



**CUSTOM THERMOELECTRIC**  
Your Thermoelectric Partner

**PS-050W1-15-3.4**

**RS-50 series**

50W Single Output Switching Power Supply



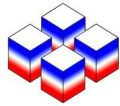
■ Features :

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- 100% full load burn-in test
- All using 105°C long life electrolytic capacitors
- Withstand 300VAC surge input for 5 second
- High operating temperature up to 70°C
- Withstand 5G vibration test
- No load power consumption<0.5W
- High efficiency, long life and high reliability
- 3 years warranty



**SPECIFICATION**

| MODEL                 | RS-50-3.3   | RS-50-5   | RS-50-12     | RS-50-15     | RS-50-24       | RS-50-48     |              |
|-----------------------|---|---|--------------|--------------|----------------|--------------|--------------|
| OUTPUT                | DC VOLTAGE  | 3.3V  | 5V           | 12V          | 15V            | 24V          | 48V          |
|                       | RATED CURRENT   | 10A   | 10A          | 4.2A         | 3.4A           | 2.2A         | 1.1A         |
|                       | CURRENT RANGE   | 0 ~ 10A   | 0 ~ 10A      | 0 ~ 4.2A     | 0 ~ 3.4A       | 0 ~ 2.2A     | 0 ~ 1.1A     |
|                       | RATED POWER   | 33W   | 50W          | 50.4W        | 51W            | 52.8W        | 52.8W        |
|                       | RIPPLE & NOISE (max.) Note.2  | 80mVp-p   | 80mVp-p      | 120mVp-p     | 120mVp-p       | 120mVp-p     | 200mVp-p     |
|                       | VOLTAGE ADJ. RANGE  | 3V ~ 3.6V   | 4.75 ~ 5.5V  | 10.8 ~ 13.2V | 13.5 ~ 16.5V   | 22 ~ 27.2V   | 42 ~ 54V     |
|                       | VOLTAGE TOLERANCE Note.3  | ±3.0%   | ±2.0%        | ±1.0%        | ±1.0%          | ±1.0%        | ±1.0%        |
|                       | LINE REGULATION Note.4  | ±0.5%   | ±0.5%        | ±0.5%        | ±0.5%          | ±0.5%        | ±0.5%        |
|                       | LOAD REGULATION Note.5  | ±2.0%   | ±1.0%        | ±0.5%        | ±0.5%          | ±0.5%        | ±0.5%        |
|                       | SETUP, RISE TIME  | 500ms, 30ms/230VAC      1200ms, 30ms/115VAC at full load  |              |              |                |              |              |
| HOLD UP TIME (Typ.)   | 60ms/230VAC      14ms/115VAC at full load   |   |              |              |                |              |              |
| INPUT                 | VOLTAGE RANGE   | 88 ~ 264VAC      125 ~ 373VDC (Withstand 300VAC surge for 5sec. Without damage)   |              |              |                |              |              |
|                       | FREQUENCY RANGE   | 47 ~ 63Hz   |              |              |                |              |              |
|                       | EFFICIENCY(Typ.)  | 78%   | 83%          | 84.5%        | 86%            | 88%          | 89%          |
|                       | AC CURRENT (Typ.)   | 1.3A/115VAC      0.8A/230VAC  |              |              |                |              |              |
|                       | INRUSH CURRENT (Typ.)   | COLD START 33A/230VAC   |              |              |                |              |              |
|                       | LEAKAGE CURRENT   | <2mA / 240VAC   |              |              |                |              |              |
| PROTECTION            | OVERLOAD  | 110 ~ 150% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |              |              |                |              |              |
|                       | OVER VOLTAGE  | 3.8 ~ 4.45V   | 5.75 ~ 6.75V | 13.8 ~ 16.2V | 17.25 ~ 20.25V | 27.6 ~ 32.4V | 55.2 ~ 64.8V |
| ENVIRONMENT           | WORKING TEMP.   | -25 ~ +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, period for 60min. each along X, Y, Z axes   |              |              |                |              |              |
| SAFETY & EMC (Note 6) | 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°C/ 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; EN61000-6-2 (EN50082-2), heavy industry level, criteria A                       |              |              |                |              |              |
| OTHERS                | MTBF  | 228Khrs min.    MIL-HDBK-217F (25°C)  |              |              |                |              |              |
|                       | DIMENSION   | 99*97*36mm (L*W*H)  |              |              |                |              |              |
|                       | PACKING   | 0.41Kg; 45pcs/19.5Kg/0.9CUFT  |              |              |                |              |              |
| 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. Line regulation is measured from low line to high line at rated load.</li> <li>5. Load regulation is measured from 0% to 100% rated load.</li> <li>6. 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> </ol> |   |              |              |                |              |              |



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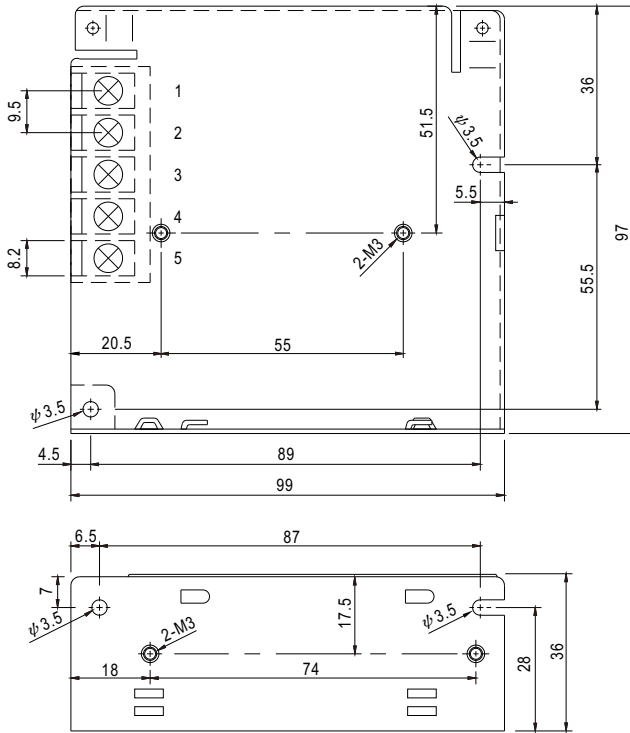
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**Mechanical Specification**

Case No. 905B Unit:mm

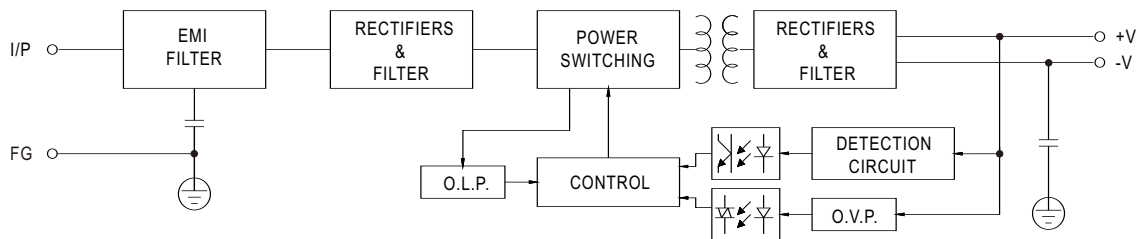


Terminal Pin No. Assignment

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

**Block Diagram**

fosc : 60KHz



**Derating Curve**

**Output Derating VS Input Voltage**

