DESCRIPTION

The PU350 series of AC-DC switching power supplies in a package of 3 x 5 x 1.28 inches are capable of delivering 350 watts of continuous power at 16.8 CFM forced air cooling or 200 watts at convection cooling. The units are constructed on a printed circuit board. They are designed for ITE, telecommunication, audio/video and industrial applications.

PU350 SERIES

CE (LVD)

RoHS

FEATURES

- 90-264 VAC input with active PFC
- Operation altitude up to 5000 meters
- EN55032 Class B conducted emissions
- Power consumption less than 0.5W
- Compliant with RoHS requirements

SAFETY STANDARD APPROVALS

C SP US UL 62368-1, CSA C22.2 No. 62368-1

INPUT SPECIFICATIONS

Input voltage:	90-264 VAC
Input frequency:	47-63 Hz
Input current:	4.3 A (rms) @100 VAC, 60 Hz
	1.8 A (rms) @ 240 VAC, 50 Hz
Earth leakage current:	750 μA max. @ 264 VAC, 50 Hz
Touch current:	250 μA max. @ 264 VAC, 50 Hz

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart.
Maximum output power:	See rating chart.
Ripple and noise:	See rating chart
Overvoltage protection:	Set at 115-140% of nominal output voltage
Overcurrent protection:	Protected to output short circuit conditions
Thermal shutdown:	Protected to over temperature conditions
Temperature coefficient:	All outputs ±0.04% /℃ maximum
Transient response:	Maximum excursion of 4%, recovering to 1% of final value within 500 us after a 25% step load change
Fan power:	12 V at 600 mA maximum

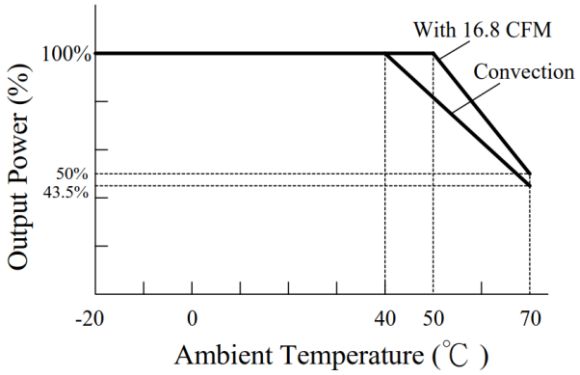
ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	-20℃ to +70℃
Storage temperature:	-40℃ to +85℃
Relative humidity:	5% to 95% non-condensing
Temperature derating:	At forced-air cooling condition, derate from 100% at +50℃ linearly to 50% at +70℃; at convection condition, derate from 100% at +40℃ linearly to 50% at +70℃.

GENERAL SPECIFICATIONS

Switching frequency:	55-300 KHz
Efficiency:	87% minimum on all models
Hold-up time:	10 ms minimum at 115 VAC @ 350W
	35 ms minimum at 115 VAC @ 200W
Line regulation:	±0.5% maximum at full load
Inrush current:	120 A @ 230 VAC, at 25℃ cold start
Withstand voltage:	3000 VAC from input to output,
	1500 VAC from input to ground,
	500 VAC from output to ground
MTBF:	100,000 hours at full load at 25℃ ambient, calculated per MIL-HDBK-217F
EMC Performance	
EN55032	Class B conducted, class B radiated
EN61000-3-2:	Harmonic distortion, class A and D
EN61000-3-3:	Line flicker
EN55035	
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 and >95% reduction for 10 ms

OUTPUT POWER DERATING CURVE



OUTPUT VOLTAGE/CURRENT RATING CHART

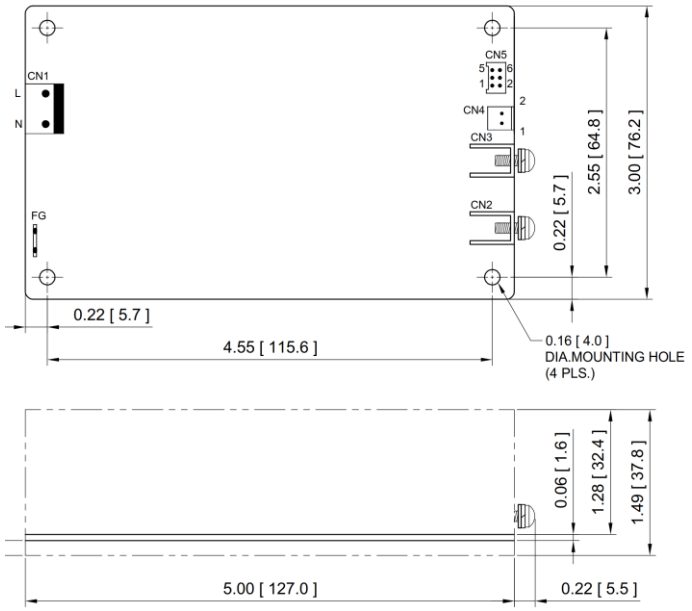
Model	Output							Efficiency (typical) 115 /230 Vac
	V1	Min. Current	Max. Current at convection	Max. Current at 16.8 CFM	Tol.	Ripple & Noise(1)	Max. Output Power(2)	
PU350-12A	12 V	0 A	16.7 A	29.2 A	±3%	150 mV	200 W /350 W	87 /91%
PU350-13-1A	18 V	0 A	11.1 A	19.5 A	±2%	234 mV	200 W /350 W	88 /91%
PU350-14A	24 V	0 A	8.3 A	14.6 A	±2%	240 mV	200 W /350 W	88 /92%
PU350-19A	54 V	0 A	3.7A	6.5 A	±2%	540 mV	200 W /350 W	89 /91%

NOTES:

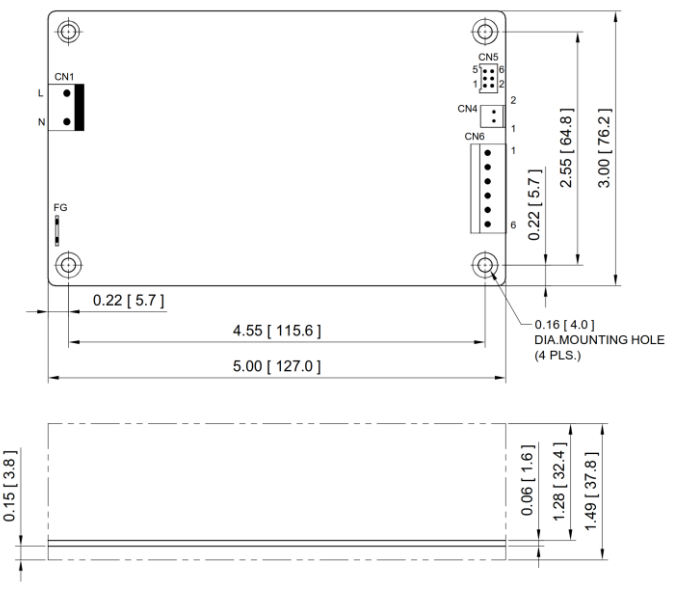
1. Ripple and noise is maximum peak-to-peak voltage value measured at output within 20 MHz bandwidth, at rated line voltage and output load ranges, and with a 10 μF tantalum capacitor in parallel with a 0.1 μF ceramic capacitor across the output.
2. The first value of max. power is at convection cooling. The second value is with 16.8 CFM forced air provided by user.

MECHANICAL SPECIFICATIONS

For PU350-12A



For PU350-13-1A, PU350-14A, and PU350-19A



NOTES:

1. Dimensions shown in inches [mm], tolerance 0.02 [0.5] maximum.
2. Input connector CN1 is JWT A3963WV2-A3P-D C/O 2 or equivalent.
3. Output connectors CN 2 & CN 3 are M3 X 0.5 screw connectors.
4. Output connector CN 6 is JWT A3963WV2-6P or equivalent.
5. Fan connector CN 4 is SHIYIN 2540702(287) or equivalent.
6. Output connector CN 5 is JWT A2006WV0-2*3P-6T or equivalent.
7. Weight: 303g (0.67 lbs.) approx.

PIN CHART

PIN NO.	CN 1 (AC)		CN2 (for PU350-12A only)	CN 3 (for PU350-12A only)	CN 4 (Fan)	
	1	2	1	1	1	2
Polarity	Live	Neutral	+V1	Common Return	Fan Return (isolated)	+12V (isolated)

PIN NO.	CN 5					
	1	2	3	4	5	6
Polarity	+V1 Sense	-V1 Sense	N/C	N/C	N/C	N/C

PIN NO.	CN 6 (for PU350-13-1A, PU350-14A, and PU350-19A)					
	1	2	3	4	5	6
Polarity	+V1	+V1	+V1	Common Return	Common Return	Common Return