      2500ms, 50ms/115VAC at full load  |             |                             |              |              |              |              |              |
| HOLD UP TIME (Typ.)   | 16ms/230VAC      16ms/115VAC at full load   |  |             |                             |              |              |              |              |              |
| INPUT                 | VOLTAGE RANGE Note.5  | 85 ~ 264VAC      120 ~ 370VDC  |             |                             |              |              |              |              |              |
|                       | FREQUENCY RANGE   | 47 ~ 63Hz  |             |                             |              |              |              |              |              |
|                       | POWER FACTOR (Typ.)   | PF>0.95/230VAC   |             | PF>0.99/115VAC at full load |              |              |              |              |              |
|                       | EFFICIENCY (Typ.)   | 80%  | 84%         | 86%                         | 88%          | 88%          | 88%          | 89%          | 89%          |
|                       | AC CURRENT (Typ.)   | 2.1A/115VAC      1.1A/230VAC   |             |                             |              |              |              |              |              |
|                       | INRUSH CURRENT (Typ.)   | 35A/115VAC      70A/230VAC   |             |                             |              |              |              |              |              |
|                       | LEAKAGE CURRENT   | <1.2mA / 240VAC  |             |                             |              |              |              |              |              |
| PROTECTION            | OVERLOAD  | 105 ~ 135% rated output power<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed        |             |                             |              |              |              |              |              |
|                       | OVER VOLTAGE  | 3.96 ~ 4.62V   | 6 ~ 7V      | 9.4 ~ 10.9V                 | 14.4 ~ 16.8V | 18.8 ~ 21.8V | 30 ~ 34.8V   | 41.4 ~ 48.6V | 57.6 ~ 67.2V |
|                       | OVER TEMPERATURE  | Shut down o/p voltage, recovers automatically after temperature goes down<br>Protection type : Shut down o/p voltage, re-power on to recover |             |                             |              |              |              |              |              |
| ENVIRONMENT           | WORKING TEMP.   | -40 ~ +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)   |             |                             |              |              |              |              |              |
|                       | VIBRATION   | 10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes   |             |                             |              |              |              |              |              |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS  | UL62368-1, TUV BS EN/EN62368-1, AS/NZS62368.1, EAC TP TC 004 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   |             |                             |              |              |              |              |              |
|                       | EMC IMMUNITY  | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, heavy industry level, EAC TP TC 020   |             |                             |              |              |              |              |              |
| OTHERS                | MTBF  | 1830.6K hrs min.      Telcordia SR-332 (Bellcore) ; 209.5K hrs min.      MIL-HDBK-217F (25°C)  |             |                             |              |              |              |              |              |
|                       | DIMENSION   | 199*98*38mm (L*W*H)  |             |                             |              |              |              |              |              |
|                       | PACKING   | 0.77Kg; 18pcs/14.9Kg/0.87CUFT  |             |                             |              |              |              |              |              |
| NOTE                  | <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. 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>5. Derating may be needed under low input voltages. Please check the derating curve for more details.</li> <li>6. 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> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p> |  |             |                             |              |              |              |              |              |

### Mechanical Specification

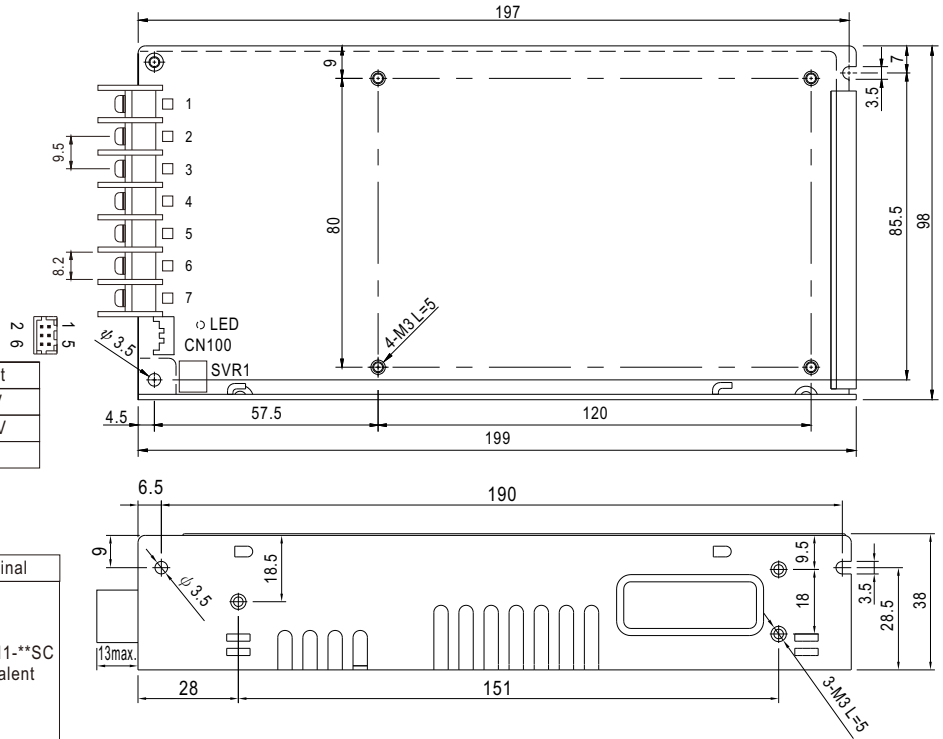
Case No.902E Unit:mm

#### Terminal Pin No. Assignment

| Pin No. | Assignment  | Pin No. | Assignment   |
|---------|-------------|---------|--------------|
| 1       | AC/L        | 4,5     | DC OUTPUT -V |
| 2       | AC/N        | 6,7     | DC OUTPUT +V |
| 3       | FG $\oplus$ |         |              |

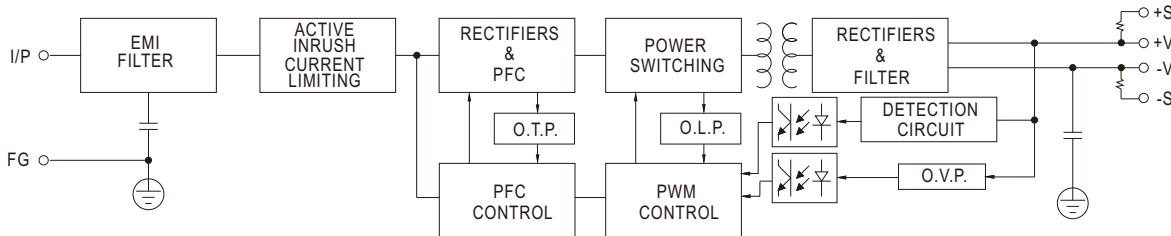
#### Connector Pin No. Assignment (CN100) : HRS DF11-6DP-2DS or equivalent

| Pin No. | Assignment | Mating Housing                | Terminal                        |
|---------|------------|-------------------------------|---------------------------------|
| 1       | NC         | HRS DF11-6DS<br>or equivalent | HRS DF11-**-SC<br>or equivalent |
| 2       | NC         |                               |                                 |
| 3       | NC         |                               |                                 |
| 4       | NC         |                               |                                 |
| 5       | +S         |                               |                                 |
| 6       | -S         |                               |                                 |

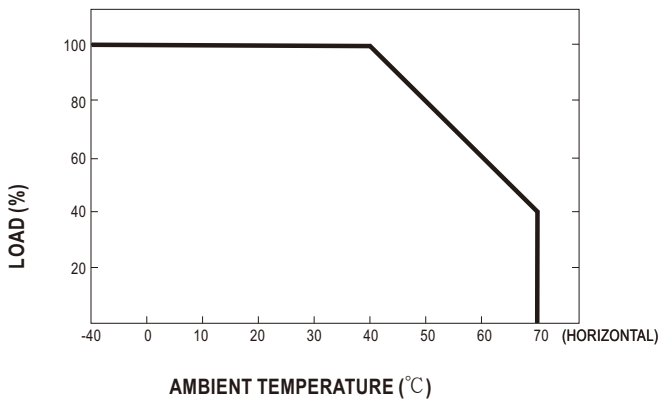


### Block Diagram

PWM fosc :70KHz



### Derating Curve



### Output Derating VS Input Voltage

