



Size: 9.17in x 4.3in x 2.5in (233.7mm x 109.2mm x 63.5mm)

## FEATURES

- Optional Top Cover Available
- Universal AC Input/Full Range
- Optional N+1 Active Current Sharing
- Peak Power 900W within 500 $\mu$ S duty duration
- Power Factor Corrected to EN61000-3-2 Class D
- High Power Density (Max. 9.1 Watts per cubic inch)
- Approved to UL/CUL/TUV/CB/CE & Class B Emissions
- Enclosed with Built-in Fan Mechanical Options

## DESCRIPTION

The PSRL5017R5 series of AC DC power supplies provides up to 500W of output power. All models have a single output and a universal input. Models are available as enclosed with built-in Fan (Type E). Output connectors are Howder terminal block design. Optional Mating Molex outputs are also available. Please contact factory for ordering details.

MODEL SELECTION TABLE

Model Number	Output Voltage Range	Output Current	Ripple & Noise	Preset Voltage	Output Power	Regulation
PSRL5017Rx5-03(I)	2-3.3VDC	80A	75mV	3.3VDC	264W	$\pm$ 1%
PSRL5017Rx5-05(I)	5-6VDC	80A	75mV	5VDC	400W	$\pm$ 1%
PSRL5017Rx5-12(I)	12-15VDC	41.67A	$\pm$ 1%	12VDC	500W	$\pm$ 1%
PSRL5017Rx5-16(I)	16-21VDC	31.25A	$\pm$ 1%	18VDC	500W	$\pm$ 1%
PSRL5017Rx5-24(I)	22-30VDC	22.73A	$\pm$ 1%	24VDC	500W	$\pm$ 1%
PSRL5017Rx5-36(I)	31-47VDC	16.13A	$\pm$ 1%	36VDC	500W	$\pm$ 1%
PSRL5017Rx5-48(I)	48-56VDC	10.42A	$\pm$ 1%	48VDC	500W	$\pm$ 1%

**SPECIFICATIONS: PSRL5017R5**

All specifications are based on 25°C, Nominal Input Voltage, and Maximum 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>					
Input Voltage Range	Full Range (PSRL5017Rx8 800W Series: 180-264VAC only)	90		264	VAC
Input Frequency		47		63	Hz
Inrush Current	@230VAC with Full Load Cold Start			70	A
Leakage Current	@240VAC			3.5	mA
Input Current	@90VAC and Full Load		8		A
Remote ON/OFF	Designated as <b>RSW</b> on CN3, requires a low signal to inhibit output				
<b>OUTPUT SPECIFICATIONS</b>					
Output Voltage			See Table		
Output Power Range	With Airflow.			500	W
Output Adjustability	Output user adjustable	±5			%
Total Regulation			±1		%
Output Current			See Table		
Ripple and Noise	Peak to peak		See Table		
Transient Response	Returns to within 1% in less than 2.5ms for a 50% load change and the peak transient does not exceed 5%				
Hold-Up Time	@80% of Full Load.	20			ms
Overshoot	Turn-On & Off overshoot <5% over normal voltage				
Turn On Delay	@120VAC			1	Sec.
Remote Sense	Designated as <b>RS+</b> and <b>RS-</b> on CN3. Voltage compensates for up to 0.5V line drop. (Not available for current sharing models)				
<b>PROTECTION</b>					
Short Circuit Protection	Trip without damage and auto-recovery.				
Over-Temperature Protection	Unit protected of excessive operating ambient 85°C and automatic recovery.				
Over Voltage Protection	Unit latching down when output voltage exceeds 130% and recycle AC input to reset.				
Over-Power Protection	Fold back mode 110-140% and auto-recovery.				
Input Voltage Protection	Power shut down under 80 ±5VAC, and recovered over 86VAC				
Input Fusing Protection	A T10A/250V fuse inserted in primary				
<b>ENVIRONMENTAL SPECIFICATIONS</b>					
Operating Temperature	Ambient, De-Rating at 2.5% per degree from 50°C to 70°C	0		+70	°C
Storage Temperature		-20		85	°C
Operating Humidity	Non-Condensing	5		90	% RH
Storage Humidity	Non-Condensing	5		95	% RH
Vibration	Acceleration 7.35 m/(s x s) on X,Y, and Z axis	5		50	Hz
Cooling	Self-cooled by built-in fan.				
MTBF	(according to MIL-HBK-217F) @30°C		150,000		Hr
<b>GENERAL SPECIFICATIONS</b>					
Efficiency	@230VAC and Full Load	3.3V		70	%
		5V		75	
		12V		80	
		All other Outputs		83	
Withstand Voltage	1500 VAC input line to chassis (10mA DC cut off current); 3000VAC between primary & secondary windings. Primary to core 1500VAC. All for 3 sec.				
Burn-In	For one hour @ 230VAC with Full Load	40	45	50	°C
PFC	Active power factor correction meets EN61000-3-2 Class D				
Power Good	Designated as <b>PG</b> on the CN3 and TTL high 100-500ms after regulation. It goes low at least 1ms before loss of regulation for Power on Reset signal.				
Grounding Test	Apply 25A from ground pin of the three prong plug to the far most earth. Max allowable resistance is 0.1 ohm.				
Current Sharing	Designated as <b>CSH</b> on the CN3, optional single wired for forced current sharing function and parallel up to 4 units within 10% accuracy at full load.				
Current Monitor	Designated as <b>CMN</b> on the CN3 is a 0.5V to 3VDC output voltage to represent 0% to 100% output current.				
LED Display	Bi-Color <b>LED1</b> emit Green for Power On and emit Orange when protection is enabled or RSW is applied to a low signal				
<b>PHYSICAL SPECIFICATIONS</b>					
Weight	3.2lbs (1450 grams)				
Dimensions (L x W x H)	9.17 x 4.3 x 2.5in (233.7 x 109.2 x 63.5mm)				
<b>SAFETY &amp; EMC CHARACTERISTICS</b>					
Safety Regulations	UL60950-1 <sup>(7)</sup> , CSA C22.2 No. 60950-1-03, TUV EN60950-1 CE Mark (LVD) EN61000-3-2-3, IEC61000-4 Series Regulations and CB				
Emissions	FCC part15, CISPR 22 Class B, Conducted				

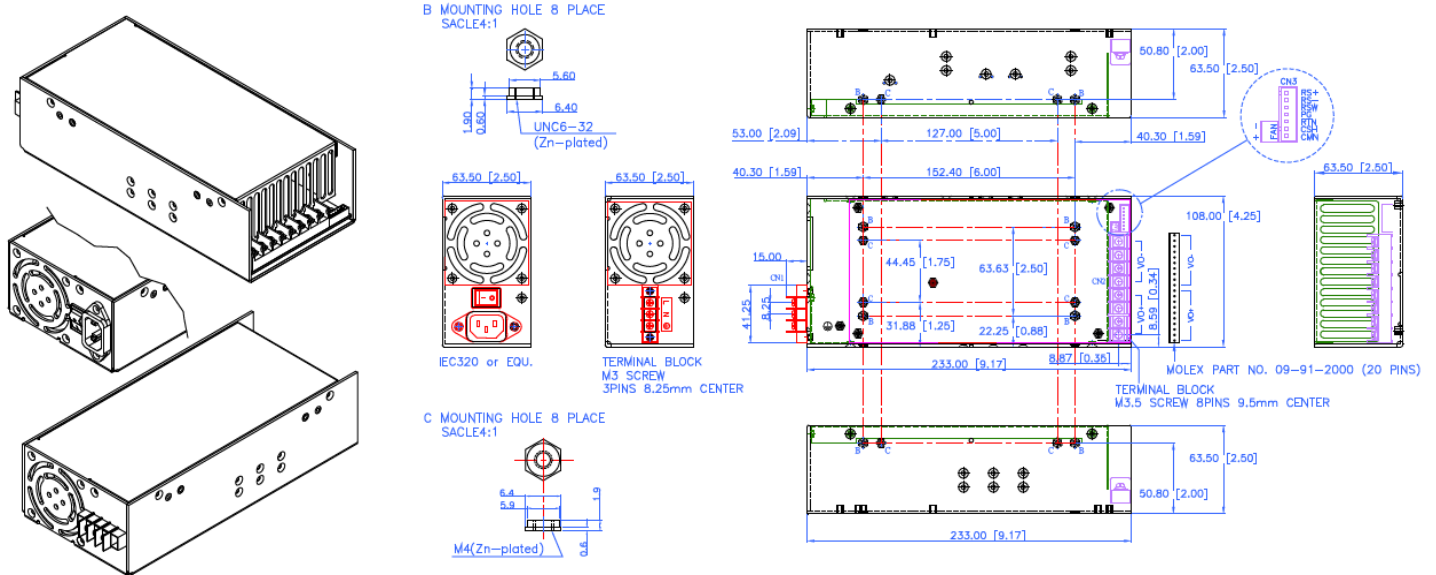
**NOTES**

- (1) The PSRL5017R5 Series is designated as PSRL5017Rxw-yz where x=**E** (Enclosed with built-in fan type), w=**5** for output power from 264W-500W, y= **03,05,12,16,36**, or **48** for output voltage, and z can be **blank** or **I** where **I** denotes forced current sharing option (output with internal OR-ring diode). See PSRL5017-I Series for forced current sharing.
- (2) All output ranges are covered in agency certifications and preset voltage will be set as standard models. If any request is not preset output, then please contact us in advance.
- (3) Ripple & Noise are measured from 10KHZ to 20 MHz bandwidth at output with parallel 0.1µF ceramic and 22µF electrolytic capacitors.
- (4) Providing peak power to 900W within 500µS for all models, longer duty duration need contact with manufacturer.
- (5) 1% minimum load is required to maintain the ripple and regulation.
- (6) Output is fully isolated.
- (7) This product is Listed to applicable standards and requirements by UL.

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

**MECHANICAL DRAWINGS**

**Enclosed with Built-In Fan Type**



**I/O Connector Pin Assignment**

**AC Input Connector (CN1):**

IEC320 or equivalent Snap-in mounting type or DINKLE Terminal Block Part No. DT-35-A02W-03 (3 pin)

**Output Connector (CN2):**

Mating Molex Part No. 09-91-2000 (20 Pin) or Howder Terminal Block Part No. HD-121-8P (8 pin)

**Output Pin Assignment:**

Output Pin Connection		
	Howder	Molex
<b>Vo+</b>	Pins 1-4	Pins 1-10
<b>Vo-</b>	Pins 5-8	Pins 11-20

**Logic Signal Connectors (CN3):**

Mating JST XHP-7 or equivalent (CHYAO SHIUNN JS-2001-07).

**Fan Drive:**

12VDC/500mA Mating JST XHP-2 or equivalent (CHYAO SHIUNN JS-2001-02)

**Mounting Inserts:**

6-32, M4 4 Places individually with maximum penetration 0.2 inch on bottom side and 0.25 inch on both sides.

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## 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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