



# 350W Single Output DC-DC Converter

SD-350 series



#### ■ Features :

- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 1500VDC 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

# CB(for D type only) ( €

### **SPECIFICATION**

MODEL			SD-350B				SD-350C					
	DC VOLTAGE	5V	12V	24V	48V	5V	12V	24V	48V			
ОИТРИТ	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:19 ~ 36VDC										
	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	95°C±5°C (TSW1) detect on main power transistor										
		Protection type: Shut down o/p voltage, recovers automatically after temperature goes down										
ENVIRONMENT	WORKING TEMP.	-20 ~ +60 °C (Refer to output load derating curve)										
	WORKING HUMIDITY	20 ~ 90% RH non-condensing										
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH										
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)										
	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: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										
	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	209.4K hrs min. MIL-HDBK-217F (25°C)										
	DIMENSION	215*115*50mm (L*W*H)										
	PACKING	1.1Kg; 12pcs/14.4Kg/0.92CUFT										
NOTE	<ul><li>2. Ripple &amp; noise are measure</li><li>3. Tolerance : includes set up</li></ul>	ally mentioned are measured at 24,48,96VDC input, rated load and 25°C of ambient temperature.  red at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.  to tolerance, line regulation and load regulation.  dered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets										

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#### Features:

- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 1500VDC 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

## **SPECIFICATION**

CB(for D type only) ( €

MODEL		SD-350D								
	DC VOLTAGE	5V	12V	24V	48V					
ОИТРИТ	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								
	VOLTAGE RANGE	B:19 ~ 36VDC								
INPUT	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								
	OVERLOAD	105 ~ 135% rated output power								
PROTECTION		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	75°C±5°C (TSW1) detect on main power transistor								
		Protection type: Shut down o/p voltage, recovers automatically after temperature goes down								
ENVIRONMENT	WORKING TEMP.	$-20 \sim +60 ^{\circ} \text{C}$ (Refer to output load derating curve)								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing								
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH								
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)								
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes								
	SAFETY STANDARDS	IEC60950-1 CB approved by TUV (for D type only)								
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC								
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH								
(Note 4)	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	209.4K hrs min. MIL-HDBK-217F ( $25^{\circ}$ C)								
	DIMENSION	215*115*50mm (L*W*H)								
	PACKING	1.1Kg; 12pcs/14.4Kg/0.92CUFT								
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