



2000W Power Supply with Single Output

RSP-2000 series

| Dimension | | | |
|-----------|---|-----|------------------|
| L | * | W | * H |
| 295 | * | 127 | * 41 (1U) mm |
| 11.6 | * | 5 | * 1.61 (1U) inch |



■ Features

- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 92%
- Forced air cooling by built-in DC fan
- Output voltage programmable
- Active current sharing up to 8000W (3+1)
- Built-in remote ON-OFF control / remote sense / auxiliary power / DC OK signal / OTP alarm signal
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Optional conformal coating
- 5 years warranty

■ Applications

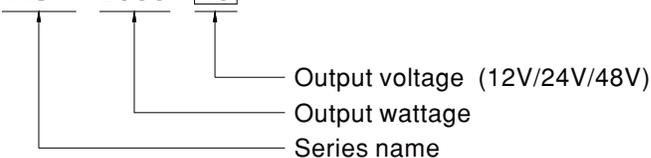
- Factory control or automation apparatus
- Test and measurement instrument
- Laser related machine
- Burn-in facility
- Digital broadcasting
- RF application

■ Description

RSP-2000 is a 2KW single output enclosed type AC/DC power supply with 1U low profile. This series operates for 90~264VAC input voltage and offers the models with the DC output mostly demanded from the industry. Each model is cooled by the built-in fan with fan speed control, working for the temperature up to 70°C. Moreover, RSP-2000 provides vast design flexibility by equipping various built-in functions such as the output programming, active current sharing, remote ON-OFF control, auxiliary power, etc.

■ Model Encoding / Order Information

RSP - 2000 - 48



SPECIFICATION

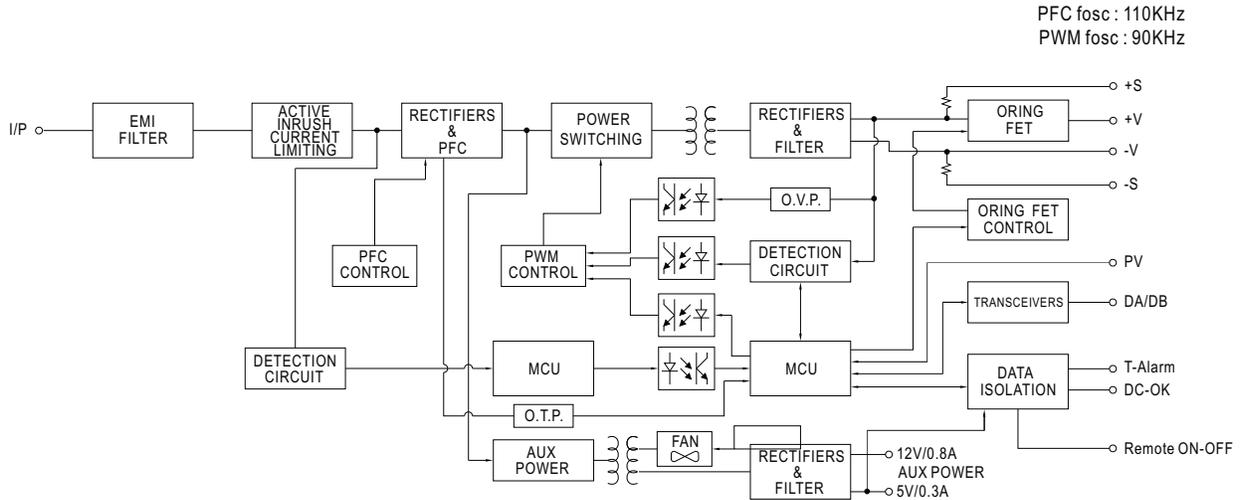
| MODEL | | RSP-2000-12 | RSP-2000-24 | RSP-2000-48 | |
|--------------------------------|--|---|--|-----------------------|--|
| OUTPUT | DC VOLTAGE | 12V | 24V | 48V | |
| | RATED CURRENT | 100A | 80A | 42A | |
| | CURRENT RANGE | 0 ~ 100A | 0 ~ 80A | 0 ~ 42A | |
| | RATED POWER | 1200W | 1920W | 2016W | |
| | RIPPLE & NOISE (max.) Note.2 | 150mVp-p | 200mVp-p | 300mVp-p | |
| | VOLTAGE ADJ. RANGE | 10.5 ~ 14V | 21 ~ 28V | 42 ~ 56V | |
| | VOLTAGE TOLERANCE Note.3 | ±2.0% | ±1.0% | ±1.0% | |
| | LINE REGULATION | ±1.0% | ±0.5% | ±0.5% | |
| | LOAD REGULATION | ±1.0% | ±0.5% | ±0.5% | |
| | SETUP, RISE TIME | 1500ms, 60ms/230VAC at full load | | | |
| HOLD UP TIME (Typ.) | 16ms/230VAC at 75% load | 10ms/230VAC at full load | | | |
| INPUT | VOLTAGE RANGE Note.4,5 | 90 ~ 264VAC 127 ~ 320VDC | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | |
| | POWER FACTOR (Typ.) | 0.97/230VAC at full load | | | |
| | EFFICIENCY (Typ.) | 87% | 90.5% | 92% | |
| | AC CURRENT (Typ.) Note.4 | 13A/115VAC 7A/230VAC | 16A/115VAC 10A/230VAC | 16A/115VAC 10A/230VAC | |
| | INRUSH CURRENT (Typ.) | COLD START 50A | | | |
| LEAKAGE CURRENT | <2mA / 240VAC | | | | |
| PROTECTION | OVERLOAD | 105 ~ 125% rated output power Protection type : Constant current limiting, unit will shut down o/p voltage after 5 sec. re-power on to recover | | | |
| | OVER VOLTAGE | 14.7 ~ 17.5V | 29.5 ~ 35V | 57.6 ~ 67.2V | |
| | OVER TEMPERATURE | Shut down o/p voltage, recovers automatically after temperature goes down | | | |
| FUNCTION | OUTPUT VOLTAGE PROGRAMMABLE(PV) | Adjustment of output voltage is allowable to 40 ~ 115% of nominal output voltage. Please refer to the Function Manual. | | | |
| | CURRENT SHARING | Up to 8000W or (3+1) units. Please refer to the Function Manual. | | | |
| | AUXILIARY POWER | 5V @ 0.3A, 12V @ 0.8A | | | |
| | REMOTE ON-OFF CONTROL | By electrical signal or dry contact Power ON:open Power OFF:short. Please refer to the Function Manual. | | | |
| | REMOTE SENSE | Compensate voltage drop on the load wiring up to 0.5V. Please refer to the Function Manual. | | | |
| ENVIRONMENT | DC OK SIGNAL | The isolated TTL signal out. Please refer to the Function Manual. | | | |
| | WORKING TEMP. | -35 ~ +70°C (Refer to "Derating Curve") | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85°C, 10 ~ 95% RH non-condensing | | | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 50°C) | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes | | | |
| SAFETY & EMC (Note 6) | SAFETY STANDARDS | UL62368-1, CSA C22.2 No. 62368-1, TUV EN62368-1, EAC TP TC 004, BSMI CNS14336-1 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 | Parameter | Standard | Test Level / Note | |
| | | Conducted | EN55032 (CISPR32) | Class B | |
| | | Radiated | EN55032 (CISPR32) | Class A | |
| | | Harmonic Current | EN61000-3-2 | ----- | |
| | EMC IMMUNITY | Voltage Flicker | EN61000-3-3 | ----- | |
| | | EN55024, EN61204-3, EN61000-6-2, BSMI CNS13438 | | | |
| | | Parameter | Standard | Test Level / Note | |
| ESD | | EN61000-4-2 | Level 3, 8KV air ; Level 2, 4KV contact | | |
| Radiated | | EN61000-4-3 | Level 3 | | |
| EFT / Burst | | EN61000-4-4 | Level 3 | | |
| Surge | | EN61000-4-5 | Level 4, 4KV/Line-Earth ; Level 3, 2KV/Line-Line | | |
| Conducted | | EN61000-4-6 | Level 3 | | |
| Magnetic Field | EN61000-4-8 | Level 4 | | | |
| Voltage Dips and Interruptions | EN61000-4-11 | >95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods | | | |
| OTHERS | MTBF | 159K hrs min. Telcordia SR-332 (Bellcore) ; 46.3K hrs min. MIL-HDBK-217F (25°C) | | | |
| | DIMENSION | 295*127*41mm (L*W*H) | | | |
| | PACKING | 1.95Kg; 6pcs/12.7Kg/1.15CUFT | | | |
| NOTE | <ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance : includes set up tolerance, line regulation and load regulation. Derating may be needed under low input voltages. Please check the derating curve for more details. Please contact MEANWELL for 320~370VDC application. 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 720mm*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) 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). | | | | |



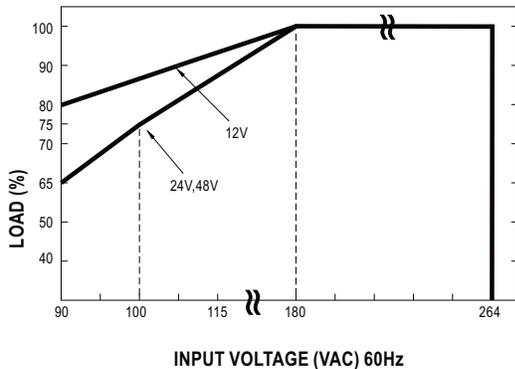
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■ Block Diagram

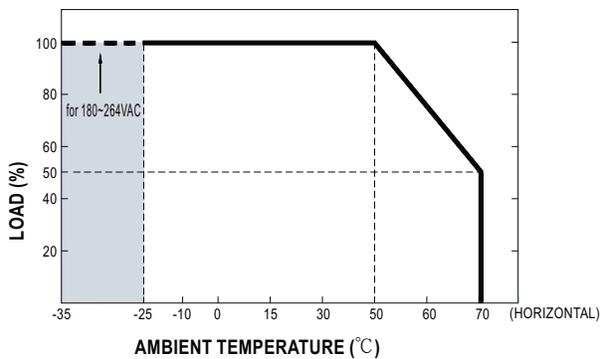


■ Static Characteristics

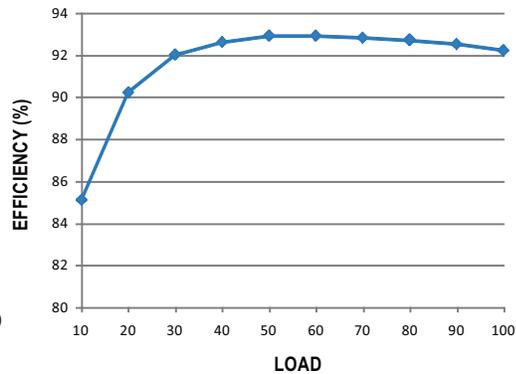


| INPUT \ MODEL | 12V | 24V | 48V |
|---------------|---------------|--------------|------------------|
| 180~264VAC | 1200W 100A | 1920W 80A | 2016W 42A |
| 115VAC | 1080W 90A | 1632W 68A | 1713.6W 35.7A |
| 100VAC | 1020W 85A | 1440W 60A | 1512W 31.5A |
| 90VAC | 960W 80A | 1248W 52A | 1310.4W 27.3A |

■ Derating Curve



■ Efficiency vs Load (48V Model)



© The curve above is measured at 230VAC.