



Наличие и актуальные цены на

**SP-200-12**

<https://www.mean-well.ru/store/SP-200-12/>



## 200W Single Output with PFC Function

## SP-200 series



### ■ Features :

- Universal AC input / full range
- Built-in active PFC function, PF>0.93
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in cooling fan speed control
- Built-in constant current limiting circuit
- Built-in fan speed control
- 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

User's Manual



UL60950-1

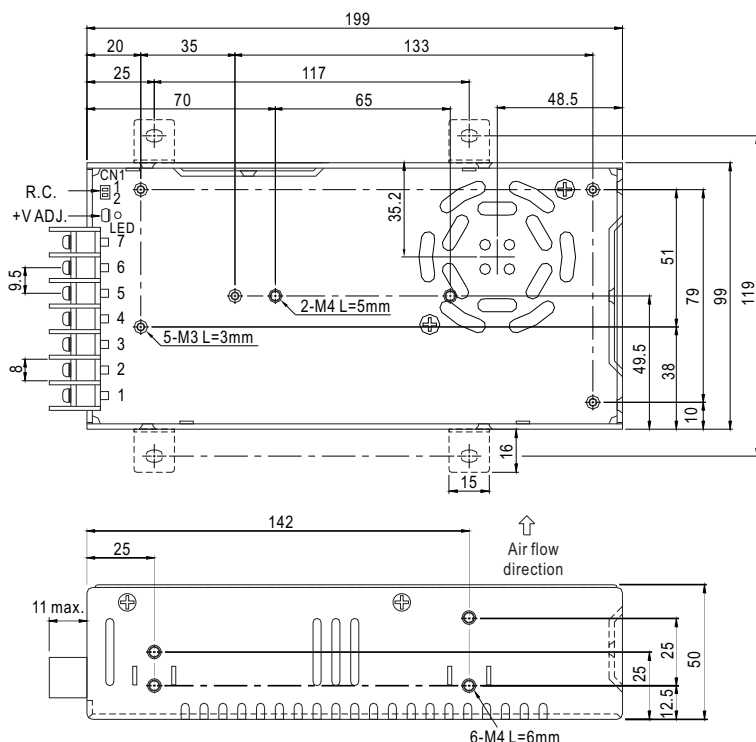
GB4943.1

### SPECIFICATION

| MODEL                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SP-200-3.3                                                                                                                            | SP-200-5    | SP-200-7.5                  | SP-200-12    | SP-200-13.5   | SP-200-15     | SP-200-24    | SP-200-27     | SP-200-48    |     |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------|--------------|---------------|---------------|--------------|---------------|--------------|-----|
| OUTPUT                   | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3.3V                                                                                                                                  | 5V          | 7.5V                        | 12V          | 13.5V         | 15V           | 24V          | 27V           | 48V          |     |
|                          | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 40A                                                                                                                                   | 40A         | 26.7A                       | 16.7A        | 14.9A         | 13.4A         | 8.4A         | 7.5A          | 4.2A         |     |
|                          | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0 ~ 40A                                                                                                                               | 0 ~ 40A     | 0 ~ 26.7A                   | 0 ~ 16.7A    | 0 ~ 14.9A     | 0 ~ 13.4A     | 0 ~ 8.4A     | 0 ~ 7.5A      | 0 ~ 4.2A     |     |
|                          | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 132W                                                                                                                                  | 200W        | 200.2W                      | 200.4W       | 201.1W        | 201W          | 201.6W       | 202.5W        | 201.6W       |     |
|                          | 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, 40ms 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>0.97/115VAC at full load |              |               |               |              |               |              |     |
|                          | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 69%                                                                                                                                   | 76%         | 78.5%                       | 84%          | 84%           | 84%           | 84%          | 85%           | 85%          | 85% |
|                          | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 3.5A/115VAC                                                                                                                           |             | 1.7A/230VAC                 |              |               |               |              |               |              |     |
|                          | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | COLD START 50A/230VAC                                                                                                                 |             |                             |              |               |               |              |               |              |     |
|                          | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <2mA / 240VAC                                                                                                                         |             |                             |              |               |               |              |               |              |     |
| PROTECTION               | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 105 ~ 150% rated output power<br>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 ~ 18.2V | 16.5 ~ 20.25V | 26.4 ~ 32.4V | 29.7 ~ 36.45V | 52.8 ~ 64.8V |     |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 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(OPTION)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | CN1:4 ~ 10VDC POWER ON, <0 ~ 0.8VDC POWER OFF                                                                                         |             |                             |              |               |               |              |               |              |     |
| ENVIRONMENT              | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -10 ~ +60℃ (Refer to output load derating curve)                                                                                      |             |                             |              |               |               |              |               |              |     |
|                          | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20 ~ 90% RH non-condensing                                                                                                            |             |                             |              |               |               |              |               |              |     |
|                          | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -20 ~ +85℃, 10 ~ 95% RH                                                                                                               |             |                             |              |               |               |              |               |              |     |
|                          | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ±0.05%/℃ (0 ~ 50℃)                                                                                                                    |             |                             |              |               |               |              |               |              |     |
|                          | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes                                                                          |             |                             |              |               |               |              |               |              |     |
| SAFETY & EMC<br>(Note 4) | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | UL60950-1, 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℃/70% RH                                                                               |             |                             |              |               |               |              |               |              |     |
|                          | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Compliance to EN55032 (CISPR32) Class B,EN61000-3-2,-3                                                                                |             |                             |              |               |               |              |               |              |     |
|                          | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, light industry level, criteria A                                           |             |                             |              |               |               |              |               |              |     |
| OTHERS                   | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 183.8K hrs min. MIL-HDBK-217F (25℃)                                                                                                   |             |                             |              |               |               |              |               |              |     |
|                          | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 199*99*50mm (L*W*H)                                                                                                                   |             |                             |              |               |               |              |               |              |     |
|                          | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.85Kg; 20pcs/17.9Kg/1.21CUFT                                                                                                         |             |                             |              |               |               |              |               |              |     |
| NOTE                     | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>4. 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> )<br>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a> |                                                                                                                                       |             |                             |              |               |               |              |               |              |     |

## Mechanical Specification

Case No. 916B Unit:mm



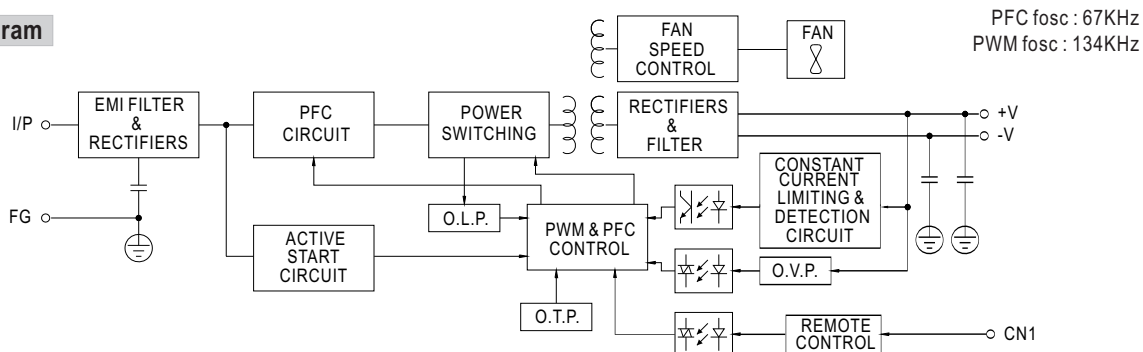
### Terminal Pin No. Assignment

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

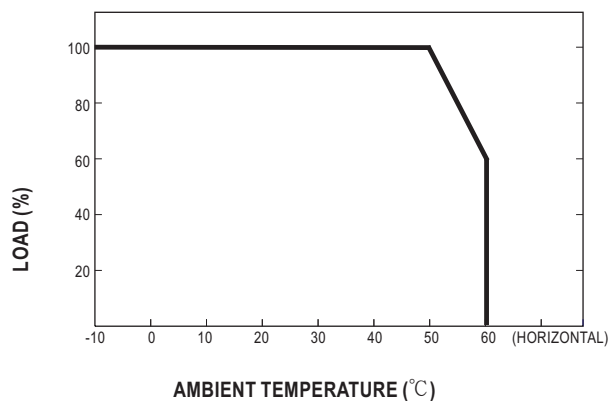
Remote ON/OFF(CN1):JST S2B-XH or equivalent(optional)

| 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

