

Size: 1.38in x 0.65in x 0.43in (35mm x 16.6mm x 11mm)

**FEATURES**

- Universal Input Range of 85~305VAC (70~430VDC)
- Ultra Small Size
- RoHS Compliant
- Straight Pin or 90° Pin
- Short Circuit and Over Load Protection
- High Efficiency
- UL62368-1 and IEC62368-1 Safety Approvals

**DESCRIPTION**

The PSGS3 series of AC/DC open frame converters offers up to 3 watts of output power in a 1.38" x 0.65" x 0.43" ultra-small package. This series consists of single output models with a universal input range of 85~305VAC (70~430VDC) and high efficiency. The models in this series have short circuit and over load protection, are RoHS compliant, and can either have a straight pin or 90° bended pin package type. This series also has UL62368-1 and IEC62368-1 safety approvals.

**MODEL SELECTION TABLE**

Model Number <sup>(1)</sup>	Input Voltage Range	Output Voltage	Output Current	Typ. Ripple & Noise	Output Power	Maximum Capacitive Load	Typ. Efficiency
PSGS3-S03(-F)	85~264VAC (70~400VDC)	3.3VDC	500mA	80mVp-p	1.65W	800µF	67%
PSGS3-S05(-F)		5VDC	500mA	80mVp-p	2.5W	800µF	68%
PSGS3-S09(-F)		9VDC	333mA	80mVp-p	3W	600µF	75%
PSGS3-S12(-F)		12VDC	250mA	80mVp-p	3W	470µF	77%
PSGS3-S15(-F)		15VDC	200mA	80mVp-p	3W	470µF	78%
PSGS3-S24(-F)		24VDC	125mA	80mVp-p	3W	120µF	80%

**SPECIFICATIONS**

All specifications are based on 25°C, Nominal Input Voltage, and Rated Output Current unless otherwise noted.  
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
	<b>INPUT SPECIFICATIONS</b>					
Rated Input Voltage	Vo, Io nom			100~277		VAC
Voltage Range	Vo, Io nom	AC in	85		305	VAC
		DC in	70		430	VDC
Line Frequency	Vi nom, Io nom		47		63	Hz
Input Current	Io Nom, Vi: 115VAC				0.12	A
	Io Nom, Vi: 230VAC				0.06	
Inrush Current	Io Nom, Vi: 115VAC			13		A
	Io Nom, Vi: 230VAC			23		
<b>OUTPUT SPECIFICATIONS</b>						
Output Voltage				See Table		
Voltage Accuracy	3.3V			±8		%
	5~24V			±5		
Line Regulation	Io nom, Vi min, Vi max			±1.5		%
Load Regulation	10~100% Load			±2.5		%
Output Power				See Table		
Output Current				See Table		
Maximum Capacitive Load				See Table		
Ripple & Noise (20MHz bandwidth)	Vi nom, Io nom, BW=20MHz			80	150	mVp-p
No Load				0.10	0.15	W
<b>PROTECTION</b>						
Short Circuit Protection	Recovers automatically after fault condition is removed					
Over Load Protection	Recovers automatically after fault condition is removed			Above 110% rated output power		
<b>ENVIRONMENTAL SPECIFICATIONS</b>						
Operating Temperature			-40		+85	°C
Storage Temperature	Non operational		-40		+105	°C
Relative Humidity	Vi nom, Io nom				85	%RH
Cooling				Free Air Convection		

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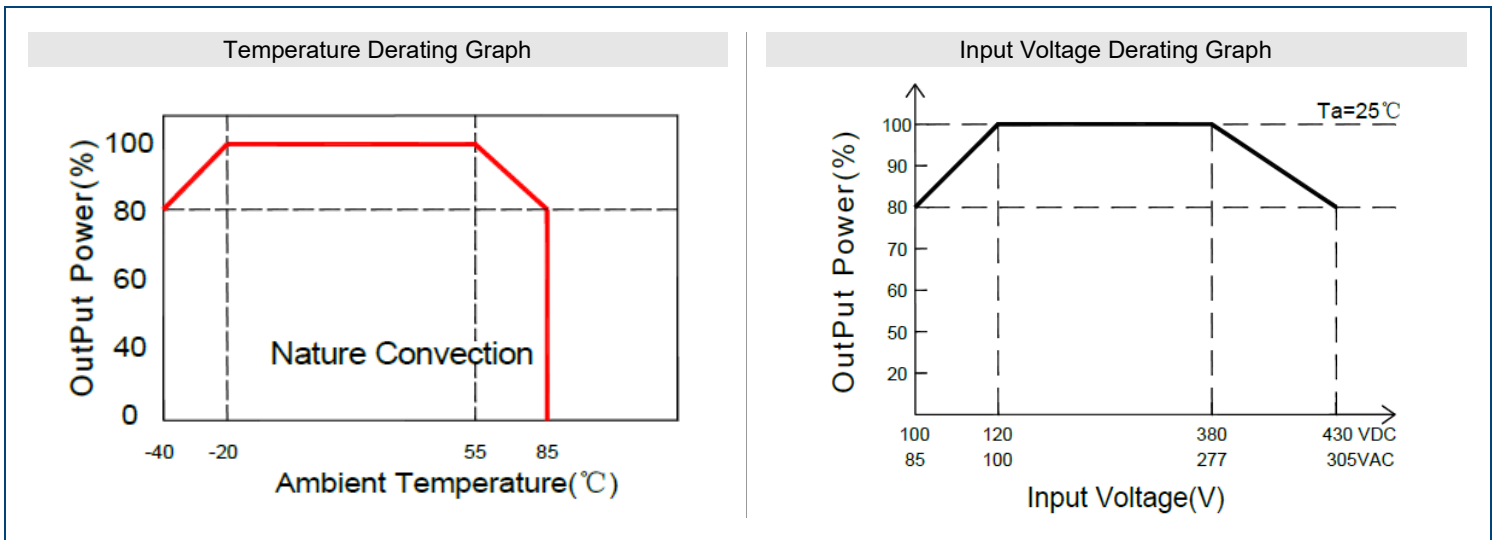
SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
<b>GENERAL SPECIFICATIONS</b>					
Efficiency		See Table			
Switching Frequency	Vi nom, Io nom			60	KHz
Isolation Voltage	Input/Output	3KVac/5mA/5Sec			
Isolation Resistance	Input/Output, @500VDC	100			MΩ
<b>PHYSICAL SPECIFICATIONS</b>					
Dimensions (L x W x H)		1.38in x 0.65in x 0.43in (35mm x 16.6mm x 11mm)			
<b>SAFETY CHARACTERISTICS</b>					
Safety Approvals		UL62368-1 <sup>(3)</sup> , IEC62368-1			
EMI Conduction & Radiation		EN55022, Class B <sup>(4)</sup> Class			
EMS Immunity		EN55035 <sup>(4)</sup>			

**NOTES**

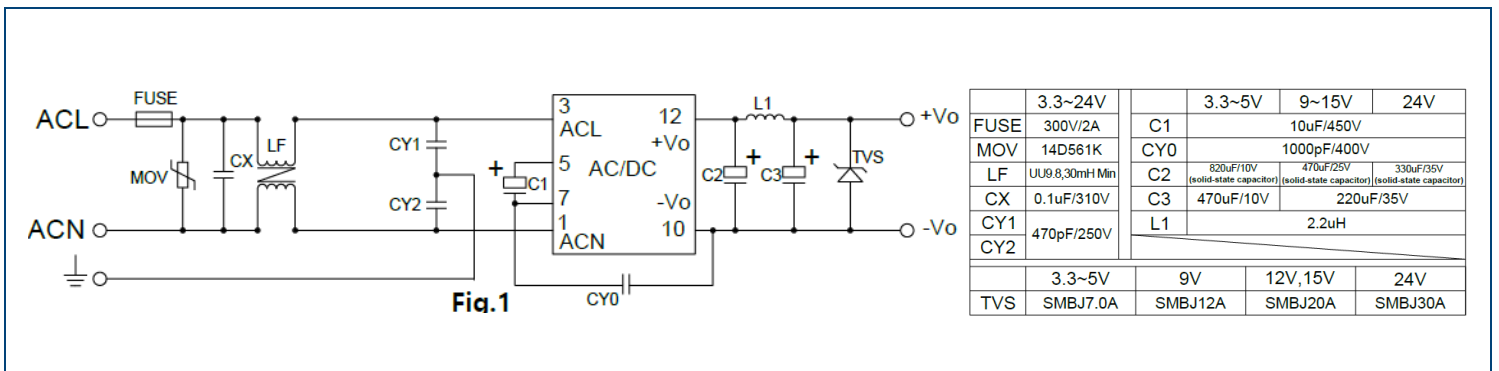
1. Straight pin is the standard package type. Add "-F" suffix for 90° bend pin type. Ex. PSGS3-S05-F
2. The product is able to work with 0%-10% load and with stable output.
3. Product is Listed to applicable standards and requirements by UL.
4. See Fig. 1 for recommended circuit.

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

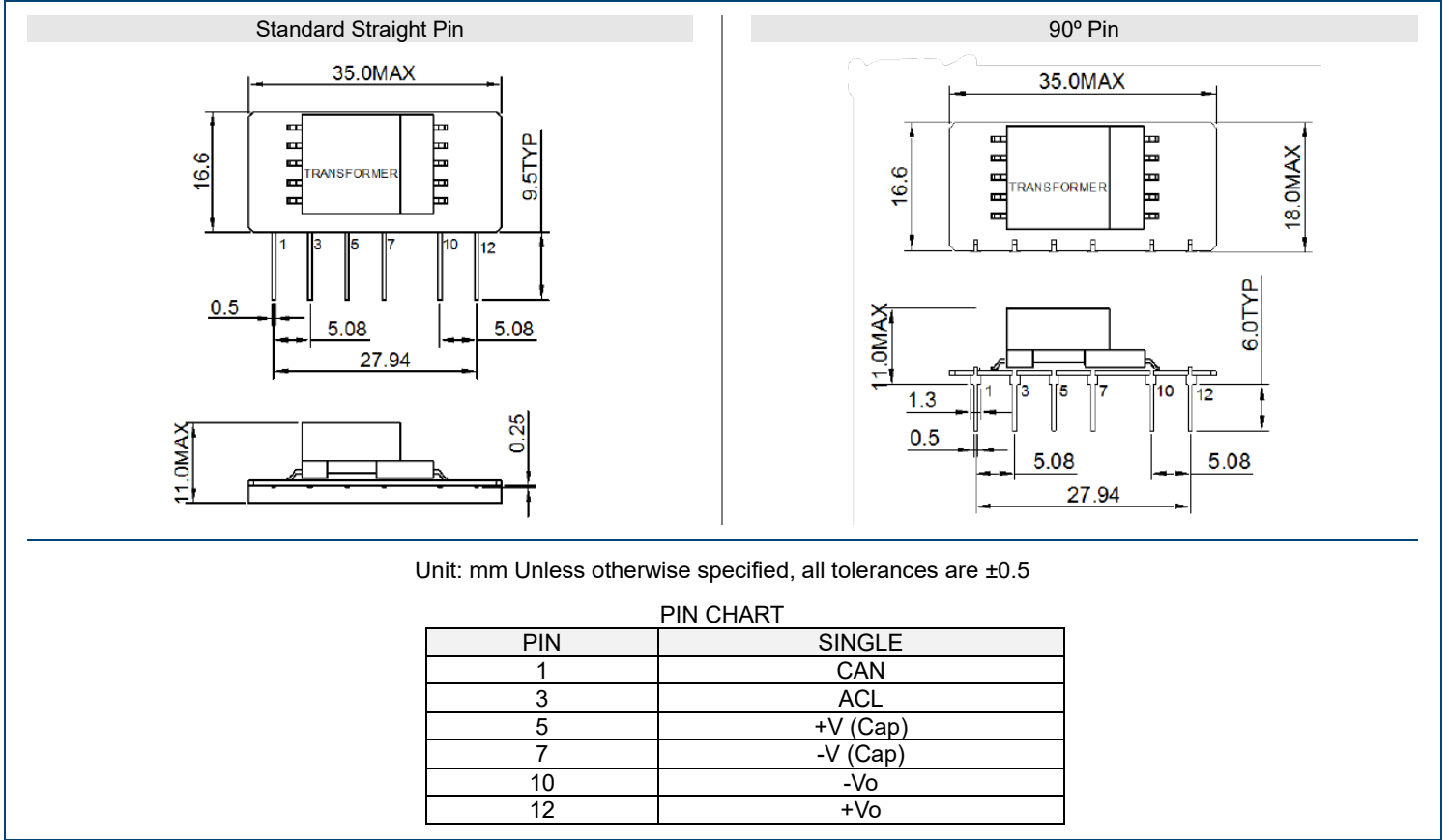
**DERATING CURVES**



**EMC SOLUTION-RECOMMENDED CIRCUIT**



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.

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Contact **Wall Industries** for further information:

Phone: ☎(603)778-2300  
 Toll Free: ☎(888)597-9255  
 Fax: ☎(603)778-9797  
 E-mail: [sales@wallindustries.com](mailto:sales@wallindustries.com)  
 Web: [www.wallindustries.com](http://www.wallindustries.com)  
 Address: 37 Industrial Drive  
 Exeter, NH 03833

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