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
- 100% full load burn-in test
- Fixed switching frequency at 83KHz
- 24V and 48V input voltage design refer to LVD
- Low cost
- High reliability
- 2 years warranty

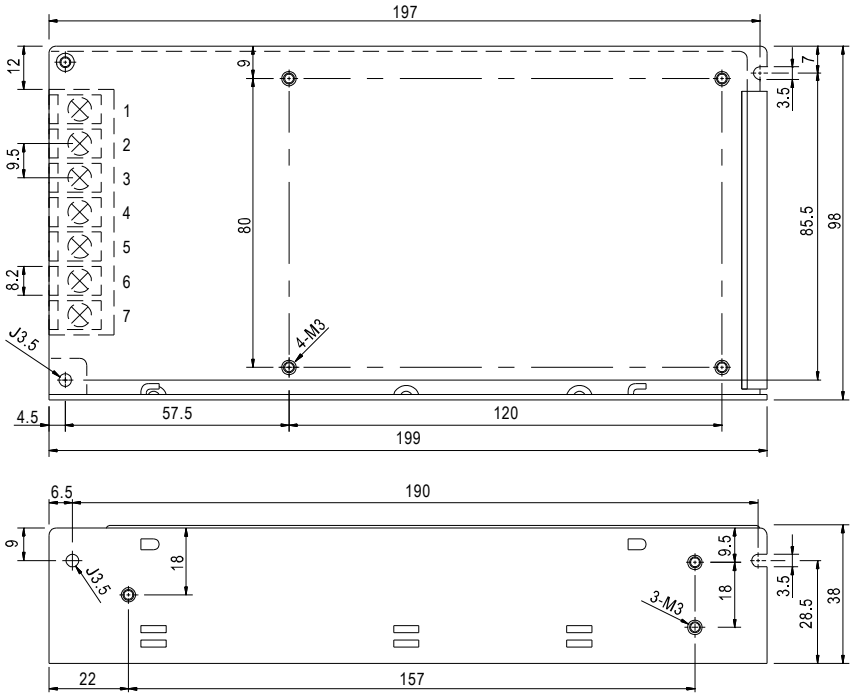
CB (for D type only) CE

SPECIFICATION

MODEL		SD-100B-5	SD-100C-5	SD-100D-5	SD-100B-12	SD-100C-12	SD-100D-12	SD-100B-24	SD-100C-24	SD-100D-24
OUTPUT	DC VOLTAGE	5V			12V			24V		
	RATED CURRENT	20A			8.5A			4.2A		
	CURRENT RANGE	0 ~ 20A			0 ~ 8.5A			0 ~ 4.2A		
	RATED POWER	100W			102W			100.8W		
	RIPPLE & 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								
	HOLD UP TIME (Typ.)	20ms(only D mode) at full load								
INPUT	VOLTAGE RANGE	B:19 ~ 36VDC		C:36 ~ 72VDC		D:72 ~ 144VDC or 85 ~ 132VAC				
	EFFICIENCY (Typ.)	74%	75%	76%	75%	77%	80%	78%	81%	83%
	DC CURRENT (Typ.)	4.8A/24V	2.4A/48V	1.8A/96V	4.8A/24V	2.4A/48V	1.8A/96V	4.8A/24V	2.4A/48V	1.8A/96V
	INRUSH CURRENT (Typ.)	D:18A/96VDC								
	LEAKAGE CURRENT	<0.75mA/120VAC(SD-100D)								
PROTECTION	OVERLOAD	105 ~ 135% rated output power								
		Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE	5.75 ~ 6.75V/10% load			16.8 ~ 20V/10% load			31.5 ~ 37.5V/10% load		
		Protection type : Hiccup mode, recovers automatically after fault condition is removed								
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (Refer to output load derating curve)								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing								
	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH								
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)								
	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:2.0KVAC O/P-FG:0.5KVAC								
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 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	356.7K hrs min.(SD-100B) 355.5K hrs min.(SD-100C) 341.9K Hrs min.(SD-100D) MIL-HDBK-217F (25℃)								
	DIMENSION	199*98*38mm (L*W*H)								
	PACKING	0.65Kg; 20pcs/13.8Kg/0.8CUFT								
NOTE	1. All parameters NOT specially mentioned are measured at 24,48,96VDC input, rated load and 25℃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. 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)									

■ Mechanical Specification

Case No. 902 Unit:mm



Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1,2	INPUT ў	4,5	DC OUTPUT -V
3	FG ⏚	6,7	DC OUTPUT +V

“ SD-100B,C

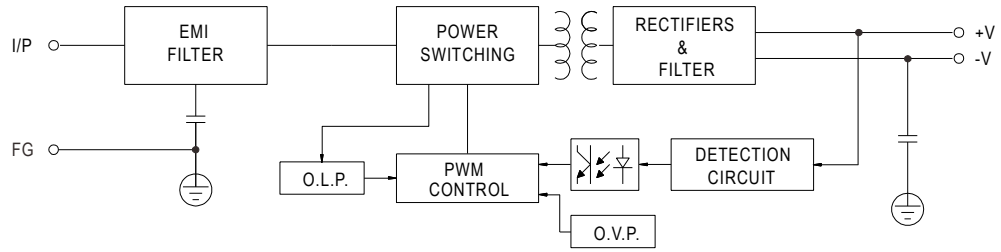
Pin No.	Assignment
1	DC INPUT V+
2	DC INPUT V-

“ SD-100D

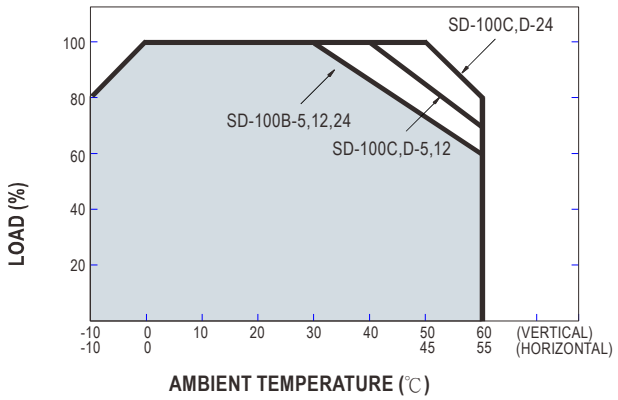
Pin No.	Assignment
1,2	AC/DC INPUT

■ Block Diagram

fosc : 83KHz



■ Derating Curve



■ Static Characteristics(SD-100D-24V)