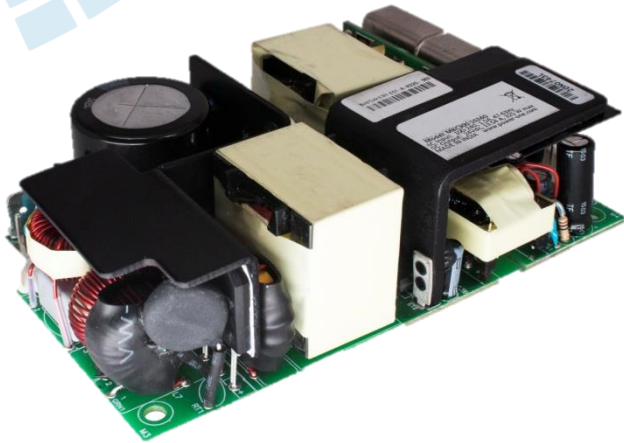


ABC300 Series AC-DC Open Frame Power Supplies



Key Features & Benefits

- 200 W convection cooled
- -20 to 50°C full load operation
- 5.0 x 3.0 x 1.5 inch (127.0 x 76.2 x 38.1 mm)
- No minimum load required
- 12 V fan & 5 V standby outputs
- Inhibit & Power Good signals
- 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 **ABC300 Series** of open-frame power supplies, with its wide universal 90-264 VAC input range and high power density, is available at 300 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
- Robotics
- Renewable Energy
- Data Comm.
- Applied Computing
- Process Control
- Wireless

North America

+1-866.513.2839

Asia-Pacific

+86.755.29885888

Europe, Middle East

+353 61 225 977

ABC300 Series

Model Selection

MODEL	OUTPUT VOLTAGE (VDC)	MAX LOAD CONVECTION ^{1,2,5}	MAX LOAD 300 LFM ^{1,2,5}	MINIMUM LOAD (A)	RIPPLE & NOISE ⁴	CONNECTOR	TOTAL REGULATION
ABC300-1T05G	5	28.0 A	40.0 A	0.0	2%	Screw Terminal	± 2.5%
ABC300-1T12G	12	16.67 A	25.0 A	0.0	2%	Screw Terminal	± 2.5%
ABC300-1T15G	15	13.33 A	20.0 A	0.0	2%	Screw Terminal	± 2.5%
ABC300-1T24G	24	7.5 A	13.54 A	0.0	2%	Screw Terminal	± 2.5%
ABC300-1T30G	30	6.0 A	10.83 A	0.0	2%	Screw Terminal	± 2.5%
ABC300-1T48G	48	3.75 A	6.77 A	0.0	2%	Screw Terminal	± 2.5%
Vfan (all models) ³	12	0.5 A	0.5 A	0.0			± 20%
V s/b (all models)	5	2.0 A	2.0 A	0.0			± 5%

Warranty 2 years.

NOTES:

- ¹ Peak current rating on main output is 120% of max., lasting < 30 s with a maximum 10% duty cycle.
- ² Combined output power of main output, fan supply and standby supply shall not exceed max. power rating.
- ³ Fan supply output voltage tolerance including set point accuracy, line and load regulation is +/-30% and needs min. 1% load on main output to be within regulation band. Ripple and noise is less than 10%.
- ⁴ Ripple is peak to peak with 20 MHz bandwidth and 10 µF (Tantalum capacitor) in parallel with a 0.1 µF capacitor at rated line voltage and load ranges.
- ⁵ Derate power linearly to 80% from 90 Vac to 80 Vac input.

ABC300 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	90-264 VAC / 120-390 VDC
Input Frequency		47 to 63 Hz
Inrush Current	120 VAC 230 VAC	35 A max. 65 A max.
Leakage Current	@ 120VAC @ 230 VAC	< 150 µA < 300 µA
No Load Power		0.8 W
Input Current	120 VAC @ 200 W 230 VAC @ 200 W	3.2 A max 1.65 A max

Output Specifications

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Output Power		200 to 325 W
Efficiency	120 VAC 230 VAC	88% typical 92% typical
Hold Up Time	120 / 230 VAC	10 ms
Power Factor	120 VAC 230 VAC	0.98 0.95
Line Regulation		+/-0.5%
Load Regulation		+/-2%
Transient Response	Main output 50 to 100% load change, 50 Hz, 50% duty cycle, 0.1A / uSec	< 10%, recovery time < 5 ms
Rise Time		< 100 ms
Set Point Tolerance		± 1%
Voltage Adjustment		± 3 %
Over Voltage Protection	Automatic recovery	110 to 150 %
Over Current Protection		110 to 150 %
Short Circuit Protection	Short term, automatic recovery	
Over Temperature Protection	Automatic Recovery	110° C primary heat sink

Other Specifications

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Isolation Voltage	Input to Output:	4242 VDC min
Switching Frequency	PFC converter (fixed) Resonant converter (variable)	80 kHz typical 35 to 250 kHz, 90 kHz typical
Reliability	MTBF according to Telcordia –SR332-issue 3	1.77m Hours
Operating Temperature	Refer to derating curve; -20 to 0°C, start-up is guaranteed	-20 to 70°C
Storage Temperature		-40 to 70° C
Cooling*	Convection: With 300LFM:	140W max (5V model), 200W max (12V, 15V, 24V, 30V & 48V models) 200W max (5V model) 300W max (12V and 15V models) 325W max (24V, 30V and 48V models)

* Refer de-rating curves to determine output power over the entire operating temperature range

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ABC300 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 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
Humidity	Non Condensing	95%
Altitude	Operating:	10,000 ft.
	Non-Operating:	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

Signals

PARAMETER	DESCRIPTION / CONDITION
Power Good *	TTL signal goes high after main output is within regulation band, delay is 0.1 to 0.3 s
Remote On/ Off	To turn on PSU short remote pin to ground
Remote Sense	Compensates for 200 mV cable drop

* Power good signal cannot be used as a current source. Internal pull up resistor from PG signal to 5V is 10K. It is recommended to use external transistor if intended to source current.

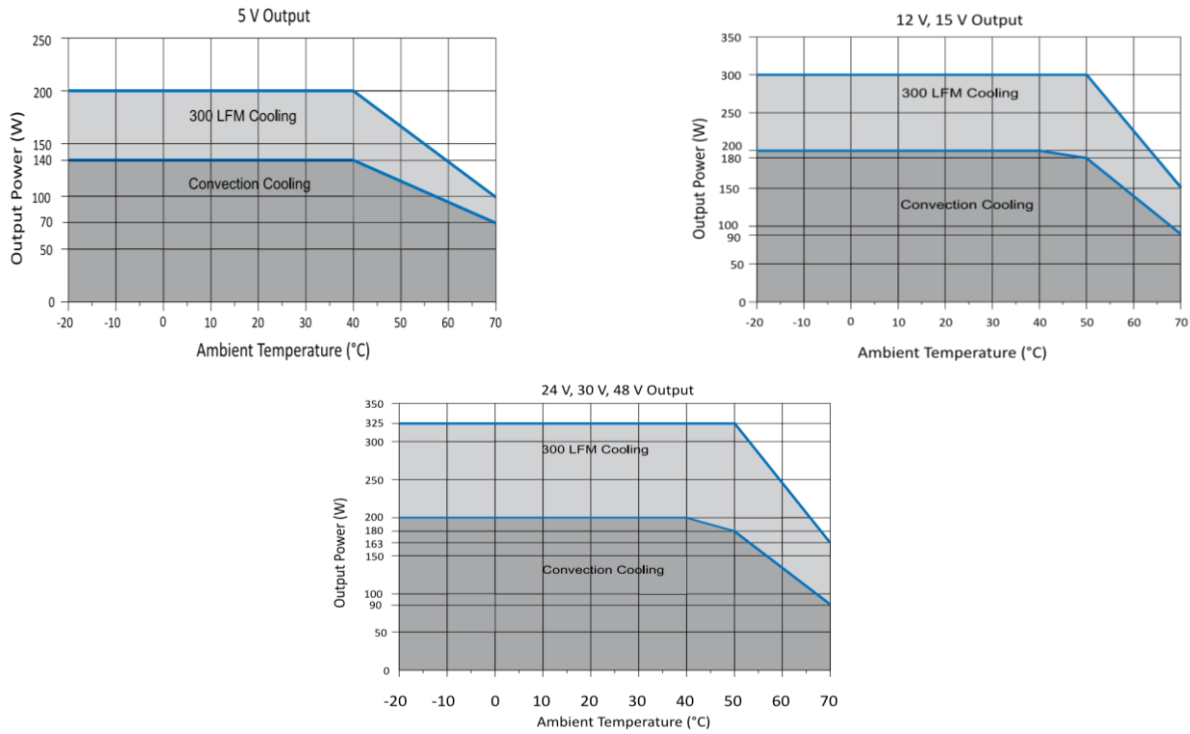
Connector & Pin Description

CONNECTOR	PIN	DESCRIPTION / CONDITION	MANUFACTURER / PN
AC Input Connector	J1	Pin 1	AC LINE
		Pin 2	AC NEUTRAL
DC Output Connector	J2	2 x 6-32 inches pan head screw	
		Pin 1	RTN
Signals & Aux Power	J3	Pin 2	V1
		Pin 1	REMOTE ON/OFF
		Pin 2	RTN
		Pin 3	VFAN (+12 V/0.5 A)
		Pin 4	-VE REMOTE SENSE
		Pin 5	VSTBY (+5 V/2 A, +/-5%)
		Pin 6	+VE REMOTE SENSE
		Pin 7	RTN
Earthing Tab	J4	Pin 8	POWER GOOD
		Spade Connector (Class 1 product only)	

* PSU is supplied with J3 housing, pin-1 and pin-2 shorted to enable main output without remote on/off feature.

ABC300 Series

Figure 1 - Output Power Vs. Temperature Derating Curve



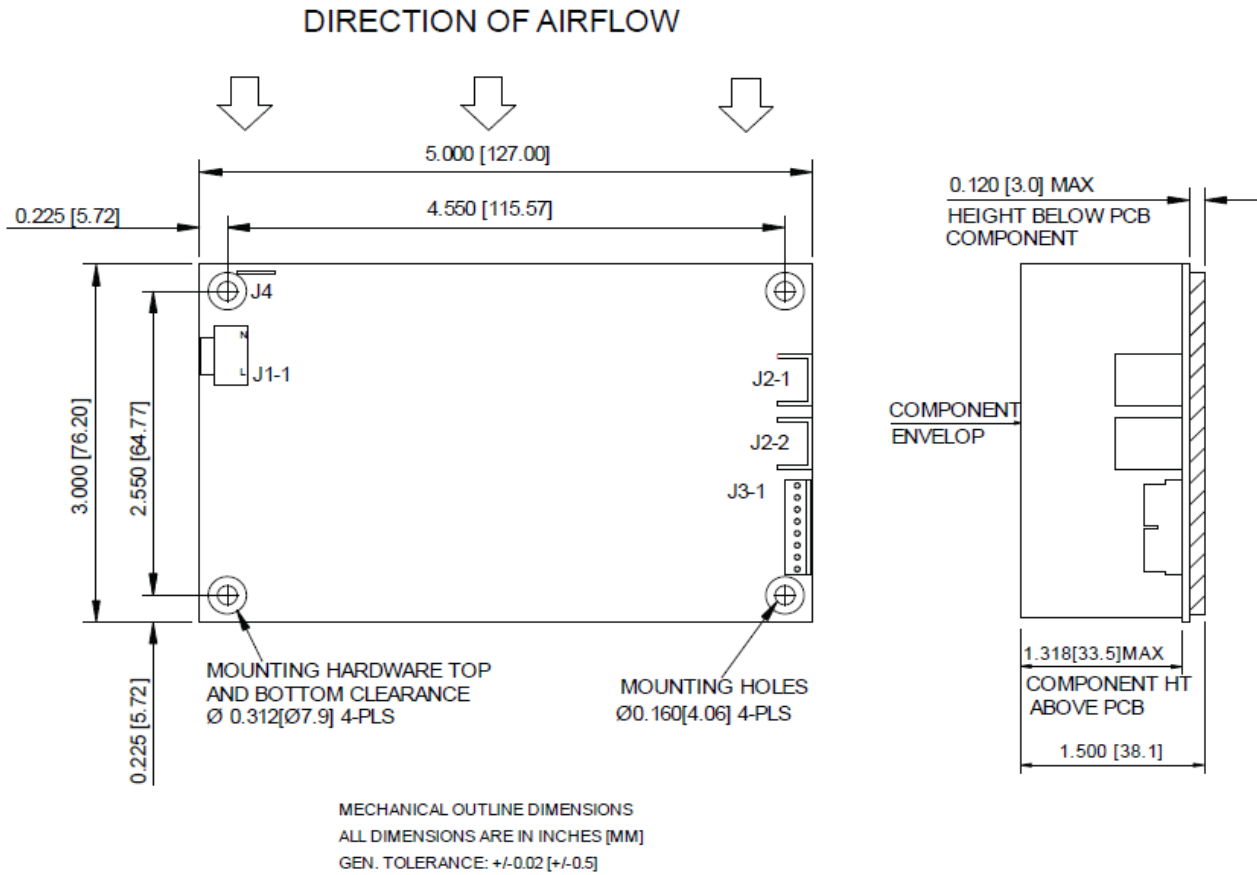
NOTE: The de-rating curves are valid for input voltages of 115 VAC to 264 VAC. Below 115 VAC to 90 VAC the convection rating is 180 Watts maximum.

Mechanical

PARAMETER	DESCRIPTION / CONDITION
Weight	450 g (0.99 lbs)
Dimensions	127.0 x 76.2 x 38.1 mm (5.0 x 3.0 x 1.5 inch)

ABC300 Series

Figure 2 - Mechanical Drawing



NOTE: Air flow over long edge (either direction) required for air flow rating.

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.