Sparkle Power Inc

FSP GROUP

100W ITE POWER SUPPLIES

DESCRIPTION

This AC-DC switching power supplies in a package of 3 x 5 inches is a Class-I PSU and no load power consumption less than 0.21W. This PSU is capable of delivering 150 watts continuous power at 7 CFM forced air cooling or 100 watts continuous power at convection cooling and 50℃ operation temperature. Product is suitable for display, information, and networking application.

FEATURES

- Class-I design
- Design to meet IEC 60950-1 and IEC 62368-1 safety standard
- Low profile 3x5x1.126 inches
- No load power consumption less than 0.21W
- EN 55032 Class B radiated emission
- High altitude 5000 meters operation
- OTP, Brown out protection

INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	1.2 A (rms) for 115 VAC 0.6 A (rms) for 230 VAC
No load power consumption	≦0.21W
Earth leakage current:	0.75 mA max. @ 264 VAC, 63 Hz
Touch current:	0.25 mA max. @ 264 VAC, 63 Hz

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart.
Total output power:	100W
Protection:	
Over voltage:	Set at 110~122% of nominal output voltage. Latch off
Short circuit & Over current:	Output protected to short circuit condition and auto recovery
Over temperature:	Detected by thermistor and latch off
Brown-out	Set at 75VAC
Temperature coefficient:	All outputs ±0.04% /℃ maximum
Transient response:	Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500 us after a 25% step load change

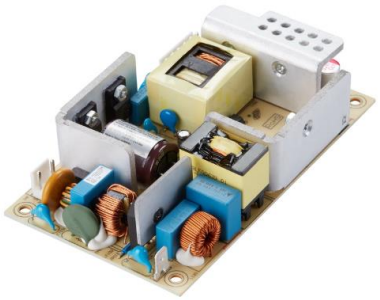
ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	-20℃ to +70℃
Storage temperature:	-40℃ to +85℃
Relative humidity:	5% to 95% non-condensing
Derating:	Derate from 100% at +50℃ linearly to 50% at +70℃, applicable to convection cooling conditions

FSP100-P35-B19

RoHS

CE



SAFETY STANDARD APPROVAL

CB **IEC 62368-1, IEC 60950-1**

c UL us **UL 62368-1, CAN/CSA 22.2 No.62368-1-14**

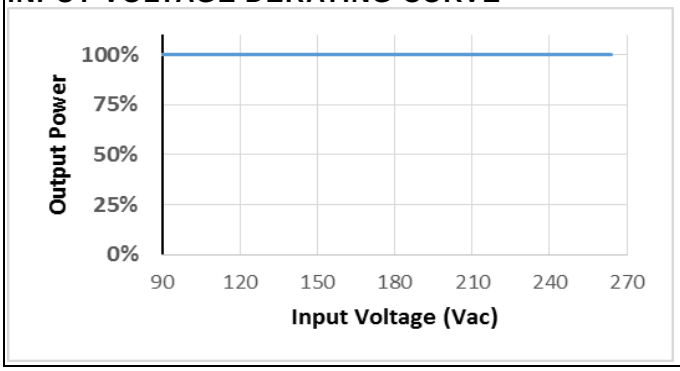
GENERAL SPECIFICATIONS

Power factor:	0.97 minimum @ 115VAC & 100% load 0.88 minimum @ 230VAC & 100% load
Efficiency:	See rating chart.
Power turn-on time	1.0 Sec maxi.
Hold-up time:	20 ms minimum at 115 VAC 20 ms minimum at 230 VAC
Line regulation:	±0.5% maximum at full load
Inrush current:	35 A @ 115 VAC, at 25℃ cold start 70 A @ 230 VAC, at 25℃ cold start
Operating altitude:	5000 meters above sea level
Withstand voltage:	3000 VAC from input to output, 1500 VAC from input to ground, 1500 VAC from output to ground
Isolation Resistance:	Input to output 100M ohm @ 500Vdc, 25℃
MTBF:	400,000 hours mini. at full load at 25℃ ambient, calculated per BELL CORE SR-332

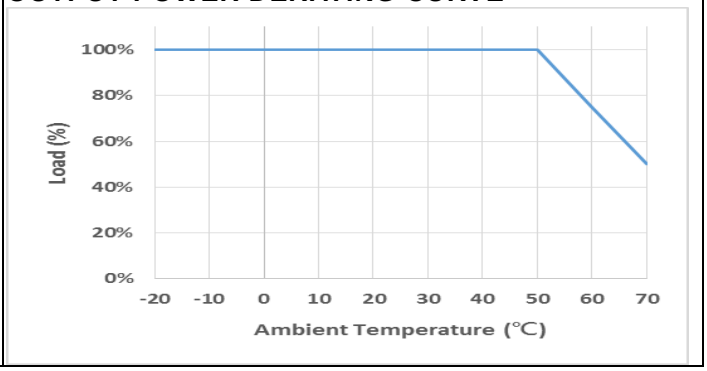
EMC Performance

EN55032	Class B conducted, class B radiated
FCC:	Class B conducted, class B radiated
VCCI:	Class B conducted, class B radiated
EN61000-3-2:	Harmonic distortion, class A and D
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD, ±8 KV air and ±4 KV contact
EN61000-4-3:	Radiated immunity, 3 V/m
EN61000-4-4:	Fast transient/burst, ±1 KV
EN61000-4-5:	Surge, ±1 KV diff., ±2 KV com
EN61000-4-6:	Conducted immunity, 3 Vrms
EN61000-4-8:	Magnetic field immunity, 1 A/m
EN61000-4-11:	Voltage dip immunity, 30% reduction for 500 mS, criteria A >95% reduction for 10 mS, criteria A >95% reduction for 5000 mS, criteria B

INPUT VOLTAGE DERATING CURVE



OUTPUT POWER DERATING CURVE



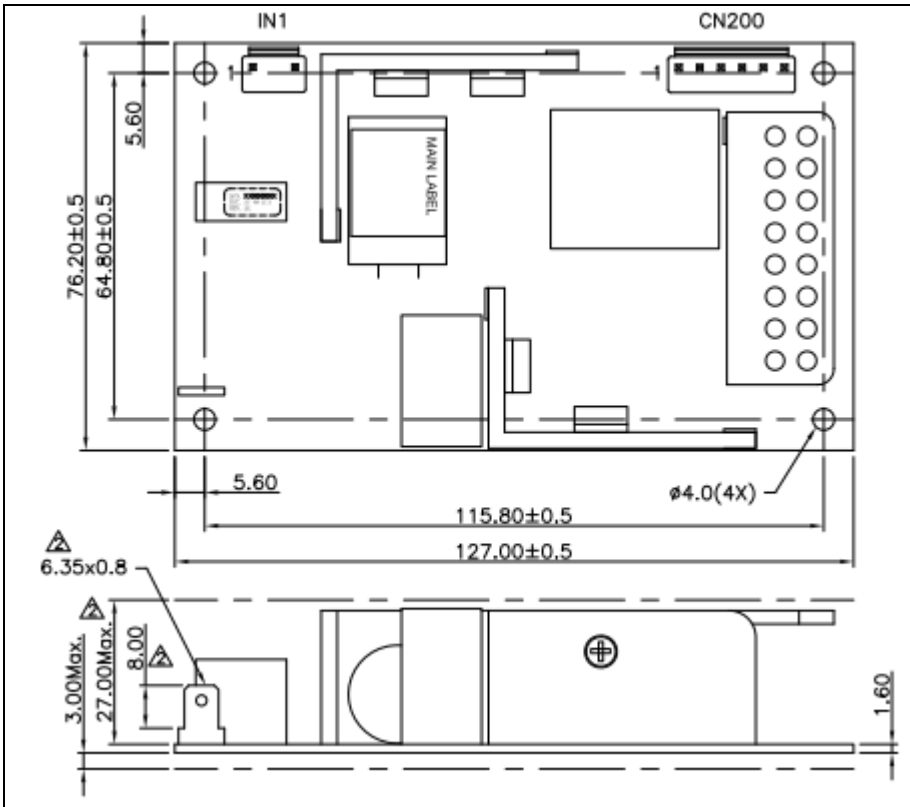
OUTPUT VOLTAGE/CURRENT RATING CHART

Model	Output						Efficiency
	V1	Min. Load	Max. Current convection	Load Regulation	Ripple & Noise(1)	Max. Power	115 / 230 Vac (typical)
FSP100-P35-B19	19 V	0 A	5.27 A	±3%	190 mV	100 W	86 / 88%

NOTES:

1. Ripple and noise is maximum peak to peak voltage value measured at output within 20 MHz bandwidth, at rated line voltage and output load ranges, and with a 47 μF electrical capacitor in parallel with a 0.1 μF ceramic capacitor across the output.

MECHANICAL SPECIFICATIONS



Dimensions shown in mm.

Pin assignment:

1. Input connector (CN1):

Pin No.	Function	Wafer
1	Neutral	J.S.T B2P3-VH or equivalent
2		
3	Line	

Matting connector:
J.S.T housing VHR-3N,
Crimp PIN SVH-21T-P1.1 or equivalent.

2. Output connector (CN200):

Pin No.	Function	Wafer
1, 2, 3	+V	J.S.T B6P-VH or equivalent
4, 5, 6	Return	

Matting connector:
J.S.T housing VHR-6N,
Crimp PIN SVH-41T-P1.1 or equivalent.

3. Ground pad: 8 x 6.35 x 0.8 mm

Weight: 220 grams (0.485 lbs.) approx.

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