



■ Features :

- AC input range selected by switch
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Battery under/Over voltage and polarity protections(ESC only)
- Forced air cooling by built-in DC fan(240W only)
- Fixed switching frequency at 25KHz
- 3 color LED loading indicator
- 2 years warranty

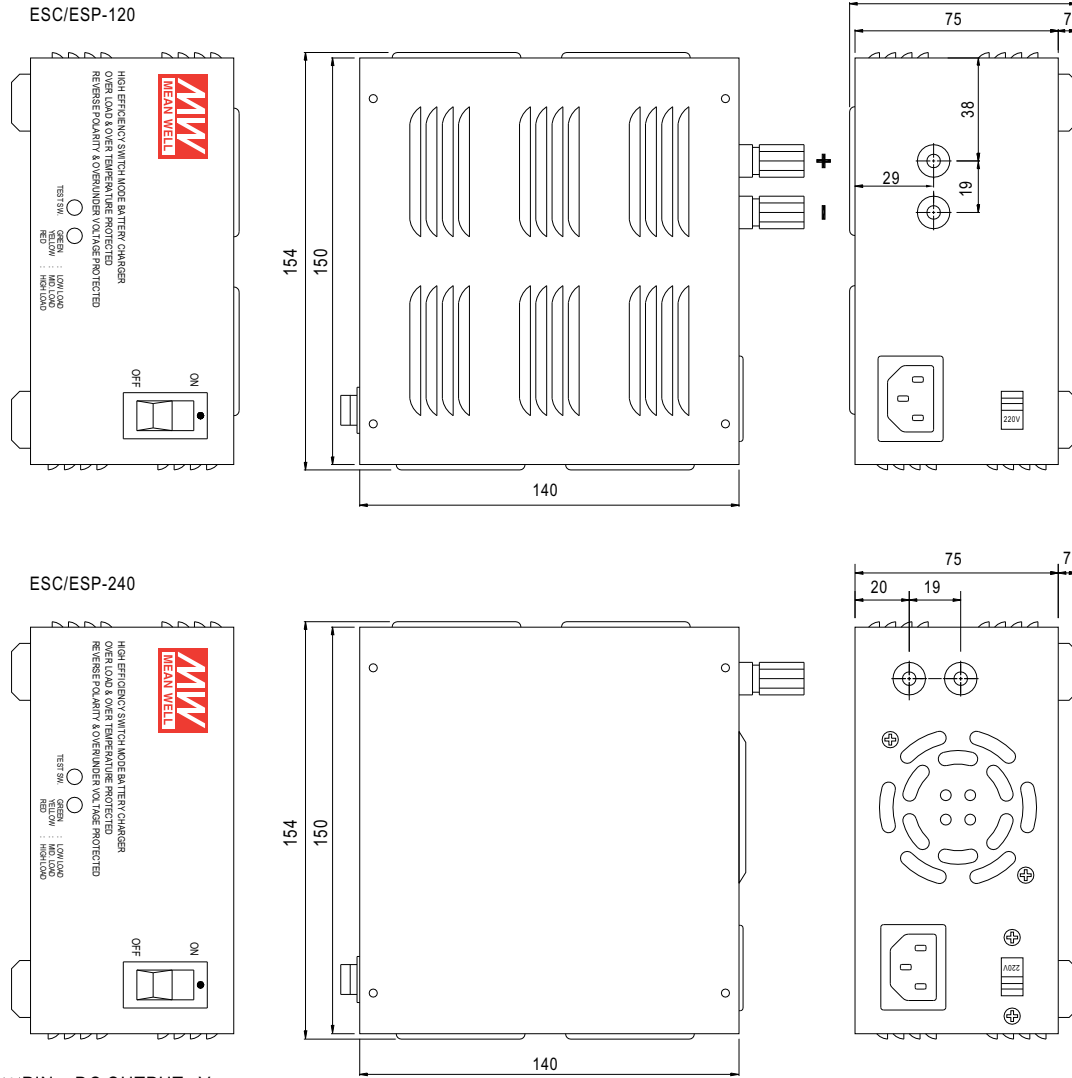


**SPECIFICATION**

| MODEL                 |   | ESC/ESP-120  |                          |                          | ESC/ESP-240   |                      |              |
|-----------------------|---|--|--------------------------|--------------------------|---|----------------------|--------------|
| OUTPUT                | DC VOLTAGE  | 13.5V  | 27V                      | 54V                      | 13.5V   | 27V                  | 54V          |
|                       | RATED CURRENT   | 8A   | 4A                       | 2A                       | 16A   | 8A                   | 4A           |
|                       | CURRENT RANGE   | 0 ~ 8A   | 0 ~ 4A                   | 0 ~ 2A                   | 0 ~ 16A   | 0 ~ 8A               | 0 ~ 4A       |
|                       | RATED POWER   | 108W   | 108W                     | 108W                     | 216W  | 216W                 | 216W         |
|                       | RIPPLE & NOISE (max.) Note.2  | 120mVp-p   | 150mVp-p                 | 400mVp-p                 | 120mVp-p  | 150mVp-p             | 400mVp-p     |
|                       | VOLTAGE ADJ. RANGE  | 12 ~ 15V   | 24 ~ 30V                 | 48 ~ 56V                 | 12 ~ 15V  | 24 ~ 30V             | 48 ~ 56V     |
|                       | VOLTAGE TOLERANCE Note.3  | ±2.0%  | ±1.0%                    | ±1.0%                    | ±2.0%   | ±1.0%                | ±1.0%        |
|                       | LINE REGULATION   | ±0.5%  | ±0.5%                    | ±0.5%                    | ±1.0%   | ±0.5%                | ±0.5%        |
|                       | LOAD REGULATION   | ±2.0%  | ±1.0%                    | ±0.5%                    | ±2.0%   | ±1.0%                | ±0.5%        |
|                       | SETUP, RISE TIME  | 200ms, 100ms at full load  |                          |                          | 200ms, 100ms at full load                                 |                      |              |
| HOLD UP TIME (Typ.)   | 36ms at full load   |  |                          | 30ms at full load        |   |                      |              |
| INPUT                 | VOLTAGE RANGE   | 88 ~ 132VAC/176 ~ 264VAC selected by switch  |                          |                          | 249 ~ 370VDC  |                      |              |
|                       | FREQUENCY RANGE   | 47 ~ 63Hz  |                          |                          |   |                      |              |
|                       | EFFICIENCY (Typ.)   | 81%  | 83%                      | 84%                      | 81%   | 84%                  | 85%          |
|                       | AC CURRENT (Typ.)   | 3A/115VAC  | 1.5A/230VAC              |                          | 4.5A/115VAC   | 2.5A/230VAC          |              |
|                       | INRUSH CURRENT (Typ.)   | COLD START 40A   |                          |                          |   |                      |              |
|                       | LEAKAGE CURRENT   | <3.5mA / 240VAC  |                          |                          |   |                      |              |
| PROTECTION            | OVERLOAD  | 105 ~ 135% rated output power<br>Protection type : Fold back current limiting, recovers automatically after fault condition is removed |                          |                          |   |                      |              |
|                       | OVER VOLTAGE  | 15.5 ~ 18.2V   | 31 ~ 36.5V               | 62.1 ~ 72.9V             | 15.5 ~ 18.2V  | 31 ~ 36.5V           | 62.1 ~ 72.9V |
|                       | OVER TEMPERATURE  | RTH5 ≥ 80°C detect on heatsink of Q1, Q2 power transistor  |                          |                          | RTH5 ≥ 85°C detect on heatsink of Q1, Q2 power transistor |                      |              |
|                       | BATTERY   | ESC series with bat. polarity, bat. Under voltage, bat. Over voltage protection  |                          |                          |   |                      |              |
| FUNCTION              | FAN CONTROL   | NO FAN   |                          |                          | RTH5 ≥ 60°C FAN ON, ≤ 50°C FAN OFF                        |                      |              |
| ENVIRONMENT           | WORKING TEMP.   | -10 ~ +60°C (Refer to "Derating Curve")  |                          |                          |   |                      |              |
|                       | WORKING HUMIDITY  | 20 ~ 90% RH non-condensing   |                          |                          |   |                      |              |
|                       | STORAGE TEMP., HUMIDITY   | -20 ~ +85°C, 10 ~ 95% RH   |                          |                          |   |                      |              |
|                       | VIBRATION   | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes   |                          |                          |   |                      |              |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS  | CSA1010.1(UL3101-1,IEC1010-1,EN61010-1) 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 / 25°C / 70% RH   |                          |                          |   |                      |              |
|                       | EMC EMISSION  | Compliance to EN55022 (CISPR22) Class B, EN61000-3-2,-3  |                          |                          |   |                      |              |
|                       | EMC IMMUNITY  | Compliance to EN61000-4-2,3,4, light industry level, criteria A  |                          |                          |   |                      |              |
| OTHERS                | MTBF  | 215.8K hrs min.(ESC-120)   | 200.6K hrs min.(ESC-240) | 250.9K Hrs min.(ESP-120) | 226.6K Hrs min.(ESP-240)                                  | MIL-HDBK-217F (25°C) |              |
|                       | DIMENSION   | 150*140*86mm (L*W*H)   |                          |                          |   |                      |              |
|                       | PACKING   | 1.38Kg; 8pcs/12Kg/1.1CUFT(ESC-120)   |                          |                          | 1.5Kg; 8pcs/13Kg/1.1CUFT(ESC-240)                         |                      |              |
| 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. 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> |  |                          |                          |   |                      |              |

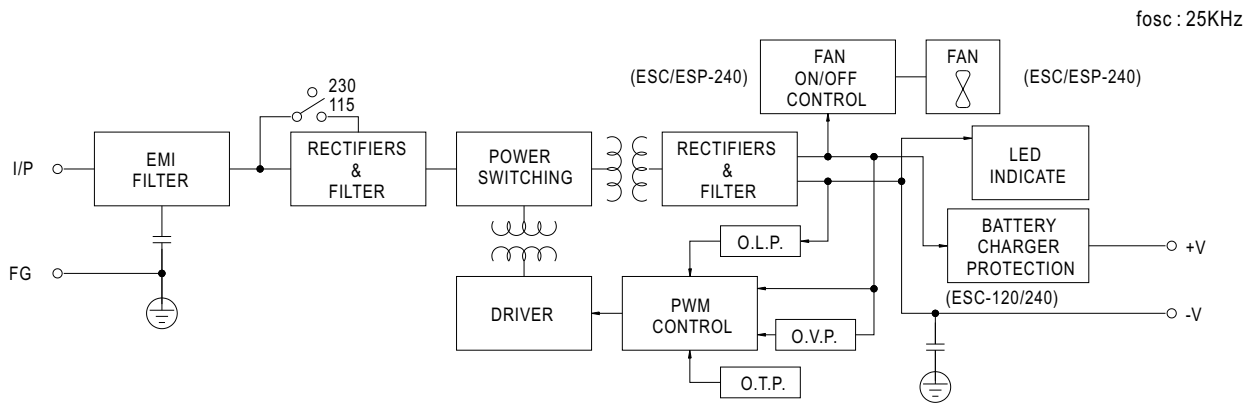
**Mechanical Specification**

Case No. 909E Unit:mm

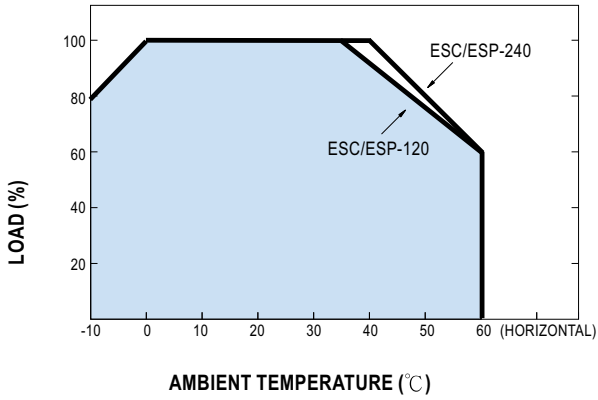


※PIN+: DC OUTPUT +V  
 ※PIN-: DC OUTPUT COM

**Block Diagram**



■ Derating Curve



■ Static Characteristics (ESP-120-27.6)

