



200W Single Output DC-DC Converter

SD-200 series



■ Features :

- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 1500VDC I/O isolation
- Cooling by free air convection
- 100% full load burn-in test
- 24V and 48V input voltage design refer to LVD
- 2 years warranty

c us (for SD-200C-24 type only) (for D type only)

SPECIFICATION

| MODEL | | SD-200B | | | | SD-200C | | | | |
|-----------------------|--|--|------------|--------------|------------|---------------|------------|--------------|------------|--|
| OUTPUT | DC VOLTAGE | 5V | 12V | 24V | 48V | 5V | 12V | 24V | 48V | |
| | RATED CURRENT | 34A | 16.7A | 8.4A | 4.2A | 40A | 16.7A | 8.4A | 4.2A | |
| | CURRENT RANGE | 0 ~ 34A | 0 ~ 16.7A | 0 ~ 8.4A | 0 ~ 4.2A | 0 ~ 40A | 0 ~ 16.7A | 0 ~ 8.4A | 0 ~ 4.2A | |
| | RATED POWER | 170W | 200.4W | 201.6W | 201.6W | 200W | 200.4W | 201.6W | 201.6W | |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 120mVp-p | 150mVp-p | 200mVp-p | 100mVp-p | 120mVp-p | 150mVp-p | 200mVp-p | |
| | VOLTAGE ADJ. RANGE | 4.5 ~ 5.5VDC | 11 ~ 16VDC | 23 ~ 30VDC | 43 ~ 53VDC | 4.5 ~ 5.5VDC | 11 ~ 16VDC | 23 ~ 30VDC | 43 ~ 53VDC | |
| | VOLTAGE TOLERANCE Note.3 | ±2.0% | ±1.0% | ±1.0% | ±1.0% | ±2.0% | ±1.0% | ±1.0% | ±1.0% | |
| | LINE REGULATION | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | |
| | LOAD REGULATION | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% | |
| SETUP, RISE TIME | 300ms, 50ms at full load | | | | | | | | | |
| INPUT | VOLTAGE RANGE | B:19 ~ 36VDC | | C:36 ~ 72VDC | | D:72 ~ 144VDC | | | | |
| | EFFICIENCY (Typ.) | 79% | 82% | 85% | 86% | 81% | 84% | 86% | 86% | |
| | DC CURRENT (Typ.) | 10.8A/24V | 10.6A/24V | 10.4A/24V | 10.4A/24V | 5.4A/48V | 5.2A/48V | 6.7A/48V | 5A/48V | |
| | INRUSH CURRENT (Typ.) | C:45A/48VDC | | D:45A/96VDC | | | | | | |
| PROTECTION | OVERLOAD | 105 ~ 135% rated output power Protection type : Shut down o/p voltage, re-power on to recover | | | | | | | | |
| | OVER VOLTAGE | 5.75 ~ 6.75V | 16.8 ~ 20V | 31.5 ~ 37.5V | 53 ~ 65V | 5.75 ~ 6.75V | 16.8 ~ 20V | 31.5 ~ 37.5V | 53 ~ 65V | |
| | OVER TEMPERATURE | 95°C ±5°C (100°C ±5°C for SD-200B-12 only) TSW1 detect on main power transistor Protection type : Shut down o/p voltage, recovers automatically after temperature goes down | | | | | | | | |
| ENVIRONMENT | WORKING TEMP. | -20 ~ +60°C (Refer to output load derating curve) | | | | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +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 | UL60950-1 approved (for SD-200C-24 type only), 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 | | | | | | | | |
| | EMI CONDUCTION & RADIATION | Compliance to EN55022 (CISPR22) Class B | | | | | | | | |
| | EMS IMMUNITY | Compliance to EN61000-4-2,3,4,6,8; ENV50204, light industry level, criteria A | | | | | | | | |
| OTHERS | MTBF | 218.2K hrs min. MIL-HDBK-217F (25°C) | | | | | | | | |
| | DIMENSION | 215*115*50mm (L*W*H) | | | | | | | | |
| | PACKING | 1.1Kg; 12pcs/14.4Kg/0.92CUFT | | | | | | | | |
| NOTE | <ol style="list-style-type: none"> 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. | | | | | | | | | |



200W Single Output DC-DC Converter

SD-200 series



■ Features :

- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 1500VDC I/O isolation
- Cooling by free air convection
- 100% full load burn-in test
- 24V and 48V input voltage design refer to LVD
- 2 years warranty

CB (for D type only) CE

SPECIFICATION

| MODEL | | SD-200D | | | |
|-----------------------|--|---|------------|--------------|------------|
| OUTPUT | DC VOLTAGE | 5V | 12V | 24V | 48V |
| | RATED CURRENT | 40A | 16.7A | 8.4A | 4.2A |
| | CURRENT RANGE | 0 ~ 40A | 0 ~ 16.7A | 0 ~ 8.4A | 0 ~ 4.2A |
| | RATED POWER | 200W | 200.4W | 201.6W | 201.6W |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 120mVp-p | 150mVp-p | 200mVp-p |
| | VOLTAGE ADJ. RANGE | 4.5 ~ 5.5VDC | 11 ~ 16VDC | 23 ~ 30VDC | 43 ~ 53VDC |
| | VOLTAGE TOLERANCE Note.3 | ±2.0% | ±1.0% | ±1.0% | ±1.0% |
| | LINE REGULATION | ±0.5% | ±0.5% | ±0.5% | ±0.5% |
| | LOAD REGULATION | ±1.0% | ±1.0% | ±1.0% | ±1.0% |
| SETUP, RISE TIME | 300ms, 50ms at full load | | | | |
| INPUT | VOLTAGE RANGE | B:19 ~ 36VDC C:36 ~ 72VDC D:72 ~ 144VDC | | | |
| | EFFICIENCY (Typ.) | 82% | 82% | 84% | 90% |
| | DC CURRENT (Typ.) | 3.5A/96V | 3.5A/96V | 3.5A/96V | 3.5A/96V |
| | INRUSH CURRENT (Typ.) | C:45A/48VDC D:45A/96VDC | | | |
| PROTECTION | OVERLOAD | 105 ~ 135% rated output power Protection type : Shut down o/p voltage, re-power on to recover | | | |
| | OVER VOLTAGE | 5.75 ~ 6.75V | 16.8 ~ 20V | 31.5 ~ 37.5V | 53 ~ 65V |
| | OVER TEMPERATURE | 85°C ±5°C (TSW1) detect on main power transistor Protection type : Shut down o/p voltage, recovers automatically after temperature goes down | | | |
| ENVIRONMENT | WORKING TEMP. | -20 ~ +60°C (Refer to output load derating curve) | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +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 | 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 | | | |
| | EMI CONDUCTION & RADIATION | Compliance to EN55022 (CISPR22) Class B | | | |
| | EMS IMMUNITY | Compliance to EN61000-4-2,3,4,6,8; ENV50204, light industry level, criteria A | | | |
| OTHERS | MTBF | 218.2K hrs min. MIL-HDBK-217F (25°C) | | | |
| | DIMENSION | 215*115*50mm (L*W*H) | | | |
| | PACKING | 1.1Kg; 12pcs/14.4Kg/0.92CUFT | | | |
| NOTE | <ol style="list-style-type: none"> 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. | | | | |

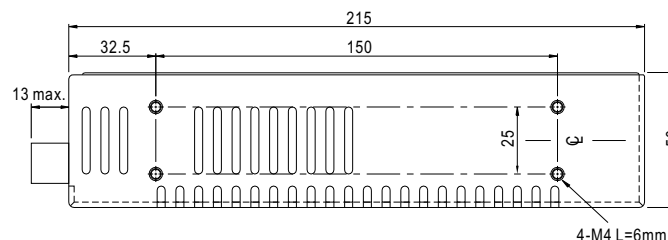
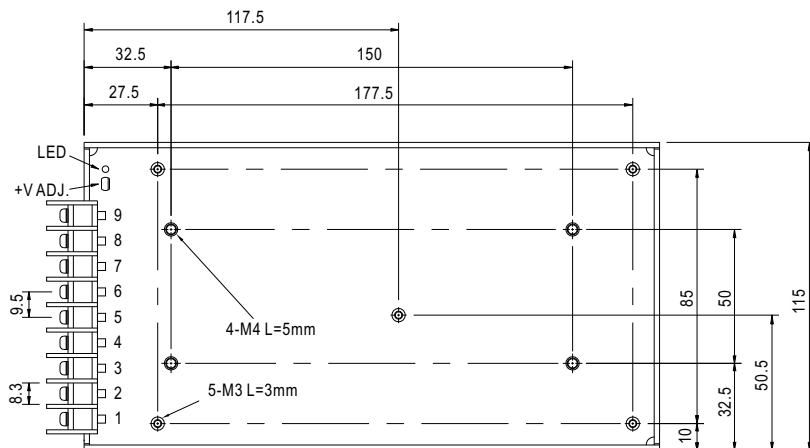


200W Single Output DC-DC Converter

SD-200 series

Mechanical Specification

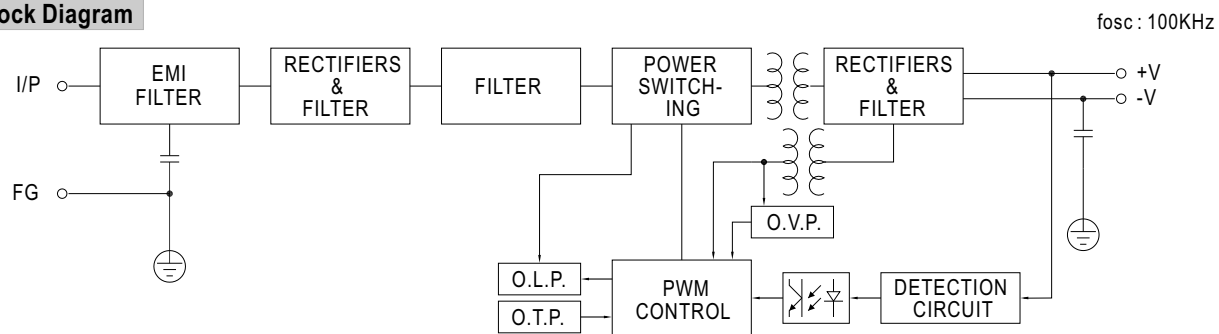
Case No. 912B Unit:mm



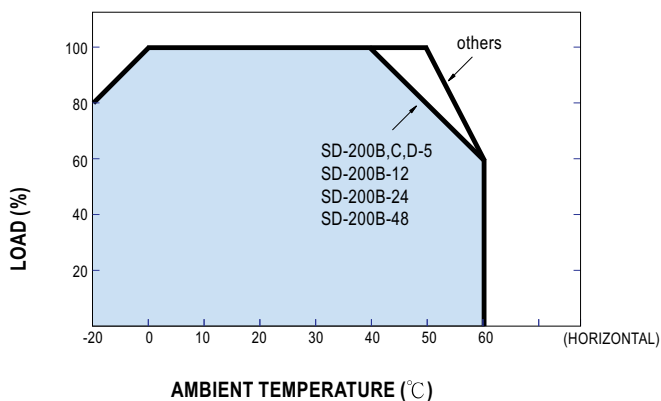
Terminal Pin No. Assignment :

| Pin No. | Assignment | Pin No. | Assignment |
|---------|-------------|---------|--------------|
| 1 | DC INPUT V+ | 4,5,6 | DC OUTPUT V- |
| 2 | DC INPUT V- | 7,8,9 | DC OUTPUT V+ |
| 3 | FG \perp | | |

Block Diagram



Derating Curve



Static Characteristics

