



#### ■ Features :

- AC input range selectable by switch
- Protections: Short circuit / Overload / Over voltage/ Over temperature
- Cooling by free air convection
- Withstand 300vac surge input for 5 second
- Built-in constant current limiting circuit
- 100% full load burn-in test
- LED indicator for power on
- Fixed switching frequency at 90KHz
- Low cost,high reliability
- 2 years warranty

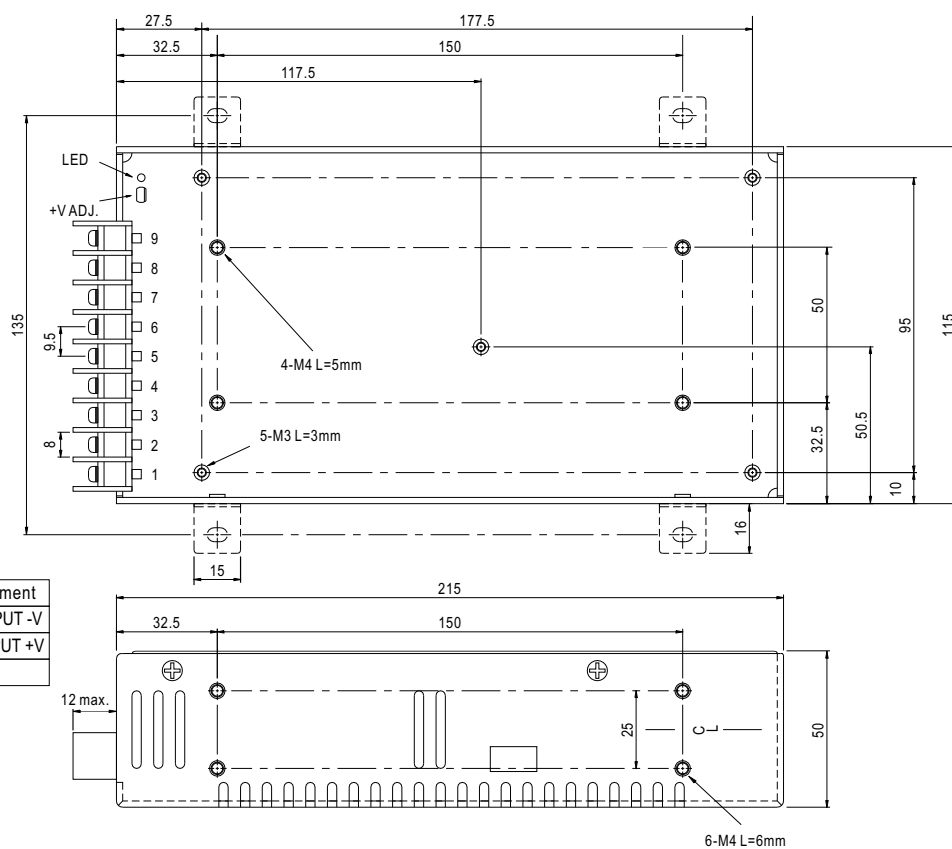
#### SPECIFICATION



| MODEL        |                                                                                                                                                                                                                                                                                                                                                  | SE-200-3.3                                                                                                                                                                                               | SE-200-5   | SE-200-7.5 | SE-200-12  | SE-200-15  | SE-200-24  | SE-200-27 | SE-200-36 | SE-200-48 |  |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|--|
| OUTPUT       | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                       | 3.3V                                                                                                                                                                                                     | 5V         | 7.5V       | 12V        | 15V        | 24V        | 27V       | 36V       | 48V       |  |
|              | RATED CURRENT                                                                                                                                                                                                                                                                                                                                    | 40A                                                                                                                                                                                                      | 40A        | 27A        | 17A        | 14A        | 8.8A       | 7.8A      | 5.9A      | 4.4A      |  |
|              | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                    | 0 ~ 40A                                                                                                                                                                                                  | 0 ~ 40A    | 0 ~ 27A    | 0 ~ 17A    | 0 ~ 14A    | 0 ~ 8.8A   | 0 ~ 7.8A  | 0 ~ 5.9A  | 0 ~ 4.4A  |  |
|              | RATED POWER                                                                                                                                                                                                                                                                                                                                      | 132W                                                                                                                                                                                                     | 200W       | 202.5W     | 204W       | 210W       | 211.2W     | 210.6W    | 212.4W    | 211.2W    |  |
|              | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                      | 150mVp-p                                                                                                                                                                                                 | 150mVp-p   | 150mVp-p   | 150mVp-p   | 150mVp-p   | 150mVp-p   | 200mVp-p  | 240mVp-p  | 240mVp-p  |  |
|              | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                               | 2.97 ~ 3.7V                                                                                                                                                                                              | 4.5 ~ 5.6V | 6 ~ 9V     | 10 ~ 13.5V | 13.5 ~ 18V | 20 ~ 26.4V | 26 ~ 32V  | 32 ~ 40V  | 41 ~ 56V  |  |
|              | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                          | ±2.0%                                                                                                                                                                                                    | ±2.0%      | ±2.0%      | ±1.0%      | ±1.0%      | ±1.0%      | ±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                                                                                                                                                                                                                                                                                                                                  | ±1.5%                                                                                                                                                                                                    | ±1.0%      | ±1.0%      | ±0.5%      | ±0.5%      | ±0.5%      | ±0.5%     | ±0.5%     | ±0.5%     |  |
|              | SETUP, RISE TIME                                                                                                                                                                                                                                                                                                                                 | 1000ms, 50ms/230VAC      1000ms,50ms/115VAC at full load                                                                                                                                                 |            |            |            |            |            |           |           |           |  |
| HOLD UP TIME | 20ms/230VAC      16ms/115VAC at full load                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                          |            |            |            |            |            |           |           |           |  |
| INPUT        | VOLTAGE RANGE                                                                                                                                                                                                                                                                                                                                    | 90 ~ 132VAC / 180 ~ 264VAC by switch      254 ~ 370VDC                                                                                                                                                   |            |            |            |            |            |           |           |           |  |
|              | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                  | 47 ~ 63Hz                                                                                                                                                                                                |            |            |            |            |            |           |           |           |  |
|              | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                | 75%                                                                                                                                                                                                      | 79%        | 82%        | 85%        | 85%        | 87%        | 88%       | 89%       | 89%       |  |
|              | AC CURRENT                                                                                                                                                                                                                                                                                                                                       | 4.5A/115VAC      2.5A/230VAC                                                                                                                                                                             |            |            |            |            |            |           |           |           |  |
|              | INRUSH CURRENT (max.)                                                                                                                                                                                                                                                                                                                            | 40A/115VAC      55A/230VAC                                                                                                                                                                               |            |            |            |            |            |           |           |           |  |
|              | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                  | <3.5mA / 240VAC                                                                                                                                                                                          |            |            |            |            |            |           |           |           |  |
| PROTECTION   | OVER LOAD                                                                                                                                                                                                                                                                                                                                        | 105 ~ 150% rated output power<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed                                                                    |            |            |            |            |            |           |           |           |  |
|              | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                     | 3.8 ~ 4.9V    5.75 ~ 6.75V    9.4 ~ 10.9V    13.8 ~ 16.2V    18 ~ 21V    27.6 ~ 32.4V    33.7 ~ 39.2V    41.4 ~ 46.8V    57.6 ~ 67.2V<br>Protection type : Shut down O/P voltage, re-power on to recover |            |            |            |            |            |           |           |           |  |
|              | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                 | 95℃±5℃(3.3V);100℃±5℃(5V); 90℃±5℃(7.5V);85℃±5℃(12~24V);80℃±5℃(27~36V);75℃±5℃(48V) (TSW1) Detect on case<br>Protection type : Shut down O/P voltage, recovers automatically after temperature goes down    |            |            |            |            |            |           |           |           |  |
|              |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                          |            |            |            |            |            |           |           |           |  |
| ENVIRONMENT  | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                    | -20 ~ +50℃ (Refer to output load derating curve)                                                                                                                                                         |            |            |            |            |            |           |           |           |  |
|              | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                 | 20 ~ 90% RH non-condensing                                                                                                                                                                               |            |            |            |            |            |           |           |           |  |
|              | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                          | -20 ~ +85℃, 10 ~ 95% RH                                                                                                                                                                                  |            |            |            |            |            |           |           |           |  |
|              | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                | ±0.03%/℃ (0 ~ 50℃)                                                                                                                                                                                       |            |            |            |            |            |           |           |           |  |
|              | VIBRATION                                                                                                                                                                                                                                                                                                                                        | 10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes                                                                                                                                             |            |            |            |            |            |           |           |           |  |
| SAFETY & EMC | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                 | UL60950-1 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℃ / 70% RH                                                                                                                                                  |            |            |            |            |            |           |           |           |  |
|              | EMI CONDUCTION & RADIATION                                                                                                                                                                                                                                                                                                                       | Design refer to EN55022 (CISPR22) Class A                                                                                                                                                                |            |            |            |            |            |           |           |           |  |
|              | EMS IMMUNITY                                                                                                                                                                                                                                                                                                                                     | Design refer to EN61000-4-2, 3, 4, 5, 6, 8,11, ENV50204, EN55024, light industry level, criteria A                                                                                                       |            |            |            |            |            |           |           |           |  |
| OTHERS       | MTBF                                                                                                                                                                                                                                                                                                                                             | 271.9K hrs min.      MIL-HDBK-217F (25℃)                                                                                                                                                                 |            |            |            |            |            |           |           |           |  |
|              | DIMENSION                                                                                                                                                                                                                                                                                                                                        | 215*115*50mm (L*W*H)                                                                                                                                                                                     |            |            |            |            |            |           |           |           |  |
|              | PACKING                                                                                                                                                                                                                                                                                                                                          | 0.93Kg; 12pcs/12Kg/0.92CUFT                                                                                                                                                                              |            |            |            |            |            |           |           |           |  |
| 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. |                                                                                                                                                                                                          |            |            |            |            |            |           |           |           |  |

## Mechanical Specification

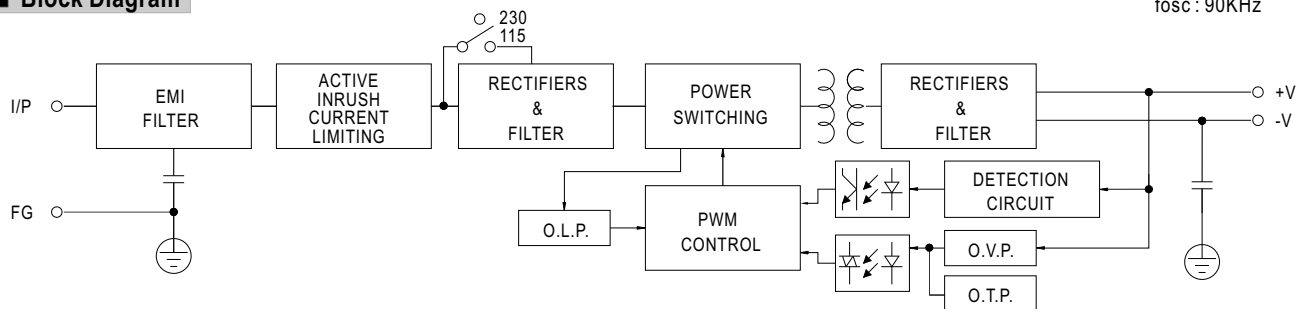
Case No. 912E Unit:mm



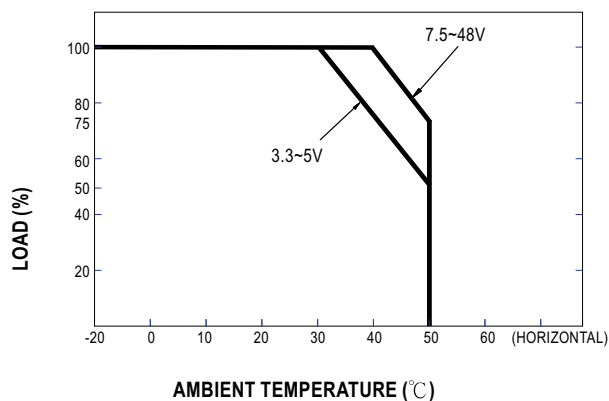
Terminal pin number assignment :

| Pin No. | Assignment | Pin No. | Assignment   |
|---------|------------|---------|--------------|
| 1       | AC/L       | 4~6     | DC OUTPUT -V |
| 2       | AC/N       | 7~9     | DC OUTPUT +V |
| 3       | FG $\perp$ |         |              |

## Block Diagram



## Derating Curve



## Static Characteristics

