



Size: 7.64in x 2.17in x 1.02in  
(194mm x 55mm x 26mm)

**FEATURES**

- Universal 85-305VAC or 120~430VDC Input Voltage
- Accepts AC or DC Input (Dual-Use of Same Terminal)
- Semi-Potted Process, Fanless Design
- High I/O Isolation Test Voltage up to 4000VAC
- Ultra-Narrow Package
- Output Short Circuit, Over Current, Over Voltage, and Over Temperature Protection
- Compact Size with Low 1U Profile
- High Efficiency
- Active PFC
- GB4943.1, EN62368-1, and BS EN62368-1 Safety Approvals

**APPLICATIONS**

- Industrial
- Lighting
- Security
- Telecommunications
- Smart Home

**DESCRIPTION**

The PSEH200 series of AC/DC switching power supplies offers up to 201.6 watts of output power in an enclosed 7.64" x 2.17" x 1.02" ultra-slim 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 fanless design. This series has short circuit, over current, over voltage, and over temperature protection, and also has GB4943.1, EN62368-1, and BS EN62368-1 safety approvals.

**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
PSEH200-05S	85-305VAC (120-430VDC)	5V	40A	4.5-5.5V	200mV	200W	10000µF	91%
PSEH200-12S		12V	16.7A	11.4 - 12.6V	240mV	200.4W	8000µF	93%
PSEH200-24S		24V	8.4A	22.8 - 25.2V	240mV	201.6W	5000µF	94%
PSEH200-36S		36V	5.6A	34.2-37.8V	240mV	201.6W	3000µF	94%
PSEH200-48S		48V	4.2A	45.6 - 50.4V	300mV	201.6W	2000µF	94%

**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
	AC Input	DC Input				
<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	115VAC			2.1	2.5	A
	230VAC			1.0	1.2	
Inrush Current	Cold Start	115VAC		40		A
		230VAC		80		
Power Factor	Full Load	115VAC		0.98		
		230VAC		0.95		
Leakage Current Hot Plug	240VAC				0.5	mA
<b>OUTPUT SPECIFICATIONS</b>						
Output Voltage						See Table
Voltage Accuracy	Full Load Range	5V		±2.0		%
		12V/24V/36V/48V		±1.0		
Line Regulation	Rated Load	5V		±0.5		%
		12V/24V/36V/48V		±0.5		
Load Regulation	0% - 100% load	5V		±1.0		%
		12V/24V/36V/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)	5V			200	mV
		12V/15V/26V			240	
		48V			300	
Hold-Up Time	115VAC/230VAC		10			ms
Temperature Coefficient				±0.03		%/°C

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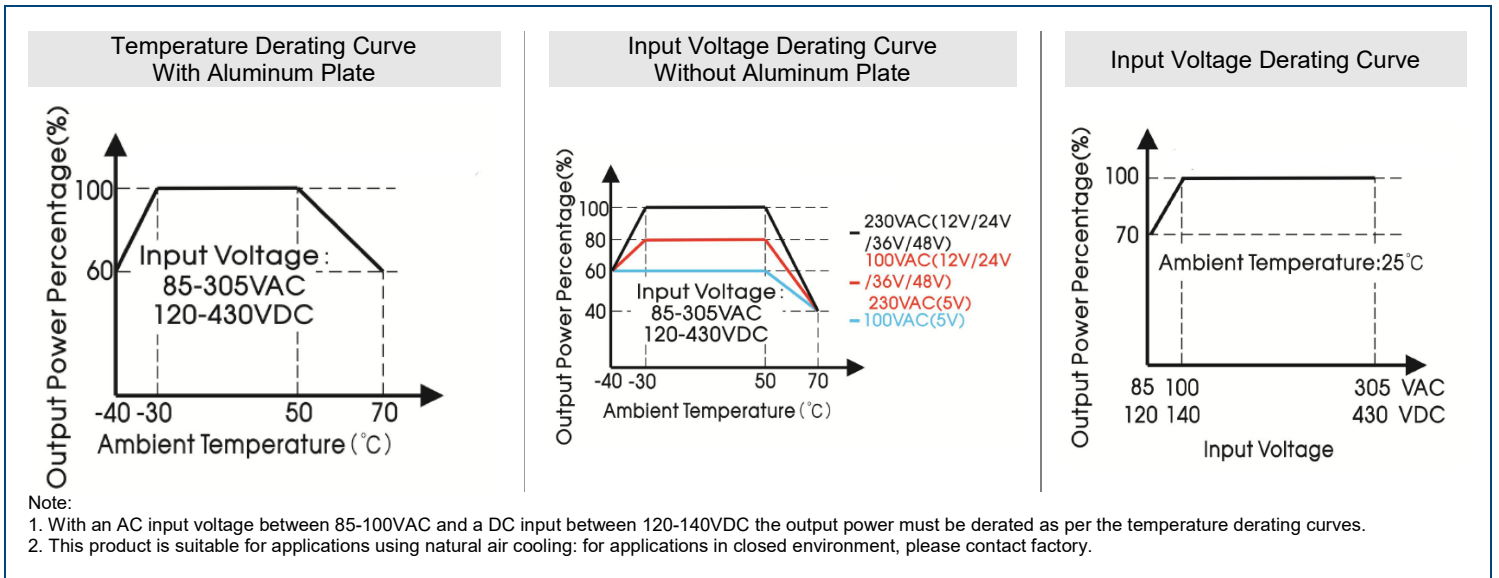
SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit	
<b>PROTECTION</b>							
Short Circuit Protection	Recovery time <10s after the short circuit disappears	5V	Hiccup mode, continuous current (200%Io-300%Io) works 200ms, turn off 10s, continuous, self-recovery				
		12V/24V/36V/48V	Hiccup mode, continuous current (200%Io-300%Io) works 1s, turn off 10s, continuous, self-recovery				
Over Current Protection	230VAC Rated Load	Normal Temperature, High Temperature	105%-200% Io, delay protection, delay time 1s, self-recovery after the abnormality is removed				
		Low Temperature	≥105%, delay protection, delay time 1s, self-recovery after the abnormality is removed				
Over-voltage Protection	Hiccup, Self-Recovery	5V		≤6.3		V	
		12V		≤16			
		24V		≤35			
		36V		≤47			
		48V		≤60			
Over Temperature Protection	Output voltage turn-off, self-recover after the temperature drops						
<b>ENVIRONMENTAL SPECIFICATIONS</b>							
Operating Temperature			-40		+70	°C	
Storage Temperature			-40		+85	°C	
Storage Humidity	Non-Condensing		10		95	%RH	
Operating Humidity	Non-Condensing		20		90	%RH	
Power Derating	Operating Temperature Derating	With aluminum plate	-40°C to -30°C	4.0		% / °C	
			+50°C to +70°C	2.0			
		Without aluminum plate	230VAC, Others	-40°C to -30°C	4.0		
				+50°C to +70°C	3.0		
			230VAC, 5V & 100VAC, Others: 80%Io	-40°C to -30°C	2.0		
				+50°C to +70°C	2.0		
Input Voltage Derating	85VAC-100VAC	+50°C to +70°C	1.0				
MTBF	MIL-HDBK-217F@25°C		≥300,000			H	
<b>GENERAL SPECIFICATIONS</b>							
Efficiency	@230VAC		See Table				
Isolation Test	Electric Strength Test for 1min., leakage current <10mA	Input - ⊥	2000			VAC	
		Input - Output	4000				
		Output - ⊥	1250				
Insulation Resistance	500VDC	Input - ⊥	100			MΩ	
		Input - Output	100				
		Output - ⊥	100				
<b>PHYSICAL SPECIFICATIONS</b>							
Weight			15.17oz (430g)				
Dimensions (L x W x H)			7.64in x 2.17in x 1.02in (194mm x 55mm x 26mm)				
Case Material			Metal (AL6063, SGCC)				
Cooling			Free Air Convection				
<b>SAFETY CHARACTERISTICS</b>							
Safety Standard <sup>(4)</sup>			GB4943.1 Safety Approved & EN62368-1, BS EN62368-1 (Report) Design Refers to UL62368-1, EN60335-1, EN61558-1				
Safety Class			Class I				
Emissions	CE	CISPR32/EN55032	Class B				
	RE	CISPR32/EN55032	Class B				
	Harmonic Current	IEC/EN61000-3-2	Class A, Class C and Class D				
Immunity	ESD	IEC/EN 61000-4-2	Contact ±6KV/ Air ±8KV			Perf. Criteria A	
	RS	IEC/EN 61000-4-3	10V/m			Perf. Criteria A	
	EFT	IEC/EN 61000-4-4	±4KV			Perf. Criteria A	
	Surge	IEC/EN 61000-4-5	Line to Line ±2KV/ Line to Ground ±4KV			Perf. Criteria A	
	CS	IEC/EN 61000-4-6	10 Vr.m.s			Perf. Criteria A	
	Voltage dips, short interruptions, and voltage variations immunity	IEC/EN 61000-4-11	0%, 70%			Perf. Criteria B	
	Intercom Interference Test	MS-SOP-DQC-007				Perf. Criteria B	

**NOTES**

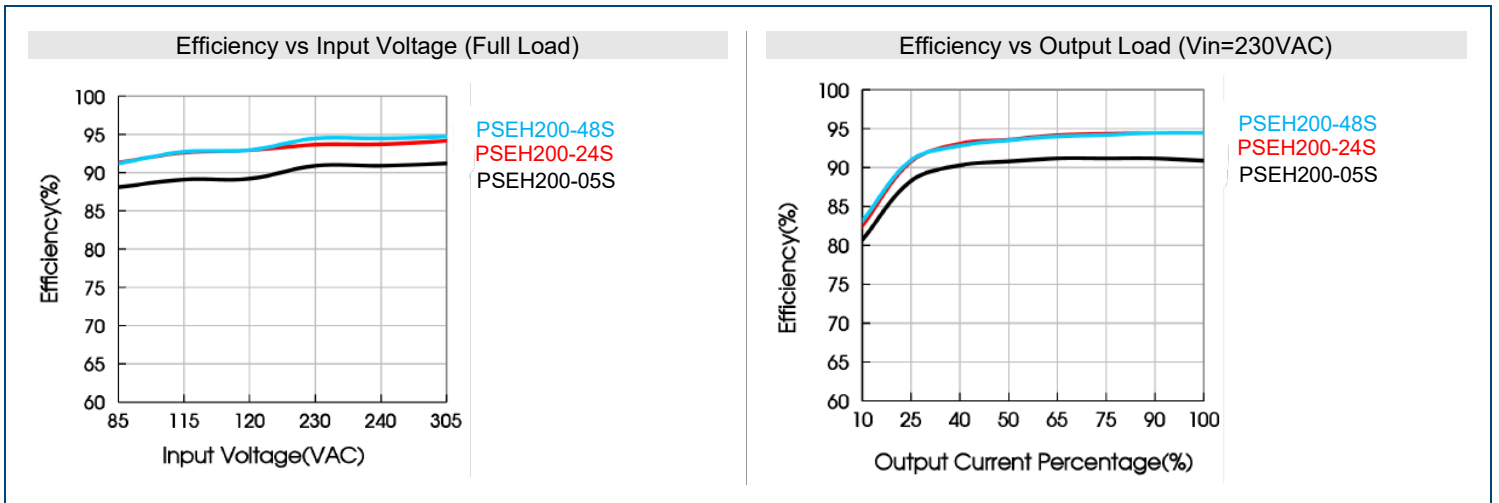
1. For 12V & 24V Output, add "Y" to model number to indicate a product with optional salt-spray proof at terminal.
2. Tip and barrel method is used for ripple and noise test. Output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor, contact factory for more information.
3. In order to optimize the heat dissipation performance when the aluminum plate is used for auxiliary heat dissipation. Please note:
  - a. the size of the aluminum plate is 450mm x 450mm x3mm.
  - b. The surface of the aluminum plate must be coated with thermal grease.
  - c. The product must be tightly attached to the aluminum plate.
4. This product is Listed to applicable standards and requirements by UL.
5. The room temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m.
6. In order to improve the efficiency at high input voltage, there will be audible noise generated, but does not affect product performance and reliability.
7. Product customization service is available, please contact factory for more details.
8. Out case needs to be connected to PE (≡) of system when terminal equipment is operating.
9. Output voltage can be adjusted b the ADJ. clockwise to increase.
10. Products should be classified according to ISO14001 and related environmental laws and regulations and should be handled by qualified units.
11. 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

THIRD ANGLE PROJECTION

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

①-⑧ any position must be connected to the earth (⊥)

Note:  
Unit: mm[inch]  
ADJ: Output Voltage Adjustable Resistor  
General Tolerances: ±1.00 [±0.039]  
①-④ any position must be connected to the earth ⊥

Connector Wires Range				
Pin. No	Input Connector	Output Connector (Single Wire)	Output Connector (Double Wire)	Output Connector (Double Wires) Pic.
5V	22-14AWG	No Suggestion	14-12AWG	
12V		14-12AWG	18-12AWG	
24/36/48V		18-12AWG	20-12AWG	
Screw/Torque	M3.0, Max. 0.5N·m	M3.5, Max. 0.8N·m		

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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