DESCRIPTION

This series AC-DC switching power supplies is Class-I design and features with 3 x 5 x 1.126 inches low profile and no load input power less than 0.21W. 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. The units are constructed on a printed circuit board. They are designed for information, display, industrial and telecom applications.

FEATURES

- Class-I design
- Dimension 3"x5"x1.126"
- 100W at convection cooling, 150W at 7 CFM forced air cooling
- No load power consumption less than 0.21W
- Design to meet IEC 62368-1 safety standard
- 1.5KVac isolated between output and Ground
- High altitude 5000 meters operation
- OTP, Brown out protection
- 12V fan driver

INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	1.5 A (rms) for 115 VAC 0.75 A (rms) for 230 VAC
No load power consumption	≦0.21W
Earth leakage current:	0.75 mA max. @ 264 VAC, 63 Hz
Touch current:	250 μA max. @ 264 VAC, 63 Hz

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart.
Fan driver	12V @ 500 mA max.
Total output power:	150W
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

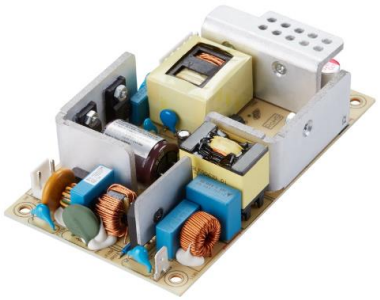
ENVIRONMENTAL SPECIFICATIONS

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 and forced-air cooling conditions

FSP150-P35 SERIES

RoHS

CE



SAFETY STANDARD APPROVAL

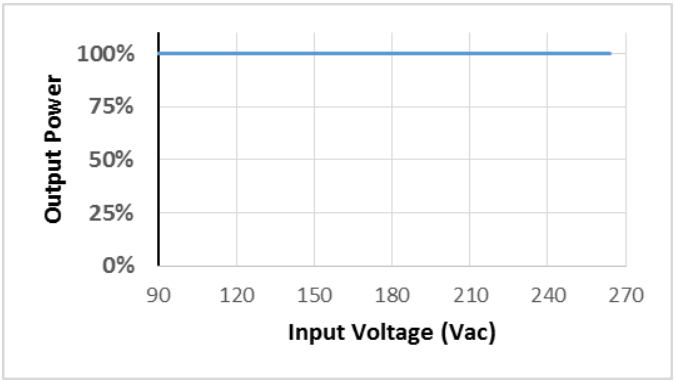
CB **IEC 62368-1**

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

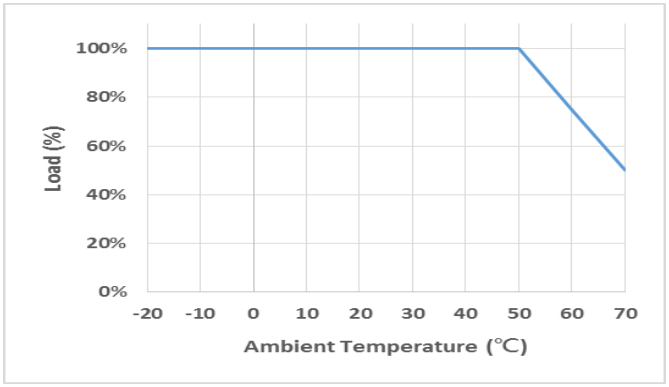
GENERAL SPECIFICATIONS

Power factor:	0.98 minimum @ 115VAC & 100% load 0.9 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 @ 100W 8 mS minimum at 115VAC @ 150W
Line regulation:	±0.5% maximum at full load
Inrush current:	45 A @ 115 VAC, at 25℃ cold start 90 A @ 230 VAC, at 25℃ cold start
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:	250,000 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, ±2 KV diff., ±4 KV com (standard)
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

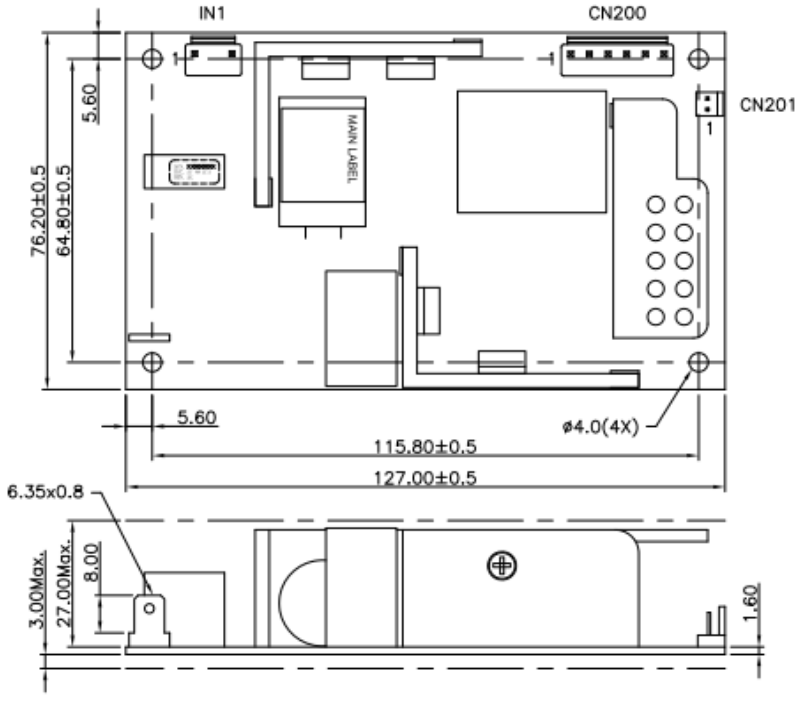


OUTPUT VOLTAGE/CURRENT RATING CHART

Model	Output							Efficiency
	V1	Min. Load	Max. Current convection	Max. Current 7 CFM	Load Regulation	Ripple & Noise(1)	Max. Power(2)	115 / 230 Vac (typical)
FSP150-P35-A12	12 V	0 A	8.34 A	12.5 A	±3%	120 mV	100 W / 150 W	90 / 92%
FSP150-P35-A24	24 V	0 A	4.17 A	6.25 A	±3%	200 mV	100 W / 150 W	89 / 91%
FSP150-P35-A54	54 V	0 A	1.86 A	2.78 A	±3%	300 mV	100 W / 150 W	91 / 92%

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.
2. The first value of maximum current is at convection cooling. The second value is with 7 CFM forced air provided by user.

MECHANICAL SPECIFICATIONS



NOTES:
1. Dimensions shown in mm.
2. Input connector (IN1): JWT A3963WV2-3P-D or equivalent.
3. Output connector (CN200): JWT A3963WV2-6P or equivalent.
4. Fan driver (CN201): JWT A2543WV2-2P or equivalent.
5. Ground pad: 8 x 6.35 x 0.8 mm
6. Weight: 220 grams (0.485 lbs.) approx.

PIN CHART

CONNECTOR	AC INPUT (CN1)			DC OUPUT (CN200)						FAN DRIVER (CN201)		GROUND PAD
PIN NO.	1	2	3	1	2	3	4	5	6	1	2	
OUTPUT	NEUTRAL	--	LIVE	V+			RETURN			12V FAN DRIVER	RETURN	PROTECT EARTH