

#### ■ Features :

- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage
- 1500VAC I/O isolation
- Built-in EMI filter, low ripple noise
- 100% full load burn-in test
- Fixed switching frequency at 83KHz
- 24V and 48V input voltage design refer to LVD
- Low cost
- High reliability
- 2 years warranty

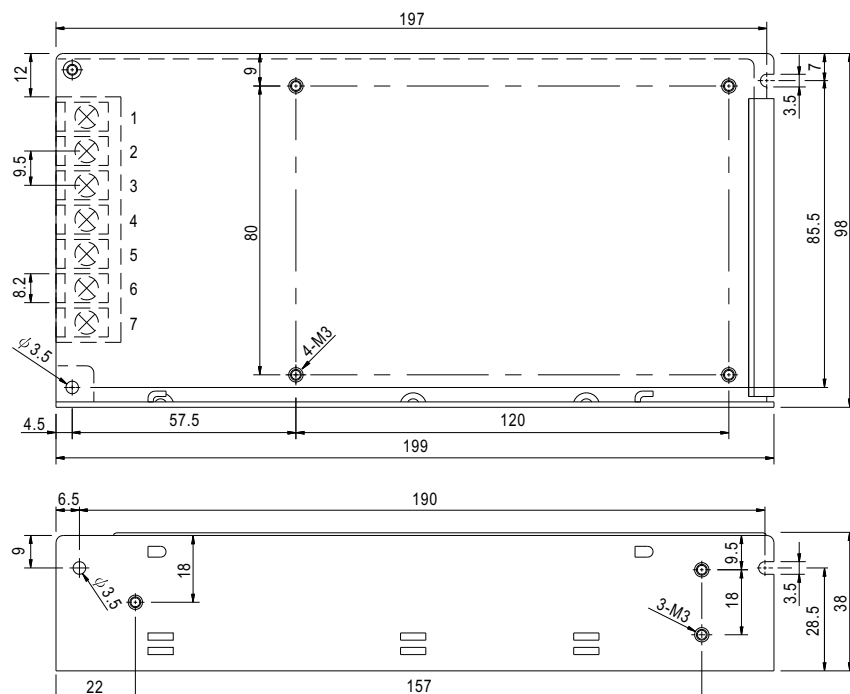
**CB** (for D type only) **CE**

#### SPECIFICATION

| MODEL                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SD-100B-5                                                                                                               | SD-100C-5 | SD-100D-5                | SD-100B-12          | SD-100C-12               | SD-100D-12 | SD-100B-24                                                                                                      | SD-100C-24 | SD-100D-24 |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------|---------------------|--------------------------|------------|-----------------------------------------------------------------------------------------------------------------|------------|------------|
| OUTPUT                                  | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5V                                                                                                                      |           |                          | 12V                 |                          |            | 24V                                                                                                             |            |            |
|                                         | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 20A                                                                                                                     |           |                          | 8.5A                |                          |            | 4.2A                                                                                                            |            |            |
|                                         | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0 ~ 20A                                                                                                                 |           |                          | 0 ~ 8.5A            |                          |            | 0 ~ 4.2A                                                                                                        |            |            |
|                                         | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 100W                                                                                                                    |           |                          | 102W                |                          |            | 100.8W                                                                                                          |            |            |
|                                         | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 100mVp-p                                                                                                                |           |                          | 120mVp-p            |                          |            | 150mVp-p                                                                                                        |            |            |
|                                         | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 4.5 ~ 5.5VDC                                                                                                            |           |                          | 11 ~ 16VDC          |                          |            | 23 ~ 30VDC                                                                                                      |            |            |
|                                         | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ±2.0%                                                                                                                   |           |                          | ±1.0%               |                          |            | ±1.0%                                                                                                           |            |            |
|                                         | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ±0.5%                                                                                                                   |           |                          | ±0.3%               |                          |            | ±0.2%                                                                                                           |            |            |
|                                         | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ±0.5%                                                                                                                   |           |                          | ±0.3%               |                          |            | ±0.2%                                                                                                           |            |            |
|                                         | SETUP, RISE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2s, 50ms(only D mode) at full load                                                                                      |           |                          |                     |                          |            |                                                                                                                 |            |            |
| HOLD UP TIME (Typ.)                     | 20ms(only D mode) at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                         |           |                          |                     |                          |            |                                                                                                                 |            |            |
| INPUT                                   | VOLTAGE RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | B:19 ~ 36VDC      C:36 ~ 72VDC      D:72 ~ 144VDC or 85 ~ 132VAC                                                        |           |                          |                     |                          |            |                                                                                                                 |            |            |
|                                         | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 74%                                                                                                                     | 75%       | 76%                      | 75%                 | 77%                      | 80%        | 78%                                                                                                             | 81%        | 83%        |
|                                         | DC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 4.8A/24V                                                                                                                | 2.4A/48V  | 1.8A/96V                 | 4.8A/24V            | 2.4A/48V                 | 1.8A/96V   | 4.8A/24V                                                                                                        | 2.4A/48V   | 1.8A/96V   |
|                                         | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | D:18A/96VDC                                                                                                             |           |                          |                     |                          |            |                                                                                                                 |            |            |
|                                         | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <0.75mA/120VAC(SD-100D)                                                                                                 |           |                          |                     |                          |            |                                                                                                                 |            |            |
| PROTECTION                              | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 105 ~ 135% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |           |                          |                     |                          |            |                                                                                                                 |            |            |
|                                         | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5.75 ~ 6.75V/10% load                                                                                                   |           |                          | 16.8 ~ 20V/10% load |                          |            | 31.5 ~ 37.5V/10% load<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |            |            |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                         |           |                          |                     |                          |            |                                                                                                                 |            |            |
| ENVIRONMENT                             | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -10 ~ +60℃ (Refer to "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, 2G 10min./1cycle, 60min. each along X, Y, Z axes                                                            |           |                          |                     |                          |            |                                                                                                                 |            |            |
| SAFETY & EMC<br><small>(Note 4)</small> | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | IEC60950-1 CB approved by TUV (for D type only)                                                                         |           |                          |                     |                          |            |                                                                                                                 |            |            |
|                                         | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | I/P-O/P:1.5KVAC    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                                                               |           |                          |                     |                          |            |                                                                                                                 |            |            |
|                                         | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compliance to EN55022 (CISPR22) Class B                                                                                 |           |                          |                     |                          |            |                                                                                                                 |            |            |
|                                         | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compliance to EN61000-4-2,3,4,6,8, light industry level, criteria A                                                     |           |                          |                     |                          |            |                                                                                                                 |            |            |
| OTHERS                                  | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 356.7K hrs min.(SD-100B)                                                                                                |           | 355.5K hrs min.(SD-100C) |                     | 341.9K Hrs min.(SD-100D) |            | MIL-HDBK-217F (25℃)                                                                                             |            |            |
|                                         | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 199*98*38mm (L*W*H)                                                                                                     |           |                          |                     |                          |            |                                                                                                                 |            |            |
|                                         | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.65Kg; 20pcs/13.8Kg/0.8CUFT                                                                                            |           |                          |                     |                          |            |                                                                                                                 |            |            |
| NOTE                                    | 1. All parameters NOT specially mentioned are measured at 24,48,96VDC 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. 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."<br>(as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a> ) |                                                                                                                         |           |                          |                     |                          |            |                                                                                                                 |            |            |

## ■ Mechanical Specification

Case No. 902 Unit:mm



### Terminal Pin No. Assignment

| Pin No. | Assignment | Pin No. | Assignment   |
|---------|------------|---------|--------------|
| 1,2     | INPUT ※    | 4,5     | DC OUTPUT -V |
| 3       | FG $\perp$ | 6,7     | DC OUTPUT +V |

※ SD-100B,C

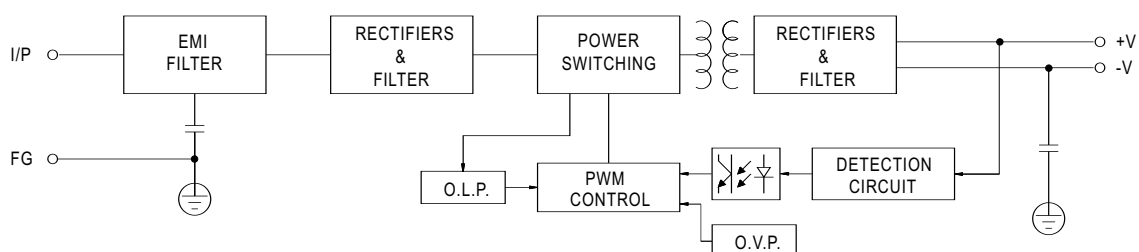
| Pin No. | Assignment  |
|---------|-------------|
| 1       | DC INPUT V+ |
| 2       | DC INPUT V- |

※ SD-100D

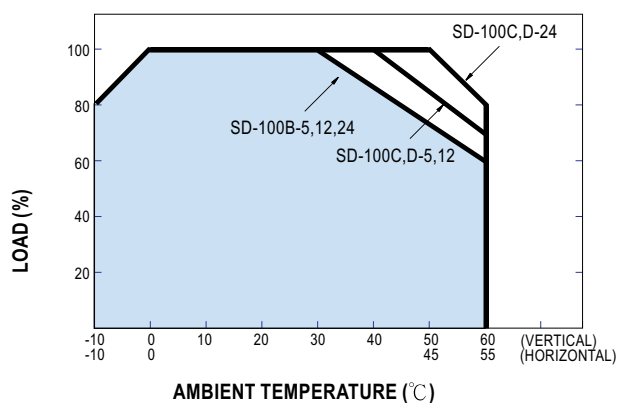
| Pin No. | Assignment  |
|---------|-------------|
| 1,2     | AC/DC INPUT |

### ■ Block Diagram

fosc : 83KHz



### Derating Curve



### ■ Static Characteristics(SD-100D-24V)

