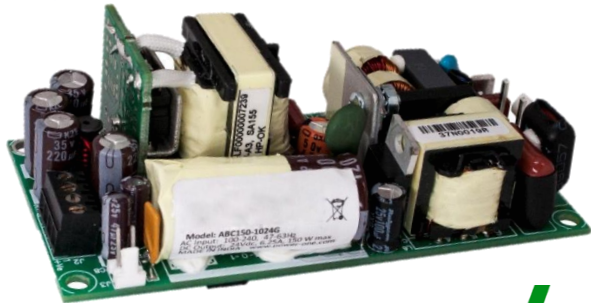


# ABC150 Series AC-DC Open Frame Power Supplies



## Key Features & Benefits

- 150 W with Forced-Air Cooling
- 90-264 VAC Input
- -20 to 50°C Full Load Operation
- 4.0 x 2.0 x 1.3 inch (101.6 x 50.8 x 33.6 mm)
- No Minimum Load Required
- Fan Output, 12 VDC @ 0.5 A standard
- IEC Protection Class Options:
  - Class I: Earthing Tab J4 (no suffix)
  - Class II: No Earthing Tab (-2 suffix)
- Conducted EMI EN 55022-B, FCC Part 15 Level B
- ITE Safety Agency Approvals
- RoHS Compliant
- CE Marked

The **ABC150 Series** of open-frame power supplies, with its wide universal 90-264 VAC input range and high power density, is available at 150 W of output power and a variety of single output voltages.

The high efficiency and high power density of the ABC family ensures minimal power loss in end-use equipment, thereby facilitating higher reliability, easier thermal management and meets regulatory approvals for environmentally-friendly end products.

These power supplies are ideal for telecom, datacom, industrial equipment and other applications.

## Applications

- Instrumentation
- Lighting
- Industrial Applications
- Test and Measurement
- Renewable Energy
- Wireless Data
- Automation Control
- Applied Computing

### North America

+1-866.513.2839

### Asia-Pacific

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### Europe, Middle East

+353 61 225 977

# ABC150 Series

## Model Selection

MODEL	OUTPUT VOLTAGE (VDC)	MAX LOAD CONVECTION <sup>1</sup>	MAX LOAD 300 LFM <sup>1,2</sup>	MINIMUM LOAD (A)	RIPPLE & NOISE <sup>4</sup>	CONNECTOR	TOTAL REGULATION
ABC150-1005G	5.0	16.0 A	16.0 A	0.0	1%	JST	± 2.5%
ABC150-1T05G	5.0	16.0 A	20.0 A	0.0	1%	Screw Terminal	± 2.5%
ABC150-1012G	12	8.33 A	12.5 A	0.0	1%	JST	± 2.5%
ABC150-1T12G	12	8.33 A	12.5 A	0.0	1%	Screw Terminal	± 2.5%
ABC150-1015G	15	6.67 A	10.0 A	0.0	1%	JST	± 2.5%
ABC150-1T15G	15	6.67 A	10.0 A	0.0	1%	Screw Terminal	± 2.5%
ABC150-1024G	24	4.17 A	6.25 A	0.0	1%	JST	± 2.5%
ABC150-1T24G	24	4.17 A	6.25 A	0.0	1%	Screw Terminal	± 2.5%
ABC150-1048G	48	2.08 A	3.13 A	0.0	1%	JST	± 2.5%
ABC150-1T48G	48	2.08 A	3.13 A	0.0	1%	Screw Terminal	± 2.5%
COVER-150-XBC	metal cover kit accessory						

Warranty 2 years.

### NOTES:

- <sup>1</sup> Combined power from main output and Vfan should not exceed total power rating.
- <sup>2</sup> Fan output tolerance is ± 20%
- <sup>3</sup> Peak power for fan output is 1 A.
- <sup>4</sup> 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.

# ABC150 Series

## TECHNICAL PARAMETERS

Specifications are for nominal input voltage, 25°C and max load unless otherwise stated.

### Input Specifications

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Input Voltage	Universal	90-264 VAC / 120-390 VDC
Input Frequency		47 to 63 Hz
Input Current	120 VAC: 230 VAC:	1.7 A max. 0.85 A max.
Inrush Current	120 VAC: 230 VAC:	35 A max. 65 A max.
Leakage Current	120 VAC 230 VAC:	< 150 µA < 300 µA
Power Factor	120 VAC: 230 VAC:	0.99 0.95
Switching Frequency	PFC converter (variable) Resonant converter (variable)	35-250 kHz, 90 kHz typical 35-250 kHz, 90 kHz typical

### Output Specifications

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Output Power	Peak power 170 W for 0.2 s	150 W
Efficiency	120 VAC: 230 VAC:	84% typical 86% typical
Hold Up Time	120 VAC: 230 VAC:	6 ms 10 ms
Line Regulation		+/-0.5%
Load Regulation		+/-2.0%
Transient Response	Main output 50 to 100% load change, 50 Hz, 50% duty cycle, 0.1A / µs	< 10%, recovery time < 5 ms
Rise Time		< 100 ms
Set Point Accuracy		± 1%
Voltage Adjustment		± 3%
Over Voltage Protection		110 to 150 %
Over Current Protection	Typical above rating	110%
Short Circuit Protection	Short term, auto recovery	

### Environmental Specifications

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Operating Temperature	Refer to derating curve Start-up is guaranteed	-20 to 70°C -20 to 0°C
Storage Temperature		-40 to 70° C
Cooling	5 V model: Other models:	Convection: 300 LFM Convection: 300 LFM 80 W 100 W 100 W 150 W
Humidity	Non Condensing	95% Rh
Altitude	Operating: Non-Operating:	10,000 ft. 40,000 ft.
Reliability	MTBF according to Telcordia -SR332-Issue 3	2.4 million hours

# ABC150 Series

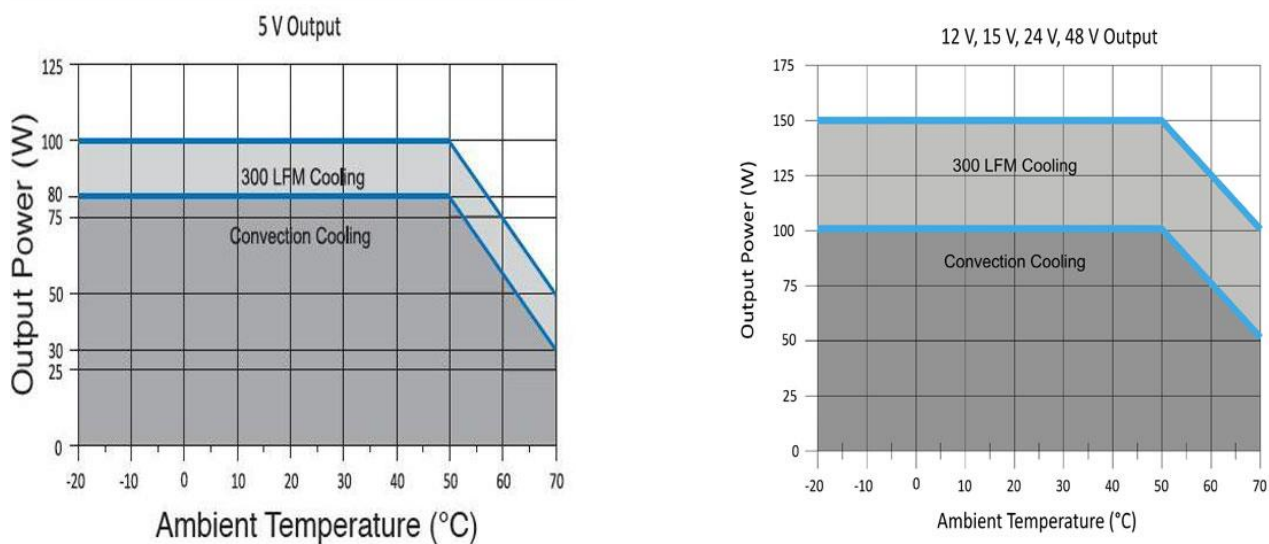
## EMC Specifications

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Conducted Emissions	EN55022-B, CISPR22-B, FCC PART15, EN50082-1	Class B
Radiated Emissions	EN55022-B, CISPR22-B, FCC PART15-B	To be controlled in end system
Harmonic Current	EN61000-3-2	Class D
Static Discharge	EN61000-4-2	Level 3
RF Field Susceptibility	EN61000-4-3	Level-3
Fast Transients/Bursts	EN61000-4-4	Level-3
Surge Susceptibility	EN61000-4-5	Level-3

## Safety Specifications

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Isolation Voltage	Input to Output: Input to Ground:	Min. 4242 VDC 2120 VDC
Agency Approvals	Approved to the latest edition of the following standards: CSA/UL60950-1, EN60950-1 and IEC60950-1	
CE mark	Complies with LVD Directive	

Figure 1 - Output Power Vs. Temperature



## Connector & Pin Description

CONNECTOR	PIN	DESCRIPTION / CONDITION	MANUFACTURER / PN
AC Input Connector	J1	Pin 1 AC Line Pin 2 AC Neutral	Molex: 26-60-4030 or equivalent; Mating: 09-50-3031; Pins: 08-50-0106 Option 1: Tyco: 1776112-4 or equivalent
DC Output Connector	J2	Pin 1,2 V1 Pin 3,4 RTN	Mating: 13 AWG wire Option 2: JST: B4P-VH-B (LF) (SN) or B4P-VH (LF) (SN) or equivalent Mating: VHR-4M; Pins: SVH-41T-P1.1
Fan	J3	Pin 1 VFAN (12 V / 0.5 A) Pin 2 RTN	Tyco: 640456-2 or equivalent Mating: 640440-2
Earthing Tab	J4		Molex: 19705-4301 or equivalent Mating: 190030001

866.513.2839

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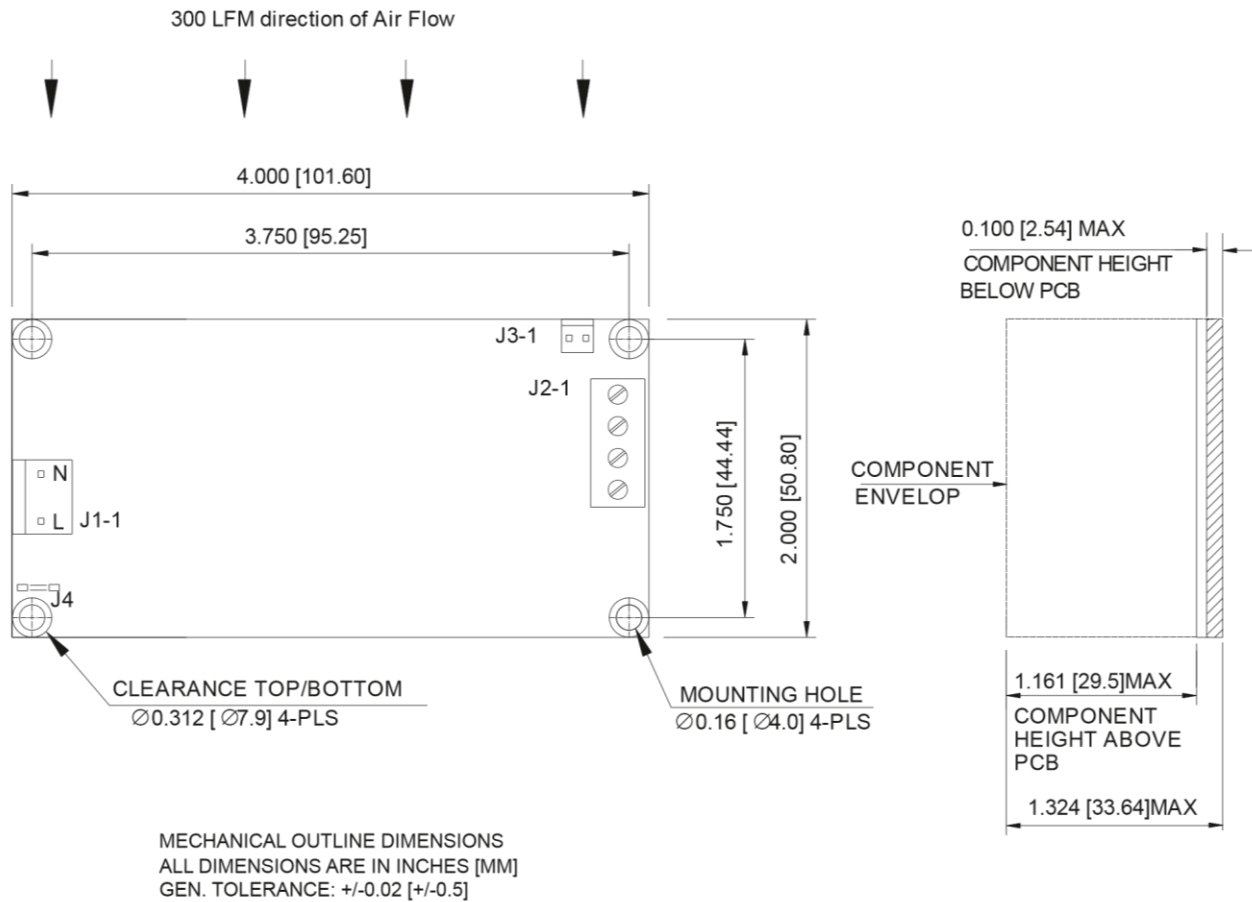
[belpowersolutions.com](http://belpowersolutions.com)

# ABC150 Series

## Mechanical

PARAMETER	DESCRIPTION / CONDITION
Weight	150 g (0.33 lbs.)
Dimensions	101.6 x 50.8 x 33.6 mm (4.0 x 2.0 x 1.3 inch)

Figure 2 - Mechanical Drawing (Top and Side View)



**NOTE:** Air flow over length of supply recommended (either direction) for forced air rating.

**For more information on these products consult: [tech.support@psbel.com](mailto:tech.support@psbel.com)**

**NUCLEAR AND MEDICAL APPLICATIONS** - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

**TECHNICAL REVISIONS** - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.