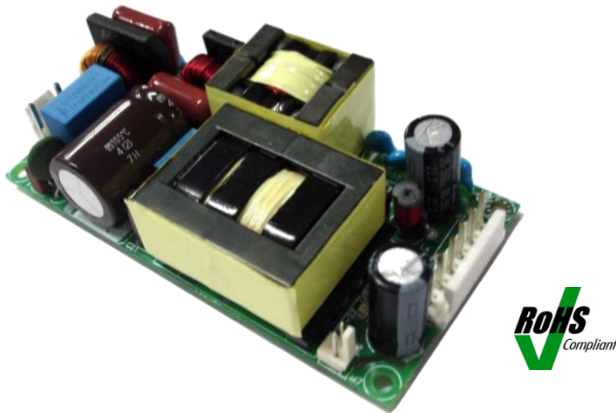


ABC225 Series Low Profile Open Frame Power Supplies



Key Features & Benefits

- 2 x 4 x 1 Inches Form Factor
- 225 W with Forced Air Cooling
- Efficiencies up to 94%
- -40 to 70 °C Operating Temperature
- 12 V Fan Output, Thermal Shut-Down Feature
- 3.37 Million Hours, Telcordia - SR332-Issue 3 MTBF
- Standby Power <0.5 W
- RoHS Compliant
- 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

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ABC225 Series

Model Selection

MODEL NUMBER	DESCRIPTION	VOLTAGE	MAX. LOAD (CONVECTION) (112.5 W)	MAX. LOAD (CONVECTION) (120 W)	MAX. LOAD (13 CFM)	MIN. LOAD	RIPPLE & NOISE ¹
ABC225-1T12L ABC225-1012L	Screw Terminal Molex Connector	12 V	9.37 A	10.0 A	18.75 A	0.0 A	1%
ABC225-1T15L ABC225-1015L	Screw Terminal Molex Connector	15 V	7.5 A	8.0 A	15 A	0.0 A	1%
ABC225-1T24L ABC225-1024L	Screw Terminal Molex Connector	24 V	4.68 A	5.0 A	9.37 A	0.0 A	1%
ABC225-1T30L ABC225-1030L	Screw Terminal Molex Connector	30 V	3.75 A	4.0 A	7.5 A	0.0 A	1%
ABC225-1T48L ABC225-1048L	Screw Terminal Molex Connector	48 V	2.34 A	2.5 A	4.68 A	0.0 A	1%
ABC225-1T58L ABC225-1058L	Screw Terminal Molex Connector	58 V	1.94 A	2.07 A	3.88 A	0.0 A	1%
COVER-225-XBC	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	SPECIFICATION
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	Typical	< 0.5 W
Inrush Current	115 VAC: 230 VAC: 264 VAC:	25 A 45 A 75 A
Leakage Current	Typical (N.A. For Class II Option) Touch current	300 uA < 100 uA
Power Factor	@ Full Load	> 0.95
Switching Frequency	PFC: PWM:	70 to 130 KHz 50-80 KHz

Output Specifications

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Output Power	With 13 CFM: Convection:	225 W Up to 120 W
Efficiency	48 V: 24 V, 30 V: 12 V, 15 V:	94% 93% 92%
Hold-up Time	225 W: 110 W:	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	

Environmental Specifications

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Operating Temperature	Startup is guaranteed, with spec deviation, see Fig.1	-40 to +70°C -40 to 0°C
Storage Temperature		-40 to +85°C
Cooling	With 13 CFM forced air cooling With natural convection cooling at 100 to 264 VAC	225 W Up to 120 W
Relative Humidity	Noncondensing	5% to 95%
Altitude	Operating: Nonoperating:	16,000 ft 40,000 ft.
Reliability	MTBF according to Telcordia -SR332-Issue 3	3.37 million hours

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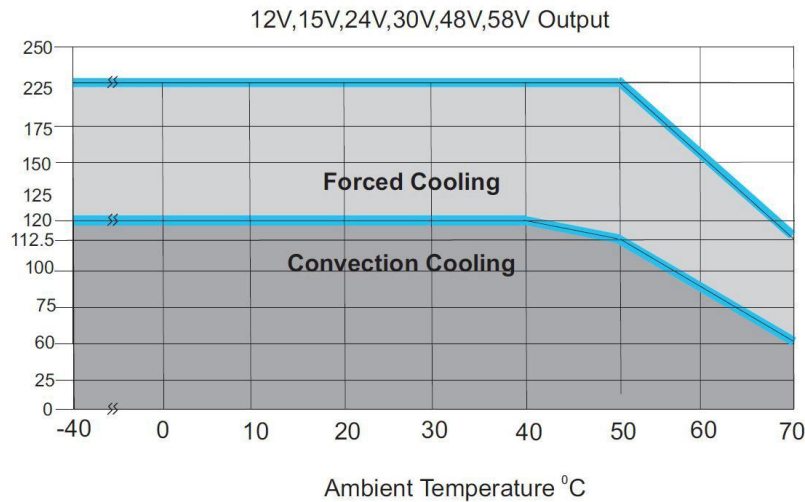
EMC Specifications

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
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

Safety Specifications

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Isolation Voltage	Input to Output: (For ITE application)	3000 VAC
	Input to GND: (Not Applicable For Class II Option)	1500 VAC
Safety Standard(s)	Approved to the latest edition of the following standards: CSA/UL60950-1, EN60950-1 and IEC60950-1; Class1 SELV.	
Agency Approvals	Nemko, UL, C-UL	
CE mark	Complies with LVD Directive	

Figure 1 – Derating Curve



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Figure 2 – Efficiency Graph at 115 VAC

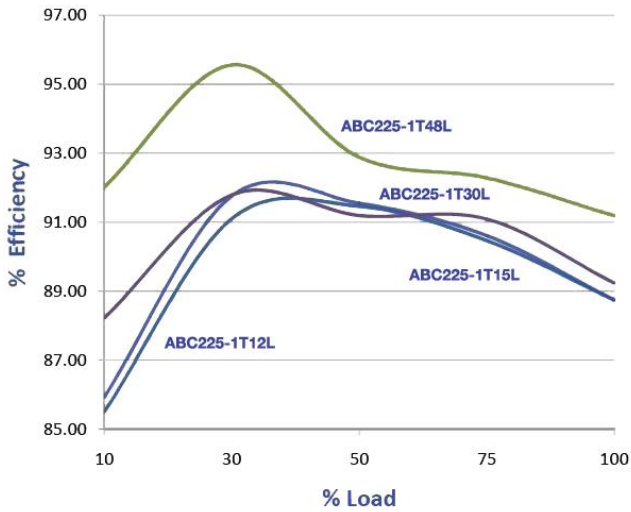
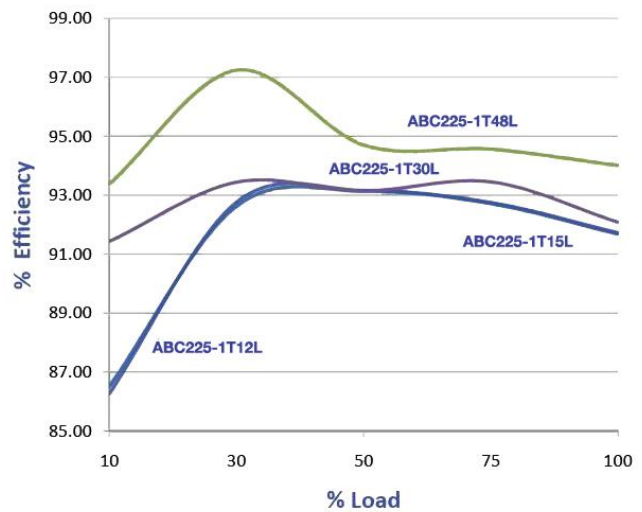


Figure 3 – Efficiency Graph at 230 VAC



Connector & Pin Description

CONNECTOR	PIN	DESCRIPTION/CONDITION	MANUFACTURER / PN
AC Input Connector	J1	Pin 1	AC Line
		Pin 2	Not Fitted
		Pin 3	AC Neutral
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

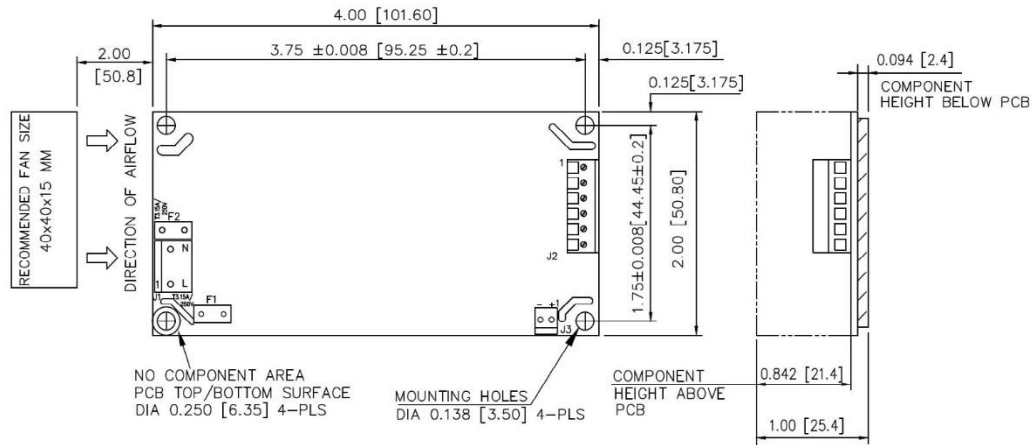
CONNECTOR	DESCRIPTION/CONDITION	MANUFACTURER / PN
Screw Terminal (Option 1)	Molex: 39357 Series or equivalent	
Molex Connector (Option 2)	Molex: 26-60-4060 Mating: 09-50-3061; Pins: 08-50-0106	
	AMP :640456-2 Mating: 640440-2	

Mechanical

PARAMETER	DESCRIPTION/CONDITION
Weight	200 g approx.
Dimensions	50.8 x 101.6 x 25.4 mm (2 x 4 x 1 inch)

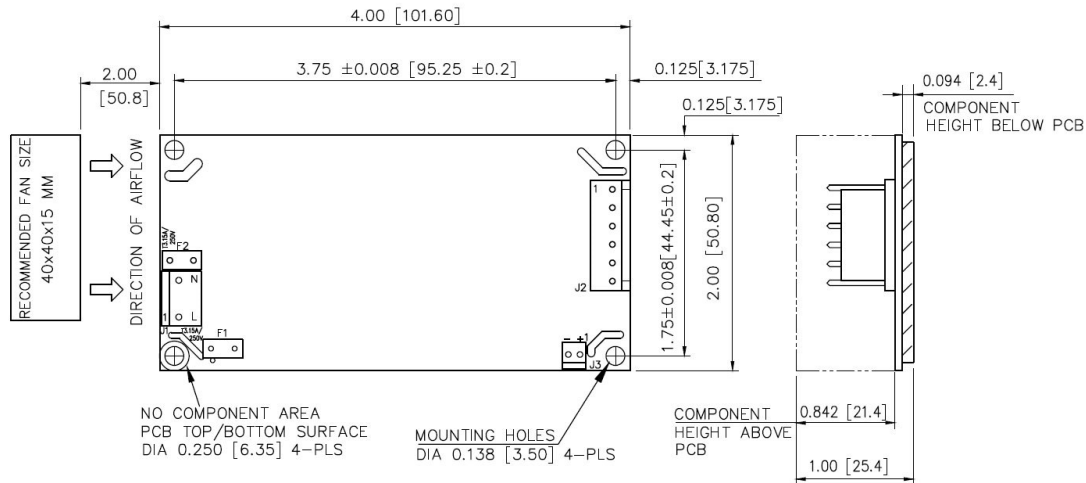
ABC225 Series

Figure 4 - Mechanical Drawing – Screw Terminal (Option 1)



MECHANICAL OUTLINE DIMENSIONS
ALL DIMENSIONS ARE IN INCHES[MM]
GEN TOLERANCE : +/-0.04 [+/-1.0MM]

Figure 5 - Mechanical Drawing – Molex Connector (Option 2)



MECHANICAL OUTLINE DIMENSIONS
ALL DIMENSIONS ARE IN INCHES[MM]
GEN TOLERANCE : +/-0.04 [+/-1.0MM]

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.