

DESCRIPTION

This series AC-DC switching power supplies in a package of 3 x 5 x 1.21 inches are capable of delivering 180 watts continuous power at 10 CFM forced air cooling or 150 watts continuous power at convection cooling, except FSP180-1H35-12 only 100W. They are constructed on a printed circuit board with a U-bracket for mechanical support and heat sinking. They are designed for information and industrial applications.

FEATURES

- Low profile 3" x 5" x 1.21"
- OTP and Brown-out protection

INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	1.8 A (rms) for 115 VAC 0.95 A (rms) for 230 VAC
Earth leakage current:	750 μ A max. @ 264 VAC, 63 Hz

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart.
Total output power:	180W
Protection:	
Over voltage:	Set at 120%~150% of it's nominal output voltage. Latch off
Short circuit & Over current:	Output protected to short circuit condition. Set at 120~140% of output rated current. Auto recovery
Over temperature:	Detected by thermistor and latch off
Brown-out	Set at 70Vac input voltage
Temperature coefficient:	All outputs $\pm 0.04\%$ / $^{\circ}$ C maximum
Transient response:	Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500 μ s after a 25% step load change

ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	-0 $^{\circ}$ C to +70 $^{\circ}$ C
Storage temperature:	-20 $^{\circ}$ C to +85 $^{\circ}$ C
Relative humidity:	5% to 95% non-condensing
Derating:	Derate from 100% at +50 $^{\circ}$ C linearly to 50% at +70 $^{\circ}$ C, applicable to convection and forced-air cooling conditions

FSP180-1H35 SERIES



RoHS



SAFETY STANDARD APPROVAL

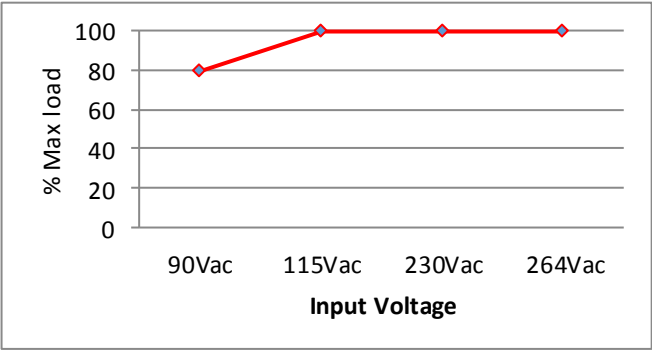
CB

IEC 60950-1

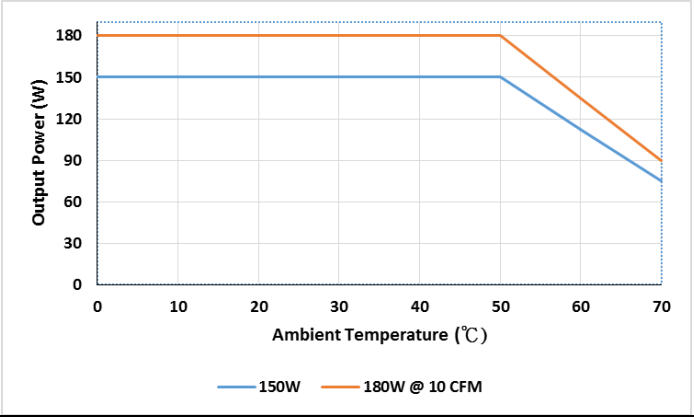
GENERAL SPECIFICATIONS

Power factor:	0.98 min at 100% load and 115VAC 0.9 min. at 100% load and 230VAC
Efficiency:	See rating chart.
Hold-up time:	20 ms min. at 115 VAC & 230VAC and 180W
Power turn on time	2 Sec maximum
Line regulation:	$\pm 1\%$ maximum at full load
Inrush current:	50 A @ 115 VAC, at 25 $^{\circ}$ C cold start 100 A @ 230 VAC, at 25 $^{\circ}$ C cold start
Withstand voltage:	3000 VAC from input to output, 1500 VAC from input to ground,
MTBF:	100,000 hours at full load at 25 $^{\circ}$ C ambient, calculated per MIL-HDBK-217F
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, 30 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



OUTPUT DERATING CURVE



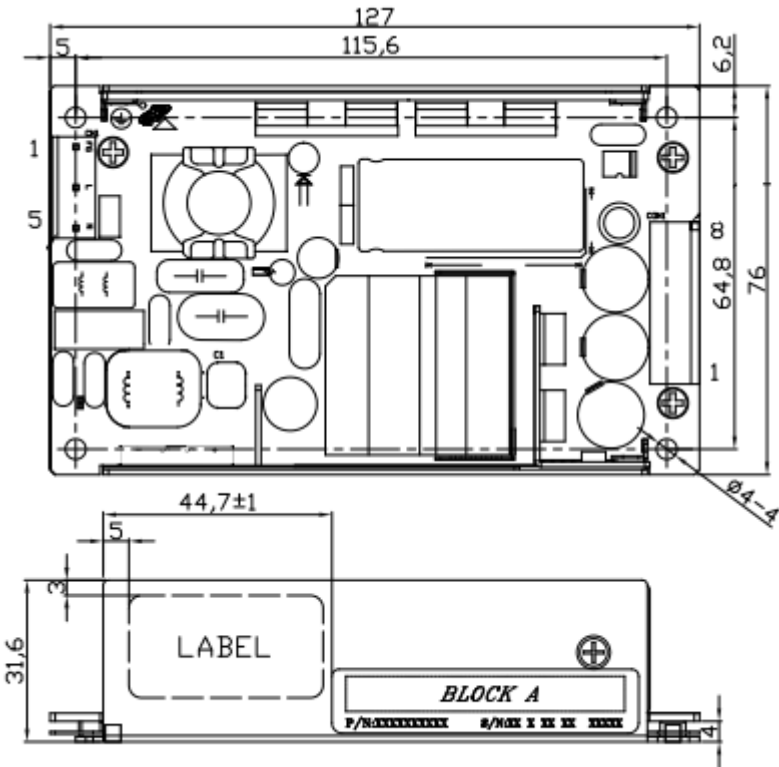
OUTPUT VOLTAGE/CURRENT RATING CHART

Model	Output							Efficiency
	V1	Min. Load	Max. Current ¹² convection	Max. Current 10 CFM ¹²	Tol.	Ripple & Noise ⁽¹⁾	Max. Power ⁽²⁾	115 / 230 Vac (typical)
FSP150-1H35-19	19 V	0 A	7.90 A	---	±3%	190 mV	150 W	89 / 92%
FSP150-1H35-36	36 V	0 A	4.10 A	---	±3%	360 mV	150 W	89 / 92%
FSP180-1H35-12	12 V	0 A	8.33 A	15.0 A	±3%	200 mV	100 W / 180 W	89 / 92%
FSP180-1H35-24	24 V	0 A	6.25 A	7.50 A	±3%	240 mV	150 W / 180 W	89 / 92%
FSP180-1H35-48	48 V	0 A	3.10 A	3.80 A	±3%	480 mV	150 W / 180 W	89 / 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 max. current is at convection cooling. The second value is with 10 CFM forced air provided by user.

MECHANICAL SPECIFICATIONS



NOTES:

- 1. Dimensions shown in mm.
- 2. Input connector: JWT A3963WV2-5P or equivalent.
- 3. Output connector: JWT A3963WV2-8P or equivalent.
- 4. PIN CHART

CONNECTOR	AC INPUT			
PIN NO.	1	2,4	3	5
OUTPUT	PE	NC	LINE	NEUTRAL

CONNECTOR	DC OUPUT	
PIN NO.	1,2,3,4	5,6,7,8
OUTPUT	V+	RETURN

- 5. Weight: 500 grams (1.1 lbs.) approx.