



Size: 4.62in x 2.42in x 0.52in (117.3mm x 61.5mm x 13.2mm)

FEATURES

- Universal Input of 90~264VAC
- Switching Power Module for PCB Mountable
- Full Brick Size with Base Plate
- Remote Sense
- Conduction Cooling
- Over Current, Short Circuit, Over Temperature and Over Voltage Protection
- High Efficiency
- EN60950-1 and UL60950-1 Safety Approvals

DESCRIPTION

The PSABR300 series of AC/DC power supplies offers 300 watts of output power in a 4.62" x 2.42" x 0.52" full brick package. This series consists of single output models with a universal input range of 90~264VAC. Each model in this series has high efficiency, over current, short circuit, over temperature, and over voltage protection, as well as remote sense. This series has EN60950-1 and UL60950-1 safety approvals.

MODEL SELECTION TABLE

Model Number	Input Voltage Range	Output Voltage	Output Trim	Output Current	Ripple & Noise ⁽²⁾	Efficiency	Max. Output Power
PSABR300-12S	90~264VAC	12VDC	10.8~13.2VDC	25A	150mV	90%	300W
PSABR300-24S		24VDC	21.6~26.4VDC	12.5A	200mV	90.5%	
PSABR300-28S		28VDC	25.2~30.8VDC	11A	200mV	90.5%	
PSABR300-48S		48VDC	43.2~52.8VDC	6.25A	300mV	91%	

SPECIFICATIONS

All specifications are based on Normal Input Voltage, Full Load, and 25°C After Warm-Up Time unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
INPUT SPECIFICATIONS					
Input Voltage Range		90		264	VAC
Input Frequency		47	50/60	63	Hz
Input Current	100VAC, Full Load			4.0	A
	200VAC, Full Load			2.0	
Inrush Current	<2ms	Limited by External Resistance			
Leakage Current				0.75	mA
Power Factor	100VAC, Full Load		>0.95		
	200VAC, Full Load		>0.9		
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Accuracy			±2		%
Line Regulation	LL-HL		±1		%
Load Regulation	5-100%		±1		%
Output Trim		See Table			
Remote Sense		Provided			
Output Power		See Table			
Output Current		See Table			
Minimum Load		0			%
Ripple & Noise		See Table			
ENA	Open collector (10mA sink current), Low (on) when output is present				
Hold-Up Time		Limited by External Capacitor			
Temperature Coefficient	0~50°C		±0.05		%/°C
PROTECTION					
Short Circuit Protection		Automatic Recovery, Hiccup Mode			
Over Current Protection		Automatic Recovery			
Over Voltage Protection		Automatic Recovery			
Over Temperature Protection		Automatic Recovery			
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature	On Aluminum Base Plate	-40		+100	°C
Storage Temperature		-40		+100	°C
Humidity	Non-Condensing	20		95	%RH
Vibration	10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes				
MTBF	@25°C (MIL-HDBK-217F, Notice 1)	250,000			Hours

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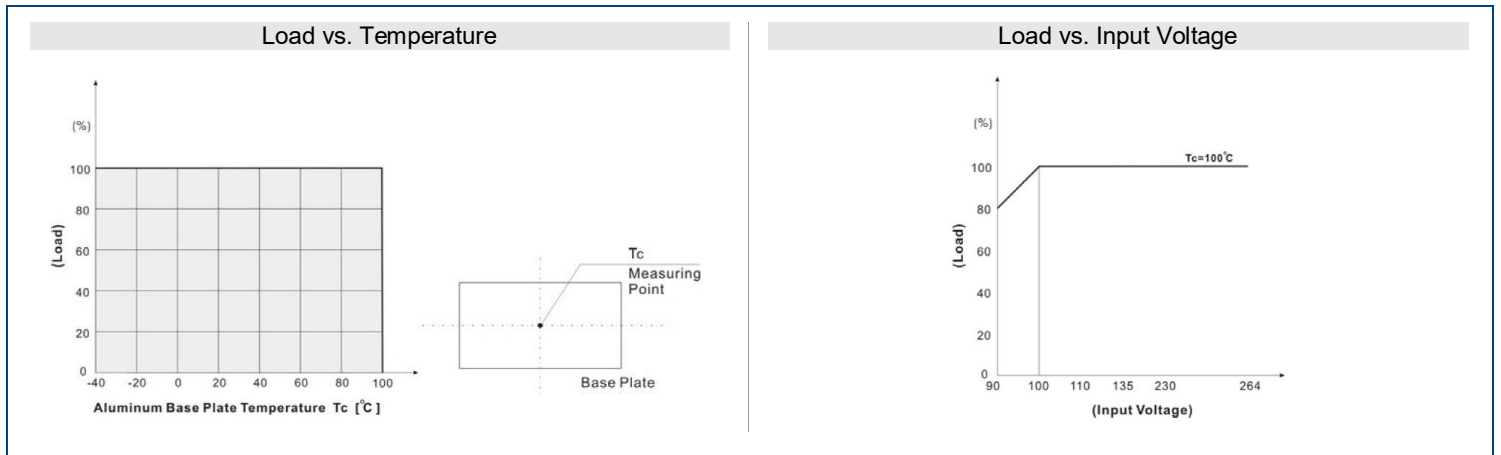
SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
GENERAL SPECIFICATIONS					
Efficiency			See Table		
Isolation	Input-Output		3000		VAC
	Input-FG		2000		
	Output-FG		500		
PHYSICAL SPECIFICATIONS					
Weight			3.92oz (111g)		
Dimensions (L x W x H)			4.62in x 2.42in x 0.52in (117.3mm x 61.5mm x 13.2mm)		
Cooling Method			Conduction Cooling		
SAFETY CHARACTERISTICS					
Safety Approvals		EN6095-1, UL60950-1 ⁽³⁾			

NOTES

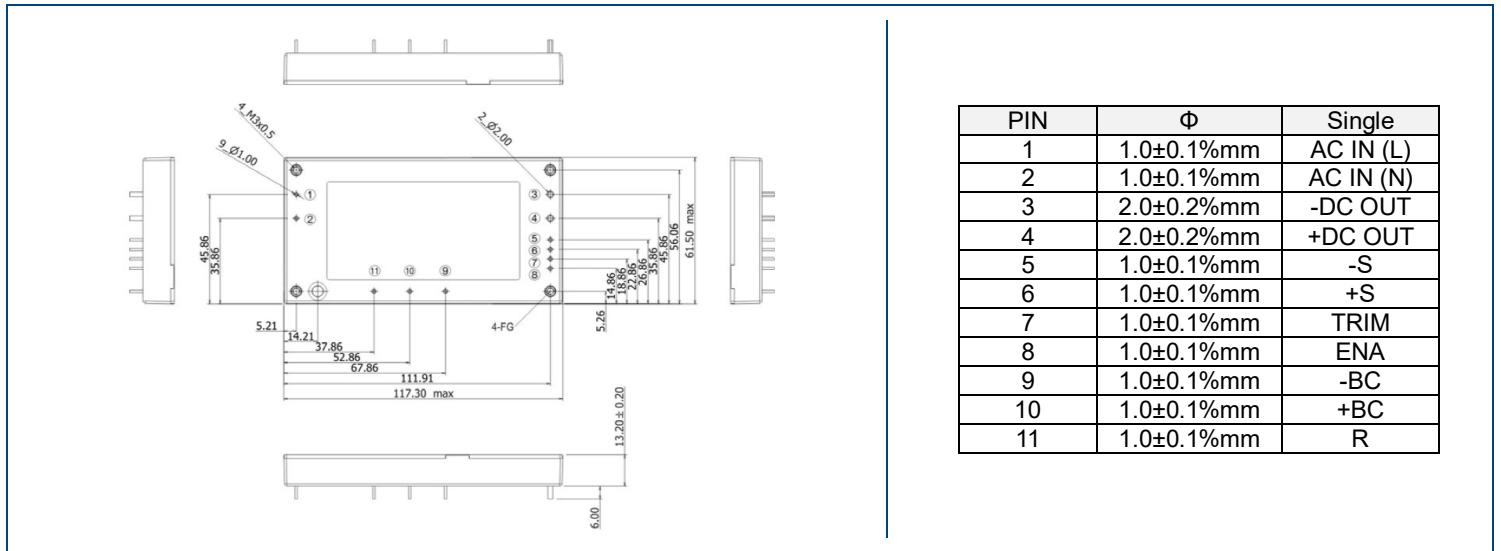
- See figure 1.1 connection
- Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
- This product is Listed to applicable standards and requirements by UL.

*Due to advances in technology, specifications subject to change without notice.

DERATING CURVES



MECHANICAL DRAWINGS



CONNECTION FOR STANDARD USE

1. To use PSABR300 series, external parts should be connected as shown in figure 1.1
2. The PSABR300 series should be conduction-cooled. Use a heatsink or fan to dissipate heat.

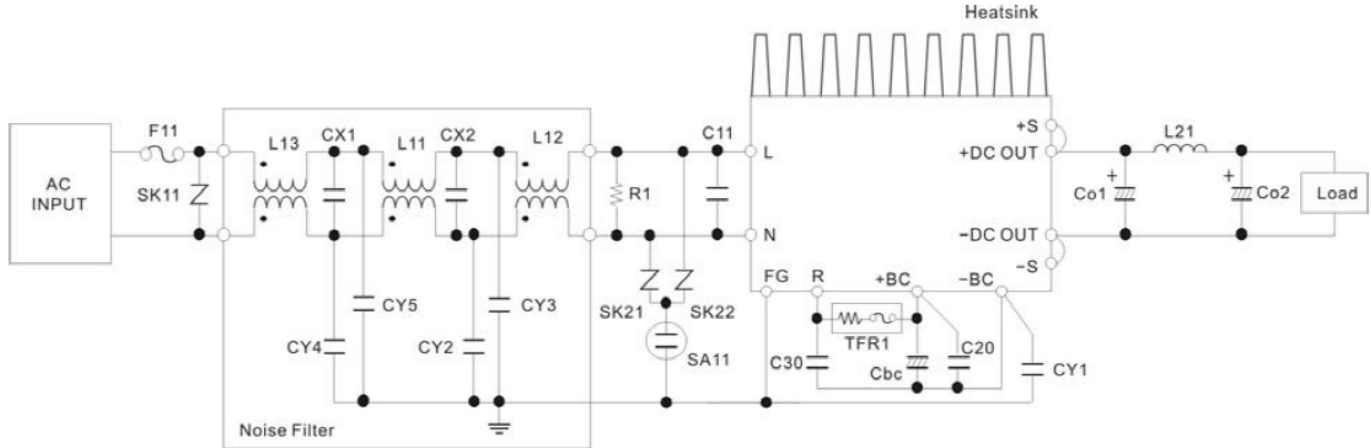


Fig. 1.1

Table 1.1 (Parts Name)

No.	Symbol	Item	Rating	Remark	
1	F11	Input Fuse	AC250V/10A	-	
2	C11	Input Capacitor	AC275V/1uF	Class X1 or X2	
3	CY1	Y Capacitor	AC250V/1000pF	Class Y1	
4	L11	Noise Filter	Line Filter	Min. 9mH	
5	L12		Min. 12mH		
6	L13		Min. 100uH		
7	CX1	X Capacitor		AC275V/0.68uF	
8	CX2			AC275V/1uF	
9	CY2, CY3	Y Capacitor		AC250V/2200pF	
10	CY4, CY5			AC250V/1000pF	
11	Co1	Output pi Filter	12S	DC16V/1500uF x3	Conductive Polymer
			24S, 28S	DC35V/1000uF x3	Electrolytic Capacitor
			48S	DC63V/390uF x3	Electrolytic Capacitor
12	L21	Output Inductor		1~3uF	R-type Inductor
			12S	DC16V/1800uF x3	Electrolytic Capacitor
			24S, 28S	DC35V/1000uF x1	Electrolytic Capacitor
13	Co2	Output Inductor	48S	DC63V/390uF x1	Electrolytic Capacitor
14	Cbc	Smoothing Capacitor for Boost Voltage	DC450V/470uF	Electrolytic Capacitor	
15	C20, C30	Capacitor for Boost Voltage	DC450V/0.68uFx2 (parallel)	Film Capacitor	
16	TFR1	Inrush Current Limiting Resistor	10Ω	Thermal Fuse Build-In Resistor	
17	R1	Discharging Resistor	470KΩ	1/4W Resistor	
18	SK21/SK22	Varistor	NC	-	
19	SA11	Surge Absorber	NC	-	
20	SK11	Varistor	620V	300VAC/3500A (8/20μS)	

-Parts name are shown in Table 1.1 as reference.

-External parts should be changed according to the ambient temperature, and input and output conditions. For details, refer to the selection method of individual parts.

COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

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