



100W Single Output DC-DC Converter

SD-100 series



## ■ Features :

- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage
- 1500VAC I/O isolation
- Built-in EMI filter, low ripple noise
- Low cost
- High reliability
- 2 years warranty

User's Manual



## SPECIFICATION

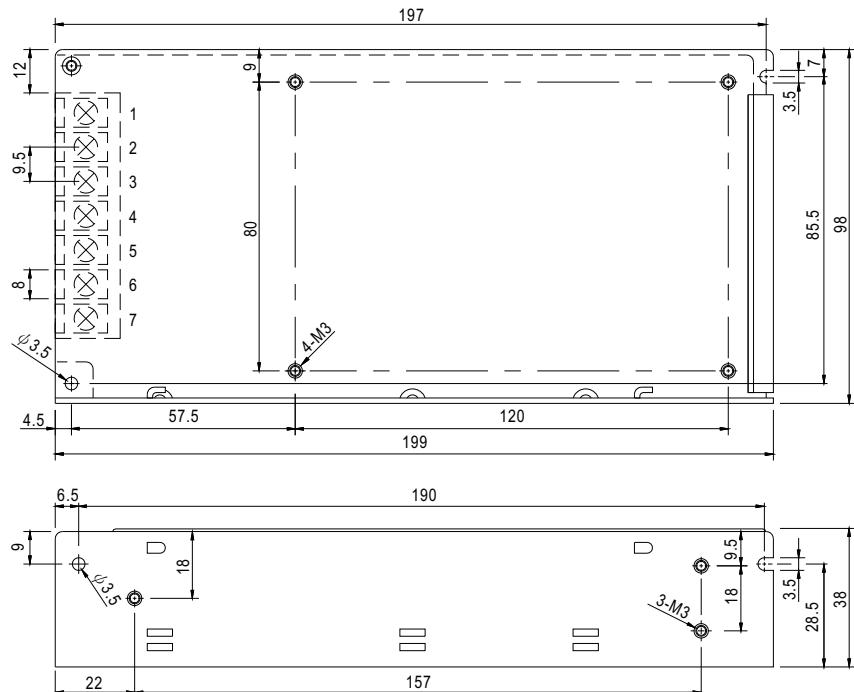
MODEL	SD-100A-5	SD-100B-5	SD-100C-5	SD-100D-5	SD-100A-12	SD-100B-12	SD-100C-12	SD-100D-12	SD-100A-24	SD-100B-24	SD-100C-24	SD-100D-24
OUTPUT	DC VOLTAGE	5V			12V				24V			
	RATED CURRENT	18A	20A		8.5A				4.2A			
	CURRENT RANGE	0 ~ 18A	0 ~ 20A		0 ~ 8.5A				0 ~ 4.2A			
	RATED POWER	90W	100W		102W				100.8W			
	RIPLPE & 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 TIME	2s, 50ms (only D mode) at full load										
INPUT	HOLD UP TIME (Typ.)	20ms (only D mode) at full load										
	VOLTAGE RANGE	A: 9.5 ~ 18VDC	B: 19 ~ 36VDC	C: 36 ~ 72VDC	D: 72 ~ 144VDC or 85 ~ 132VAC							
	EFFICIENCY (Typ.)	78%	74%	75%	76%	82%	75%	77%	80%	84%	78%	81%
	DC CURRENT (Typ.)	9.7A/12V	4.8A/24V	2.4A/48V	1.8A/96V	10.4A/12V	4.8A/24V	2.4A/48V	1.8A/96V	10A/12V	4.8A/24V	2.4A/48V
	INRUSH CURRENT (Typ.)	D: 18A/96VDC										
PROTECTION	LEAKAGE CURRENT	<0.75mA/120VAC (SD-100D)										
	OVERLOAD	105 ~ 135% rated output power										
		Protection type : Hiccup mode, recovers automatically after fault condition is removed										
ENVIRONMENT	OVER VOLTAGE	5.75 ~ 6.75V/10% load		16.8 ~ 20V/10% load			31.5 ~ 37.5V 5% load		31.5 ~ 37.5V/10% load			
		Protection type : Hiccup mode, recovers automatically after fault condition is removed										
SAFETY & EMC (Note 4)	WORKING TEMP.	-15 ~ +60°C (SD-100A), -10 ~ +60°C (SD-100B/C/D) (Refer to "Derating Curve")										
	WORKING HUMIDITY	20 ~ 90% RH non-condensing										
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH non-condensing										
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)										
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes										
OTHERS	SAFETY STANDARDS	IEC/BS EN/EN 62368-1 (for D type only), EAC TP TC 004 approved, design refer to AS/NZS 62368.1										
	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 / 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, light industry level, criteria A, EAC TP TC 020										
NOTE	MTBF	399.9K hrs min. (SD-100A)	356.7K hrs min. (SD-100B)	355.5K hrs min. (SD-100C)	341.9K Hrs min. (SD-100D)	MIL-HDBK-217F (25°C)						
	DIMENSION	199*98*38mm (L*W*H)										
	PACKING	0.65Kg; 20pcs/13.8Kg/0.85CUFT										

1. All parameters NOT specially mentioned are measured at 12, 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 0.1μF & 47μF 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 <http://www.meanwell.com>)
5. 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>

## ■ Mechanical Specification

Case No. 902 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

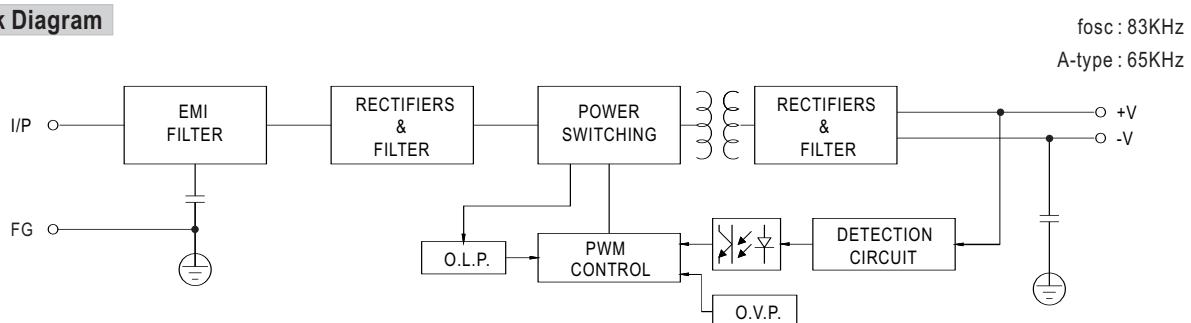
※ SD-100A,B,C

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

※ SD-100D

Pin No.	Assignment
1,2	AC/DC INPUT

## ■ Block Diagram





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