350W Single Output DC-DC Converter

SD-350 series



User's Manual

■ Features :

- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 1500VAC I/O isolation
- Forced air cooling by built-in DC Fan
- 100% full load burn-in test
- 24V and 48V input voltage design refer to LVD
- 2 years warranty

AS/NZS62368-1 TPTC004

■ GTIN CODE

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

SPECIFICATION

MODEL		SD-350B				SD-350C			
OUTPUT	DC VOLTAGE	5V	12V	24V	48V	5V	12V	24V	48V
	RATED CURRENT	57A	27.5A	14.6A	7.3A	60A	27.5A	14.6A	7.3A
	CURRENT RANGE	0 ~ 57A	0 ~ 27.5A	0 ~ 14.6A	0 ~ 7.3A	0 ~ 60A	0 ~ 27.5A	0 ~ 14.6A	0 ~ 7.3A
	RATED POWER	285W	330W	350.4W	350.4W	300W	330W	350.4W	350.4W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	120mVp-p	150mVp-p	200mVp-p	100mVp-p	120mVp-p	150mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	4.5 ~ 5.5VDC	11 ~ 16VDC	23 ~ 30VDC	43 ~ 53VDC	4.5 ~ 5.5VDC	11 ~ 16VDC	23 ~ 30VDC	43 ~ 53VDC
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.3%	±0.2%	±0.2%	±0.5%	±0.3%	±0.2%	±0.2%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME	300ms, 50ms at full load							
INPUT	VOLTAGE RANGE	B:20 ~ 36VDC C:36 ~ 72VDC D:72 ~144VDC							
	EFFICIENCY (Typ.)	74%	80%	80%	84%	76%	81%	81%	82%
	DC CURRENT (Typ.)	14.4A/24V	16A/24V	17.6A/24V	17.6A/24V	7.6A/48V	8.8A/48V	9.0A/48V	9.0A/48V
	INRUSH CURRENT (Typ.)	C:45A/48VDC D:45A/96VDC							
PROTECTION	OVERLOAD	105 ~ 135% rated output power							
		Protection type : Shut down o/p voltage, re-power on to recover							
	OVER VOLTAGE	5.75 ~ 6.75V	16.8 ~ 20V	31.5 ~ 37.5V	53 ~ 65V	5.75 ~ 6.75V	16.8 ~ 20V	31.5 ~ 37.5V	53 ~ 65V
		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							
ENVIRONMENT	WORKING TEMP.	-20 ~ +60℃ (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-40 ~ +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 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/EN55035, light industry level, EAC TP TC 020							
OTHERS	MTBF	1705.6K hrs min. Telcordia SR-332 (Bellcore) ; 263.9K hrs min. MIL-HDBK-217F (25℃)							
	DIMENSION	215*115*50mm (L*W*H)							
	PACKING	1.1Kg; 12pcs/14.4Kg/0.9CUFT							
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 0.1 μF & 47 μF 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. 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								

350W Single Output DC-DC Converter

SD-350 series



■ Features :

- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 1500VAC I/O isolation
- Forced air cooling by built-in DC Fan
- 100% full load burn-in test
- 24V(B) and 48V(C) input voltage design refer to LVD
- 2 years warranty

User's Manual

■ GTIN CODE

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

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

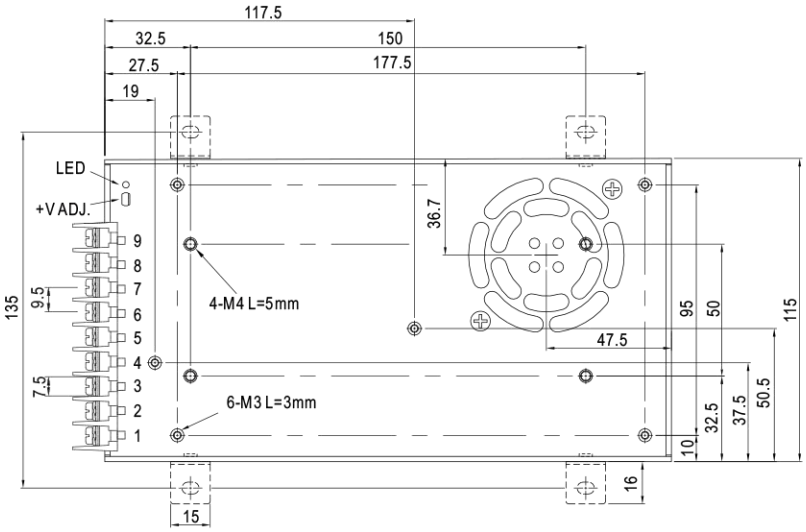
SPECIFICATION

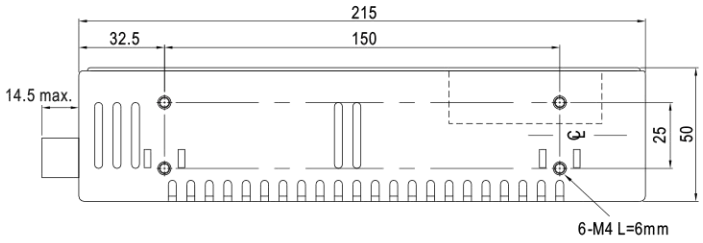
MODEL		SD-350D			
OUTPUT	DC VOLTAGE	5V	12V	24V	48V
	RATED CURRENT	60A	29.2A	14.6A	7.3A
	CURRENT RANGE	0 ~ 60A	0 ~ 29.2A	0 ~ 14.6A	0 ~ 7.3A
	RATED POWER	300W	350.4W	350.4W	350.4W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	120mVp-p	150mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	4.5 ~ 5.5VDC	11 ~ 16VDC	23 ~ 30VDC	43 ~ 53VDC
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.3%	±0.2%	±0.2%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME	300ms, 50ms at full load			
INPUT	VOLTAGE RANGE	B:20 ~ 36VDC C:36 ~ 72VDC D:72 ~144VDC			
	EFFICIENCY (Typ.)	78%	83%	87%	89%
	DC CURRENT (Typ.)	6A/96V	6A/96V	6A/96V	6A/96V
	INRUSH CURRENT (Typ.)	C:45A/48VDC D:45A/96VDC			
PROTECTION	OVERLOAD	105 ~ 135% rated output power			
		Protection type : Shut down o/p voltage, re-power on to recover			
	OVER VOLTAGE	5.75 ~ 6.75V	16.8 ~ 20V	31.5 ~ 37.5V	53 ~ 65V
		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			
ENVIRONMENT	WORKING TEMP.	-20 ~ +60℃ (Refer to "Derating Curve")			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +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	IEC/BS EN/EN 62368-1, EAC TP TC 004 approved, design refer to 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/EN55022 (CISPR22) 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	1705.6K hrs min. Telcordia SR-332 (Bellcore) ; 263.9K hrs min. MIL-HDBK-217F (25℃)			
	DIMENSION	215*115*50mm (L*W*H)			
	PACKING	1.1Kg; 12pcs/14.4Kg/0.9CUFT			
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 0.1 μF & 47 μF 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. 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. 912B

(Unit: mm , tolerance ± 1mm)





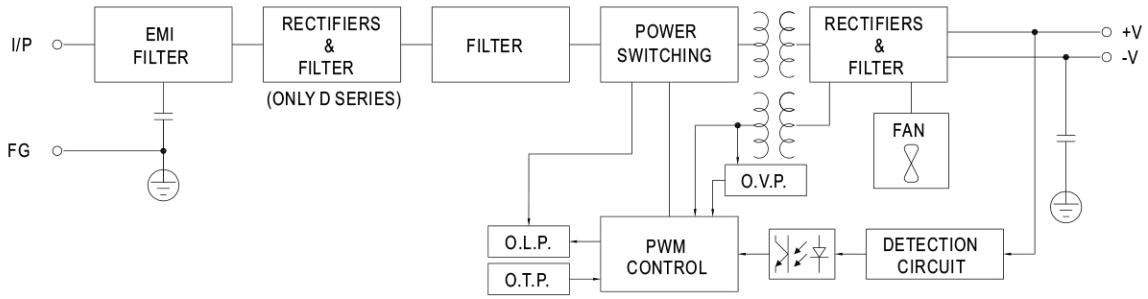
Air flow direction

Terminal Pin No. Assignment :

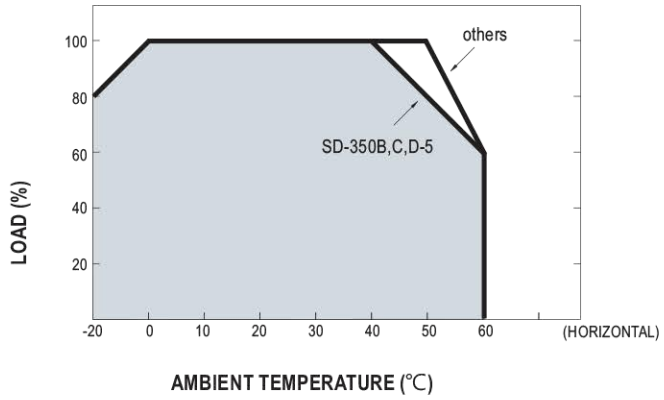
Pin No.	Assignment	Pin No.	Assignment
1	DC INPUT V+	4,5,6	DC OUTPUT V-
2	DC INPUT V-	7,8,9	DC OUTPUT V+
3	FG ⏚		

■ Block Diagram

fosc : 100KHz



■ Derating Curve



■ Static Characteristics

