



50W Single Output DC-DC Converter

SD-50 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
 - Low cost
 - High reliability
 - 2 years warranty

User's Manual



GTIN CODE

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

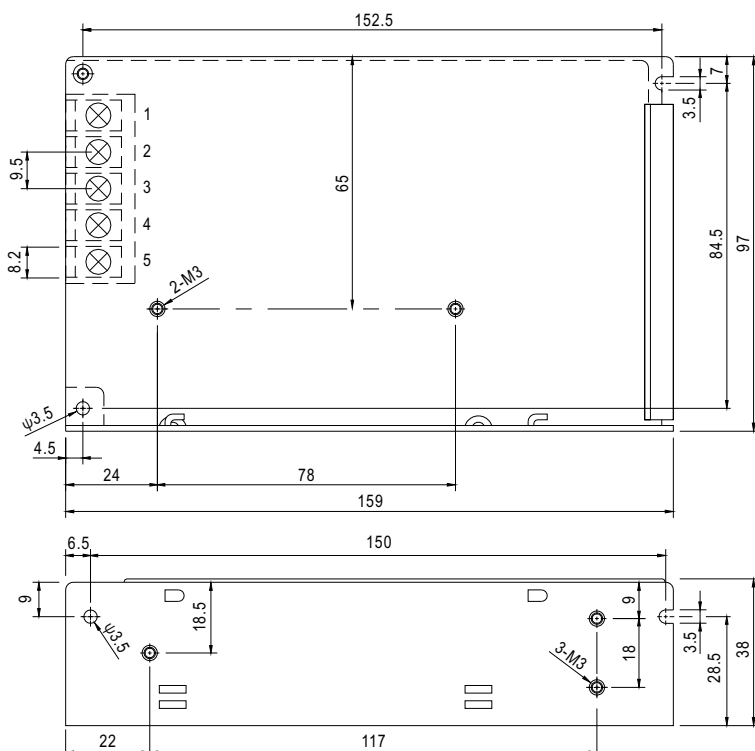
SPECIFICATION



MODEL										
OUTPUT	DC VOLTAGE	5V			12V		24V			
	RATED CURRENT	10A			4.2A		2.1A			
	CURRENT RANGE	0 ~ 10A			0 ~ 4.2A		0 ~ 2.1A			
	RATED POWER	50W			50.4W		50.4W			
	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, HOLD UP TIME	2.5s, 50ms, ----- at full load								
INPUT	VOLTAGE RANGE	A:9.2 ~ 18VDC B:19 ~ 36VDC C:36 ~ 72VDC								
	EFFICIENCY (Typ.)	70%	73%	76%	72%	75%	78%	74%	80%	83%
	DC CURRENT	7A/12V	3A/24V	1.5A/48V	7A/12V	3A/24V	1.5A/48V	7A/12V	3A/24V	1.5A/48V
PROTECTION	OVERLOAD	105 ~ 150% 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 "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	EAC TP TC 004 approved, Design refer to LVD, AS/NZS 62368.1								
	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC 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℃/ 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/EN55024, heavy industry level, EAC TP TC 020								
OTHERS	MTBF	3293.1K hrs min. Telcordia SR-332 (Bellcore) ; 512.8K hrs min. MIL-HDBK-217F (25℃)								
	DIMENSION	159*97*38mm (L*W*H)								
	PACKING	0.43Kg; 24pcs/11.35Kg/0.83CUFT								
NOTE	1. All parameters NOT specially mentioned are measured at 12,24,48VDC 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. 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℃/1000m with fanless models and of 5℃/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

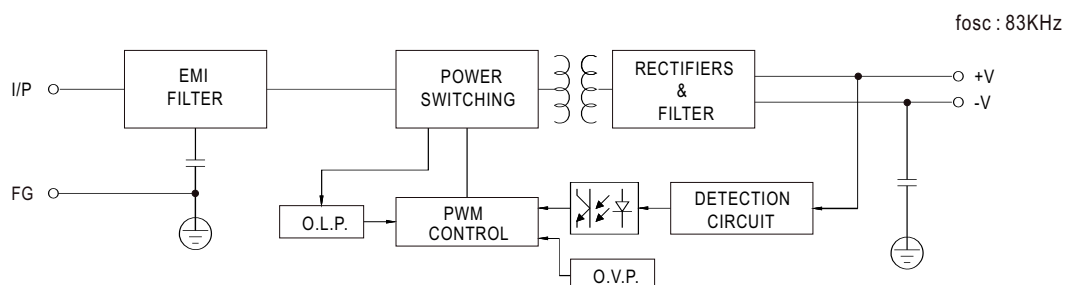
Case No. 901 Unit:mm



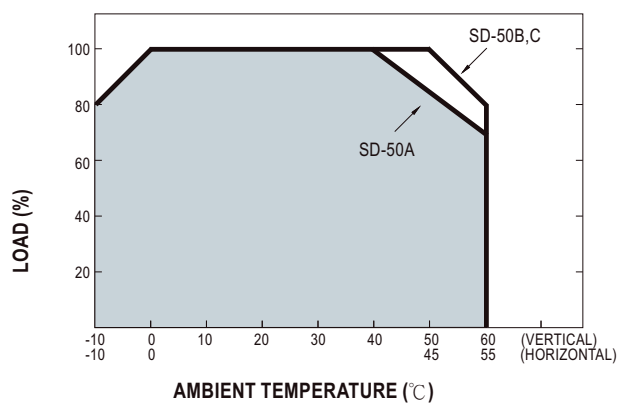
Terminal Pin No. Assignment

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

■ Block Diagram



Derating Curve



■ Static Characteristics(SD-50C-24V)

