



100W Single Output with PFC Function

SP-100 series



■ Features :

- Universal AC input / full range
- Built-in active PFC function, PF>0.93
- Protections: Short circuit / Overload / Over voltage
- Built-in constant current limiting circuit
- Remote ON-OFF control(Optional)
- LED indicator for power on
- 100% full load burn-in test
- Fixed switching frequency at PFC:67KHz PWM:134KHz
- 3 years warranty



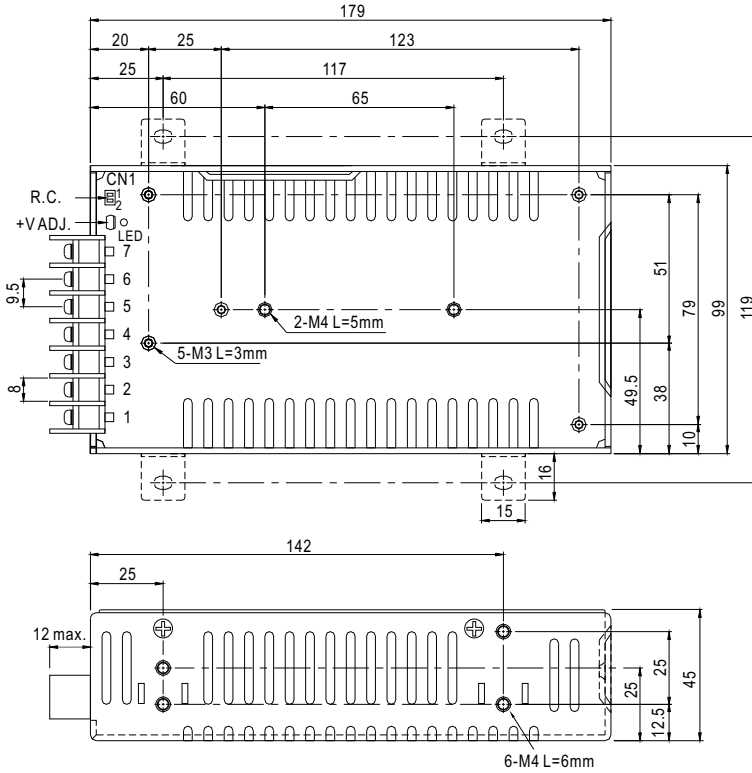
SPECIFICATION

| MODEL | | SP-100-3.3 | SP-100-5 | SP-100-7.5 | SP-100-12 | SP-100-13.5 | SP-100-15 | SP-100-24 | SP-100-27 | SP-100-48 | |
|-----------------------|------------------------------|---|-------------|-----------------------------|--------------|----------------|---------------|--------------|---------------|--------------|--|
| OUTPUT | DC VOLTAGE | 3.3V | 5V | 7.5V | 12V | 13.5V | 15V | 24V | 27V | 48V | |
| | RATED CURRENT | 20A | 20A | 13.5A | 8.5A | 7.5A | 6.7A | 4.2A | 3.8A | 2.1A | |
| | CURRENT RANGE | 0 ~ 20A | 0 ~ 20A | 0 ~ 13.5A | 0 ~ 8.5A | 0 ~ 7.5A | 0 ~ 6.7A | 0 ~ 4.2A | 0 ~ 3.8A | 0 ~ 2.1A | |
| | RATED POWER | 66W | 100W | 101.25W | 102W | 101.25W | 100.5W | 100.8W | 102.6W | 100.8W | |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 100mVp-p | 100mVp-p | 100mVp-p | 100mVp-p | 100mVp-p | 150mVp-p | 150mVp-p | 250mVp-p | |
| | VOLTAGE ADJ. RANGE | 3.14 ~ 3.63V | 4.75 ~ 5.5V | 7.13 ~ 8.25V | 11.4 ~ 13.2V | 12.8 ~ 14.9V | 14.3 ~ 16.5V | 22.8 ~ 26.4V | 25.7 ~ 29.7V | 45.6 ~ 52.8V | |
| | VOLTAGE TOLERANCE Note.3 | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 1.0% | 1.0% | 1.0% | |
| | LINE REGULATION | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | |
| | LOAD REGULATION | 1.0% | 1.0% | 1.0% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | |
| | SETUP, RISE TIME | 600ms, 30ms at full load | | | | | | | | | |
| HOLD UP TIME (Typ.) | 20ms at full load | | | | | | | | | | |
| INPUT | VOLTAGE RANGE | 85 ~ 264VAC | | 120 ~ 370VDC | | | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | | | | |
| | POWER FACTOR (Typ.) | PF>0.93/230VAC | | PF>0.98/115VAC at full load | | | | | | | |
| | EFFICIENCY (Typ.) | 70% | 76% | 78% | 80% | 80% | 82% | 84% | 83% | 82% | |
| | AC CURRENT (Typ.) | 1.7A/115VAC | | 0.8A/230VAC | | | | | | | |
| | INRUSH CURRENT (Typ.) | COLD START 30A/230VAC | | | | | | | | | |
| LEAKAGE CURRENT | <2mA / 240VAC | | | | | | | | | | |
| PROTECTION | OVERLOAD | 105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed | | | | | | | | | |
| | OVER VOLTAGE | 3.63 ~ 4.46V | 5.5 ~ 6.75V | 8.25 ~ 10.13V | 13.2 ~ 16.2V | 14.85 ~ 18.23V | 16.5 ~ 20.25V | 26.4 ~ 32.4V | 29.7 ~ 36.45V | 52.8 ~ 64.8V | |
| FUNCTION | REMOTE CONTROL(OPTION) | CN1:4 ~ 10VDC POWER ON, <0 ~ 0.8VDC POWER OFF | | | | | | | | | |
| | WORKING TEMP. | -10 ~ +60°C (Refer to output load derating curve) | | | | | | | | | |
| ENVIRONMENT | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | | | | | |
| | STORAGE TEMP., HUMIDITY | -20 ~ +85°C, 10 ~ 95% RH | | | | | | | | | |
| | TEMP. COEFFICIENT | 0.05%/C (0 ~ 50°C) | | | | | | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes | | | | | | | | | |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS | UL60950-1, TUV EN60950-1 approved | | | | | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC | | | | | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC | | | | | | | | | |
| | EMI CONDUCTION & RADIATION | Compliance to EN55022 (CISPR22) Class B | | | | | | | | | |
| | HARMONIC CURRENT | Compliance to EN61000-3-2,-3 | | | | | | | | | |
| OTHERS | EMS IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, light industry level, criteria A | | | | | | | | | |
| | MTBF | 211.3K hrs min. MIL-HDBK-217F (25°C) | | | | | | | | | |
| | DIMENSION | 179*99*45mm (L*W*H) | | | | | | | | | |
| NOTE | PACKING | 0.66Kg; 20pcs/14.3Kg/1.17CUFT | | | | | | | | | |
| | | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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. 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. | | | | | | | | | |



Case No. 915A Unit:mm

Mechanical Specification



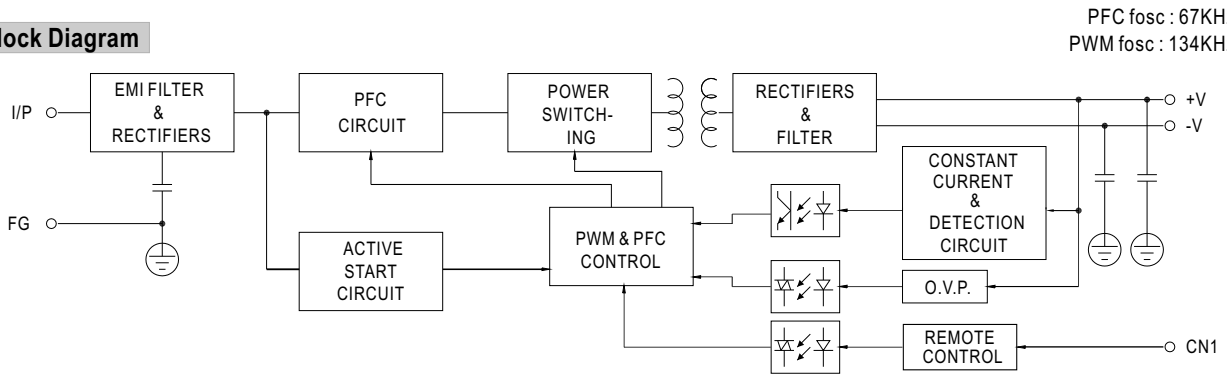
Terminal Pin No. Assignment

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

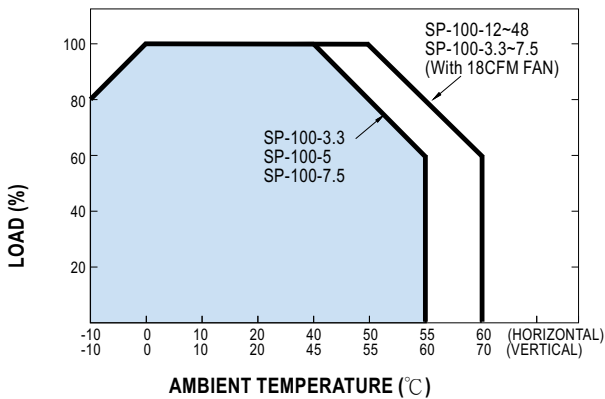
Remote ON/OFF(CN1): JST S2B-XH or equivalent(optional)

| Pin No. | Assignment | Mating Housing | Terminal |
|---------|------------|-----------------------|---------------------------------|
| 1 | RC+ | JST XHP or equivalent | JST SXH-001T-P0.6 or equivalent |
| 2 | RC- | | |

Block Diagram



Derating Curve



Output Derating VS Input Voltage

