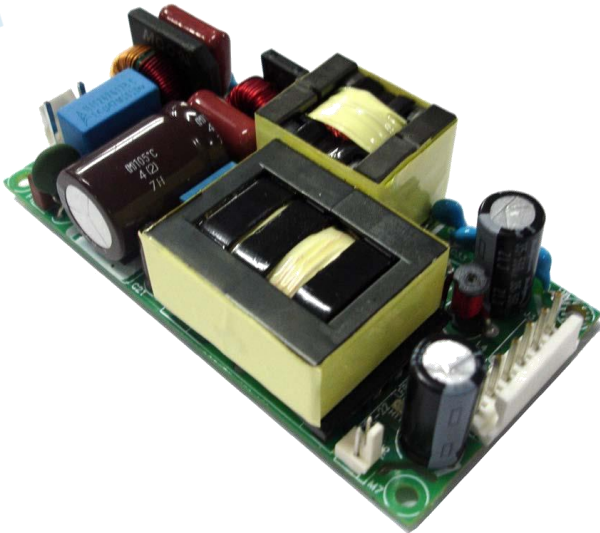


ABC225 Series Low Profile Open Frame Power Supplies



Key Features & Benefits

- 2 x 4 x 1 Inches Form Factor
 - 225 Watts with Forced Air Cooling & 112.5 Watts with Convection Cooling
 - Efficiencies up to 94%
 - -40 to 70 degree operating temperature
 - 12 V Fan Output, Thermal Shut-Down feature
 - 300 k Hours MTBF
 - Standby Power <0.5 W
- CE marked

The ABC225 Series of open-frame power supplies, with its wide universal 90-264 VAC input range and high power density, is available at 225 W of output power and a variety of single and multiple 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
- Applied Computing
- Renewable Energy
- Test and Measurement
- Robotics
- Wireless Communication

North America
+1-866.513.2839

Asia-Pacific
+86.755.29885888

Europe, Middle East
+353 61 225 977

Bel Power Solutions
152 North 3rd Street, Suite 805
San Jose, CA 95112 USA

tech.support@psbel.com
belpowersolutions.com

© 2015 Bel Power Solutions, inc.

BCD.00554_AA

ABC225 Series

Model Selection

MODEL NUMBER	DESCRIPTION	VOLTAGE	MAX. LOAD (CONVECTION)	MAX. LOAD (13 CFM)	MIN. LOAD	RIPPLE & NOISE ¹
ABC225-1T12L	Screw Terminal	12 V	9.37 A	18.75 A	0.0 A	1%
ABC225-1012L	Molex Connector					
ABC225-1T15L	Screw Terminal	15 V	7.5 A	15 A	0.0 A	1%
ABC225-1015L	Molex Connector					
ABC225-1T24L	Screw Terminal	24 V	4.68 A	9.37 A	0.0 A	1%
ABC225-1024L	Molex Connector					
ABC225-1T30L	Screw Terminal	30 V	3.75 A	7.5 A	0.0 A	1%
ABC225-1030L	Molex Connector					
ABC225-1T48L	Screw Terminal	48 V	2.34 A	4.68 A	0.0 A	1%
ABC225-1048L	Molex Connector					
ABC225-1T58L	Screw Terminal	58 V	1.94 A	3.88 A	0.0 A	1%
ABC225-1058L	Molex Connector					
ABC225-CK metal cover kit accessory						

NOTES:

1. Ripple is peak to peak with 20 MHz bandwidth and 10 μ F (Tantalum capacitor) in parallel with a 0.1 μ F capacitor at rated line voltage and load ranges.
2. Combined output power of main output, fan supply shall not exceed max. power rating.
3. Fan supply output voltage tolerance including set point accuracy, line and load regulation is +/-10% and ripple and noise is less than 10%.

ABC225 Series

TECHNICAL PARAMETERS

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

Input Specifications

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Input Voltage	Universal (Derate from 100% at 100 VAC to 90% at 85 VAC)	85-264 VAC / 390 VDC
Input Frequency		47-63 Hz
Input Current	115 VAC: 230 VAC:	2.2 A max. 1.1 A max.
No Load Power	Maximum	< 0.5 W
Inrush Current	230 VAC:	120 A max.
Leakage Current	Typical (N.A. For Class II Option) Touch current	300 uA < 100 uA
Power Factor	With Full Load	> 0.95

Output Specifications

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Output Power	With 13 CFM: Convection:	225 W 112.5 W
Efficiency	48 V: 24 V, 30 V: 12 V, 15 V:	94% 93% 92%
Hold-up Time	225W: 110W:	10 ms 16 ms
Line Regulation		+/-0.5%
Load Regulation		+/-0.5%
Transient Response	25% step load change, at 0.1A/uS slew rate, 50% duty cycle, 50 Hz = 4%	recovery time < 5 ms
Rise Time	Typical	55 ms
Set Point Tolerance		+/-1%
Over Current Protection		> 110%
Over Voltage Protection		110 to 140%
Short Circuit Protection	Hiccup mode	

Other Specifications

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Isolation Voltage	Input to Output: (For ITE application) Input to GND: (Not Applicable For Class II Option)	3000 VAC 1500 VAC
Cooling	With 13 CFM forced air cooling at 100 to 264 VAC With natural convection cooling at 100 to 264 VAC	225 W 112.5 W
Switching Frequency	PFC: PWM:	70 to 130 KHz 50-80 KHz
Reliability	MTBF according to Bellcore TR-332:	> 300 kh
Operating Temperature	-40 to 0°C startup is guaranteed, with spec deviation	-40 to +70°C
Storage Temperature		-40 to +85°C

ABC225 Series

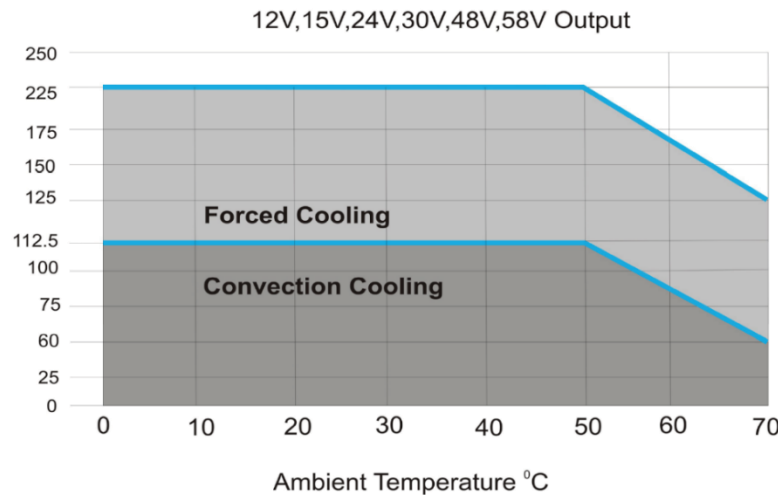
Environmental

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Conducted Emissions	EN55022-B, CISPR22-B, FCC PART15 - B	
Static Discharge	EN61000-4-2:	Level-3
RF Field Susceptibility	EN61000-4-3:	Level-3
Fast Transients/Bursts	EN61000-4-4:	Level-3
Radiated Emissions	Radiated:	Level A
	Radiated with external core:	Level B
Surge Susceptibility	EN61000-4-5:	Level-3
Harmonic Current	EN61000-3-2:	Class D
Relative Humidity	Noncondensing	5% to 95%
Altitude	Operating:	10,000 ft
	Nonoperating:	40,000 ft.

Safety Approvals

PARAMETER	DESCRIPTION / CONDITION
Safety Standard(s)	EN60950-1 IEC60950-1 (ed.2) UL 60950 (ed.2) CSA C22.2 No.60950-1 (ed.2) Class1 SELV
Agency Approvals	Nemko, UL, C-UL
CE mark	Complies with LVD Directive

Figure 1 – Derating Curve



Connector & Pin Description

CONNECTOR	PIN	DESCRIPTION/CONDITION	MANUFACTURER / PN
AC Input Connector	J1	Pin 1	AC Neutral
		Pin 2	Not Fitted
		Pin 3	AC Line
DC Output Connector	J2	Pin 1,2,3	V1 -VE
		Pin 4,5,6	V1 + VE
Aux (Fan) Output	J3	Pin 1	FAN -VE
		Pin 2	FAN +VE

866.513.2839

tech.support@psbel.com

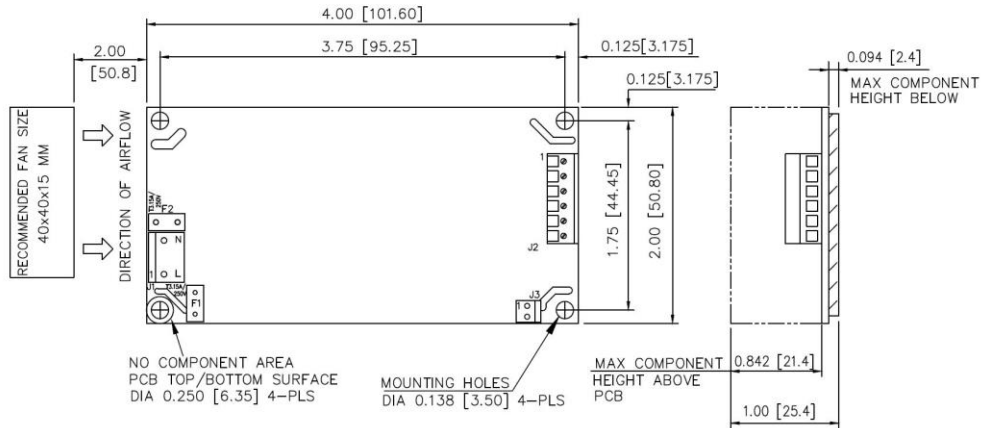
belpowersolutions.com

ABC225 Series

Mechanical

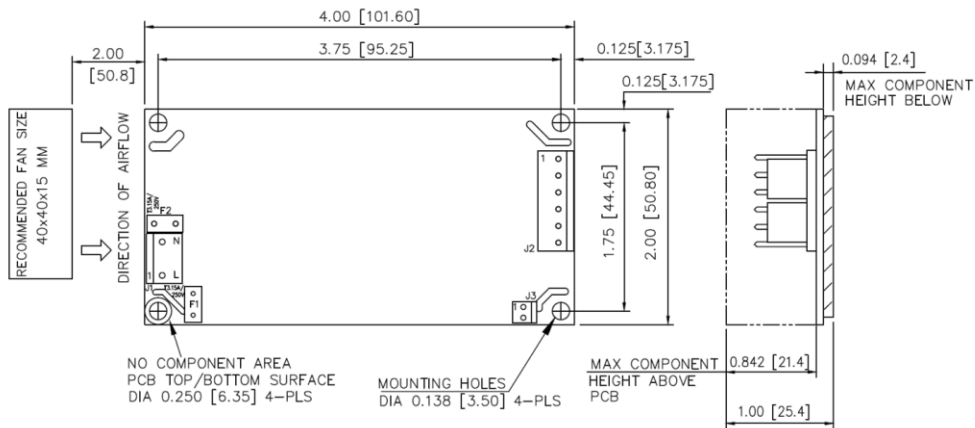
PARAMETER	DESCRIPTION/CONDITION
Weight	200 g approx.
Dimensions	50.8 x 101.60 x 25.4 mm (2 x 4 x 1 inch)

Figure 2 - Mechanical Drawing – Screw Terminal Option



MECHANICAL OUTLINE DIMENSIONS
 ALL DIMENSIONS ARE IN INCHES[MM]
 GEN TOLERANCE : +/-0.02[0.5mm]

Figure 3 - Mechanical Drawing – Molex Connector Option



MECHANICAL OUTLINE DIMENSIONS
 ALL DIMENSIONS ARE IN INCHES[MM]
 GEN TOLERANCE : +/-0.02[0.5mm]

For more information on these products consult: 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.

866.513.2839

tech.support@psbel.com

belpowersolutions.com