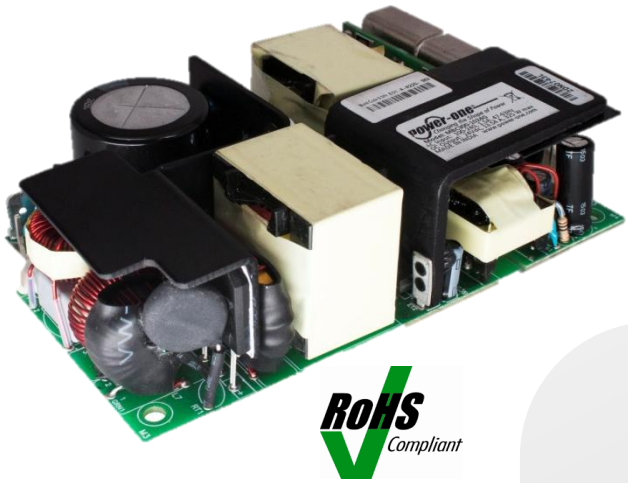
ABC300 SERIES 300W AC/DC



RoHS Compliant

FEATURES

- 200 W convection cooled
- -20 to 50 deg C full load operation
- 3” x 5“ x 1.5” (76.2 x 127 x 38.1 mm)
- No minimum load required
- 12 V fan & 5 V standby outputs
- Inhibit and Power Good signals
- Conducted EMI EN 55022-B, FCC Part 15 Level B
- ITE Safety Agency Approvals
- RoHS Compliant

APPLICATIONS

- Instrumentation
- Lighting
- Industrial Applications
- Test and Measurement
- Robotics
- Renewable Energy
- Data Comm.
- Applied Computing
- Process Control
- Wireless

TECHNICAL DATA:

Input

PARAMETER	DESCRIPTION/CONDITION	
Input voltage range	Universal Input	90 - 264 Vac
		120 – 390 Vdc
Input frequency range	47-63 Hz	
Input surge current	230 Vac (cold start)	65 A max.
Safety ground leakage current	230 Vac	300 µA max
Input current	120 Vac @ 200 W 230 Vac @ 200 W	3.2 A 1.65 A

Output

PARAMETER	DESCRIPTION/CONDITION	
Voltage Adjustment	V1	± 3%
Transient Response	Main output 50 to 100% load change, 50 Hz, 50% duty cycle, 0.1 A / uSec, 50/60 Hz.	< 10%, recovery time < 5 mSec
Over Voltage Protection	V1	110 to 150% rated max
Over Current Protection	Rated output current	110 to 150% Typical
Short Circuit Protection	Automatic recovery	
Over Temperature Protection	Automatic recovery	110° C primary heatsink
Set point tolerance	± 1%	
Rise Time	<100 mSec	

Ordering Information

PRODUCT FAMILY	VOLTS (VDC)	MAX LOAD CONVECTION (2)	MAX LOAD 300 LFM (2)	MINIMUM LOAD (A)	RIPPLE & NOISE (4)	CONNECTOR	TOTAL REGULATION
ABC300-1T05G	5	28.0 A	40.0 A	0	2%	Screw Terminal	± 2.5%
ABC300-1T12G	12	15.0 A	25.0 A	0	2%	Screw Terminal	± 2.5%
ABC300-1T15G	15	12.0 A	20.0 A	0	2%	Screw Terminal	± 2.5%
ABC300-1T24G	24	7.5 A	13.54 A	0	2%	Screw Terminal	± 2.5%
ABC300-1T30G	30	6.0	10.83 A	0	2%	Screw Terminal	± 2.5%
ABC300-1T48G	48	3.75 A	6.77 A	0	2%	Screw Terminal	± 2.5%
Vfan (all models)	**12**	**0.5 A**	**0.5 A**	**0**			**± 20%**
V s/b (all models)	**5**	**2.0 A**	**2.0 A**	**0**			**± 5%**

Notes:

1. Peak current rating of 120% of max, < 30 Sec with max of 10% duty cycle.
2. Combined power from main output, Vfan and Vs/b should not exceed total power rating.
3. Fan output tolerance is ± 20%. When V1 full load, Vfan needs 20 mA load to be within regulation specification. Peak current for fan output is 1 A.
4. Ripple is 2% up to 20% load and less than 1% above 20% load. Output noise measurement is made with a 20 MHz bandwidth using a 6" twisted pair, terminated with a 10 uF tantalum capacitor in parallel with a 0.1 uF ceramic capacitor.
5. Specifications are for nominal input voltage, 25°C and max load unless otherwise stated.
6. Class 1 models have Earthing tab J4. Class 2 models (-2 suffix) have no Earthing tab.
7. Derate power linearly to 80% from 90 Vac to 80 Vac input.
8. Power supply shipped with J3 pin 1 and 2 shorted to enable main output
9. Specifications subject to change without notice.
10. Air flow over long edge (either direction) required for air flow rating. See mechanical drawing below.
11. Warranty 2 years.

General Specifications

PARAMETER	DESCRIPTION/CONDITION	
Hold Up Time	120 Vac	10 mSec
	230 Vac	10 mSec
MTBF	>250 khrs	Bellcore TR-332
Switching Frequency	PFC converter 80 kHz typical	Resonant converter: Variable 35 to 250 kHz, 90 kHz typical
Isolation Voltage	Min 5900 Vdc	Input to Output
Weight	450 g (0.99 lbs)	

Environmental

PARAMETER	DESCRIPTION/CONDITION	
Operating Temperature	Operating	-20 to 70°C. See derating charts below.
	Storage	-40 to +85°C.
Altitude	Operating 10,000 ft.	Non-operation 40,000 ft.
Conducted emissions:	EN55022, FCC part 15 Level B	
Radiated Emissions	EN55022, FCC part 15 Level B	To be controlled in end system
Electromagnetic Susceptibility	EN61000-4 3	2, 3, 4, 5 level 3
Harmonic Current	EN61000-3-2, Class D	

Signals

PARAMETER	DESCRIPTION/CONDITION
Power Good	TTL signal goes high after main output is within regulation, delay is 0.1 to 0.3 sec
Inhibit	To turn on power supply short J3 pin 1 to J3 pin 2 or J3 pin 7
Remote Sense	Compensates for 200 mV drop

Safety

PARAMETER	DESCRIPTION/CONDITION
EN / UL / CSA	EN60950-1+A12:2011, IEC60950-1 2nd+A1 2009, CSA-22.2 No 60950-01-07+ A1, UL60950-1-2011

Figure 1 Output Power Vs. Temperature

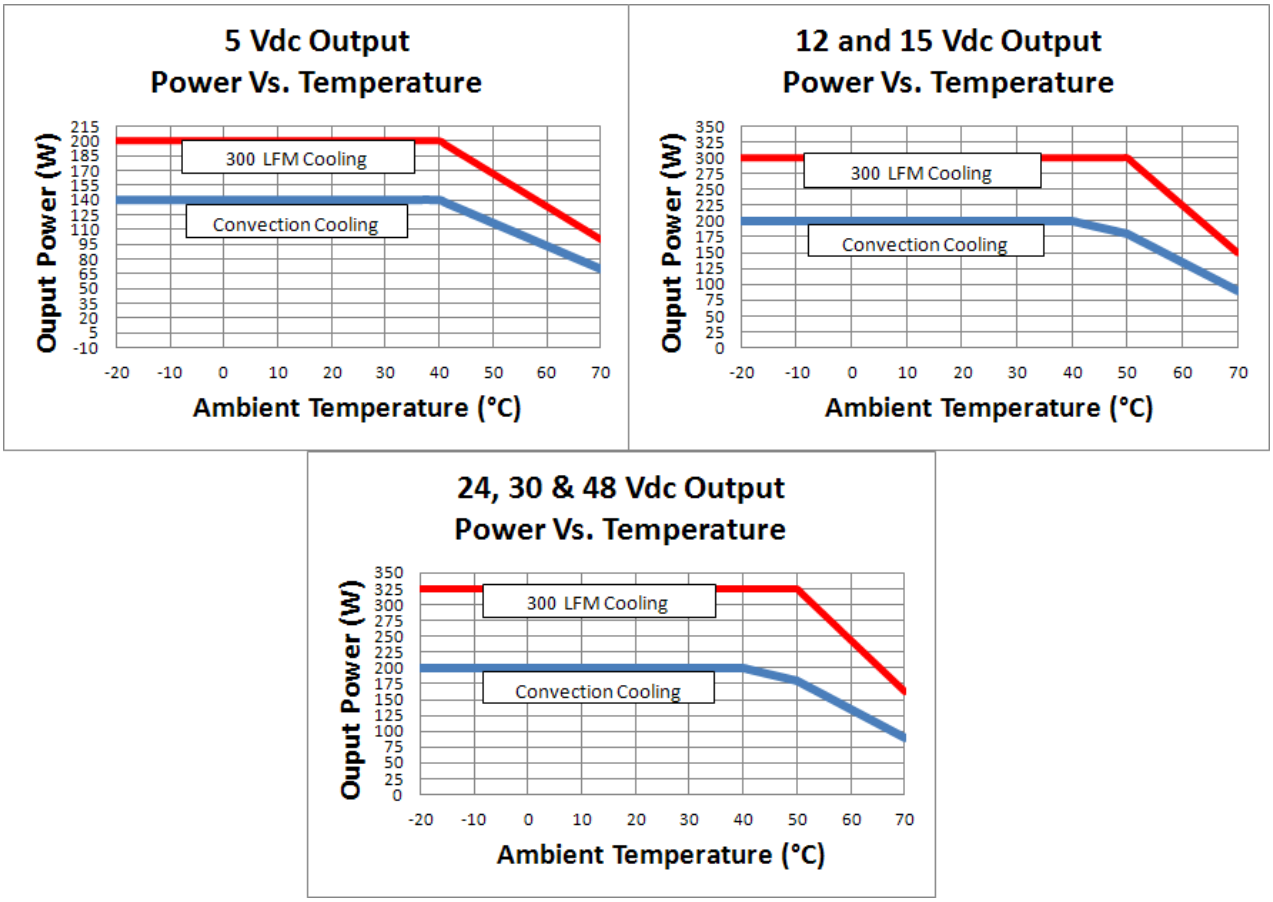
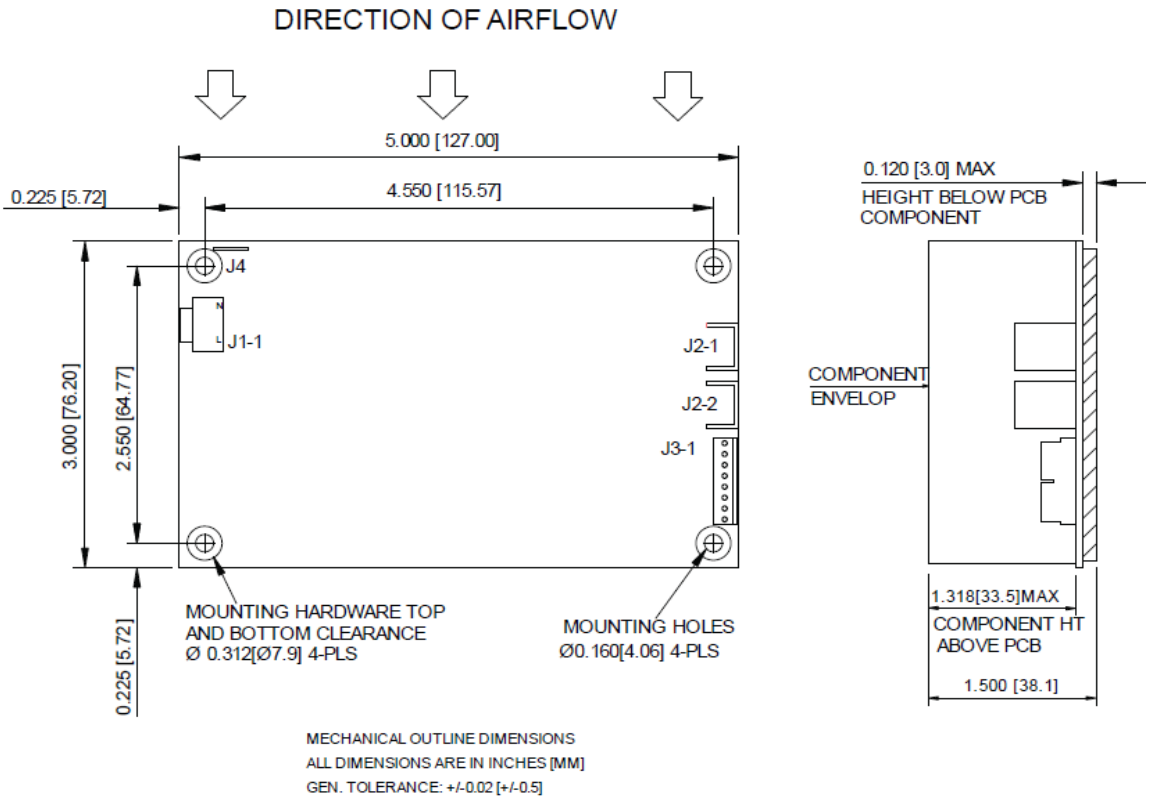


Figure 2 Dimension Drawing (Top and Side View)



Mechanical

INPUT = J1	EARTHING TAB = J4	DC OUTPUT = J2	SIGNALS & AUX POWER= J3	
Pin 1: AC Line Pin 2: Removed Pin 3: AC Neutral	Molex: 19705-4301	2 x 6-32 inches pan head screw Pin 1 = RTN Pin 2 = V1	Pin 1 = Inhibit Pin 2 = Signal Return Pin 3 = Vfan (+12 V) Pin 4 = - Remote Sense	Pin 5 = Vs/b (5 Vdc) Pin 6 = + Remote Sense Pin 7 = Signal Return Pin 8 = Power Good
Mating Connector: Molex: 09-50-3031 Pins: 08-50-0106	Mating Connector: Molex: 190030001	Mating Connector: 16 AWG wire crimped to Ring Tongue Terminal. AMP: 8-31886-1	Mating Connector: Molex: 22-01-2087, Pins: 08-50-0113	

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