



150W Single Output DC-DC Converter

SD-150 series



■ Features :

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

CB (for D type only) CE

SPECIFICATION

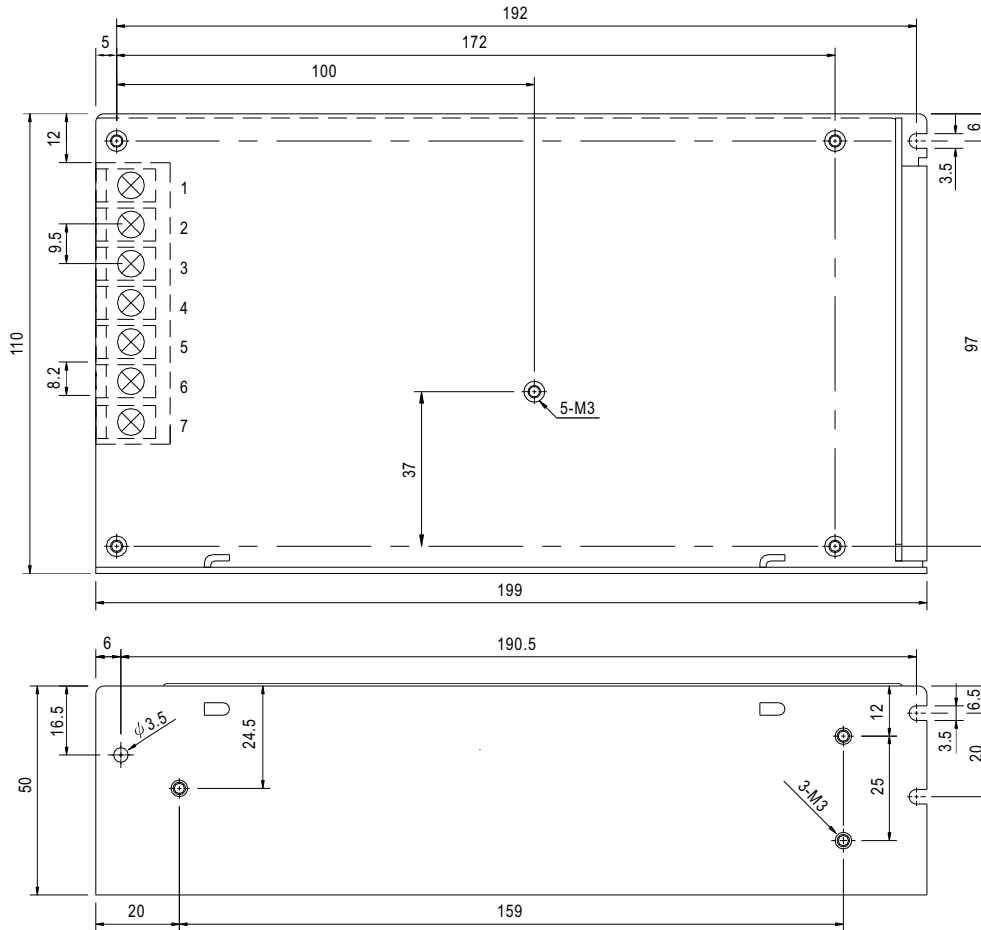
| MODEL                 |                                | SD-150B-12   | SD-150C-12               | SD-150D-12                   | SD-150B-24            | SD-150C-24 | SD-150D-24 |
|-----------------------|--------------------------------|--|--------------------------|------------------------------|-----------------------|------------|------------|
| OUTPUT                | DC VOLTAGE                     | 12V  |                          |                              | 24V                   |            |            |
|                       | RATED CURRENT                  | 12.5A  |                          |                              | 6.3A                  |            |            |
|                       | CURRENT RANGE                  | 0 ~ 12.5A  |                          |                              | 0 ~ 6.3A              |            |            |
|                       | RATED POWER                    | 150W   |                          |                              | 151.2W                |            |            |
|                       | RIPPLE & NOISE (max.) Note.2   | 120mVp-p   |                          |                              | 150mVp-p              |            |            |
|                       | VOLTAGE ADJ. RANGE             | 11 ~ 16VDC   |                          |                              | 23 ~ 30VDC            |            |            |
|                       | VOLTAGE TOLERANCE Note.3       | ±1.0%  |                          |                              | ±1.0%                 |            |            |
|                       | LINE REGULATION                | ±0.5%  |                          |                              | ±0.3%                 |            |            |
|                       | LOAD REGULATION                | ±0.5%  |                          |                              | ±0.3%                 |            |            |
|                       | SETUP, RISE TIME               | 2s, 50ms(only D mode) at full load   |                          |                              |                       |            |            |
| HOLD TIME (Typ.)      | 24ms(only D mode) at full load |  |                          |                              |                       |            |            |
| INPUT                 | VOLTAGE RANGE                  | B:19 ~ 36VDC   | C:36 ~ 72VDC             | D:72 ~ 144VDC or 85 ~ 132VAC |                       |            |            |
|                       | EFFICIENCY (Typ.)              | 75%  | 77%                      | 79%                          | 77%                   | 80%        | 82%        |
|                       | DC CURRENT (Typ.)              | 6.8A/24V   | 3.4A/48V                 | 2.7A/96V                     | 6.8A/24V              | 3.4A/48V   | 2.7A/96V   |
|                       | INRUSH CURRENT (Typ.)          | D:22.5A/96VDC  |                          |                              |                       |            |            |
| PROTECTION            | LEAKAGE CURRENT                | <0.75mA / 120VAC (SD-150D)   |                          |                              |                       |            |            |
|                       | OVER LOAD                      | 105 ~ 135% rated output power<br>Protection type : Fold back current limiting, recovers automatically after fault condition is removed |                          |                              |                       |            |            |
| ENVIRONMENT           | OVER VOLTAGE                   | 16.8V ~ 20V/10% LOAD   |                          |                              | 31.5 ~ 37.5V/10% LOAD |            |            |
|                       |                                | Protection type : Hiccup mode, recovers automatically after fault condition is removed   |                          |                              |                       |            |            |
| SAFETY & EMC (Note 4) | WORKING TEMP.                  | -10 ~ +60°C (Refer to output load 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   |                          |                              |                       |            |            |
| OTHERS                | SAFETY STANDARDS               | EN60950-1 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   |                          |                              |                       |            |            |
|                       | EMI CONDUCTION & RADIATION     | Compliance to EN55022 (CISPR22) Class B  |                          |                              |                       |            |            |
| NOTE                  | EMS IMMUNITY                   | Compliance to EN61000-4-2,3,4,6,8; ENV50204 Light industry level, criteria A   |                          |                              |                       |            |            |
|                       | MTBF                           | 296.2K hrs min.(SD-150B)   | 289.9K hrs min.(SD-150C) | 289K Hrs min.(SD-150D)       | MIL-HDBK-217F (25°C)  |            |            |
|                       | DIMENSION                      | 199*110*50mm (L*W*H)   |                          |                              |                       |            |            |
|                       | PACKING                        | 0.86Kg; 16pcs/14.5Kg/0.95CUFT  |                          |                              |                       |            |            |

1. All parameters NOT specially mentioned are measured at 24,48,96VDC input, rated load and 25°C of ambient temperature.  
 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.  
 3. Tolerance : includes set up tolerance, line regulation and load regulation.  
 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.



■ Mechanical Specification

Case No. 906 Unit:mm



Terminal Pin. No Assignment

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

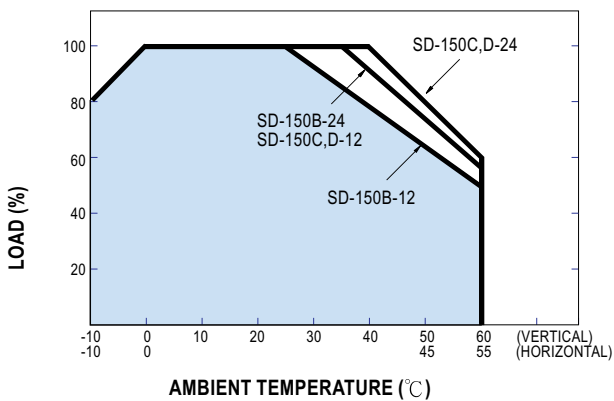
※ SD-150B,C

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

※ SD-150D

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

■ Derating Curve



■ Static Characteristics (24V)

