



Size: 7.05in x 3.90in x 1.81in  
(179mm x 99mm x 30mm)

**FEATURES**

- Universal 85-305VAC or 120~430VDC Input Voltage
- Accepts AC or DC Input (Dual-Use of Same Terminal)
- Built-In Active PFC Function
- High I/O Isolation Test Voltage up to 4000VAC
- Remote ON-OFF control
- Output Short Circuit, Over Current, Over Voltage, and Over Temperature Protection
- Up to 87% efficiency
- Emissions meets CISPR32/EN55032 CLASS B without extra components
- IEC/EN/UL62368, IEC/EN60335, GB4943, EN61558 Safety Standards

**APPLICATIONS**

- Industrial
- LED
- Street Light Control
- Security
- Telecommunications
- Smart Home

**DESCRIPTION**

The PSEF100 series of AC/DC switching power supplies offers up to 102 watts of output power in an enclosed 7.05" x 3.90" x 1.81" package. This series consists of single output models with an input voltage range of 85~305VAC or 120~430VAC as this series accepts AC or DC input. Each model features built-in active PFC function, high isolation test voltage, and efficiency up to 87%. This series has short circuit, over current, over voltage, and over temperature protection, and also has IEC/EN/UL62368, IEC/EN60335, GB4943, EN61558 safety standards.

**MODEL SELECTION TABLE**

Model Number <sup>(1)</sup>	Input Voltage Range	Output Voltage	Output Current	Output Voltage Adjustable Range	Max. Ripple & Noise	Output Power	Maximum Capacitive Load	Efficiency
PSEF100-12S	85-305VAC (120-430VDC)	12V	8.5A	11.4 - 13.8V	100mV	102W	5000µF	85%
PSEF100-15S		15V	6.7A	14.3 - 16.5V	100mV	100.5W	5000µF	86%
PSEF100-24S		24V	4.2A	22.8 - 27.6V	150mV	100.8W	4200µF	86%
PSEF100-48S		48V	2.1A	45.6 - 55.2V	250mV	100.8W	2000µF	87%

**SPECIFICATIONS**

All specifications are based on 25°C, Humidity <75%RH, Nominal Input Voltage, and Rated Output Load 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>						
Input Voltage Range	AC Input		85		305	VAC
	DC Input		120		430	VDC
Input Voltage Frequency			47		63	Hz
Input Current	85VAC				1.7	A
	115VAC				1.3	
	230VAC				0.7	
Inrush Current	Cold Start	115VAC		25		A
		230VAC		45		
Power Factor	Full Load	115VAC	0.97	0.98		
		230VAC	0.92	0.93		
Hot Plug				Unavailable		
Leakage Current					2	mA
<b>OUTPUT SPECIFICATIONS</b>						
Output Voltage				See Table		
Voltage Accuracy	Full Load Range	12V/15V		±2		%
		24V/48V		±1		
Line Regulation	Rated Load			±0.5		%
Load Regulation	0% - 100%	12V/15V/24V/48V		±0.5		%
Output Voltage Adjustable Range				See Table		
Output Power				See Table		
Output Current				See Table		
Minimum Load			0			%
Maximum Capacitive Load				See Table		
Ripple & Noise <sup>(2)</sup>	20MHz bandwidth (peak-to-peak value)	12V/15V			100	mV
		24V			150	
		48V			200	
Hold-Up Time	230VAC		16			ms
Temperature Coefficient				±0.05		%/°C
Standby Power Consumption	230VAC	12V/15V/24V			2.0	W
		48V			2.5	

**SPECIFICATIONS**

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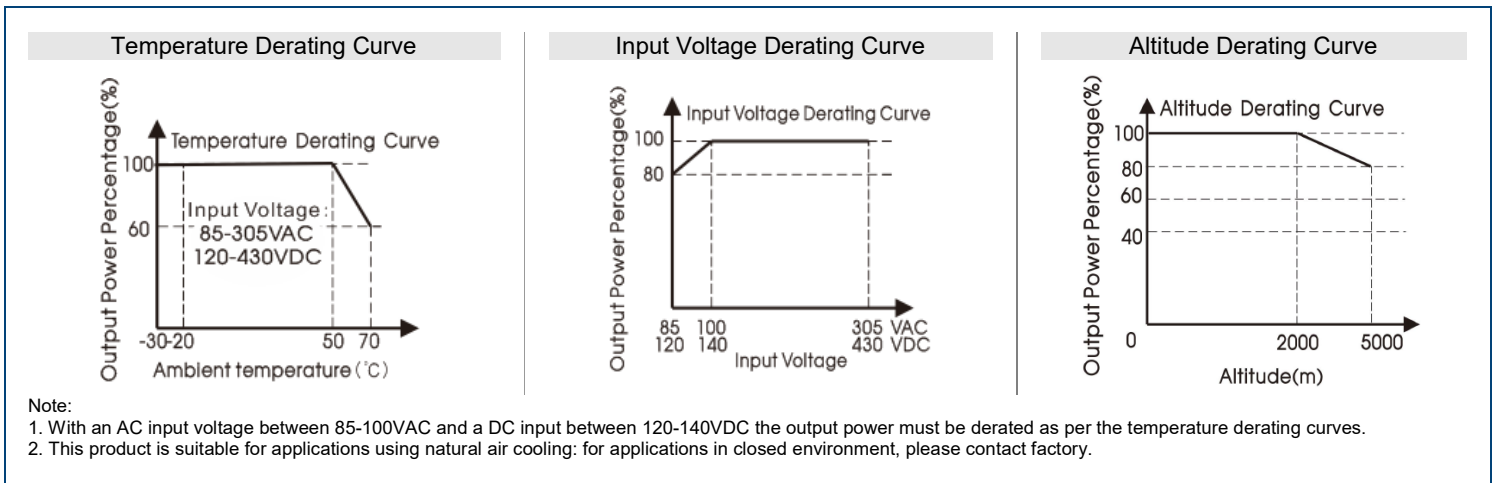
SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
<b>PROTECTION</b>						
Short Circuit Protection	Recovery time <3s after the short circuit disappears		Constant current, continuous, self-recovery			
Over Current Protection	Constant current, self-recovery		105		150	%Io
Over-voltage Protection	Output voltage hiccup	12V		≤16.8		V
		15V		≤20.25		
		24V		≤32.4		
		48V		≤60		
Over Temperature Protection <sup>(3)</sup>			Hiccup, Self-Recovery			
<b>REMOTE CONTROL (CN1)</b>						
Power ON	0-0.8VDC or Floating		0		0.8	VDC
Power OFF	4-10VDC		4		10	VDC
<b>ENVIRONMENTAL SPECIFICATIONS</b>						
Operating Temperature			-30		+70	°C
Storage Temperature			-40		+85	°C
Storage Humidity	Non-Condensing		10		95	%RH
Operating Humidity	Non-Condensing		20		90	%RH
Power Derating	+50°C to +70°C		2			%/°C
	85VAC-100VAC		1.33			%/VAC
MTBF	2000m-5000m		6.66			%Km
	MIL-HDBK-217F@25°C		300,000			H
<b>GENERAL SPECIFICATIONS</b>						
Efficiency			See Table			
Switching Frequency				65		kHz
Isolation Test	Electric Strength Test for 1min., leakage current <10mA	Input - $\perp$	2000			VAC
		Input - Output	4000			
Insulation Resistance	Testing Voltage: 500VDC Environment Temperature: 25±5°C Humidity <95%RH, non-condensing	Output - $\perp$	500			MΩ
		Input - $\perp$	100			
<b>PHYSICAL SPECIFICATIONS</b>						
Weight			1.01lbs (460g)			
Dimensions (L x W x H)			7.05in x 3.90in x 1.81in (179mm x 99mm x 30mm)			
Case Material			Metal (AL1100, SGCC)			
Cooling			Free air convection			
<b>SAFETY CHARACTERISTICS</b>						
Safety Standard <sup>(4)</sup>			IEC/EN/UL62368, IEC/EN60335, GB4943, IEC/EN61558			
Safety Certification <sup>(4)</sup>			IEC/EN/UL62368, GB4943			
Safety Class			Class I			
Emissions	CE	CISPR32/EN55032	Class B			
	RE	CISPR32/EN55032	Class B			
	Harmonic Current	IEC/EN61000-3-2	Class A			
	Voltage Flicker	IEC/EN61000-3-3				
Immunity	ESD	IEC/EN 61000-4-2	Contact ±6KV/Air ±8KV		Perf. Criteria A	
	RS	IEC/EN 61000-4-3	3V/m		Perf. Criteria B	
	EFT	IEC/EN 61000-4-4	±2KV		Perf. Criteria A	
	Surge	IEC/EN 61000-4-5	Line to Line ±1KV / Line to Ground ±2KV		Perf. Criteria A	
	CS	IEC/EN 61000-4-6	10 Vr.m.s		Perf. Criteria A	
	DIP	IEC/EN 61000-4-11	0%, 70%		Perf. Criteria B	

**NOTES**

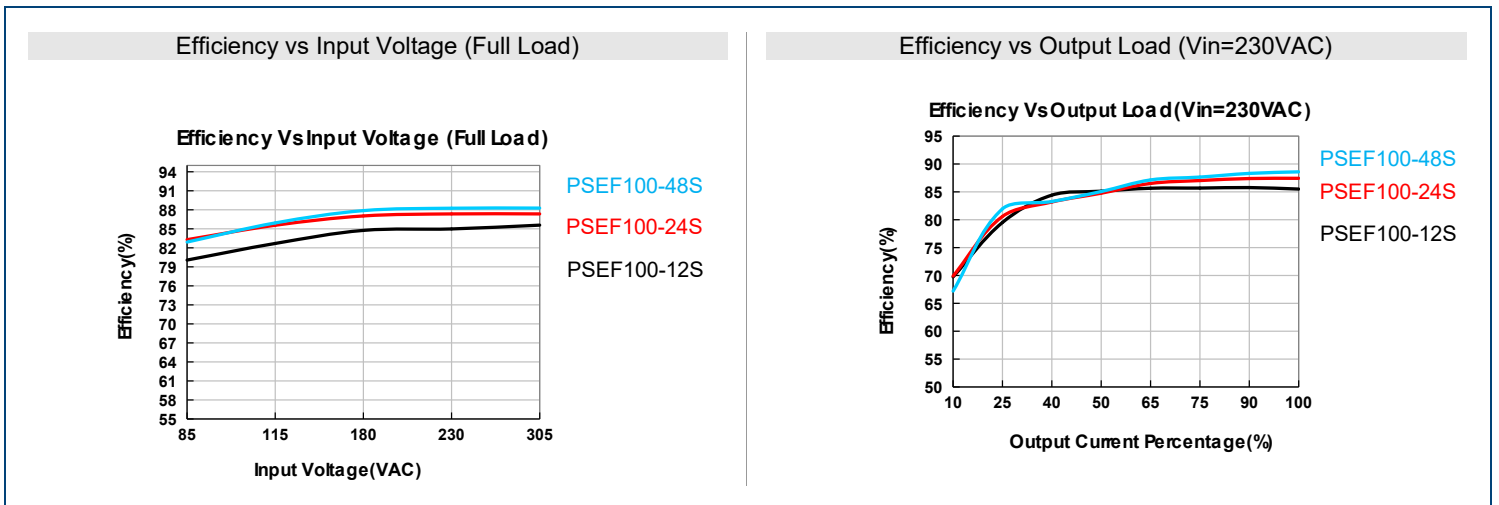
1. Add "C" to model number to indicate terminal with protective cover, and "Q" to model number for conformal coating.
2. Tip and barrel method is used for ripple and noise test. Output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor, contact factory for more information.
3. Over-Temperature Protection needs to be tested under rated full load conditions.
4. This product is Listed to applicable standards and requirements by UL.
5. In order to improve the efficiency at high input voltage, there will be audible noise generated, but does not affect product performance and reliability.
6. Product customization service is available, please contact factory for more details.
7. Out case needs to be connected to earth of system when terminal equipment in operating.
8. Products should be classified according to ISO14001 and related environmental laws and regulations and should be handled by qualified.
9. Power supply is considered a component which will be installed into terminal equipment. All EMC tests should be confirmed with final equipment.

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

**DERATING CURVES**

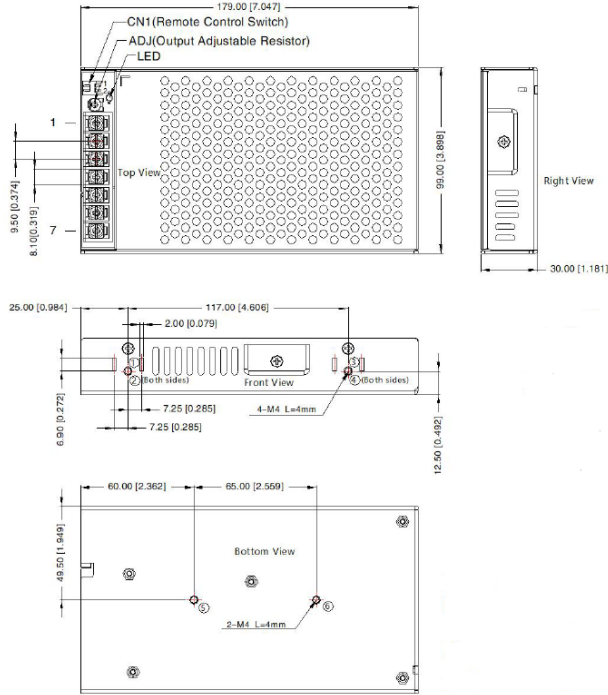


**EFFICIENCY GRAPHS**

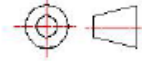


MECHANICAL DRAWINGS

Standard and "Q" Suffix Models



THIRD ANGLE PROJECTION



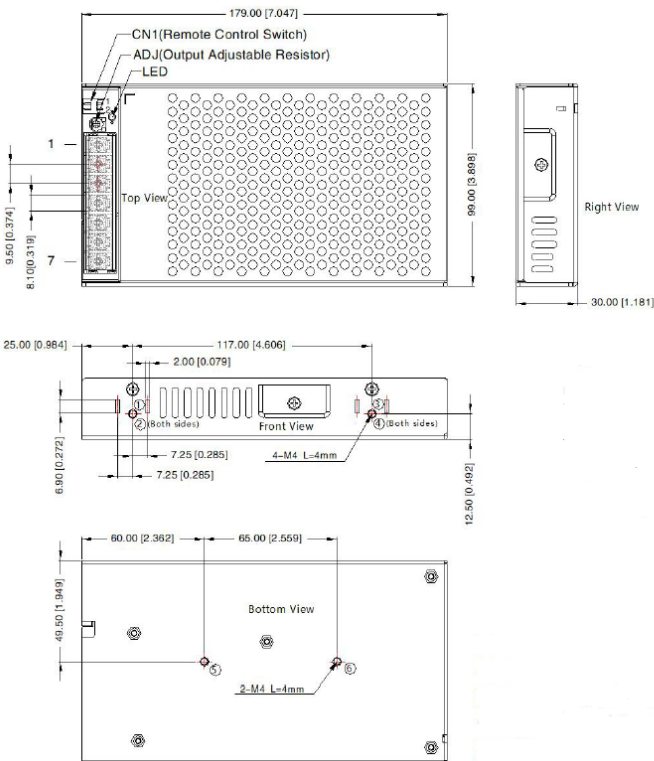
Pin Out	
Pin	Mark
1	+Vo
2	+Vo
3	-Vo
4	-Vo
5	⊕
6	AC(N)
7	AC(L)

①-⑥ any position must be connected to the earth (⊕)

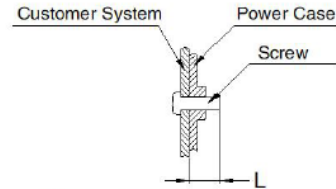
CN1: KANGDAO TJC3-NAWD-2P or the same spec.

Pin	Function	Connector	Terminal
1	RC+	KANGDAO XH25001-2Y or the same spec.	KANGDAO XH2.54-TE or the same spec.
2	RC-		

"C" Suffix Models



Position	Screw Spec.	L(max)	Torque(max)
①-⑥	M4	4mm	0.9N·m



Note:  
Unit: mm [inch]  
Wire range: 22-12AWG  
Connector Tightening Torque: M3.5, 0.8N·m  
General tolerances: ±1.00 [±0.039]

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**COMPANY INFORMATION**

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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.

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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