



500W Single Output with PFC Function

RSP-500 series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Forced air cooling by built-in DC Fan (Note5)
- 1U low profile 40.5mm
- High efficiency up to 90.5%
- Built-in remote ON-OFF control
- Built-in remote sense function
- LED indicator for power on
- 3 years warranty

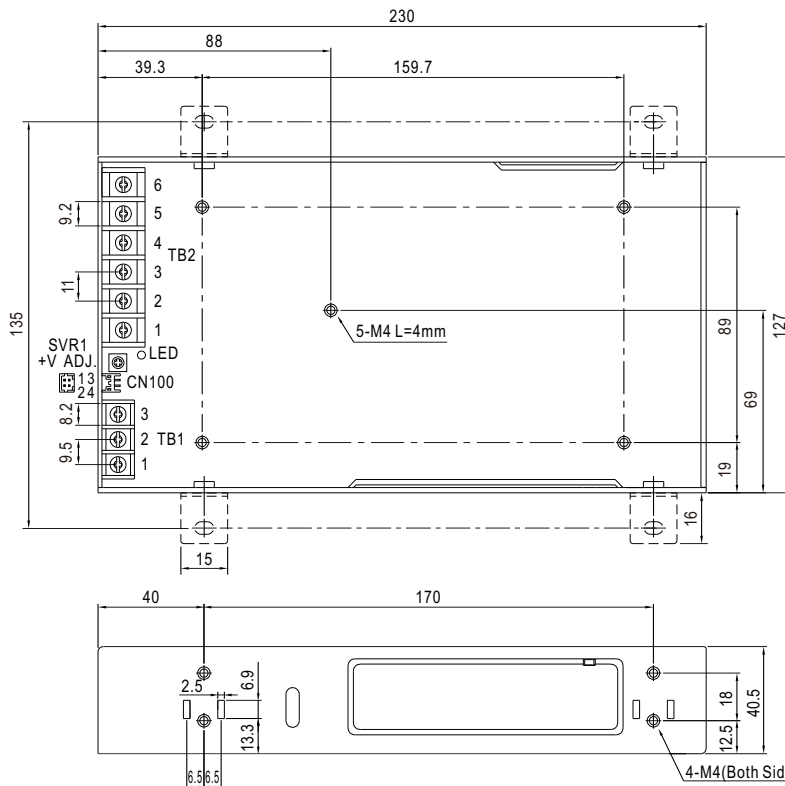


SPECIFICATION

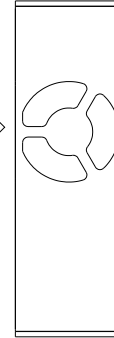
| MODEL | | RSP-500-3.3 | RSP-500-4 | RSP-500-5 | RSP-500-12 | RSP-500-15 | RSP-500-24 | RSP-500-27 | RSP-500-48 |
|---|---|---|--------------|--------------|---------------|--------------|--------------|--------------|------------|
| OUTPUT | DC VOLTAGE | 3.3V | 4V | 5V | 12V | 15V | 24V | 27V | 48V |
| | RATED CURRENT | 90A | 90A | 90A | 41.7A | 33.4A | 21A | 18.6A | 10.5A |
| | CURRENT RANGE | 0 ~ 90A | 0 ~ 90A | 0 ~ 90A | 0 ~ 41.7A | 0 ~ 33.4A | 0 ~ 21A | 0 ~ 18.6A | 0 ~ 10.5A |
| | RATED POWER | 297W | 360W | 450W | 500.4W | 501W | 504W | 502.2W | 504W |
| | RIPPLE & NOISE (max.) <small>Note.2</small> | 120mVp-p | 120mVp-p | 150mVp-p | 150mVp-p | 150mVp-p | 150mVp-p | 150mVp-p | 150mVp-p |
| | VOLTAGE ADJ. RANGE | 2.8 ~ 3.6V | 3.6 ~ 4.3V | 4.5 ~ 5.5V | 10 ~ 13.2V | 13.5 ~ 18V | 20 ~ 26.4V | 26 ~ 30V | 41 ~ 56V |
| | VOLTAGE TOLERANCE <small>Note.3</small> | ±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 | ±1.0% | ±1.0% | ±1.0% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% |
| | SETUP, RISE TIME | 1500ms, 80ms/230VAC 3000ms, 80ms/115VAC at full load | | | | | | | |
| HOLD UP TIME (Typ.) | 18ms/230VAC 14ms/115VAC at full load | | | | | | | | |
| INPUT | VOLTAGE RANGE <small>Note.4</small> | 85 ~ 264VAC 120 ~ 370VDC | | | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | | |
| | POWER FACTOR (Typ.) | PF>0.95/230VAC PF>0.98/115VAC at full load | | | | | | | |
| | EFFICIENCY (Typ.) | 81% | 83% | 84% | 88% | 88% | 89% | 89.5% | 90.5% |
| | AC CURRENT (Typ.) | 4.2A/115VAC | 2.1 A/230VAC | 5.3A/115VAC | 2.65 A/230VAC | | | | |
| | INRUSH CURRENT (Typ.) | 20A/115VAC | 40A/230VAC | | | | | | |
| | LEAKAGE CURRENT | <2mA / 240VAC | | | | | | | |
| PROTECTION | OVERLOAD | 105 ~ 130% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed | | | | | | | |
| | OVER VOLTAGE | 3.8 ~ 4.5V | 4.5 ~ 5.3V | 5.75 ~ 6.75V | 13.8 ~ 16.2V | 18.8 ~ 21.8V | 27.6 ~ 32.4V | 32.9 ~ 38.3V | 58.4 ~ 68V |
| | | Protection type : Shut down o/p voltage, re-power on to recover | | | | | | | |
| | OVER TEMPERATURE | Shut down o/p voltage, recovers automatically after temperature goes down | | | | | | | |
| FUNCTION | REMOTE CONTROL | POWER ON:open or 0~0.8VDC between RC+(Pin 4)&RC-(Pin3) on CN100 POWER OFF: 4~10VDC between RC+(Pin 4)&RC-(Pin3) on CN100 | | | | | | | |
| | REMOTE SENSE | Compensate voltage drop on the load wiring up to 0.3V | | | | | | | |
| | FAN CONTROL (Typ.) | RTH2≥50℃ ±10℃ Fan on ; RTH2≤40℃ ±10℃ Fan off (Fan always on for 3.3~5V,Fan ON/OFF control for 12~48V) | | | | | | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +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℃) | | | | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes | | | | | | | |
| SAFETY & EMC <small>(Note 4)</small> | SAFETY STANDARDS | UL60950-1, TUV EN60950-1 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℃ / 70% RH | | | | | | | |
| | EMC EMISSION | Compliance to EN55022 (CISPR22) Class B, EN61000-3-2,-3 | | | | | | | |
| | EMC IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2, EN61204-3 heavy industry level, criteria A | | | | | | | |
| OTHERS | MTBF | 187.7K hrs min. MIL-HDBK-217F (25℃) | | | | | | | |
| | DIMENSION | 230*127*40.5mm (L*W*H) | | | | | | | |
| | PACKING | 1.3Kg; 9pcs/12.7Kg/0.7CUFT | | | | | | | |
| 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. 4. Derating may be needed under low input voltages. Please check the derating curve for more details. 5. Fan always on for 3.3~5V,Fan ON/OFF control for 12~48V. 6. 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 http://www.meanwell.com) | | | | | | | | |

Case No.226A Unit:mm

Mechanical Specification



Air flow direction



AC Input Terminal Pin No. Assignment (TB1)

| Pin No. | Assignment |
|---------|------------|
| 1 | AC/L |
| 2 | AC/N |
| 3 | FG \perp |

DC Output Terminal Pin No. Assignment (TB2)

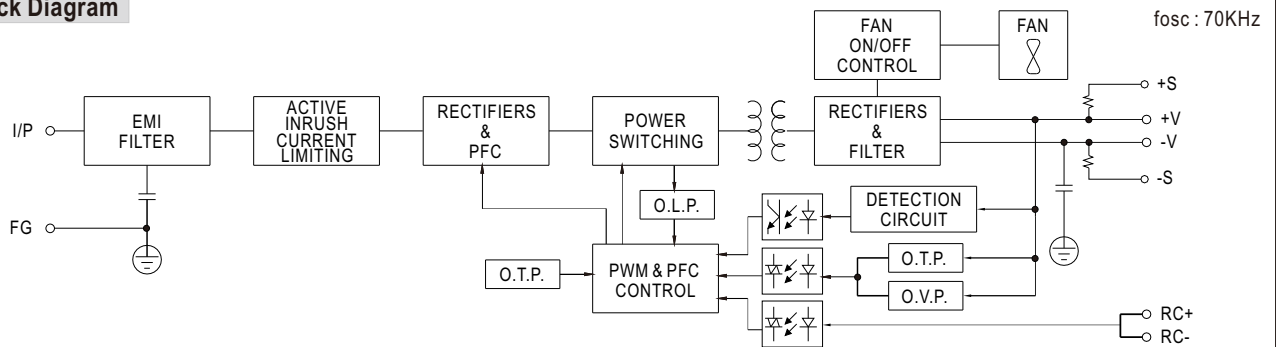
| Pin No. | Assignment |
|---------|--------------|
| 1-3 | DC OUTPUT -V |
| 4-6 | DC OUTPUT +V |

Connector Pin No. Assignment (CN100) :

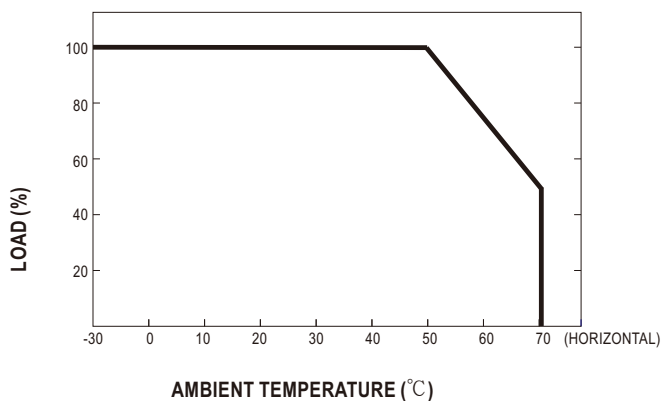
HRS DF11-04DP-2DS or equivalent

| Pin No. | Assignment | Mating Housing | Terminal |
|---------|------------|----------------------------|------------------------------|
| 1 | -S | HRS DF11-4DS or equivalent | HRS DF11-**-SC or equivalent |
| 2 | +S | | |
| 3 | RC- | | |
| 4 | RC+ | | |

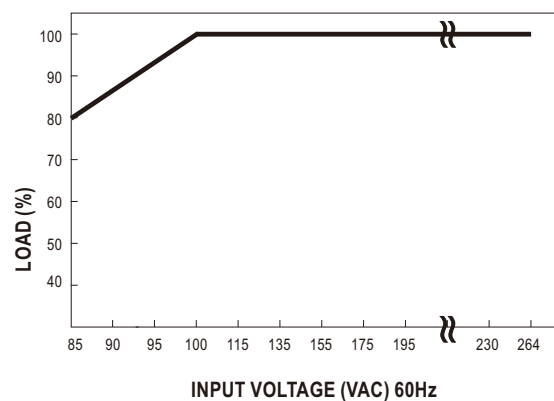
Block Diagram



Derating Curve



Static Characteristics



Function Description of CN100

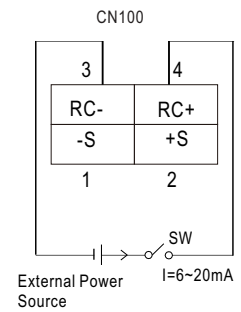
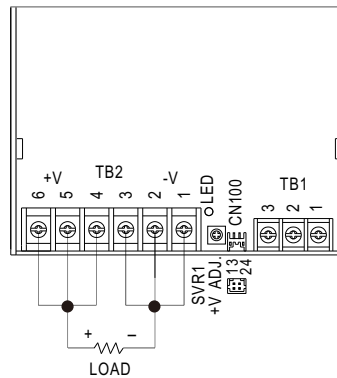
| Pin No. | Function | Description |
|---------|----------|---|
| 1 | -S | Negative sensing. The -S signal should be connected to the negative terminal of the load. The -S and +S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.3V. |
| 2 | +S | Positive sensing. The +S signal should be connected to the positive terminal of the load. The +S and -S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.3V. |
| 3 | RC- | Return for RC+ signal input. |
| 4 | RC+ | Turns the output on and off by electrical or dry contact between pin 4 (RC+) and pin 3 (RC-). 0~0.8VDC or open: Power ON, 4~10VDC: Power OFF. |

Function Manual

1.Remote Control

The PSU can be turned ON/OFF by using the "Remote Control" function.

| Between RC-(pin3) and RC+(pin4) on CN100 | PSU Status |
|--|------------|
| SW OFF (0 ~ 0.8VDC) or open | ON |
| SW ON (4 ~ 10V) | OFF |



2.Remote Sense

The remote sensing compensates voltage drop on the load wiring up to 0.3V

