



50W Dual Output Switching Power Supply

RD-50 series



■ 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
- High efficiency, long life and high reliability
- 3 years warranty

User's Manual

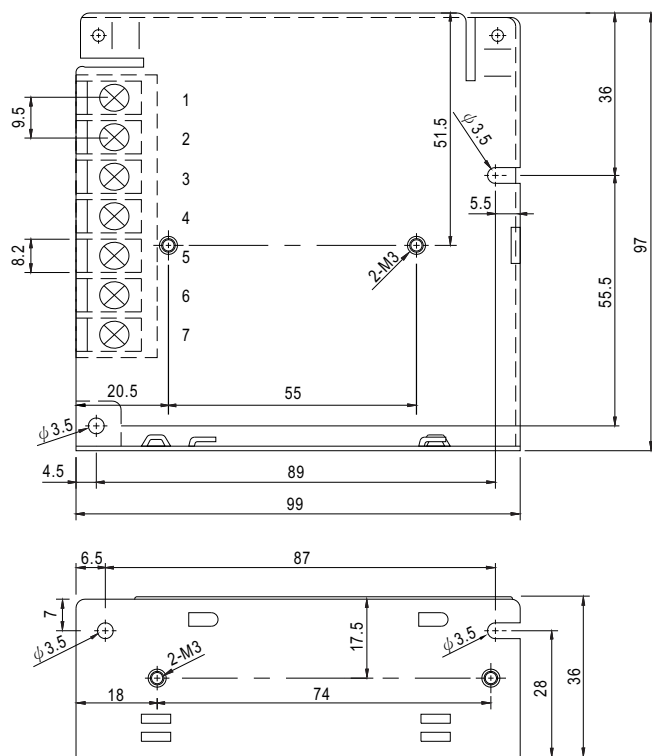


SPECIFICATION

| MODEL | | RD-50A | | RD-50B | |
|--------------------------|--|--|----------|------------------|----------|
| OUTPUT | OUTPUT NUMBER | CH1 | CH2 | CH1 | CH2 |
| | DC VOLTAGE | 5V | 12V | 5V | 24V |
| | RATED CURRENT | 6A | 2A | 4A | 1.4A |
| | CURRENT RANGE | Note.3 0 ~ 6A | 0 ~ 3A | 0 ~ 6A | 0 ~ 2A |
| | RATED POWER | 54W | | 53.6W | |
| | RIPPLE & NOISE (max.) | Note.2 80mVp-p | 120mVp-p | 80mVp-p | 150mVp-p |
| | VOLTAGE ADJ. RANGE | CH1: 4.75 ~ 5.5V | | CH1: 4.75 ~ 5.5V | |
| | VOLTAGE TOLERANCE | Note.3 ± 2.0% | ± 7.0% | ± 2.0% | ± 8% |
| | LINE REGULATION | Note.4 ± 0.5% | ± 1.5% | ± 0.5% | ± 1.5% |
| | LOAD REGULATION | Note.5 ± 0.5% | ± 3.0% | ± 0.5% | ± 3.0% |
| | SETUP, RISE TIME | 500ms, 20ms/230VAC 1200ms, 30ms/115VAC at full load | | | |
| HOLD UP TIME (Typ.) | 60ms/230VAC 10ms/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% | | 79% | |
| | AC CURRENT (Typ.) | 1.3A/115VAC 0.8A/230VAC | | | |
| | INRUSH CURRENT (Typ.) | COLD START 48A/230VAC | | | |
| | LEAKAGE CURRENT | <2mA / 240VAC | | | |
| PROTECTION | OVERLOAD | 110 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | |
| | OVER VOLTAGE | CH1: 5.75 ~ 6.75V Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | |
| | | | | | |
| ENVIRONMENT | WORKING TEMP. | -25 ~ +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 ~ 50℃)on +5V output | | | |
| | VIBRATION | 10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes | | | |
| SAFETY & EMC (Note 6) | SAFETY STANDARDS | UL62368-1, TUV BS EN/EN62368-1, 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℃ / 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/EN61000-6-2 (BS EN/EN50082-2), heavy industry level, criteria A, EAC TP TC 020 | | | |
| OTHERS | MTBF | 172.6Khrs min. MIL-HDBK-217F (25℃) | | | |
| | DIMENSION | 99*97*36mm (L*W*H) | | | |
| | PACKING | 0.41Kg; 45pcs/19.5Kg/0.94CUFT | | | |
| 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, when multi-channel output, it is recommended that CH1 load > 10%. 4. Line regulation is measured from low line to high line at rated load. 5. Load regulation is measured from 0% to 100% rated load. 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 http://www.meanwell.com) 7. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/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 | | | | |

■ Mechanical Specification

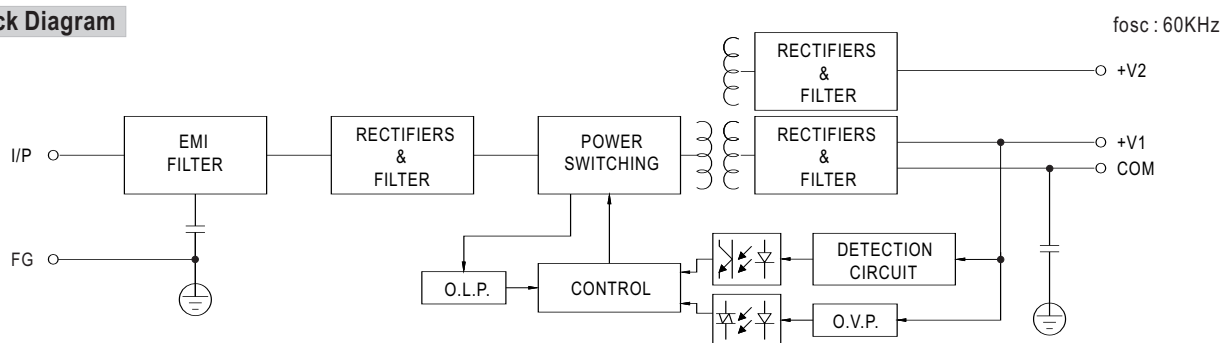
Case No. 905B Unit:mm



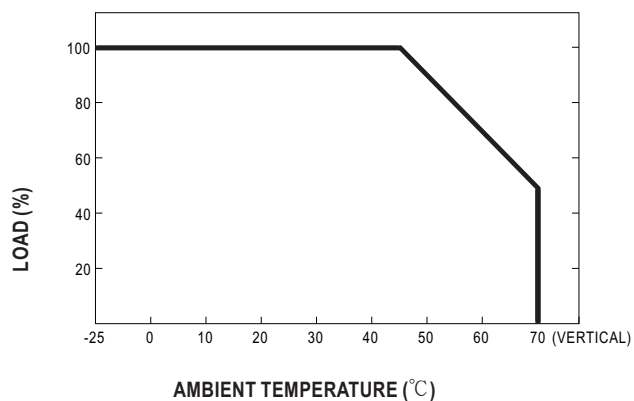
Terminal Pin No. Assignment

| Pin No. | Assignment | Pin No. | Assignment |
|---------|-------------|---------|---------------|
| 1 | AC/L | 4,6 | DC OUTPUT COM |
| 2 | AC/N | 5 | DC OUTPUT +V2 |
| 3 | FG \equiv | 7 | DC OUTPUT +V1 |

■ Block Diagram



Derating Curve



■ Output Derating VS Input Voltage

