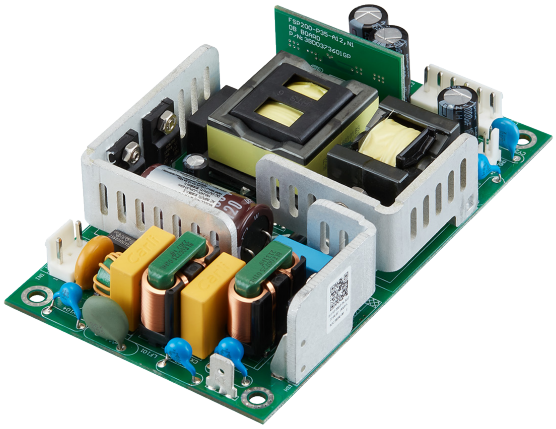
TECHNICAL DATASHEET

200W ITE POWER SUPPLIES

FSP200-P35 B Series



FSP200-P35 B Series

FEATURES

- Class-I design
- IEC 62368-1 safety standard
- Low profile 3 x 5 x 1.284 inches
- Standby power less than 0.5W
- EN 55032 Class B radiated emission
- High altitude 5000 meters operation
- Fan driver 12V

SAFETY STANDARD APPROVAL

DESCRIPTION

This AC-DC switching power supplies in a package of 3 x 5 inches is a Class-I PSU which is with Protected Earth. The standby power is less than 0.5W at load less than 0.2W conditions. This PSU is capable of delivering 200 watts continuous power at 7 CFM forced air cooling or 150 watts continuous power at convection cooling and 50℃ operation temperature. Product is suitable for audio & video, display, information, and networking application.

INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	1.7 A (rms) for 115 VAC 0.8 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.
Fan driver:	Non-regulated 12V @ 500 mA max.
Total output power:	200W
Protection:	
Over voltage:	Latch off
Short circuit:	Auto recovery
Over current:	Auto recovery
Over temperature:	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℃~+70℃
Storage temperature	-40℃~+85℃
Relative humidity:	5% to 95% non-condensing
Derating:	Derate from 100% at +50℃ linearly to 50% at +70℃, applicable to both convection and forced-air cooling conditions

GENERAL SPECIFICATIONS

Power factor:	0.98 minimum @ 115VAC & 100% load 0.93 minimum @ 230VAC & 100% load
Efficiency:	See rating chart.
Power turn-on time:	1.5 Sec maxi.
Hold-up time:	20 mS minimum at 115 VAC @ 150W 8 mS minimum at 115VAC @ 200W
Line regulation:	±0.5% maximum at full load
Inrush current:	40 A @ 115 VAC, at 25℃ cold start, 150W 80 A @ 230 VAC, at 25℃ cold start, 150W
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, calculaed per Telcordia 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

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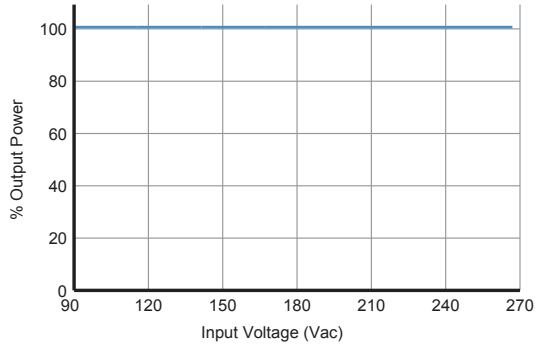
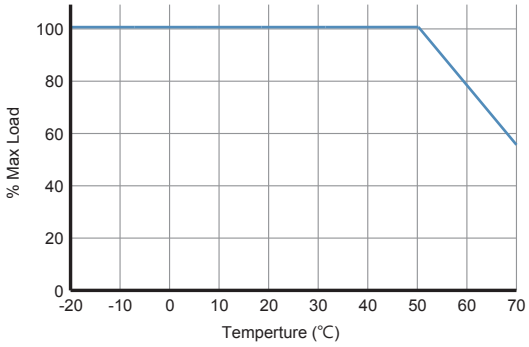
INPUT VOLTAGE DERATING CURVE



OUTPUT POWER DERATING CURVE

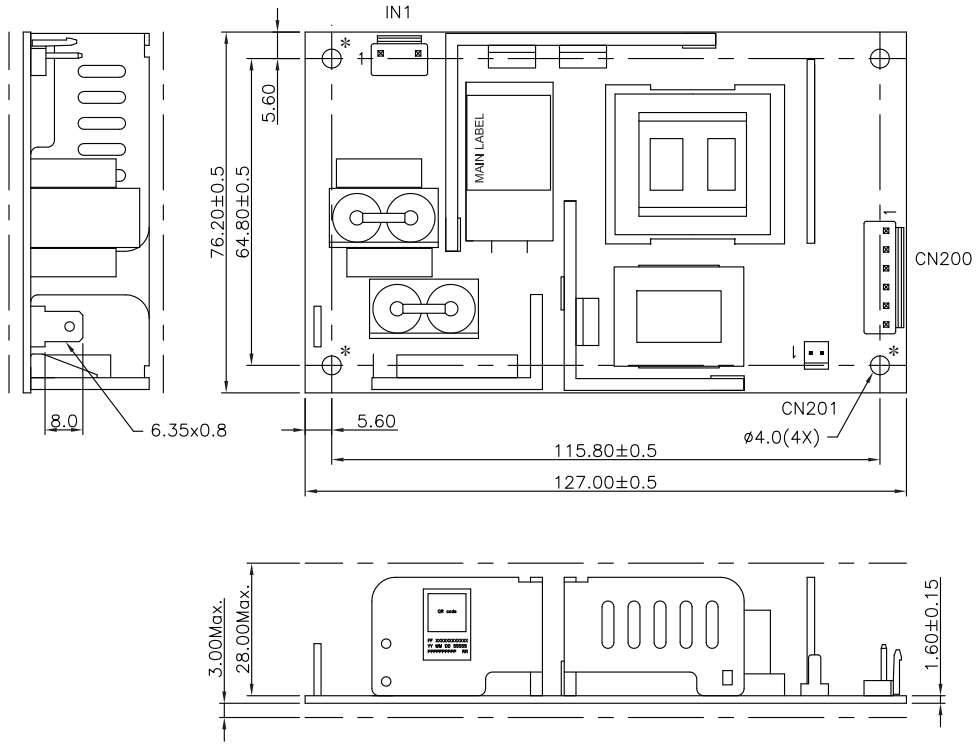


OUTPUT VOLTAGE/CURRENT RATING CHART

Model	Output							Efficiency 115/230 Vac (typical)
	Voltage	Min. Load	Max. Current convection	Max. Current 7 CFM	Tolerance	Ripple & Noise	Max. Power	
FSP200-P35-B12	12 V	0 A	12.5 A	16.67 A	±3%	120 mV	150 W / 200 W	86 / 88%
FSP200-P35-B18	18 V	0 A	8.33 A	11.1 A	±3%	180 mV	150 W / 200 W	89 / 90%
FSP200-P35-B24	24 V	0 A	6.25 A	8.34 A	±3%	240 mV	150 W / 200 W	89 / 90%
FSP200-P35-B54	54 V	0 A	2.78 A	3.70 A	±3%	300 mV	150 W / 200 W	89 / 90%

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



Pin assignment:
Input connector (IN1):

Pin No.	Function	Wafer
1	Neutral	JST B2P3-VH or equivalent
2		
3	Line	

Output connector (CN200):

Pin No.	Function	Wafer
1, 2, 3	V+	JST B6P-VH or equivalent
4, 5, 6	GND	

Pin assignment of Fan driver (CN201):

Pin No.	Function	Wafer
1	+12V	MOLEX 22-27-2021 or equivalent
2	GND	

NOTES:
1. Dimensions shown in inches [mm]
2. Ground pad: 8 x 6.35 x 0.8 mm, matting with Tyco housing SPS-21T-250.
3. Weight: 240 grams (0.529 lbs.) approx.
4. To ensure compliance with level B emissions, connect the 3 “＊” PCB mounting holes with metallic standoffs to the chassis.