



Size: 7.2in x 4.30in x 1.5~1.65in
(182.9mm x 109.2mm x 38~42mm)

FEATURES

- Universal Input Voltage Range of 85~264VAC
- ActiveDroop Current Share
- RoHS Compliant
- REACH Compliant
- 3 Years Warranty
- Several Connector Options Available
- High Efficiency
- Power Good
- Open Frame or Enclosed Type
- Over Voltage, Over Current, Short Circuit, Over Temperature Protection
- OVCI
- Optional Load Share
- Low Standby Power
- 3000VAC Reinforced Insulation
- No Min. Load Required
- Remote On Off
- Meets IEC/EN/UL 62368-1 Safety

APPLICATIONS

- Industrial
- Automation
- Datacom
- IPC
- Measurement
- Telecom

DESCRIPTION

The PSESL500 series of AC/DC power supplies offers up to 500 watts of output power in a compact 7.2" x 4.3" x 1.5~1.65" open frame or enclosed package. This series consists of single output models with a universal input voltage range of 85~264VAC (88~370VDC). Each model in this series features low standby power, high efficiency, and 3000VAC reinforced insulation. Several options are available for this series including package type and load share. This series also has over voltage, over current, over temperature, and short circuit protection, is RoHS and REACH compliant, and meets IEC/EN/UL 62368-1 safety standards.

MODEL SELECTION TABLE

Model Number ⁽¹⁾	Input Voltage Range	Output Voltage	Output Current		Ripple & Noise	Output Power	Efficiency	Maximum Capacitor Load
			Min Load	Max Load				
PSESL500-12S	85~264VAC (120~370VDC)	12VDC	0%	42A	200mVp-p	Up to 500W	91%	16000μF
PSESL500-15S		15VDC	0%	33.5A	200mVp-p	Up to 500W	91%	10000μF
PSESL500-24S		24VDC	0%	21A	240mVp-p	Up to 500W	93%	2000μF
PSESL500-28S		28VDC	0%	18A	280mVp-p	Up to 500W	93%	1000μF
PSESL500-48S		48VDC	0%	10.5A	480mVp-p	Up to 500W	93%	470μF
PSESL500-54S		54VDC	0%	9.4A	540mVp-p	Up to 500W	93%	470μF

SPECIFICATIONS

All specifications are typical based on 25°C, 230VAC Input, and Full Load unless otherwise noted.
We reserve the right to change specifications based on technological advances.

We reserve the right to change specifications without notice based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
INPUT SPECIFICATIONS					
Input Voltage Range	AC Input	85		264	VAC
	DC Input	88		370	VDC
Input Frequency	AC Input	47		63	Hz
Input Current	100VAC, Full Load			6.3	A
	240VAC, Full Load			2.7	
No Load Input Power	230VAC		0.8		W
Input Inrush Current	230VAC, Full Load		30		A
Input Protection		T10A/250VAC			
Power Factor	230VAC, Full Load	0.9			
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Accuracy	230VAC and Full Load	-1.0		+1.0	%
Line Regulation	Low Line to High Line at Full Load	-0.2		+0.2	%
	No Load to Full Load	-0.5		+0.5	%
Load Regulation	10% Load to 90% Load	-0.4		+0.4	
	Voltage Adjustability	Maximum output deviation is inclusive of remote sense	-10		+10
Only for load share models (-S Suffix)		-5		+5	
Output Power	@230VAC, Conduction Cooling, see derating curve	See Table			
Output Current	@230VAC, Conduction Cooling	See Table			
Minimum Load			0		%

SPECIFICATIONS

All specifications are typical based on 25°C, 230VAC Input, and Full Load unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION		TEST CONDITIONS		Min	Typ	Max	Unit
OUTPUT SPECIFICATIONS (CONT.)							
Ripple & Noise	Measured by 20MHz bandwidth With a 1μF/50V 1206 X7R MLCC	12Vout, 15Vout			200		mVp-p
		24Vout			240		
		28Vout			280		
	With a 1μF/100V 1206 X7R MLCC	48Vout			480		
		54Vout			540		
Transient Response	Load step from 50~75% change at 2.5A/μs Recovery within 1% Vout	Peak Deviation			3		%Vout
		Recovery Time			600		μs
Start-Up Time						2000	ms
Rise Time	24Vout, 28Vout, 36Vout				20		ms
Hold Up Time	115VAC and Full Load				16		mS
Temperature Coefficient				-0.02		+0.02	%/
Remote Sense ⁽²⁾	% of Vout(nom)					10	%
REMOTE ON/OFF ⁽³⁾							
Output ON			0~0.8VDC or Open				
Output OFF			4.5			12.5	VDC
Input Current						20	mA
Main Output Power Good Signal	Referenced to “-Vout”	Power Good	Low				
		Power Off	Open Collector				
PROTECTION							
Short Circuit Protection			Continuous, Automatic Recovery				
Over Load Protection	% of Maximum Iout Rated; Hiccup Mode				140		%
Over Voltage Protection	% of Vout(nom); Latch Mode		115			135	%
Over Temperature Protection	Internal Thermistor; Automatic Recovery				115		°C
ENVIRONMENTAL SPECIFICATIONS							
Operating Ambient Temperature	With Derating		-40			+100	°C
Storage Temperature			-55			+105	°C
Operating Altitude						5000	m
Relative Humidity	Non-Condensing		5			95	%RH
Shock			IEC60068-2-27				
Vibration			IEC60068-2-6				
MTBF	MIL-HDBK-217F, Full Load				2.5x10 ⁵		Hours
GENERAL SPECIFICATIONS							
Efficiency			See Table				
Switching Frequency	230VAC and Full Load				180		kHz
Isolation Voltage	1 minute (Reinforced insulation)	Input to Output	3000				VAC
		Input (Output) to F.G.	2000				
Isolation Resistance	500VDC		0.1				GΩ
Load Share (-S Suffix)	The converter can parallel to increase output current. It has internal load share function in this converter.		Active droop current share models				
Droop Rate (-S Suffix)	No Load to Full Load				4		%
Load Share Accuracy (-S Suffix)	Full Load				20		%
PHYSICAL SPECIFICATIONS							
Weight	Open Type		20.45oz (580g)				
	Enclosed Case		22.56oz (640g)				
Dimensions (L x W x H)	Open Type		7.2 x 4.30 x 1.5in (182.9 x 109.2 x 38mm)				
	Enclosed Case		7.2 x 4.30 x 1.65in (182.9 x 109.2 x 42mm)				
SAFETY CHARACTERISTICS							
Safety Standards ⁽²⁾			IEC/EN/UL 62368-1				
EMI	EN55032 and FCC Part 15		Conducted		Class B		
			Radiated		Class A		
Harmonic Currents	EN61000-3-2	Full Load	Class D				
Voltage Flicker	EN61000-3-3						
EMS	EN55035						
ESD	EN61000-4-2		Perf. Criteria A				
Radiated Immunity	EN61000-4-3	20V/m	Perf. Criteria A				
Fast Transient	EN61000-4-4	±2kV	Perf. Criteria A				
Surge	EN61000-4-5	DM ±1kV and CM ±2kV	Perf. Criteria A				
Conducted Immunity	EN61000-4-6	10 Vr.m.s	Perf. Criteria A				
Power Frequency Magnetic Field	EN61000-4-8	30 A/m	Perf. Criteria A				
Dip and Interruptions	EN61000-4-11						

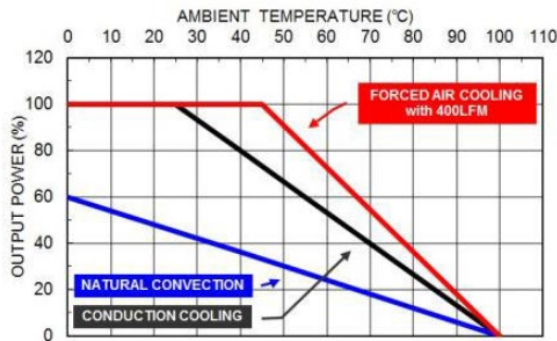
NOTES

1. See Model Number Setup for suffix details.
2. If remote sense is not being used, sense pins should be connected to corresponding polarity OUTPUT pins.
3. External power supply is required between +Ctrl and -Ctrl

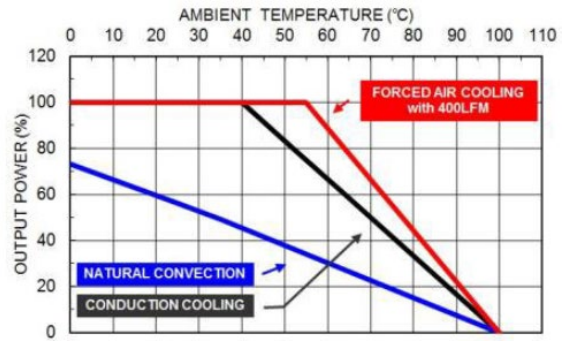
**Due to advances in technology, specifications subject to change without notice.*

DERATING CURVES

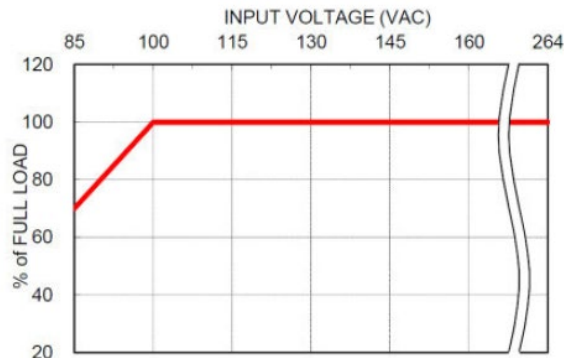
Derating Curve vs. Ambient Temperature
Vin=115VAC Open Type/Enclosed Type
Conduction cooling tested by 482.6x222.2x2mm plate



Derating Curve vs. Ambient Temperature
Vin=230VAC Open Type/Enclosed Type
Conduction cooling tested by 482.6x222.2x2mm plate

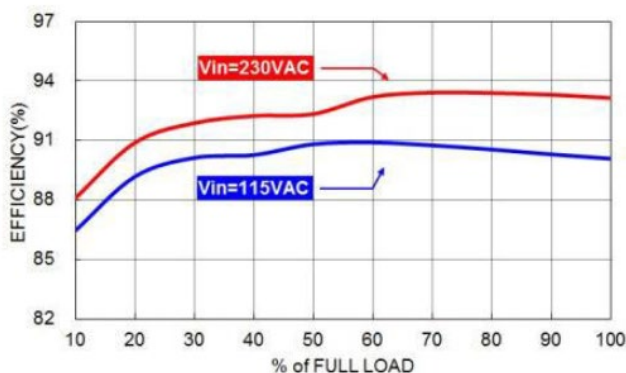


Derating Curve vs Input Voltage



EFFICIENCY GRAPHS

PSESL500-24S Efficiency vs. Output Load

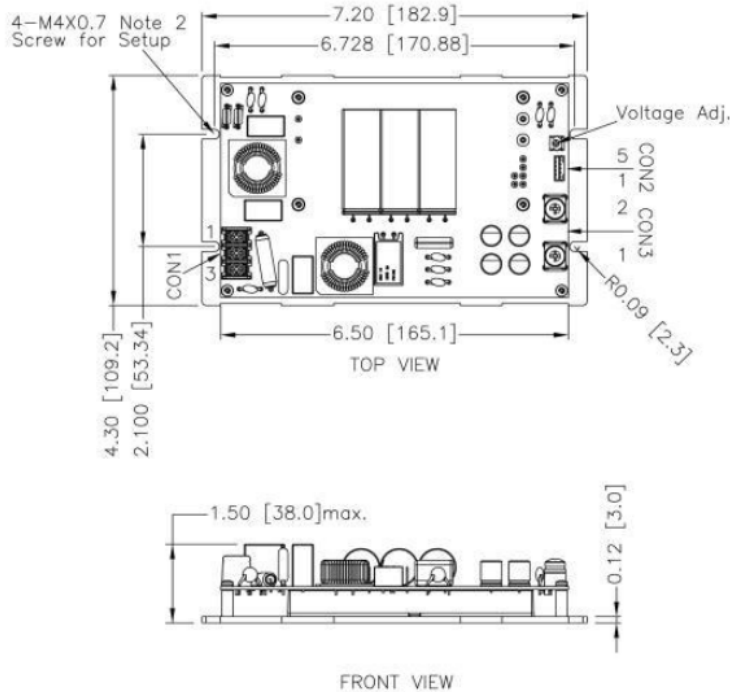


PSESL500-24S Efficiency vs. Input Voltage



MECHANICAL DRAWINGS

Open Frame



CONNECTORS

CON1 - Input Connector

Pin 1	Line
Pin 2	Neutral
Pin 3	FG

Mates with

KST Ring Terminal: RV1-3.2
Screw Locked Torque: MAX 8.1Kgf.cm/0.8N.m

CON2 - Aux Connector

Pin 1	+PG
Pin 2	+V Sense
Pin 3	-V Sense
Pin 4	+Control
Pin 5	-Control

Mates with

Landwin housing: 2001S
Landwin crimp terminals: 2005T

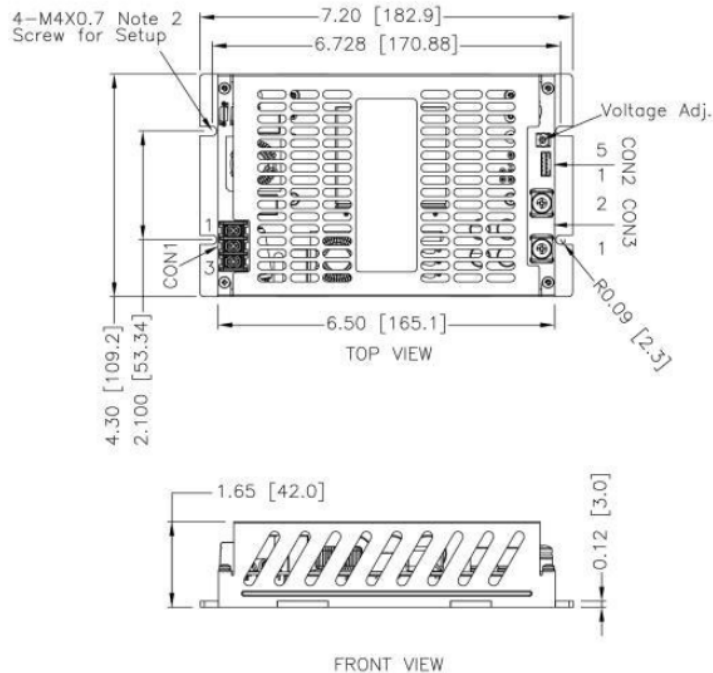
CON3 - Output Connector

Pin 1	+Vout
Pin 2	-Vout

Mates with

KST ring terminal: RV5-5
Screw locked torque: MAX 16.8Kgf.cm/1.65N.m

Enclosed Type ("-C" Suffix)



Notes:

1. All dimensions in inch [mm]
2. Tolerance: $x.xx \pm 0.02$ [$x.x \pm 0.5$]

$x.xxx \pm 0.01$ [$x.xx \pm 0.25$]

3. The screw locked torque: MAX 10.4Kgf.cm/1.02N.m

MODEL NUMBER SETUP

PSESL	500	-	5	S	-	C	S
Series Name	Output Power		Output Voltage	Output Quantity		Case Type	Load Share Options
			12: 12VDC 15: 15VDC 24: 24VDC 28: 28VDC 48: 48VDC 54: 54VDC	S: Single Output		Blank: Open Frame C: Enclosed Type	Blank: None S: Load Share

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 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
Web: www.wallindustries.com
Address: 37 Industrial Drive
Exeter, NH 03833

©2024 Wall Industries, Inc. Specifications subject to change without notice. Wall Industries is not responsible for typographical errors. The information contained herein is for informational purposes only. This information is provided by Wall Industries and we make no representations or warranties of any kind, express or implied, about the completeness, accuracy, reliability, suitability or availability with respect to the information contained in this document for any purpose. All product and manufacturer names are trademarks or registered trademarks of their respective companies.