



### ■ Features :

- AC input range selectable by switch
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- 100% full load burn-in test
- High efficiency, long life and high reliability
- 2 years warranty

### SPECIFICATION

| MODEL                 | SMN-ES150-3.3  | SMN-ES150-5   | SMN-ES150-7.5 | SMN-ES150-9 | SMN-ES150-12 | SMN-ES150-15 | SMN-ES150-24   | SMN-ES150-48 |              |  |
|-----------------------|--|---|---------------|-------------|--------------|--------------|----------------|--------------|--------------|--|
| OUTPUT                | DC VOLTAGE   | 3.3V  | 5V            | 7.5V        | 9V           | 12V          | 15V            | 24V          | 48V          |  |
|                       | RATED CURRENT  | 30A   | 26A           | 20A         | 16.7A        | 12.5A        | 10A            | 6.5A         | 3.3A         |  |
|                       | CURRENT RANGE  | 0 ~ 30A   | 0 ~ 26A       | 0 ~ 20A     | 0 ~ 16.7A    | 0 ~ 12.5A    | 0 ~ 10A        | 0 ~ 6.5A     | 0 ~ 3.3A     |  |
|                       | RATED POWER  | 99W   | 130W          | 150W        | 150W         | 150W         | 150W           | 156W         | 158.4W       |  |
|                       | RIPPLE & NOISE (max.) Note.2   | 80mVp-p   | 80mVp-p       | 120mVp-p    | 120mVp-p     | 120mVp-p     | 120mVp-p       | 120mVp-p     | 200mVp-p     |  |
|                       | VOLTAGE ADJ. RANGE   | 3.2 ~ 3.5V  | 4.75 ~ 5.5V   | 7.13 ~ 8.3V | 8.55 ~ 9.9V  | 11.4 ~ 13.5V | 14.25 ~ 16.5V  | 22.8 ~ 27.6V | 45.6 ~ 52.8V |  |
|                       | VOLTAGE TOLERANCE Note.3   | ±3.0%   | ±2.0%         | ±1.0%       | ±1.0%        | ±1.0%        | ±1.0%          | ±1.0%        | ±1.0%        |  |
|                       | LINE REGULATION Note.4   | ±0.5%   | ±0.5%         | ±0.5%       | ±0.5%        | ±0.5%        | ±0.5%          | ±0.5%        | ±0.5%        |  |
|                       | LOAD REGULATION Note.5   | ±2.0%   | ±1.0%         | ±0.5%       | ±0.5%        | ±0.5%        | ±0.5%          | ±0.5%        | ±0.5%        |  |
|                       | SETUP, RISE TIME Note.7  | 800ms, 20ms/230VAC      1200ms, 30ms/115VAC at full load  |               |             |              |              |                |              |              |  |
| HOLD UP TIME (Typ.)   | 24ms/230VAC      20ms/115VAC at full load  |   |               |             |              |              |                |              |              |  |
| INPUT                 | VOLTAGE RANGE  | 90 ~ 132VAC / 180 ~ 264VAC selected by switch      254 ~ 373VDC   |               |             |              |              |                |              |              |  |
|                       | FREQUENCY RANGE  | 47 ~ 63Hz   |               |             |              |              |                |              |              |  |
|                       | EFFICIENCY (Typ.)  | 73%   | 78%           | 80%         | 83%          | 83%          | 83%            | 86%          | 86%          |  |
|                       | AC CURRENT (Typ.)  | 3A/115VAC      2A/230VAC  |               |             |              |              |                |              |              |  |
|                       | INRUSH CURRENT (Typ.)  | COLD START 45A/230VAC   |               |             |              |              |                |              |              |  |
|                       | LEAKAGE CURRENT  | <2mA / 240VAC   |               |             |              |              |                |              |              |  |
| PROTECTION            | OVERLOAD   | 110 ~ 150% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |               |             |              |              |                |              |              |  |
|                       | OVER VOLTAGE   | 3.8 ~ 4.65V   | 5.75 ~ 6.75V  | 8.6 ~ 10.1V | 10.4 ~ 12.2V | 13.8 ~ 16.2V | 17.25 ~ 20.25V | 27.6 ~ 32.4V | 55.2 ~ 62.4V | Protection type : Hiccup mode, recovers automatically after fault condition is removed |
| ENVIRONMENT           | WORKING TEMP.  | -20 ~ +60°C (Refer to output load derating curve)   |               |             |              |              |                |              |              |  |
|                       | WORKING HUMIDITY   | 20 ~ 90% RH non-condensing  |               |             |              |              |                |              |              |  |
|                       | STORAGE TEMP., HUMIDITY  | -40 ~ +85°C, 10 ~ 95% RH  |               |             |              |              |                |              |              |  |
|                       | TEMP. COEFFICIENT  | ±0.03%/°C (0 ~ 50°C)  |               |             |              |              |                |              |              |  |
|                       | VIBRATION  | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes   |               |             |              |              |                |              |              |  |
| SAFETY & EMC (Note 6) | SAFETY STANDARDS   | -   |               |             |              |              |                |              |              |  |
|                       | 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 70% RH   |               |             |              |              |                |              |              |  |
|                       | EMI CONDUCTION & RADIATION   | Compliance to EN55022 (CISPR22) Class B, GB9254 CLASS B   |               |             |              |              |                |              |              |  |
|                       | HARMONIC CURRENT   | Compliance to EN61000-3-2,-3, GB17625.1   |               |             |              |              |                |              |              |  |
|                       | EMS IMMUNITY   | Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024, EN61000-6-1, heavy industry level, criteria A          |               |             |              |              |                |              |              |  |
| OTHERS                | MTBF   | 433.3Khrs min.    MIL-HDBK-217F (25°C)  |               |             |              |              |                |              |              |  |
|                       | DIMENSION  | 199*98*38mm (L*W*H)   |               |             |              |              |                |              |              |  |
|                       | PACKING  | 0.7Kg; 20pcs/15Kg/0.72CUFT  |               |             |              |              |                |              |              |  |
| NOTE                  | <ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>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.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. Line regulation is measured from low line to high line at rated load.</li> <li>5. Load regulation is measured from 0% to 100% rated load.</li> <li>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.</li> <li>7. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time.</li> </ol> |   |               |             |              |              |                |              |              |  |