



Наличие и актуальные цены на

SD-500L-24

<https://www.mean-well.ru/store/SD-500L-24/>



500W Single Output DC-DC Converter

SD-500 series



■ 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

User's Manual



■ GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>



AS/NZS62368-1 BS EN/EN62368-1 TPTC004 IEC62368-1

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
		Protection type : Shut down o/p voltage, re-power on to recover					
	OVER TEMPERATURE	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 "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	IEC62368-1, TUV BS EN/EN62368-1, EAC TP TC 004 approved, design refer to AS/NZS 62368.1					
	WITHSTAND VOLTAGE	I/P-O/P:2KVAC 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 BS EN/EN55032 (CISPR32) Class B, EAC TP TC 020					
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,6,8, BS EN/EN55035, light industry level, EAC TP TC 020					
OTHERS	MTBF	1333.7K hrs min. Telcordia SR-332 (Bellcore) ; 196.3K hrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	215*115*50mm (L*W*H)					
	PACKING	1.15Kg; 12pcs/14.8Kg/0.9CUFT					
NOTE	1. All parameters NOT specially mentioned are measured at 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 0.1 μ F & 47 μ F 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. 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 https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) 5. Derating may be needed under low input voltages. Please check the derating curve for more details. 7. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft). ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx						

Case No. 912A

Technical drawing of the LED module showing top and side views with dimensions and component labels.

Top View Dimensions:

- Overall width: 117.5
- Overall height: 135
- Distance from left edge to first mounting hole: 32.5
- Distance between mounting holes: 27.5
- Distance from right edge to mounting hole: 150
- Distance from left edge to center of LED array: 177.5
- Distance from center of LED array to right edge: 47.7
- Distance from top edge to center of LED array: 38.95
- Distance from bottom edge to center of LED array: 95
- Distance from center of LED array to bottom edge: 50
- Distance from bottom edge to mounting hole: 32.5
- Distance from bottom edge to mounting hole: 50.5
- Distance from bottom edge to mounting hole: 10
- Distance from bottom edge to mounting hole: 16
- Distance from bottom edge to mounting hole: 15

Side View Dimensions:

- Overall width: 215
- Overall height: 50
- Distance from left edge to first mounting hole: 32.5
- Distance between mounting holes: 150
- Distance from right edge to mounting hole: 25
- Distance from right edge to mounting hole: 14 max.

Component Labels:

- +V ADJ.
- LED
- 2 1
- 6 5
- CN3
- 4-M4 L=5mm
- 5-M3 L=3mm
- 6-M4 L=5mm
- 1
- 2
- 3
- 4
- 5
- 6
- 7

Air flow direction: Indicated by an arrow pointing upwards.

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

Pin No.	Assignment	Pin No.	Assignment	Mating Housing	Terminal
1	+S	4	GND	HRS DF11-6DS or equivalent	JST SPHD-002T-P0.9 or equivalent
2	-S	5	RC		
3	OUTPUT OK	6	RCG		

Block Diagram

The block diagram illustrates the power supply architecture. It begins with an **I/P** (Input) terminal leading into an **EMI FILTER**. The signal then passes through **ACTIVE INRUSH CURRENT LIMITING** and a **BOOST** stage. The **BOOST** stage is controlled by a **BOOST CONTROL** block, which receives input from an **O.T.P.** (Over Temperature Protection) block. The output of the **BOOST** stage goes to the **POWER SWITCHING** block, which includes an **O.L.P.** (Over Load Protection) block. The **POWER SWITCHING** block is connected to a **PWM CONTROL** block and a **RECTIFIERS & FILTER** block. The **PWM CONTROL** block also receives input from the **O.T.P.** block. The **RECTIFIERS & FILTER** block outputs to a terminal block with four lines: **+S**, **+V**, **-V**, and **-S**. The **PWM CONTROL** block is also connected to a **DETECTION CIRCUIT** block, which has an **OUTPUT** terminal. The **DETECTION CIRCUIT** block is also connected to a **REMOTE CONTROL** block. The **POWER SWITCHING** block is connected to an **AUX POWER** block, which is in turn connected to a **FAN** block. The **AUX POWER** block also receives input from the **O.T.P.** block. The **REMOTE CONTROL** block has an **ON/OFF** terminal.

BOOST fosc : 65KHz
PWM fosc : 110KHz

only for SD-500L-12

The graph illustrates the load percentage as a function of input voltage for two models, SD-500L and SD-500H. The y-axis represents Load (%) from 40 to 100, and the x-axis represents Input Voltage (VDC) from 19 to 144. The load increases linearly from 75% at 19V to 100% at 24V and remains constant at 100% for higher voltages. The SD-500L model operates from 19V to 72V, and the SD-500H model operates from 72V to 144V.

Input Voltage (VDC)	Load (%)
19	75
24	100
72	100
144	100

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

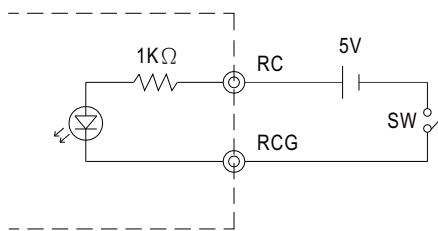
- (1)Remote ON/OFF control becomes available by applying voltage in CN3
- (2)Table 1.1 shows the specification of Remote ON/OFF function
- (3)Fig.1.2 shows the example to connect Remote ON/OFF control function

Table 1.1 Specification of Remote ON/OFF

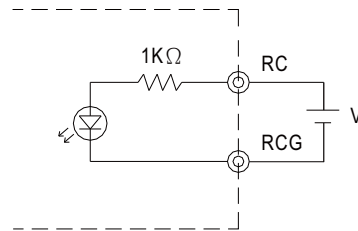
Connection Method	Fig. 1.2(A)	Fig. 1.2(B)
Output on	SW Open	V=0~0.8Vdc
Output off	SW Close	V=4~10Vdc

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.

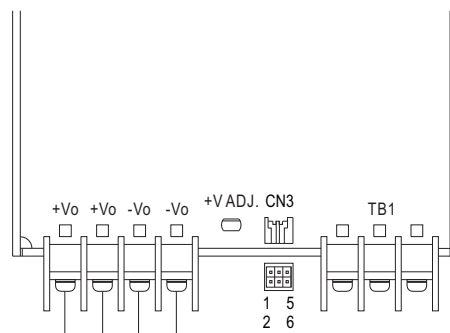
It indicates the output status of the PSU. It can operate in two ways : One is sinking current from external signal ; the other is sending out a voltage signal.

2-1 Sink current :

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

2-2 Voltage signal :

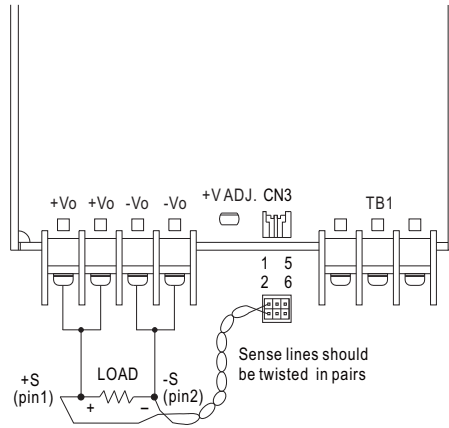
Between O/P OK(pin3) and GND(pin4)	Output Status
0 ~ 0.5V	ON
12 ~ 13V	OFF



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