

## DESCRIPTION

This series AC-DC switching power supplies in a package of 3 x 5 x 1.165 inches are capable of delivering 60W at convection cooling. The units are constructed on a printed circuit board. They are designed for information technology equipment and industrial applications.

## FEATURES

- Class-II design
- Long hold up time 20ms
- No load power consumption less than 0.5W

## INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	1.2 A (rms) for 115 VAC 0.7 A (rms) for 230 VAC
Touch current:	500 $\mu$ A max. @ 264 VAC, 63 Hz

## OUTPUT SPECIFICATIONS

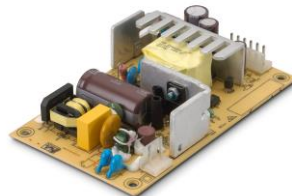
Output voltage/current:	See rating chart.
Total output power:	60W
Protection:	
Over voltage:	Set at 135%~160% of it's nominal output voltage. Latch off
Over current & Short circuit	Output protected to short circuit condition. Set at 135~150% of output rated current. Auto recovery
Temperature coefficient:	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 $\mu$ 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

## FSP060-1S35 SERIES

RoHS



## SAFETY STANDARD APPROVAL

**LVD** IEC 60950-1

## GENERAL SPECIFICATIONS

Power-on time	2 Sec maxi.
Efficiency:	See rating chart.
Hold-up time:	20 ms minimum at 115 VAC
Line regulation:	$\pm 0.5\%$ maximum at full load
Inrush current:	45 A @ 115 VAC, at 25 $^{\circ}$ C cold start 90 A @ 230 VAC, at 25 $^{\circ}$ C cold start
Withstand voltage:	3000 VAC from input to output,
MTBF:	400,000 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, $\pm 8$ KV air and $\pm 4$ KV contact
EN61000-4-3:	Radiated immunity, 3 V/m
EN61000-4-4:	Fast transient/burst, $\pm 1$ KV
EN61000-4-5:	Surge, $\pm 1$ KV diff., $\pm 2$ 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

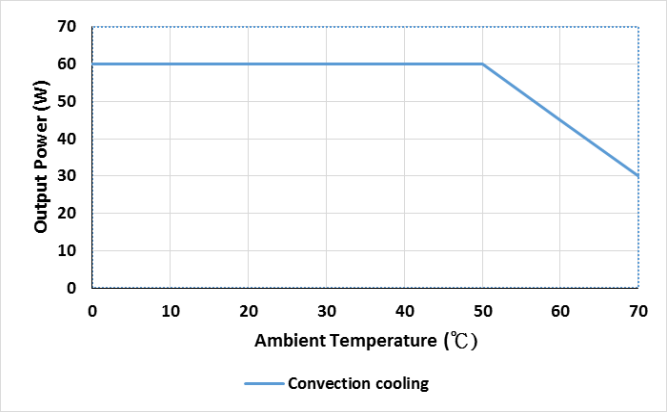
PIN CHART

CONNECTOR				AC INPUT (CN1)		
PIN NO.				1	2	3
OUTPUT				NEUTRAL	--	LINE

CONNECTOR				DC OUPUT (CN2)					
PIN NO.				1	2	3	4	5	6
OUTPUT				V+			RETURN		

OUTPUT POWER DERATING CURVE



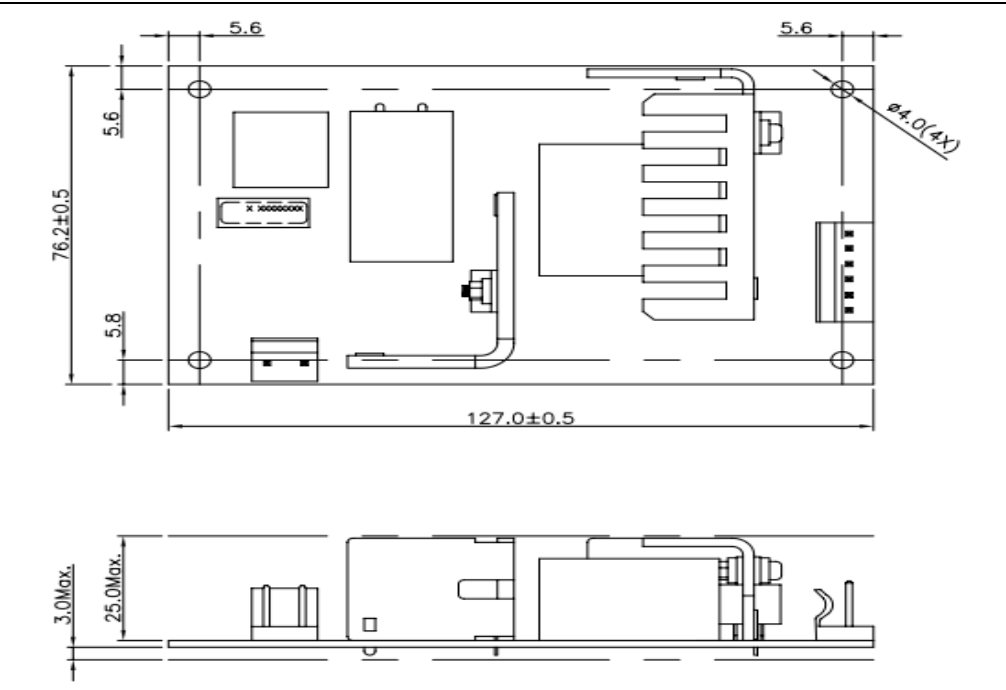
OUTPUT VOLTAGE/CURRENT RATING CHART

Model	Output						Efficiency
	V1	Min. Load	Max. Current	Tolerance	Ripple & Noise <sup>(1)</sup>	Max. Power	115 / 230Vac (typical)
FSP060-1S35-05	5 V	0 A	12.0 A	±3%	100 mV	60W	82 / 85%
FSP060-1S35-12	12 V	0 A	5.0 A	±3%	120 mV	60W	83 / 85%
FSP060-1S35-19	19 V	0 A	3.15 A	±3%	240 mV	60W	85 / 87%
FSP060-1S35-24	24 V	0 A	2.5 A	±3%	240 mV	60W	85 / 87%
FSP060-1S35-36	36 V	0 A	1.6 A	±3%	360 mV	60W	85 / 87%

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

MECHANICAL SPECIFICATIONS



- NOTES:
- 1. Dimensions shown in mm.
  - 2. Input connector: JWT A3961WV2-3P-D or equivalent.
  - 3. Output connector: JWT A3961WV2-6P or equivalent.
  - 4. Weight: 155 grams (0.342 lbs.) approx..