

SP-100 Series

100W Single Output Enclosed Power Supply with PFC Function



Case No: 8011BL
179 x 99 x 45 mm

Features

- Universal AC input / Full range
- Built-in active PFC function, PF>0.93
- Protections: Short circuit / Overload / Over Voltage
- Built-in constant current limiting circuit
- Low profile 33mm thickness
- LED indicator for power on
- 100% full load burn-in test
- Fixed switching frequency at PFC: 67KHz PWM: 134KHz
- 3 years warranty



Specification

INPUT	Voltage	85V ~ 264VAC 120 ~ 370VDC								
	Frequency	47 ~ 63 Hz								
	Power Factor	PF>0.93/230VAC PF>0.97/115VAC at full load								
	Efficiency	75%	79%	82%	82.5%	83%	84%	87%	86%	84%
	AC Current	1.7A/115VAC 0.8A/230VAC								
	Inrush Current (Typ.)	Cold Start 35A/230VAC								
	Leakage Current	<2mA@240V								
OUTPUT	MODEL No.	SP-100-3.3	SP-100-5	SP-100-7.5	SP-100-12	SP-100-13.5	SP-100-15	SP-100-24	SP-100-27	SP-100-48
	Voltage	3.3V	5V	7.5V	12V	13.5	15V	24V	27V	48V
	Rated Current	20A	20A	13.5A	8.5A	7.5A	6.7A	4.2A	3.8A	2.1A
	Current Range	0 ~ 20A	0 ~ 20A	0 ~ 13.5A	0 ~ 8.5A	0 ~ 7.5A	0 ~ 6.7A	0 ~ 4.2A	0 ~ 3.8A	0 ~ 2.1A
	Rated Power	66W	100W	101.25W	102W	101.25W	100.5W	100.8W	102.6W	100.8W
	Ripple Noise MAX.	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	150Vp-p	150mVp-p	250Vp-p
	Voltage Adj. Range	3.14~3.63V	4.75~5.5V	7.13~8.25V	11.4~13.2V	12.8~14.9V	14.3~16.5V	22.8~26.4V	25.7~29.7V	45.6~52.8V
	Voltage Tolerance	± 2.0%	± 2.0%	± 2.0%	± 2.0%	± 2.0%	± 2.0%	± 1.0%	± 1.0%	± 1.0%
	Line Regulation	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%
	Load Regulation	± 1.0%	± 1.0%	± 1.0%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%
	Setup Rise Time	600ms, 30ms at full load								
Holdup Time (Typ.)	20ms at full load									
PROTECTION	Overload	105~150% rated output power Protection Type: Constant current limiting, recovers automatically after fault condition is removed								
	Over Voltage	3.63 ~ 4.46V	5.5 ~ 6.75V	8.25 ~ 10.13V	13.2 ~ 16.2V	14.85 ~ 18.23V	16.5 ~ 20.25V	26.4 ~ 32.4V	29.7 ~ 36.45V	55.8 ~ 64.8V
FUNCTION	Remote Control (Option)	CN1:4~10VDC power ON, <0~0.8VDC Power Off								
	Working Temp.	-10 ~ +60°C (Refer to "Derating Curve")								
ENVIRONMENT	Working Humidity	20 ~ 90% RH non-condensing								
	Storage Temp., Humidity	-20 ~ +85°C, 10~95% RH								
	Temp. Co-efficient	±0.05% / °C (0~50°C)								
	Vibration	10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes								
SAFETY & EMC	Safety Standards	UL60950-1, TUV EN60950-1 approved								
	Withstand Voltage	I/P-O/P:3KVAC 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°C/70% RH								
	EMC Emission	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2-3								
	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, ENV50204, EN55024, light industry level, criteria A								
OTHERS	M.T.B.F.	211.3K hrs min. MIL-HDBK-217F (25°C)								
	Packaging	0.66Kg; 20pcs/12.3Kg/1.17CUFT								

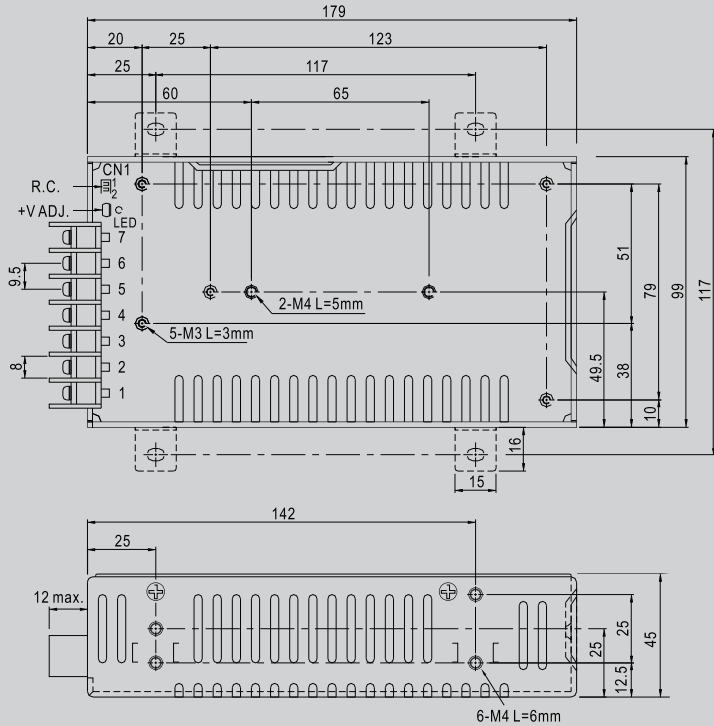
1. All measurements not specially mentioned are based on 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
3. Tolerance: Includes set up tolerance, line regulation and load regulation
4. The power supply is considered a component which will be installed into 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."

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Mechanical Specification



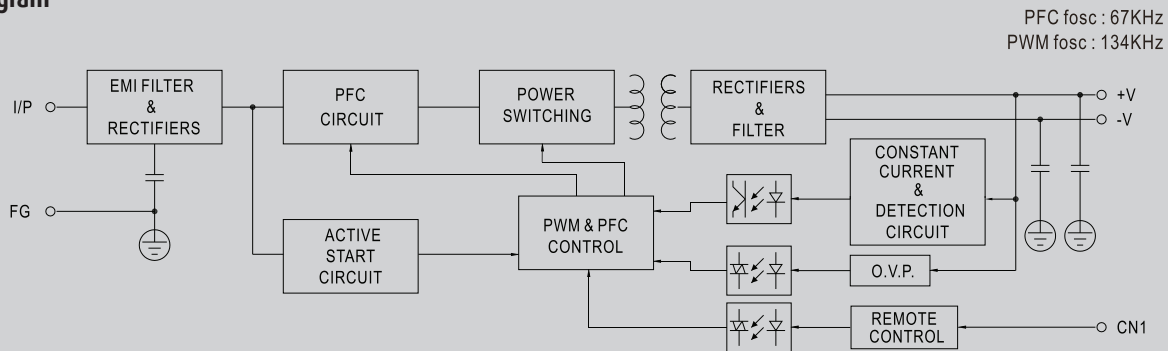
Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -V
2	AC/N	6,7	DC OUTPUT +V
3	FG \perp		

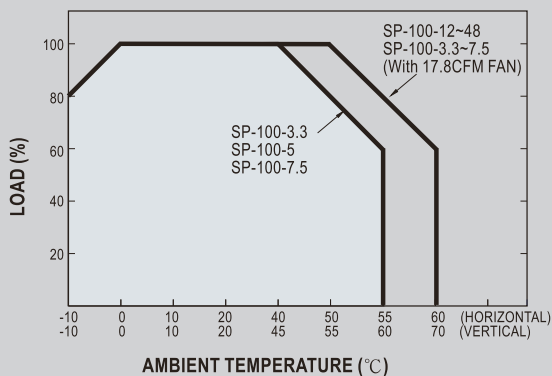
Remote ON/OFF (CN1): JST S2B-XH or equivalent(optional)

Pin No.	Assignment	Mating Housing	Terminal
1	RC+	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2	RC-		

Block Diagram



De-Rating Curve



Static Characteristics

