



# THE DATASHEET OF SP-75-3.3





■ 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
- Low profile: 33mm thickness
- 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

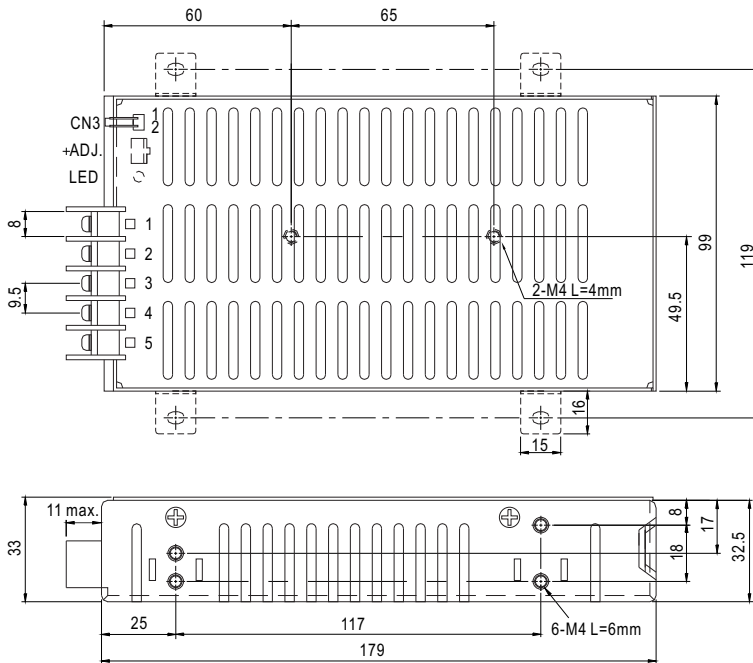


SPECIFICATION

| MODEL                 |   | SP-75-3.3   | SP-75-5      | SP-75-7.5                | SP-75-12     | SP-75-13.5     | SP-75-15       | SP-75-24     | SP-75-27       | SP-75-48     |  |
|-----------------------|---|---|--------------|--------------------------|--------------|----------------|----------------|--------------|----------------|--------------|--|
| OUTPUT                | DC VOLTAGE  | 3.3V  | 5V           | 7.5V                     | 12V          | 13.5V          | 15V            | 24V          | 27V            | 48V          |  |
|                       | RATED CURRENT   | 15A   | 15A          | 10A                      | 6.3A         | 5.6A           | 5A             | 3.2A         | 2.8A           | 1.6A         |  |
|                       | CURRENT RANGE   | 0 ~ 15A   | 0 ~ 15A      | 0 ~ 10A                  | 0 ~ 6.3A     | 0 ~ 5.6A       | 0 ~ 5A         | 0 ~ 3.2A     | 0 ~ 2.8A       | 0 ~ 1.6A     |  |
|                       | RATED POWER   | 49.5W   | 75W          | 75W                      | 75.6W        | 75.6W          | 75W            | 76.8W        | 75.6W          | 76.8W        |  |
|                       | RIPPLE & NOISE (max.) Note.2  | 80mVp-p   | 80mVp-p      | 80mVp-p                  | 80mVp-p      | 80mVp-p        | 80mVp-p        | 100mVp-p     | 100mVp-p       | 100mVp-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  | 800ms, 60ms at full load  |              |                          |              |                |                |              |                |              |  |
| HOLD UP TIME (Typ.)   | 36ms at full load   |   |              |                          |              |                |                |              |                |              |  |
| INPUT                 | VOLTAGE RANGE Note.5  | 85 ~ 264VAC   |              | 120 ~ 370VDC             |              |                |                |              |                |              |  |
|                       | FREQUENCY RANGE   | 47 ~ 63Hz   |              |                          |              |                |                |              |                |              |  |
|                       | POWER FACTOR (Typ.)   | PF>0.93/230VAC  |              | 0.96/115VAC at full load |              |                |                |              |                |              |  |
|                       | EFFICIENCY (Typ.)   | 70%   | 76%          | 79%                      | 81%          | 82%            | 82%            | 83%          | 83%            | 83%          |  |
|                       | AC CURRENT (Typ.)   | 1.3A/115VAC   |              | 0.7A/230VAC              |              |                |                |              |                |              |  |
|                       | INRUSH CURRENT (Typ.)   | COLD START 45A/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  | 3.8 ~ 4.46V   | 5.75 ~ 6.75V | 8.63 ~ 10.13V            | 13.8 ~ 16.2V | 15.53 ~ 18.23V | 17.25 ~ 20.25V | 27.6 ~ 32.4V | 31.05 ~ 36.45V | 55.2 ~ 64.8V |  |
|                       |   | Protection type : Shut down o/p voltage, re-power on to recover   |              |                          |              |                |                |              |                |              |  |
| FUNCTION              | REMOTE CONTROL(OPTION)  | CN3:4 ~ 10VDC POWER OFF, <0 ~ 0.8VDC POWER ON   |              |                          |              |                |                |              |                |              |  |
| ENVIRONMENT           | WORKING TEMP.   | -10 ~ +60°C (Refer to output load derating curve)   |              |                          |              |                |                |              |                |              |  |
|                       | 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 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  | 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  | 208.8K hrs min. MIL-HDBK-217F (25°C)  |              |                          |              |                |                |              |                |              |  |
|                       | DIMENSION   | 179*97*33mm (L*W*H)   |              |                          |              |                |                |              |                |              |  |
|                       | PACKING   | 0.58Kg; 20pcs/12Kg/0.72CUFT   |              |                          |              |                |                |              |                |              |  |
| NOTE                  | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>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>)</p> <p>5. Derating may be needed under low input voltages. Please check the derating curve for more details.</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p> |   |              |                          |              |                |                |              |                |              |  |

**Mechanical Specification**

Case No. 920A Unit:mm



**Terminal Pin No. Assignment**

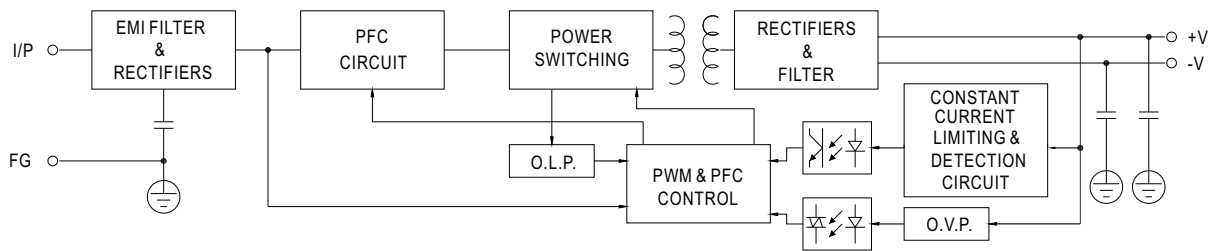
| Pin No. | Assignment   | Pin No. | Assignment |
|---------|--------------|---------|------------|
| 1       | DC OUTPUT +V | 4       | AC/N       |
| 2       | DC OUTPUT -V | 5       | AC/L       |
| 3       | FG $\perp$   |         |            |

Remote ON/OFF(CN3): Molex 5046-02 or equivalent(optional)

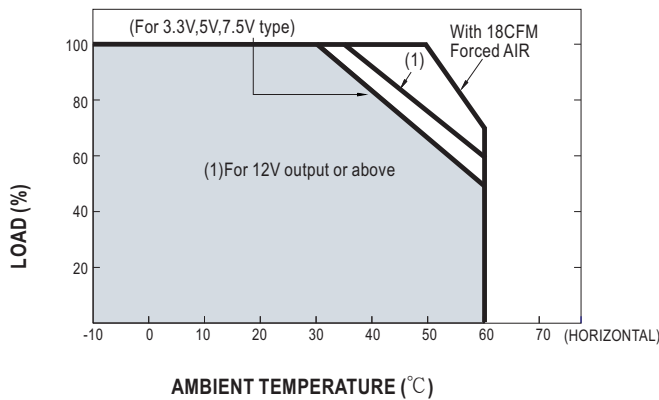
| Pin No. | Assignment | Mating Housing           | Terminal                 |
|---------|------------|--------------------------|--------------------------|
| 1       | RC-        | Molex 5051 or equivalent | Molex 2759 or equivalent |
| 2       | RC+        |                          |                          |

**Block Diagram**

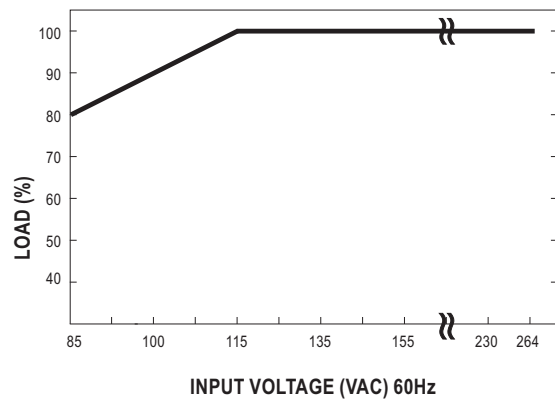
PFC fosc : 67KHz  
PWM fosc : 134KHz



**Derating Curve**



**Output Derating VS Input Voltage**



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