

Rev A



Size: 1.38in x 0.98in x 0.51in Size: 1.38in x 0.98in x 0.75in (35mm x 25mm x 13mm) (35mm x 25mm x 19mm)

FEATURES

- AC/DC Input of 85~264V
- DC/DC Input of 70~400V
- High Efficiency
- RoHS Compliant
- Low Loss, Green Power

DESCRIPTION

- Industrial Design
- Optional 90 Degree Corner Package (-F)
- Over Current and Short Circuit Protection
- Coated Package
- UL60950/EN60950 Standards

The PSLS01C series of AC/DC converters offers up to 1 watt of output power in an ultra-compact 1.38" x 0.98" x 0.51~0.75" package. This series consists of coated single output models with a wide AC/DC input of 85~264V (70~400V). Each model in this series is RoHS compliant, has over current and short circuit protection, and has high efficiency. This series meets UL60950/EN60950 standards.

MODEL SELECTION TABLE								
Model Number ⁽¹⁾	Input Voltage Range	Output Voltage	Output Current	Ripple & Noise	Standby Power	Output Power	Maximum Capacitive Load	Efficiency
PSLS01C-15B05S		5V	200mA		0.5W Max.	1W	220µF	66%
PSLS01C-15B09S		9V	111mA				100µF	67%
PSLS01C-15B12S	AC: 85~264V	12V	83mA	120mV Max.			100µF	70%
PSLS01C-15B15S	DC. 70~400V	15V	67mA				100µF	69%
PSLS01C-15B24S		24V	42mA				100µF	68%

SPECIFICATIONS					
All specifications are b	ased on 25°C, Humidity <75%, Nominal Input Voltage, and Rated Outp We reserve the right to change specifications based on technological a	out Load unle advances.	ss otherwise	e noted.	
SPECIFICATION	TEST CONDITIONS	Min	Тур	Max	
INPUT SPECIFICATIONS					
Input Voltago Bango	AC Input	85		264	
Input voltage Range	DC Input	70		400	
Input Frequency		47		440	
Input Current	115VAC			0.12	
	230VAC			0.04	1
Inruch Current	115VAC		10		
	230VAC		20		
OUTPUT SPECIFICATIONS					
Output Voltage			See ⁻	Fable	
Veltage Accuracy	5V Model			±10	
voltage Accuracy	Other Models			±5	
Line Regulation	Full Load		±1.5		
Load Regulation	5% to 100%		±2.5		
Output Power			See -	Table	

Output Current		See Table			
Minimum Load		5			%
Maximum Capacitive Load		See Table			
Ripple & Noise ⁽³⁾	(20MHz bandwidth)		50	120	mVp-p
Hold Lin Time	115VAC	80			~ ~ ~
	230VAC	300			ms
Temperature Coefficient			±0.1		%/ºC
PROTECTION					
Short Circuit Protection		Continuous, Automatic Recovery			

Over Current Protection		Automatic Recovery				
ENVIRONMENTAL SPECIFICATIONS						
Operating Temperature		-40		+85	°C	
Storage Temperature		-40		+105	°C	
Case Temperature				+90	°C	
Storage Humidity				85	%RH	
Power Dereting	-40°C~-20°C	1			%/ºC	
Power Derating	+55°C+85°C	0.67				
Wolding Tomporature	Wave Soldering	260±5°C; time:5~10s				
weiding remperature	Manual Welding	360±10°C; time:3~5		; time:3~5s		
MTBF	@25°C	300,000			Hours	

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Unit

V

Hz

А

А

%

%

%



SPECIFICATIONS									
All specifications are based on 2	25°C, Humidity <75%, Nominal I	nput Voltage, and Rated Output	Load unles	ss otherwise	noted.				
We reserve the right to change specifications based on technological advances.									
SPECIFICATION	TEST CO	NDITIONS	Min	Тур	Max	Unit			
GENERAL SPECIFICATIONS									
Efficiency	@230VAC,Typ.			See 7	Table				
Switching Frequency					50	kHz			
Isolation Voltage	Input to Output, Tested for 1 m	ninute	3000			VAC			
Isolation Resistance			100			MΩ			
PHYSICAL SPECIFICATIONS									
Weight				0.280	z (8g)				
Dimensions (L x W x H)			(1.38in x 0.9 35mm x 25r	8in x 0.51in nm x 13mm)			
Hot Swap				For	bid				
Case Material Grade				UL 9	4V-0				
Installation				PC	СВ				
Cooling	Free Air Convection								
SAFETY CHARACTERISTICS									
Safety Approvals		UL60950/EN60950 UL/CE ⁽⁵⁾							
Safety Class						Class II			
	CE	CISPR22/EN55022				Class A ⁽⁶⁾			
ENAL	CL	CISPR22/EN55022	(Class B ⁽⁷⁾			
	DE	CISPR22/EN55022	Class A ⁽⁶⁾						
	RE	CISPR22/EN55022				Class B ⁽⁷⁾			
ESD	IEC/EN61000-4-2	Contact ±4KV			Perf	. Criteria B			
RS	IEC/EN61000-4-3	10V/m ⁽⁷⁾			Perf	. Criteria A			
FFT	IEC/ENI61000-4-4	±2KV ⁽⁶⁾			Perf	. Criteria B			
	1EC/EN01000-4-4	±4KV ⁽⁷⁾			Perf	. Criteria B			
Surge	IEC/EN61000-4-5	±1KV/±2KV ⁽⁷⁾			Perf	. Criteria B			
CS	IEC/EN61000-4-6	3 Vr.m.s ⁽⁷⁾			Perf	. Criteria A			
PFM	IEC/EN61000-4-8	10A/m			Perf	. Criteria A			
Voltage Dips, Short and Interruptions Immunity	IEC/EN61000-4-11	0%-70%			Perf	. Criteria B			

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NOTES

Add "-F" to end of model number to indicate 90 degree package. 1.

External electrolytic capacitors are required to modules, refer to typical applications for more details. Ripple and Noise refers to "Ripple and Noise Measure Figure" 2.

3.

Module requires dispensing fixed after assembled. –F models do not meet these approvals. 4.

5.

6. Typical Application Circuit Refer to Figure 1.

Recommended Circuit Refer to Figure 3. 7.

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



DERATING CURVES



EFFICIENCY GRAPHS



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MECHANICAL DRAWINGS



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STRUCTURE FIGURE ·



TYPICAL APPLICATIONS -



RIPPLE AND NOISE MEASURE FIGURE RIPPLE -



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EMC RECOMMNEDED CIRCUIT -



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EMC RECOMMNEDED CIRCUIT PCB LAYOUT -



Safety and Recommended Wiring: linewidth \geq 3mm, line-line distance \geq 6mm, line-ground distance \geq 6mm, A \geq 6.4mm

EV	TEDNIAL	CIPCI	DAMETE	DC

	EXTERNAL CIRCUIT PARAMETERS								
Model	C1 (Required)	L2	C2 (Required)	L1 (Required)	C3 (Required)	C4	CY0	FUSE (Required)	TVS
PSLS01C-15B05S(-F)			150uE/25\/				1nF/400VAC	/AC 1A/250V	SMBJ7.0A
PSLS01C-15B09S(-F)			150µF/55V		68µF/35V	0.1µF			SMBJ12A
PSLS01C-15B12S(-F)	10µF/400V	1mH		2.2µH					SMR 120A
PSLS01C-15B15S(-F)			100µF/35V						SIVIDJZUA
PSLS01C-15B24S(-F)									SMBJ30A

Notes:

1. C1 and C3 are electrolytic capacitors. They are required for both AC input and DC input,

When AC input, C1 is used as filter capacitor, the value of C1 is recommended to be 10µF/400V. When DC input, C1 is used as EMC filter capacitor, the value of C1 is recommended to be 10µF/400V (when the input voltage is above 370VDC, the recommended value of C1 is 10µF/450V). C2 and C3 are output filer capacitors, they are recommended to be high frequency and low impedance electrolytic capacitors. Capacitance and rated ripple current of capacitors refer to the datasheets provided. Voltage derating of capacitors should be 80% or above. C4 is a ceramic capacitor, which is used to filter high frequency noise. C2, C3 and L1 form a pi-type filter circuit. Current of L1 and L2 refer to the datasheets provided by the manufacturers, current derating should be 80% or above. TVS is a recommended component to protect post-circuits (if converter fails). External input NTC is recommended to use 5D-9. External input MOV1 is recommended to use S14K350.

2. For Standard EMC requirement, please refer to figure 1. If higher EMC requirement, please refer to figure 3, recommended parameters are shown in table below.

Recommended Parameter for Higher EMC Standard Circuit

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Components	Recommend Parameter
MOV2	S10K300
CY1, CY2	1nF/400VAC
CX	0.1µF/275VAC
LCM	3.5mH
LDM	5mH
FC-L01DV1	1KV/2KV Surge Protector
FUSE	1A/250V, slow blow, it must be connected to FUSE

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PACKING INFORMATION



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MODEL NUMBER SETUP -

PSLS	01	С	-	1	5	В	15	S	-	F
Series Name	Output Power	Covered		Isolation Votlage	Input Votlage	Output Style	Ouptut Voltage	Special Mark		Package Type
	01: 1 Watt			1: 3000VAC			05: 5V			Blank: Standard
							09 : 9V			F: 90 Degree
							12 : 12V			
							15 : 15V			
							24: 24V			

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 ISO9001-2008 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.

Contact Wall Industries for further information:

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