



■ Features :

- DC input active surge current limiting
- Wide 4:1~2:1 DC input range (24V: 19~72VDC, 96V:72~144VDC)
- Protections: Short circuit / Overload / Over voltage / Over temperature / Input polarity(by fuse)
- 2000VAC I/O Isolation
- Forced air cooling by built-in DC fan with fan speed control function
- Output OK Signal
- Built-in remote ON-OFF control
- Built-in remote sense function
- 3 years warranty

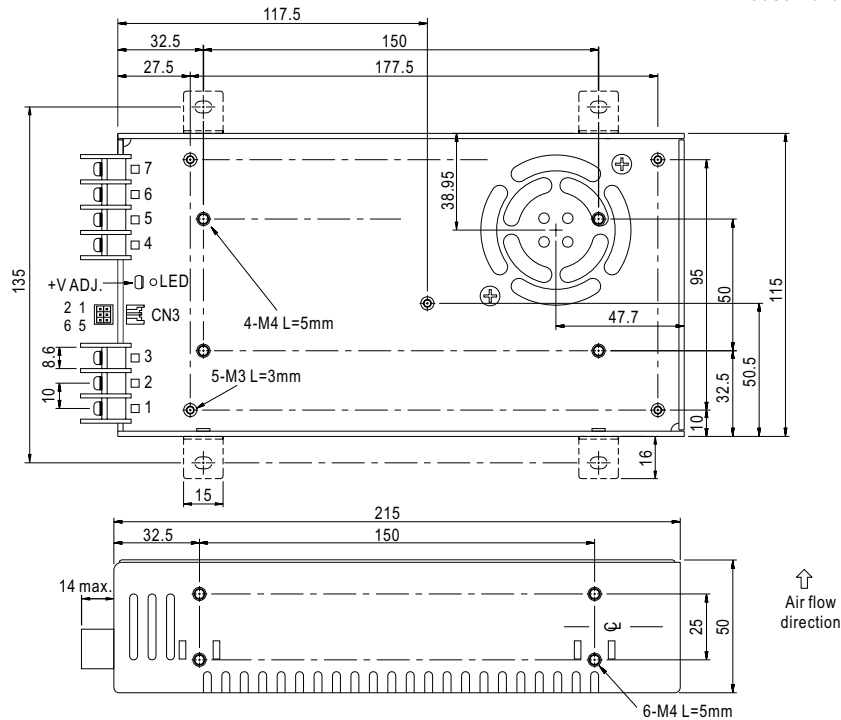


SPECIFICATION

| MODEL | SD-500L-12 | SD-500L-24 | SD-500L-48 | SD-500H-12 | SD-500H-24 | SD-500H-48 | |
|-----------------------|--|--|--------------|------------|-----------------|--------------|-----------|
| OUTPUT | DC VOLTAGE | 12V | 24V | 48V | 12V | 24V | 48V |
| | RATED CURRENT | 40A | 21A | 10.5A | 40A | 21A | 10.5A |
| | CURRENT RANGE | 0 ~ 40A | 0 ~ 21A | 0 ~ 10.5A | 0 ~ 40A | 0 ~ 21A | 0 ~ 10.5A |
| | RATED POWER | 480W | 504W | 504W | 480W | 504W | 504W |
| | RIPPLE & NOISE (max.) Note.2 | 150mVp-p | 150mVp-p | 150mVp-p | 150mVp-p | 150mVp-p | 150mVp-p |
| | VOLTAGE ADJ. RANGE | 11 ~ 15V | 23 ~ 30V | 46 ~ 60V | 11 ~ 15V | 23 ~ 30V | 46 ~ 60V |
| | VOLTAGE TOLERANCE Note.3 | ±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% |
| | LOAD REGULATION | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% |
| SETUP, RISE TIME | 500ms, 50ms at full load | | | | | | |
| INPUT | VOLTAGE RANGE Note.5 | 19 ~ 72VDC | | | 72 ~ 144VDC | | |
| | EFFICIENCY (Typ.) | 86% | 88% | 89% | 87% | 89% | 90% |
| | DC CURRENT (Typ.) | 24.2A/19VDC | 24.8A/24VDC | 12A/48VDC | 8A/72VDC | 6A/96VDC | |
| | CURRENT (AT NO LOAD) | Max. 0.2A/48VDC | | | Max. 0.1A/96VDC | | |
| | INRUSH CURRENT (Typ.) | 60A/48VDC | | | 60A/96VDC | | |
| PROTECTION | OVERLOAD | 105 ~ 125% rated output power Protection type : Constant current limiting, shut down o/p voltage after about 5 sec., re-power on to recover | | | | | |
| | OVER VOLTAGE | 16 ~ 19V | 30.8 ~ 35.2V | 62 ~ 68V | 16 ~ 19V | 30.8 ~ 35.2V | 62 ~ 68V |
| | OVER TEMPERATURE | 80°C ±5°C (TSW1) detect on heatsink of power transistor 80°C ±5°C (L-48V,H-24V,H-48V), 85°C ±5°C (L-24V), 90°C ±5°C (L-12V), 95°C ±5°C (H-12V) (TSW2 : detect on heatsink of o/p diode) Protection type : Shut down o/p voltage, recovers automatically after temperature goes down | | | | | |
| FUNCTION | REMOTE ON/OFF CONTROL | Please refer to function manual | | | | | |
| | OUTPUT OK SIGNAL | Open collector signal low when PSU turns on, max. sink current : 10mA | | | | | |
| 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 | ±0.02%/°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 | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:2KVAC 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°C 70%RH | | | | | |
| | 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 | 196.3K hrs min. MIL-HDBK-217F (25°C) | | | | | |
| | DIMENSION | 215*115*50mm (L*W*H) | | | | | |
| | PACKING | 1.15Kg; 12pcs/14.8Kg/0.92CUFT | | | | | |
| NOTE | <p>1. All parameters NOT specially mentioned are measured at 48, 96VDC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 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. The final equipment must be re-confirmed that it still meets EMC directives.</p> <p>5. Derating may be needed under low input voltages. Please check the derating curve for more details.</p> | | | | | | |

Mechanical Specification

Case No. 912A Unit:mm



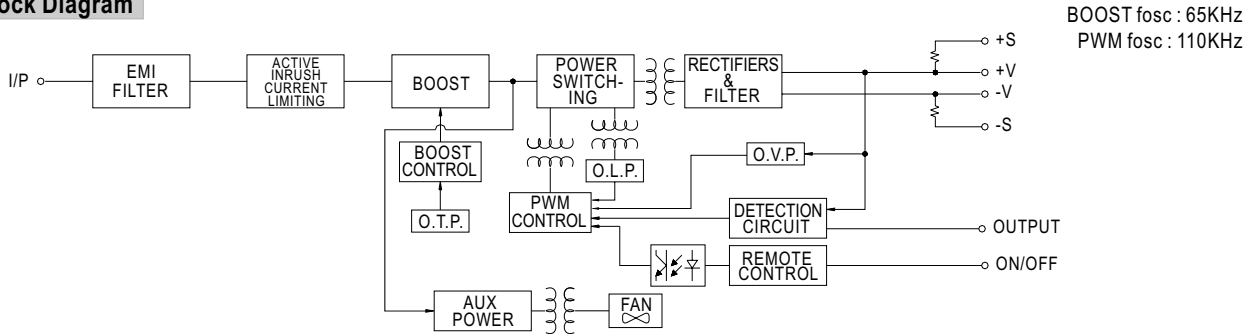
DC Input Terminal Pin No. Assignment

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

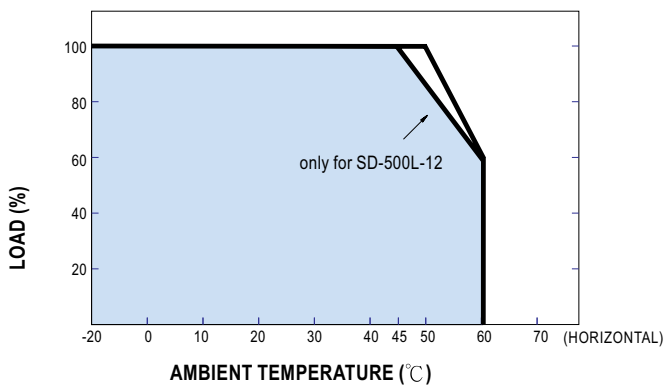
Control Pin No. Assignment (CN3) : JST B6B-PHDSS or equivalent

| Pin No. | Assignment | Pin No. | Assignment | Mating Housing | Terminal |
|---------|------------|---------|------------|-----------------------------|----------------------------------|
| 1 | +S | 4 | GND | JST PHDR-06VS or equivalent | JST SPHD-002T-P0.5 or equivalent |
| 2 | -S | 5 | RC | | |
| 3 | OUTPUT OK | 6 | RCG | | |

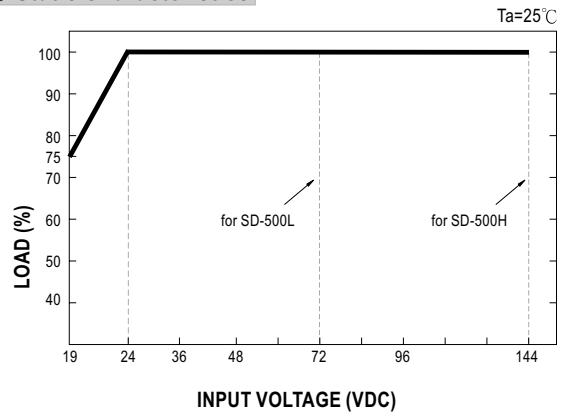
Block Diagram



Derating Curve



Static Characteristics



■ Function Description of CN3

| Pin No. | Function | Description |
|---------|----------|---|
| 1 | +S | Positive sensing. The +S signal should be connected to the positive terminal of the load. The +S and -S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.5V. |
| 2 | -S | Negative sensing. The -S signal should be connected to the negative terminal of the load. The -S and +S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.5V. |
| 3 | O/P OK | Open collector signal, reference to pin4(GND). Low when PSU turns on. The maximum sink current is 10mA and the maximum external voltage is 13V. |
| 4 | GND | These pins connect to the negative terminal (-V). |
| 5 | RC | Remote ON/OFF |
| 6 | RCG | Remote ON/OFF ground |

■ Function Manual

1.Remote ON/OFF

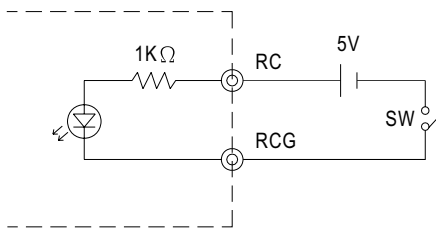
- (1)Remote ON/OFF control becomes available by applying voltage in CN3
- (2)Table 1.1 shows the specification of Remote ON/OFF function
- (3)Fig.1.2 shows the example to connect Remote ON/OFF control function

Table 1.1 Specification of Remote ON/OFF

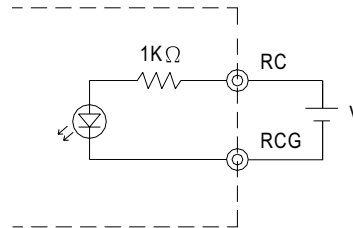
| Connection Method | Fig. 1.2(A) | Fig. 1.2(B) |
|-------------------|-------------|-------------|
| Output on | SW Open | V=0~0.8Vdc |
| Output off | SW Close | V=4~10Vdc |

Fig.1.2 Examples of connecting remote ON/OFF

(A)Using external voltage source



(B)Using external voltage source



2.Output OK signal

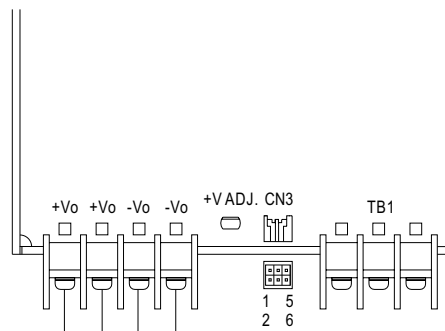
"Output OK" is an open collector signal. It indicates the output status of the PSU. It can operate in two ways : One is sinking current from external signal ; the other is sending out a voltage signal.

2-1 Sink current :

The maximum sink current is 10mA and the maximum external voltage is 13V.

2-2 Voltage signal :

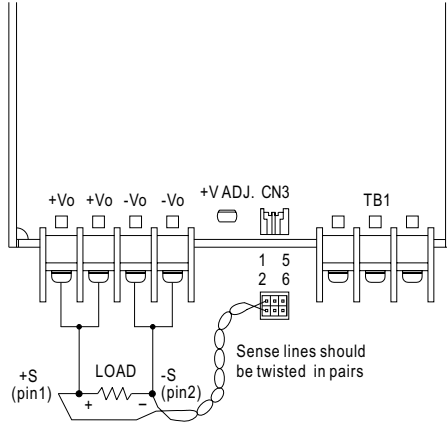
| Between O/P OK(pin3) and GND(pin4) | Output Status |
|------------------------------------|---------------|
| 0 ~ 0.5V | ON |
| 12 ~ 13V | OFF |



| 1 | CN3 | 5 |
|----|--------|-----|
| +S | O/P OK | RC |
| -S | GND | RCG |
| 2 | | 6 |

3.Remote Sense

The remote sensing compensates voltage drop on the load wiring up to 0.5V.



| | | |
|----|--------|-----|
| 1 | CN3 | 5 |
| +S | O/P OK | RC |
| -S | GND | RCG |
| 2 | | 6 |