

### ■ 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
- Low cost
- High reliability
- 2 years warranty

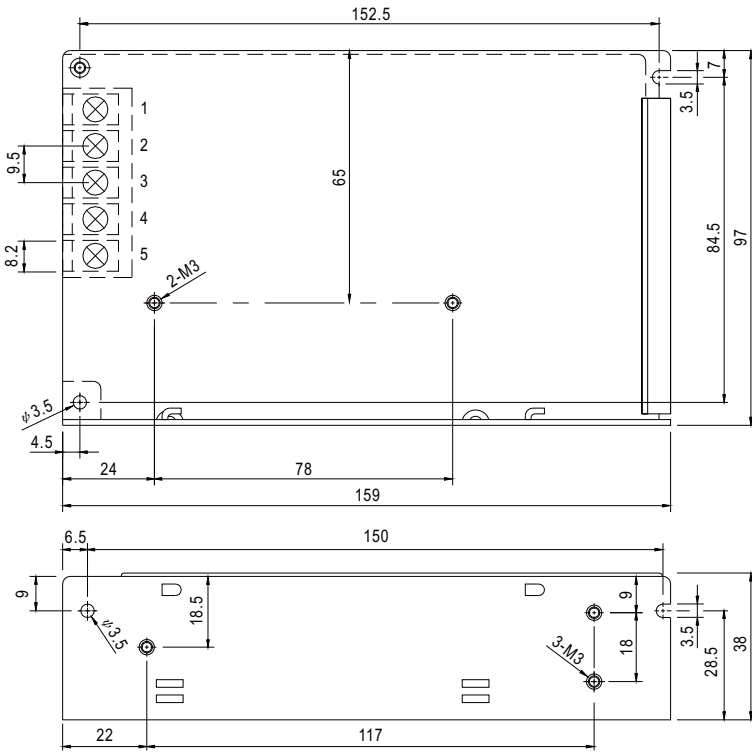


### SPECIFICATION

| MODEL                     | SD-50A-5  | SD-50B-5  | SD-50C-5 | SD-50A-12               | SD-50B-12           | SD-50C-12               | SD-50A-24 | SD-50B-24             | SD-50C-24 |          |
|---------------------------|---|---|----------|-------------------------|---------------------|-------------------------|-----------|-----------------------|-----------|----------|
| OUTPUT                    | DC VOLTAGE  | 5V  |          |                         | 12V                 |                         |           | 24V                   |           |          |
|                           | RATED CURRENT   | 10A   |          |                         | 4.2A                |                         |           | 2.1A                  |           |          |
|                           | CURRENT RANGE   | 0 ~ 10A   |          |                         | 0 ~ 4.2A            |                         |           | 0 ~ 2.1A              |           |          |
|                           | RATED POWER   | 50W   |          |                         | 50.4W               |                         |           | 50.4W                 |           |          |
|                           | RIPPLE & NOISE (max.) Note.2  | 100mVp-p  |          |                         | 120mVp-p            |                         |           | 150mVp-p              |           |          |
|                           | VOLTAGE ADJ. RANGE  | 4.5 ~ 5.5VDC  |          |                         | 11 ~ 16VDC          |                         |           | 23 ~ 30VDC            |           |          |
|                           | VOLTAGE TOLERANCE Note.3  | ±2.0%   |          |                         | ±1.0%               |                         |           | ±1.0%                 |           |          |
|                           | LINE REGULATION   | ±0.5%   |          |                         | ±0.3%               |                         |           | ±0.2%                 |           |          |
|                           | LOAD REGULATION   | ±0.5%   |          |                         | ±0.3%               |                         |           | ±0.2%                 |           |          |
| SETUP, RISE, HOLD UP TIME | 2.5s, 50ms, ----- at full load  |   |          |                         |                     |                         |           |                       |           |          |
| INPUT                     | VOLTAGE RANGE   | A:9.2 ~ 18VDC B:19 ~ 36VDC C:36 ~ 72VDC   |          |                         |                     |                         |           |                       |           |          |
|                           | EFFICIENCY (Typ.)   | 70%   | 73%      | 76%                     | 72%                 | 75%                     | 78%       | 74%                   | 80%       | 83%      |
|                           | DC CURRENT  | 7A/12V  | 3A/24V   | 1.5A/48V                | 7A/12V              | 3A/24V                  | 1.5A/48V  | 7A/12V                | 3A/24V    | 1.5A/48V |
| PROTECTION                | OVERLOAD  | 105 ~ 150% 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 |           |          |
| 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  |          |                         |                     |                         |           |                       |           |          |
|                           | TEMP. COEFFICIENT   | ±0.03%/°C (0 ~ 50°C)  |          |                         |                     |                         |           |                       |           |          |
|                           | VIBRATION   | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes  |          |                         |                     |                         |           |                       |           |          |
| SAFETY & EMC (Note 4)     | SAFETY STANDARDS  | Design refer to LVD   |          |                         |                     |                         |           |                       |           |          |
|                           | WITHSTAND VOLTAGE   | I/P-O/P:1.5KVAC 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 EN55022 (CISPR22) Class B   |          |                         |                     |                         |           |                       |           |          |
| OTHERS                    | EMC IMMUNITY  | Compliance to EN61000-4-2,3,4,6,8, EN55024, heavy industry level, criteria A  |          |                         |                     |                         |           |                       |           |          |
|                           | MTBF  | 365.6K hrs min.(SD-50A)   |          | 357.5K hrs min.(SD-50B) |                     | 368.5K Hrs min.(SD-50C) |           | MIL-HDBK-217F (25°C)  |           |          |
|                           | DIMENSION   | 159*97*38mm (L*W*H)   |          |                         |                     |                         |           |                       |           |          |
|                           | PACKING   | 0.48Kg; 24pcs/12.7Kg/0.75CUFT   |          |                         |                     |                         |           |                       |           |          |
| NOTE                      | <p>1. All parameters NOT specially mentioned are measured at 12,24,48VDC 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> |   |          |                         |                     |                         |           |                       |           |          |

**Mechanical Specification**

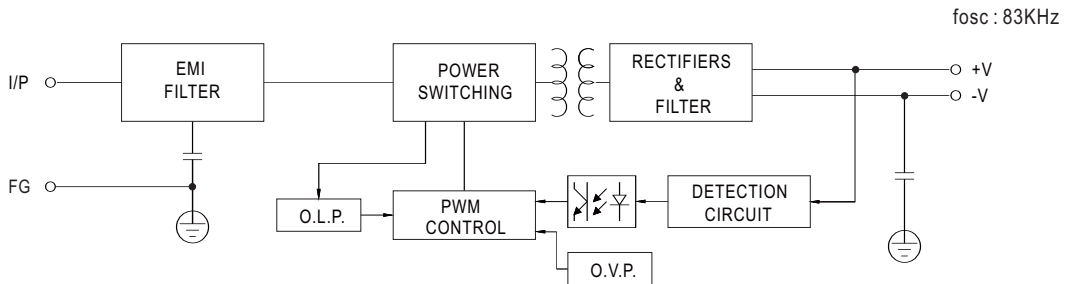
Case No. 901 Unit:mm



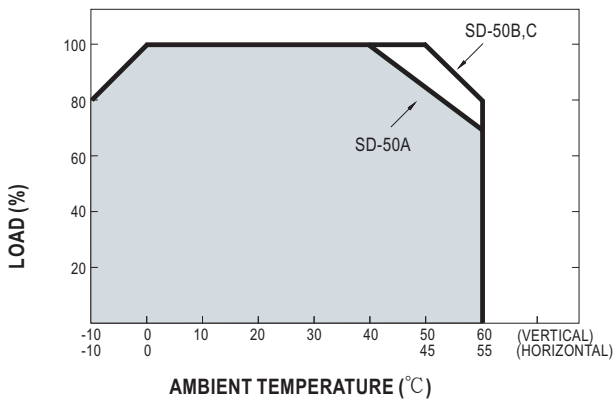
Terminal Pin No. Assignment

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

**Block Diagram**



**Derating Curve**



**Static Characteristics(SD-50C-24V)**

