

FSP420-2F47-A54H

FEATURES

- Class-I design
- Low inrush current
- Isolated between +12V & +54V outputs
- Isolated between PE and RETURN
- High altitude 5000 meters operation



SAFETY STANDARD APPROVAL



DESCRIPTION

This Class-I AC-DC switching power supplies in a package of 4 x 7.5 inches is an isolated dual outputs 54V & 12V PSU. This PSU is capable of delivering 420 watts continuous power under 14 CFM condition and suitable for PoE switch & networking application.

INPUT SPECIFICATIONS

Input voltage:	90-264 VAC (Rated 100~240Vac)
Input frequency:	47-63 Hz (Rated 50/60 Hz)
Input current:	5.0 A maxi. (rms) for 115 VAC 2.8 A maxi. (rms) for 230 VAC
Earth leakage current:	2.5 mA max. @ 264 VAC, 63 Hz
Touch current:	250 uA max. @ 264 VAC, 63 Hz

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart.
Total output power:	See rating chart.
Ripple and noise:	See rating chart.
Protection:	
Over voltage	Set at 110~135% of nominal output voltage and Latch off.
Short circuit & Overcurrent	Output protected to short circuit condition and 130% maximum for over current and auto recovery
Over temperature	Detected by thermistor and auto recovery
Temperature coefficient:	All outputs $\pm 0.04\%$ / $^{\circ}\text{C}$ maximum
Transient response:	Maximum excursion of 5% or better on all models, recovering to 1% of final value within 500 us after a 25% step load change

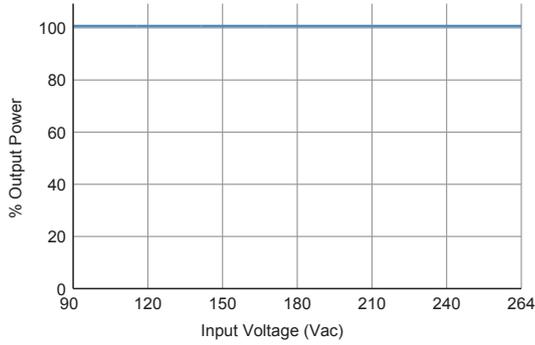
ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	-20 $^{\circ}\text{C}$ to +70 $^{\circ}\text{C}$
Storage temperature:	-40 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$
Relative humidity:	5% to 95% non-condensing
Derating:	Derate from 100% at +50 $^{\circ}\text{C}$ linearly to 50% at +70 $^{\circ}\text{C}$, applicable to convection and forced-air cooling conditions

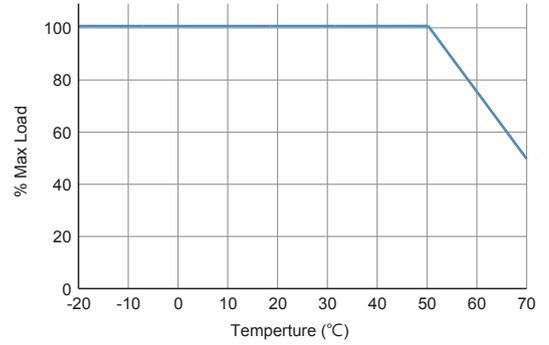
GENERAL SPECIFICATIONS

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:	12 ms minimum at 115 VAC
Power on time	2 Sec maximum
Line regulation:	$\pm 0.5\%$ maximum at full load
Inrush current:	75A maxi. @ 230 VAC, at 25 $^{\circ}\text{C}$ cold start
Withstand voltage:	3000 VAC from input to output, 1500 VAC from input to ground, 500 VAC from output to ground
MTBF:	300,000 hours minimum at full load at 25 $^{\circ}\text{C}$ ambient, calculated per BELLCORE SR-332
EMC Performance	
EN55032:	Class A conducted, class A radiated
FCC:	Class A conducted, class A radiated
VCCI:	Class A conducted, class A radiated
EN61000-3-2:	Harmonic distortion, class 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, ± 2 KV
EN61000-4-5:	Surge, ± 3 KV diff, ± 6 KV com
EN61000-4-6:	Conducted immunity, 3 Vrms
EN61000-4-8:	Magnetic field immunity, 3 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

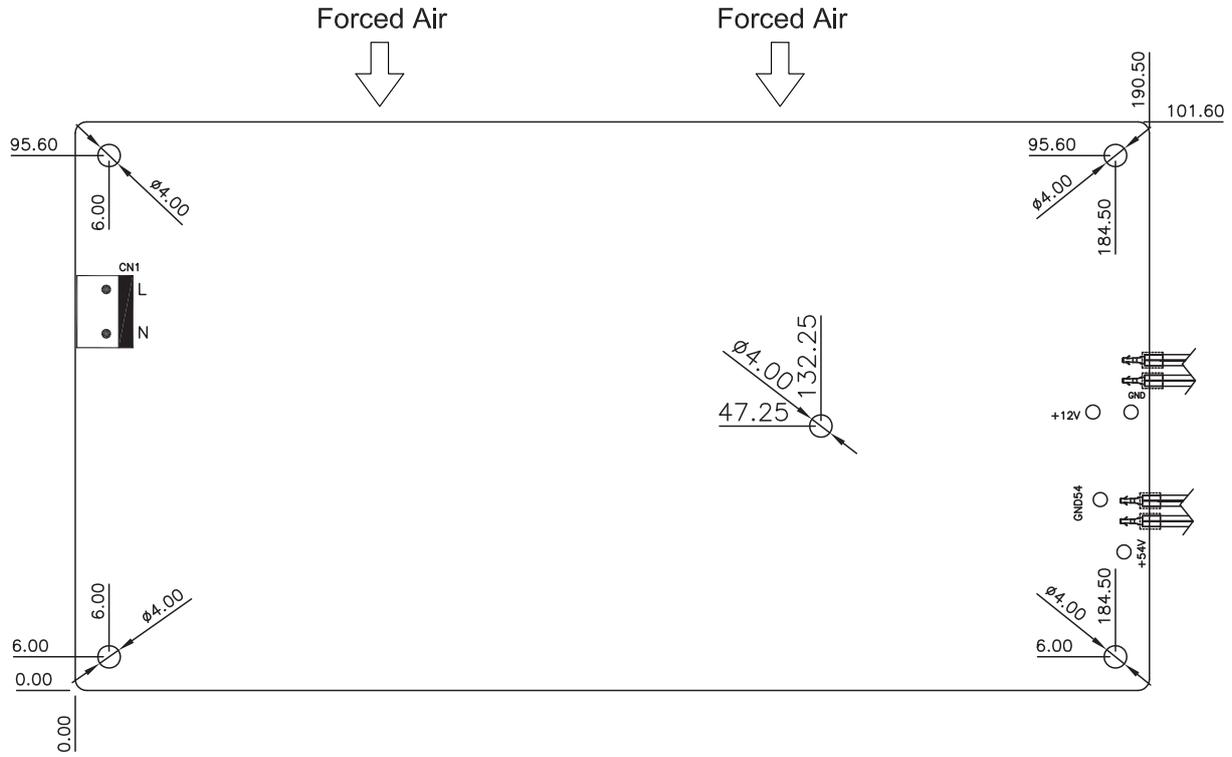
Model	Output Voltage	Min. Load	Max. Load (14 CFM)	Output Power	Ripple & Noise ⁽²⁾	Load Regulation	Efficiency 115/230 Vac
FSP420-2F47-A54H	54 V	0 A	6.85 A	420W	540 mV	±5%	88% / 90 %
	12 V	0.3 A	4.2 A		120 mV	±5%	

NOTES:

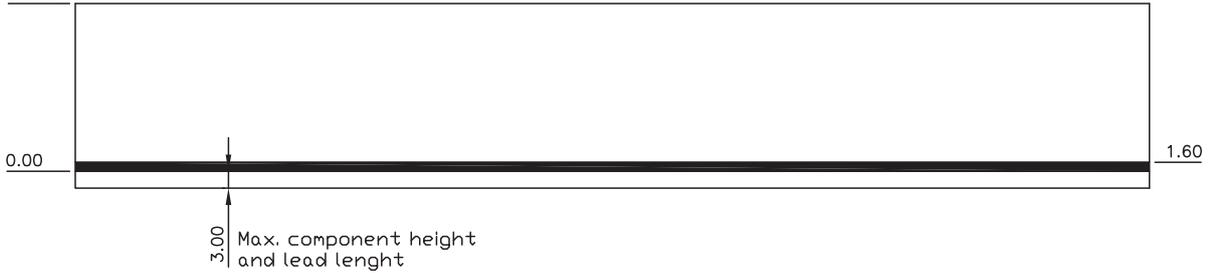
1. Forced air 14 CFM is provided by user.

2. 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 10 µF tantalum capacitor in parallel with a 0.1 µF ceramic capacitor across the output.

MECHANICAL SPECIFICATIONS



component height
 30.00



INPUT CONNECTOR (CN1):
 JWT A3963WV2-3P-D or EQU

Pin 1	Neutral
Pin 2	NC
Pin 3	Line

OUTPUT CONNECTOR:
 JWT C4201WV0-2*5P-CP or EQU

Pin 1, 2	54V RETURN
Pin 3, 8	N.C.
Pin 4, 5	+12V
Pin 6, 7	+54V
Pin 9,10	12V RETURN

NOTES:

- DIMENSION (L*W*H): 190.5 * 101.6 * 35 mm / 7.5" * 4" * 1.38"
- WEIGHT: 490 grams (1.08 lbs.) approx.