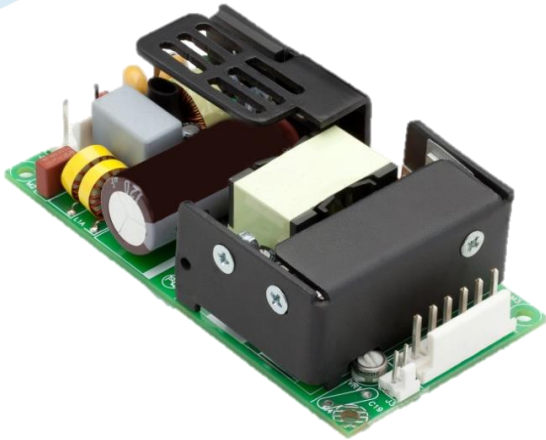


ABC40 Series AC-DC Open Frame Power Supplies



Key Features & Benefits

- 40 W Convection Cooled
- 90-264 VAC Input
- -20 To 50°C Full Load Operation
- 4 x 2 x 1.2 inch (101.6 x 50.8 x 30.48 mm)
- No Minimum Load Required - Single Output Models
- No Load Power < 0.3 W
- 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 **ABC40 Series** of open-frame power supplies, with its wide universal 90-264 VAC input range and high power density, is available at 40 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

- Lighting
- Industrial Processing
- Applied Computing
- Instrumentation
- Automation Controls
- Robotics
- Wireless Communication
- Test and Measurement

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ABC40 Series

Model Selection

MODEL	OUTPUT VOLTAGE (VDC) ¹	OUTPUT CURRENT MAX (A)	MINIMUM LOAD (A) ³	RIPPLE & NOISE ²	TOTAL REGULATION	OVP THRESHOLD
ABC40-1005G	5.1	8.0	0.0	1%	± 0.8%	130% Typical
ABC40-1012G	12	3.5	0.0	1%	± 0.8%	130% Typical
ABC40-1015G	15	2.7	0.0	1%	± 0.8%	130% Typical
ABC40-1024G	24	1.7	0.0	1%	± 0.8%	130% Typical
ABC40-1048G	48	0.83	0.0	1%	± 0.8%	130% Typical
	5.2	6.0	0.5	1%	± 0.8%	130% Typical
	12.5	2.0	0.1	1%	± 5.3%	
ABC40-3000G	-12.8	0.5	0.0	1%	± 5.3%	
	5.2	6.0	0.5	1%	± 0.8%	130% Typical
	23.8	1.0	0.1	1%	± 5.3%	
ABC40-3001G	-12.8	0.5	0.0	1%	± 5.3%	
	5.2	6.0	0.5	1%	± 0.8%	130% Typical
	14.6	1.5	0.1	1%	± 5.3%	
ABC40-3002G	-14.8	0.5	0.0	1%	± 5.3%	
	3.3	6.0	1.0	1.5%	± 0.8%	130% Typical
	5.2	3.0	0.1	1%	± 5.3%	
ABC40-3003G	-12.8	0.5	0.0	1%	± 5.3%	

Warranty 2 years.

NOTES:

- ¹ Maximum outputs for each output. Max power rating should not be exceeded.
- ² Ripple and Noise may be 3% at initial start-up at -20 C. 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.
- ³ Minimum load specified to meet cross regulation.

ABC40 Series

TECHNICAL PARAMETERS

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

Input Specifications

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Input Voltage	Universal Input	90 - 264 VAC
Input Frequency ⁴		47 to 400 Hz
Input Current	120 VAC @ 40 W 230 VAC @ 40 W	0.85 A 0.45 A
No Load Power	Single output models Multiple output models	< 0.3 W < 0.5 W
Inrush Current	120 VAC: 230 VAC:	30 A max. 60 A max.
Leakage Current	120 VAC: 230 VAC:	< 500 µA <1000 µA

⁴ Safety Approved: 47 to 63 Hz.

Output Specifications

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Efficiency	Typical	85%
Hold Up Time	120/230 VAC input	6 ms
Output Power		40 W
Line Regulation		+/-0.3%
Load Regulation	V1: V2 & V3:	+/-0.5% +/-5%
Transient Response	Main output 50 to 100% load change, 50/60 Hz, 50% duty cycle, 0.1A / µSec	< 10%, recovery time < 5 ms
Rise Time		< 100 ms
Set Point Tolerance	V1: V2 & V3:	± 3% ± 5%
Voltage Adjustment	V1	± 10%
Remote Sense	V1	0.5 VDC compensation
Over Current Protection		130% typical above rating
Over Voltage Protection	Typical (V1 only)	130%
Short Circuit Protection	Short term, auto recovery	

Other Specifications

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Isolation Voltage	Input to Output: Input to Ground:	4242 VDC 2120 VDC
Switching Frequency	Typical	67 kHz
Reliability	MTBF according to Telcordia -SR332-Issue 3	1.87 million hours
Operating Temperature	Full Load Derate linearly to 75% at 70° C	-20 to 50°C 50 to 70°C
Storage Temperature		-40 to 70° C

ABC40 Series

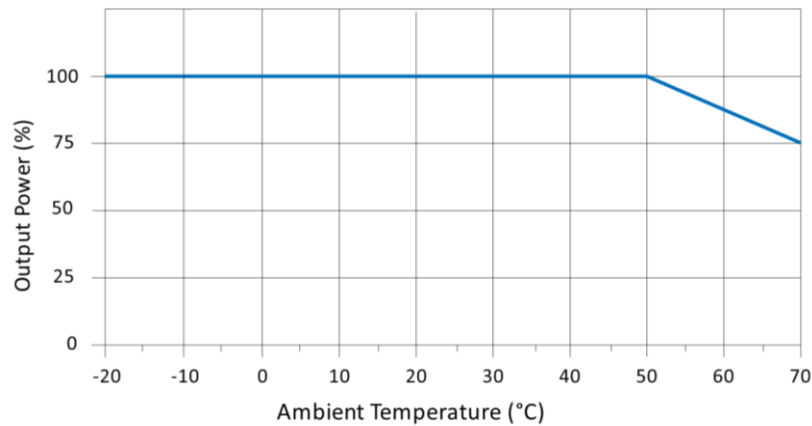
Environmental

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Conducted Emissions	EN55022-B, CISPR22-B, FCC PART15-B	
Radiated Emissions	EN55022-B, CISPR22-B, FCC PART15-B	To be controlled in end system
Harmonic Current	EN61000-3-2	Class A
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
Humidity	Non Condensing	95%
Altitude	Operating: Non-Operating:	10,000 ft. 40,000 ft.

Safety Approvals

PARAMETER	DESCRIPTION/CONDITION
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 Neutral	Molex: 26-60-4030 or equivalent Mating: 09-50-3031; Pins: 08-50-0106
		Pin 2 AC Line	
DC Output Connector	J2	Pin 1,2 V1	Tyco: 640445-6 or equivalent Mating: 647402-6; Pins: 3-647409-1
		Pin 3,4 RTN	
		Pin 5 V3	
		Pin 6 V2	
Remote Sense	J3	Pin 1 +V1 Sense	Molex: 22-23-2021 or equivalent Mating: 22-01-2021
		Pin 2 -V1 Sense	
Earthing Tab	J4		Molex: 19705-4301 Mating: 190030001

ABC40 Series

Mechanical

PARAMETER	DESCRIPTION/CONDITION
Weight	150 g (0.33 lbs.)
Dimensions	101.6 x 50.8 x 30.48 mm (4 x 2 x 1.2 inch)

Figure 2 - Mechanical Drawing ABC40-1xxxG

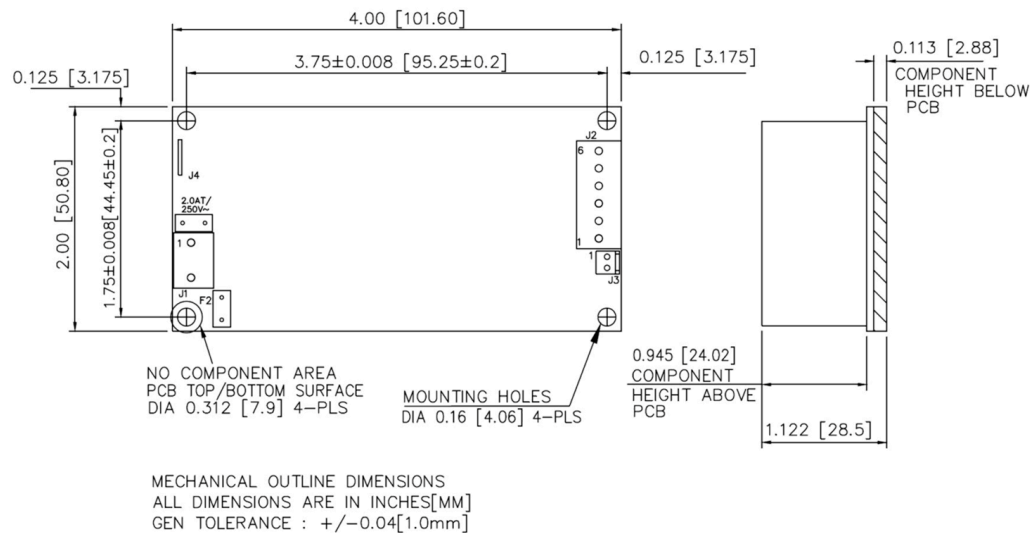
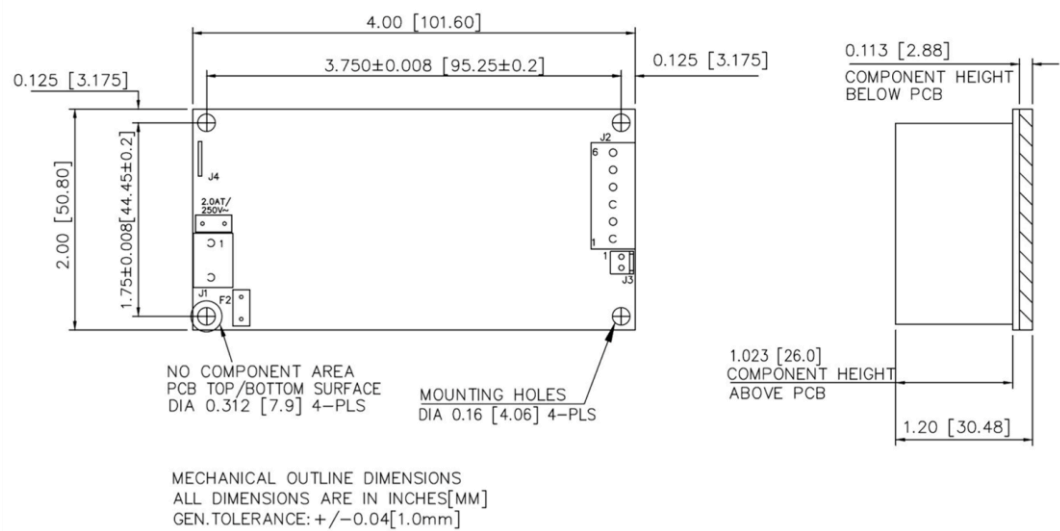


Figure 3 - Mechanical Drawing ABC40-3xxxG



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.