



Size: 2.28in x 2.4in x 0.5in
(57.91mm x 60.96mm x 12.7mm)

FEATURES

- 100% Burn In
- Wide Input Voltage Range
- Fixed Operating Switching Frequency
- 50, 66, 75, and 100 Watt Output Rating from Same Package
- CE Mark
- Isolated and Regulated
- Short Circuit and Over Voltage Protected
- Input and Output Filtering Integral to Supply
- UL1950⁽¹³⁾, cUL950⁽¹³⁾, TUV EN60950 File E155800
- Industry Standard Package (2.28" x 2.4" x 0.5") and Footprint

DESCRIPTION

The SP & SPW series of single output half brick DC/DC converters offers up to 100 watts of output power in an industry standard package and footprint. It is intended to provide power and isolation for pc board and chassis mount applications requiring high power density. Some features include wide input voltage ranges, positive or negative remote on/off, remote sense, output trim, short circuit protection, and over voltage protection. Being encapsulated, these supplies have improved thermal dissipation and protection for ruggedized environments. All models are 100% burned-in.

MODEL SELECTION TABLE

Model Number	Input Voltage Range	Output Voltage	Output Current	Output Power	
SP24S3.3-66	24VDC (18-36VDC)	3.3V	20A	66W	
SP24S3.3-75		3.3V	22.7A	75W	
SP24S5-50		5V	10A	50W	
SP24S5-75		5V	15A	75W	
SP24S5-100		5V	20A	100W	
SP24S12-50		12V	4.16A	50W	
SP24S12-75		12V	6.25A	75W	
SP24S12-100		12V	8.33A	100W	
SP24S15-50		15V	3.33A	50W	
SP24S15-75		15V	5A	75W	
SP24S15-100		15V	6.66A	100W	
SP24S24-50		24V	2.08A	50W	
SP24S24-75		24V	3.12A	75W	
SP24S24-100		24V	4.17A	100W	
SP24S48-50		48V	1.04A	50W	
SP24S48-75		48V	1.56A	75W	
SP24S48-100		48V	2.08A	100W	
SP48S3.3-66		48VDC (36-75VDC)	3.3V	20A	66W
SP48S3.3-75			3.3V	22.7A	75W
SP48S5-50			5V	10A	50W
SP48S5-75	5V		15A	75W	
SP48S5-100	5V		20A	100W	
SP48S6-50	6V		8.33A	50W	
SP48S6-75	6V		12.5A	75W	
SP48S6-100	6V		16.67A	100W	
SP48S12-50	12V		4.16A	50W	
SP48S12-75	12V		6.25A	75W	
SP48S12-100	12V		8.33A	100W	
SP48S15-50	15V		3.33A	50W	
SP48S15-75	15V		5A	75W	
SP48S15-100	15V		6.66A	100W	
SP48S24-50	24V		2.08A	50W	
SP48S24-75	24V		3.12A	75W	
SP48S24-100	24V		4.17A	100W	
SP48S28-100	28V		3.57A	100W	
SP48S48-50	48V		1.04A	50W	
SP48S48-75	48V		1.56A	75W	
SP48S48-100	48V	2.08A	100W		
SPW48S3.3-66	48VDC (18-75VDC)	3.3V	20A	66W	
SPW48S3.3-75		3.3V	22.7A	75W	
SPW48S5-50		5V	10A	50W	
SPW48S5-75		5V	15A	75W	
SPW48S5-100		5V	20A	100W	
SPW48S9-50		9V	5.56A	50W	
SPW48S12-50		12V	4.16A	50W	
SPW48S12-75		12V	6.25A	75W	
SPW48S12-100		12V	8.33A	100W	
SPW48S15-50		15V	3.33A	50W	
SPW48S15-75		15V	5A	75W	
SPW48S15-100		15V	6.67A	100W	
SPW48S24-50		24V	2.08A	50W	
SPW48S24-75		24V	3.12A	75W	
SPW48S24-100		24V	4.16A	100W	
SPW48S28-100		28V	3.57A	100W	
SPW48S48-50 ⁽¹⁰⁾		48V	1.04A	50W	

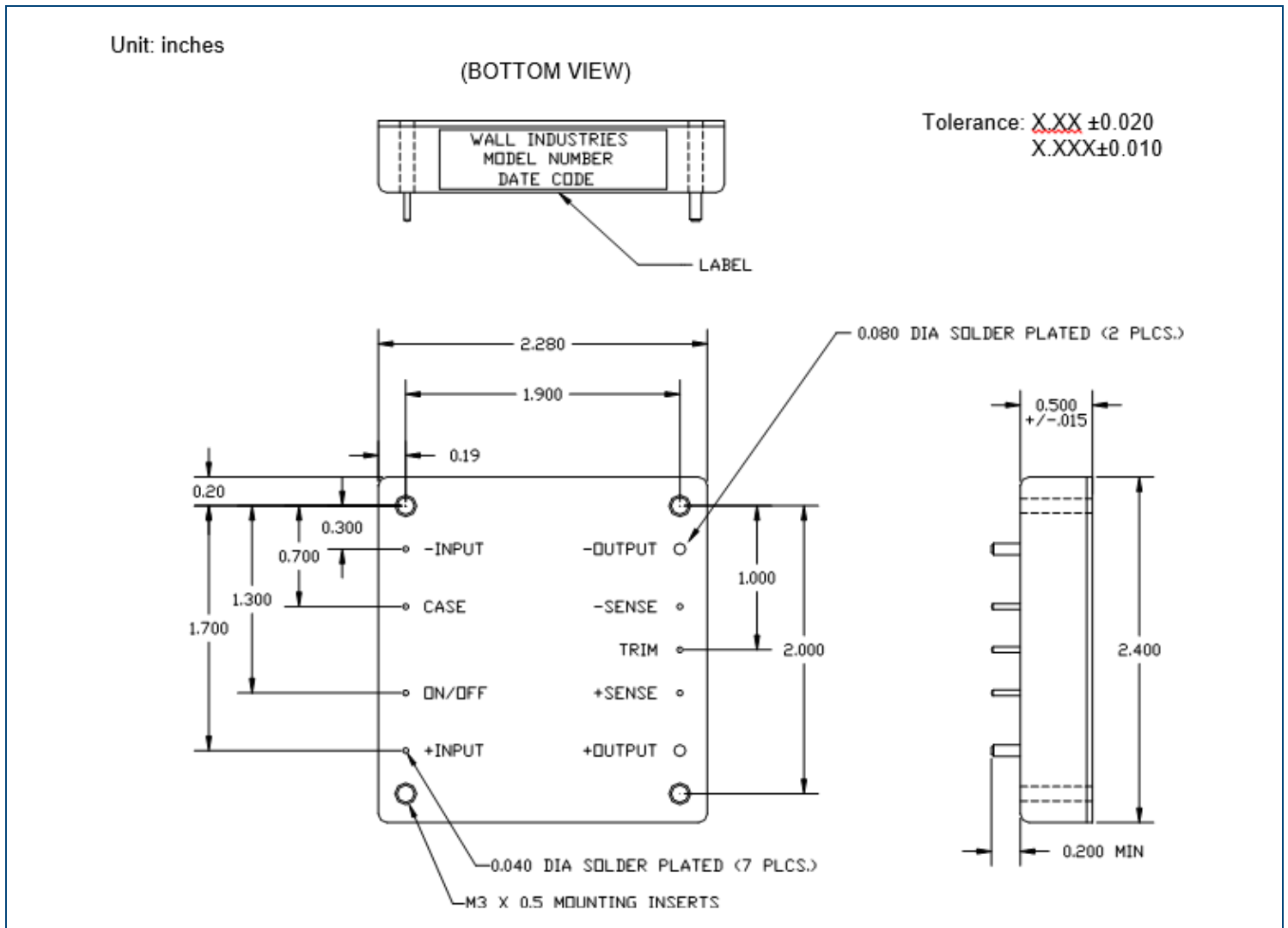
SPECIFICATIONS					
All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances.					
SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
INPUT SPECIFICATIONS					
Input Voltage Range	24VDC Nominal Input	18		36	VDC
	48VDC Nominal Input	36		75	
	48VDC Nominal Input	18		75	
Input Filter		Pi Input Filter			
Input Voltage Lockout		<16 >38VDC <34 >78VDC ⁽¹⁾			
Input Reflected Ripple ⁽²⁾			20		mAp-p
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Tolerance				1	%
Line Regulation			±0.1		%
Load Regulation			±0.1		%
External Output Trim		±10			%
Remote Sense		Up to 0.5V Power Line Drop			
Output Power		See Table			
Output Current		See Table			
Minimum Load		None Required			
Ripple & Noise (20MHz bandwidth) ⁽³⁾			1.5		%Vout
Transient Response		±5.0% Deviation 100µsec recovery to within ±1.0%			
Start-Up Time					
Temperature Coefficient					
REMOTE ON/OFF CONTROL⁽¹²⁾					
Standard		Active High Enable (Positive Remote ON/OFF)			
"R" Suffix		Active Low Enable (Negative Remote ON/OFF)			
PROTECTION					
Short Circuit Protection		Continuous			
Over Voltage Protection		Approximately 120% Vout, Self-Resetting			
Current Limiting Inception		Approximately 125%			
Thermal Overload		+110°C Baseplate, Self-Resetting			
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature		-40		+100	°C
Storage Temperature		-55		+125	°C
Humidity	Non-Condensing	20		95	%RH
Temperature Coefficient				0.01	%/°C
GENERAL SPECIFICATIONS					
Efficiency			85		%
Switching Frequency (Fixed)		400kHz ±10%			
Isolation Voltage	Input to Output	1500			VDC
	Input to Case		750		
	Output to Case		750		
Isolation Resistance	Input to Output	100			MΩ
PHYSICAL SPECIFICATIONS					
Weight		Approximately 4.0oz			
Dimensions (L x W x H)		2.28in x 2.4in x 0.5in (57.91mm x 60.96mm x 12.7mm)			
Case Material		Non-Metallic with Aluminum Baseplate			

NOTES

1. Auto off power train protection.
2. For input reflected ripple of 20mA_{p-p}, use an industry standard 12uH source impedance with a low ESR aluminum 33uf capacitor across input.
3. Ripple & Noise is measured with a 10uf//0.1uf across output.
4. All case, pin to case, and pin to header dimensions reference only unless otherwise noted.
5. Pin diameters are 0.04" except: those used for +V_{out} and -V_{out} are 0.08". Pin length is 0.20" min.
6. Pin to pin tolerance ±0.01". Pin diameter tolerance ±0.005"
7. Significant capacitive load on output may inhibit start-up and operation, consult factory.
8. All DC/DC converters should be externally fused on the front end for protection.
9. Heatsinks available, consult factory.
10. 48VDC input with 48VDC output not available in 75 and 100 watt models.
11. Through-hole instead of threaded inserts available (0.125" diameter), add suffix "TH"
12. Positive Remote ON/OFF control is standard. To order negative logic Remote ON/OFF control add the suffix "R" to the part number (Ex. SP48S48-100R0
13. This product is Listed to applicable standards and requirements by UL.

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

MECHANICAL DRAWINGS



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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