



# 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



AS/NZS62368-1

BS EN/EN62368-1  
(for D type only)

TPTC004

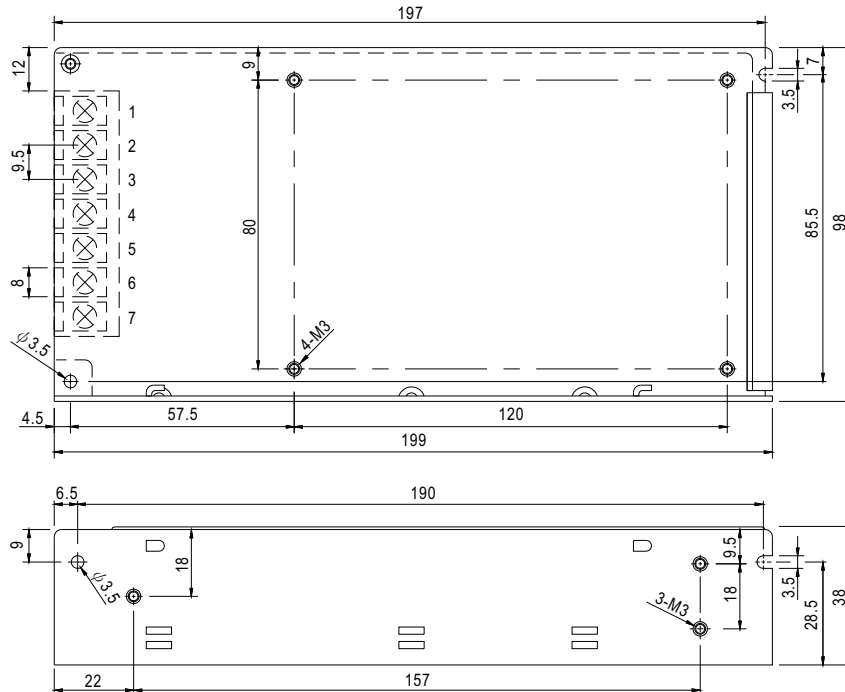
IEC62368-1  
(for D type only)

### 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				
	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	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%	83%			
	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	1.8A/96V			
	INRUSH CURRENT (Typ.)	D:18A/96VDC														
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/5% load		31.5 ~ 37.5V/10% load				
ENVIRONMENT	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)														
SAFETY & EMC (Note 4)	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes														
	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														
OTHERS	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,6,8, light industry level, criteria A, EAC TP TC 020														
	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)														
NOTE	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 0.1uf & 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. 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 <a href="http://www.meanwell.com">http://www.meanwell.com</a> ) 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 <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>														

■ 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

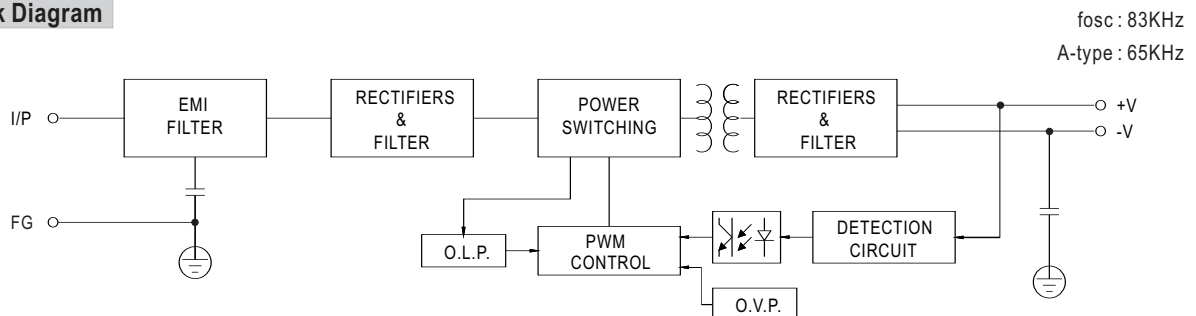
※ SD-100A,B,C

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

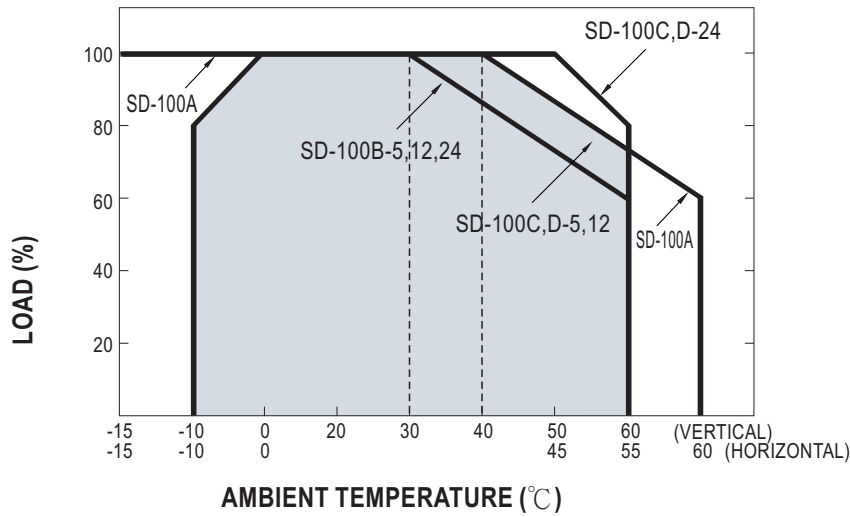
※ SD-100D

Pin No.	Assignment
1,2	AC/DC INPUT

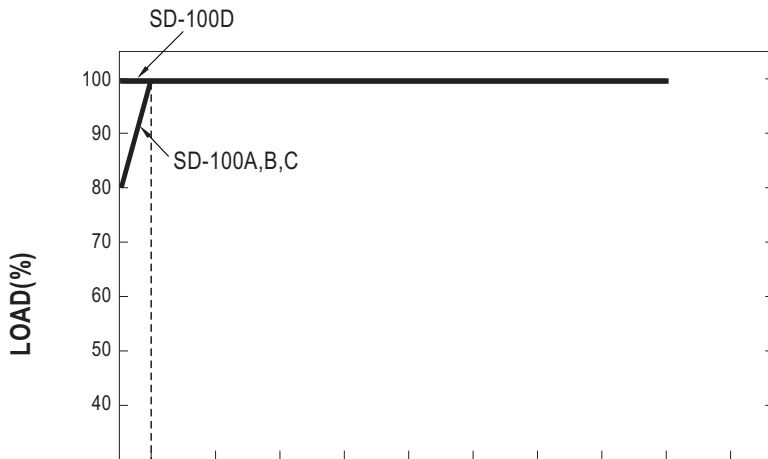
■ Block Diagram



■ Derating Curve



■ Output Derating VS Input Voltage



A:	9.5	10	11	12	13	14	15	16	17	18
B:	19	20	22	24	26	28	30	32	34	36
C:	36	38	44	48	52	56	60	64	68	72
D:	72	76	88	96	104	112	120	128	136	144