

PPWAM360 Power Supply Series (360W)

Features:

- IEC 60601-1-2 4th Edition Compliant
- High Power Density: 360W in 4" x 6" Footprint
- UL/EN60601-1 3rd Edition and UL/EN60950-1 2nd Edition Medical and ITE Approvals
- <100uA @ 264VAC Earth Leakage Current
- 2 x MOPP Primary to Secondary
- Meets BF (body Floating) Rated Output Requirements
- Short Circuit, Overload and Overvoltage Protection



Description:

The PPWAM360 series of compact, open-framed AC-DC switching power supplies offers a high power density to fit in a small space. This dense 6" x 4" platform offers up to 360W of continuous power across a wide range of operating temperatures, all while maintaining a low emissions profile. All models meet FCC, EN55011, CISPR11 class B emission limits, and comply with UL, CE, IEC, and more.

Model ¹	Output Voltage	Maximum Load with Convection Cooling ⁴	Maximum Load with 20CFM Forced Air ⁴	Output Regulation ²	Ripple & Noise (Vp-p) ³	Standby Power (V2)	Fan Output (v3)
PPWAM360-12A	12V	20.84A	30.00A	±3%	120mV	5V/0.5A	12V/0.3A
PPWAM360-14A	24V	10.42A	15.00A	±3%	240mV	5V/0.5A	12V/0.3A
PPWAM360-15A	28V	8.93A	12.86A	±3%	280mV	5V/0.5A	12V/0.3A
PPWAM360-18A	48V	5.21A	7.50A	±3%	300mV	5V/0.5A	12V/0.3A
PPWAM360-18-1A	54V	4.63A	6.67A	±3%	300mV	5V/0.5A	12V/0.3A

NOTES:

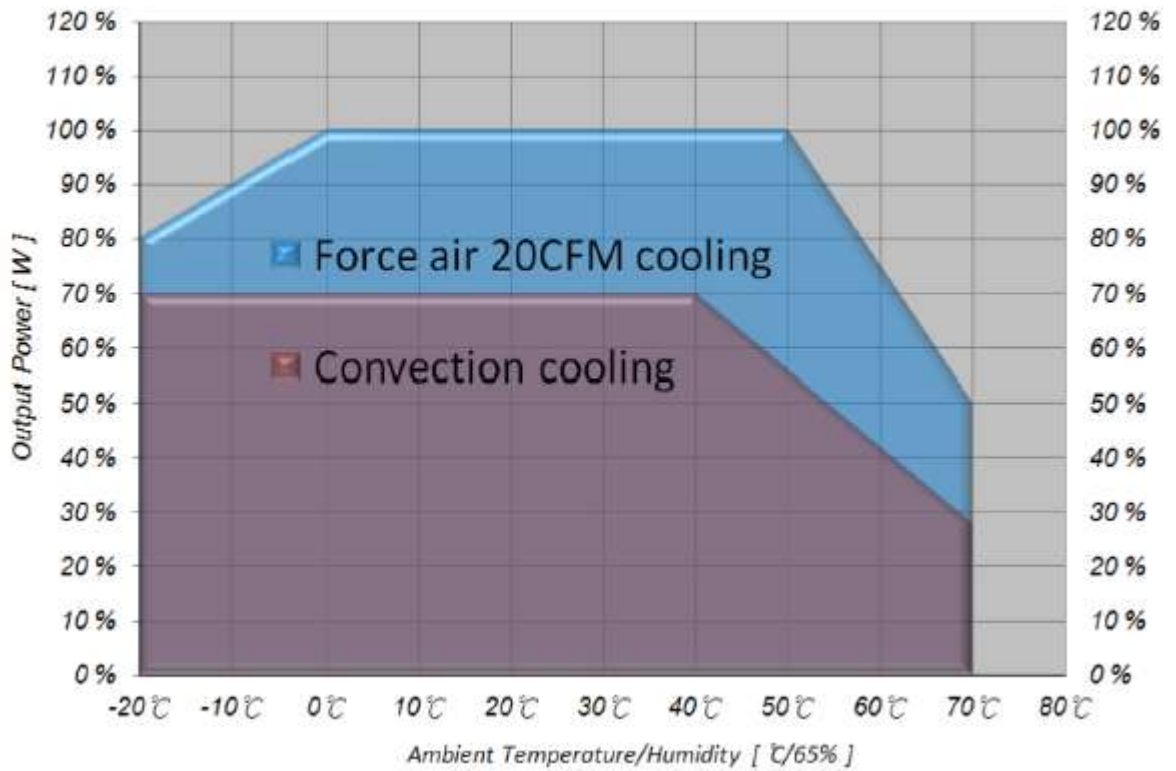
1. Output Connector option: terminal block is standard. For Molex header type, part number is PPWAM360-XX-H.
2. Output regulation is the total percentage of deviation from nominal output voltage under all operating ranges.
3. Measured at 20MHz bandwidth with a 100µF electrolytic capacitor and 0.1µF ceramic capacitor in parallel at the output connector.
4. Total output power is rated for 250W at convection and 360W with 20 CFM forced air. Refer to drawings for proper fan placement.

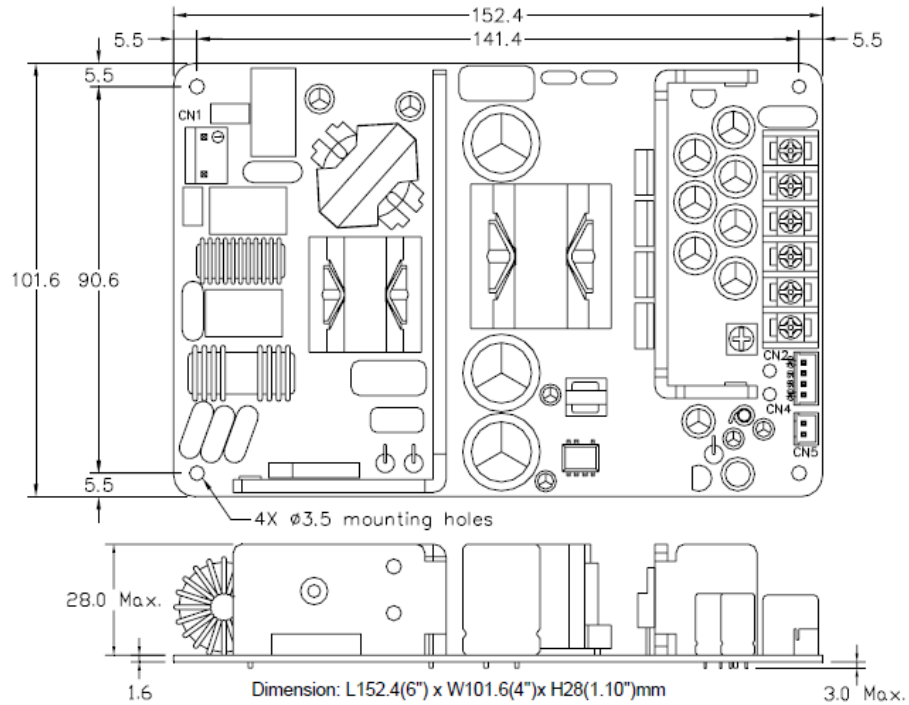
Specifications	
Input	
Input Voltage	90-264VAC
Input Frequency	47-63Hz
Input Current	5A max. @ 115VAC 2.5A max. @ 230VAC
Inrush Current	<40A peak @ 115VAC <80A peak @ 230VAC, cold start, 25°C
No Load Power Consumption	<0.5W
Power Factor	>0.9
Output	
Total Output Power	360W max. See derating chart for details
Output Voltage	See models and ratings table
Hold Up Time	10mS typical at 75% and 115VAC nominal line
Efficiency	88% average minimum, 115VAC/230VAC
Minimum Load	No Minimum Load
Output Touch Current	<100uA max. @264Vac
Protection Features	
Overvoltage Protection	105-140% of nominal output voltage. Latching type, cycle AC to reset
Overload Protection	105%-150% of maximum output rating, Auto recovery
Short Circuit Protection	Auto recovery
Environmental	
Operating Temperature	-0°C to +70°C (refer to derating curve for details)
Storage Temperature	-20°C to +85°C
Humidity	0% to 90% non-condensing
Operating Altitude	<3000m for medical use, <5000m for ITE use
General Specifications	
Dimensions	6"(152.4mm)L x 4"(101.6mm)W x 1.18"(30.0mm)"H
Weight	1.06lbs
MTBF	>250K hours per Bellcore TR-332 at full load and 25°C ambient

Specifications Continued	
Safety	
Approvals USA/Canada	ANSI/AAMI ES60601-1 cUL ES60601-1
Approvals Europe	TUV EN60601-1 3rd edition CB Report
Isolation	4000 VAC input to output, 2 x MOPP 1500 VAC input to ground, 1 x MOPP 1500 VAC output to ground, 1 x MOPP
Earth Leakage Current	<200µA max. at 264Vac
*Consult with TT Electronics for information on additional country safety approvals	
EMC	
Emissions	FCC Class B Radiated & Conducted CISPR11 Class B Radiated & Conducted EN55011 Class B Radiated & Conducted
Susceptibility	
Harmonic Currents	IEC 61000-3-2: Class A
Voltage Flicker	IEC 61000-3-3
Electrostatic Discharge	IEC 61000-4-2: ±15kV Air, ±8kV contact
Radiated Immunity	IEC 61000-4-3: 10V/m
EFT/Burst	IEC 61000-4-4: ±2kV
Surge Immunity	IEC 61000-4-5: 1kV diff, 2kV com
Conducted Immunity	IEC 61000-4-6: 10Vrms
Magnetic Field	IEC 61000-4-8: 30A/m
Dips/Interruptions	IEC 61000-4-11: Voltage dip immunity 30% reduction for 500ms, 100% reduction for 10ms

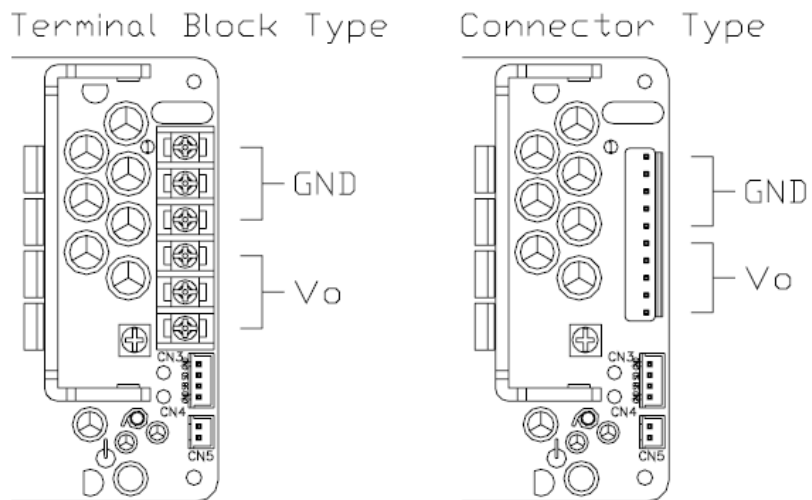
Diagrams

Derating Curve





11.1 Main Output optional Type (CN2)



Pin Assignments

CN1: Input Connector

JST B3P-VH-B (3.96mm pitch) or equivalent.
Mates with JST VHR-3N or equivalent

Pin#	Signal
1	AC Line
2	AC Neutral

CN5: Fan Output Connector

JST B2B-XH-A (2.5mm pitch) or equivalent.
Mates with JST XHP-2 or equivalent

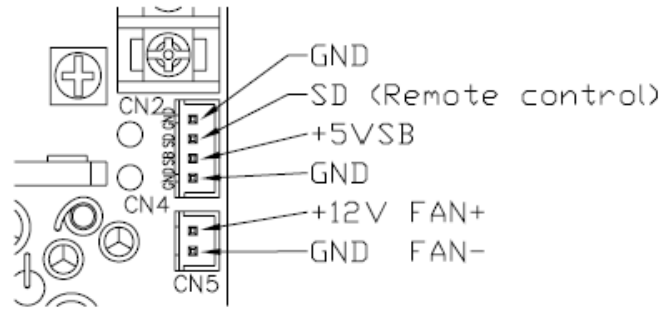
Pin#	Signal
1	+12V Fan
2	Fan Return

CN4: Remote On/Off and Standby

JST B4B-XH-A (2.5mm pitch) or equivalent.
Mates with JST XHP-4 or equivalent

Pin#	Signal
1	GND
2	+5VSB
3	Remote on/off
4	GND

Remote on/off: Logic level high (5V) or floating to enable output. Logic level low to disable output.



CN2: Main Output Connector

Terminal Block Type (standard)

Pin#	Signal
1	GND
2	GND
3	GND
4	+Vout
5	+Vout
6	+Vout

Connector Type (Option -H)

JST B10P-VH-B (3.96mm pitch) or equivalent.
Mates with JST VHR-10N or equivalent

Pin#	Signal
1	GND
2	GND
3	GND
4	GND
5	GND
6	+Vout
7	+Vout
8	+Vout
9	+Vout
10	+Vout

