

## FEATURES

- 2 Year Warranty
- AC Input Range Auto-Selectable
- Approved to UL CUL TUV CB and CE
- Optional Top Covers (Type A or B) Available
- Power Factor Corrected to EN61000-3-2 Class A
- Providing Peak Power 600W within 500uS Duty Duration
- Compact 1U Height & High Power Density: 6.25 Watts/cu in
- U-Chassis & Enclosed with Built-in Fan Mechanical Options



PSRL9827S Series: 5(L) x 3.2(W) x 1.5(H) inches  
 PSRL9827F Series: 5(L) x 3.2(W) x 2(H) inches



### SPECIFICATIONS: PSRL9827 Series

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.

#### INPUT SPECIFICATIONS

Input Voltage	90 - 132 / 180 - 264vac, Auto-Selectable.
Input Frequency	47 to 63Hz
Input Current	4 / 2A at 115 / 230 VAC.
Inrush Current	Max. 70A @ 230VAC and 35A @ 115VAC; cold start.
Leakage Current	1.5mA @ 240VAC.
Remote On/Off	Designated as <b>RMSW</b> on the CN1, requires a low signal to inhibit output; Hiccough mode.

#### OUTPUT SPECIFICATIONS

Output Voltage	See Table
Output Power Range	150 Watts max with airflow. (See Notes 3 and 4)
Output Adjustability	Output user adjustable $\pm 5\%$ minimum.
Total Regulation	$\pm 1\%$
Output Current	See Table
Ripple & Noise (peak to peak)	See Table
Transient Response	Output voltage returns to within 1% in less than 2.5ms for a 50% load change, peak does not excess 5%.
Hold-Up Time	20ms min. at 80% of full load.
Overshoot	Turn on-off overshoot < 5% over nominal voltage.
Turn On Delay	1 second maximum at 120VAC.

#### PROTECTION

Over Voltage Protection	Unit latching down when output exceeds 130% and recycle AC input to reset.
Short Circuit Protection	Trip without damage and auto-recovery.
Over-Temperature Protection	Unit protected of excessive operating ambient 85°C, and automatic recovery.
Over Power Protection	Fold back mode 110-140%; auto-recovery.
Input Fusing Protection	One T4A/250V fuse inserted in primary.

#### GENERAL SPECIFICATIONS

Switching Frequency	25KHz fixed frequency.
Efficiency	70% for 3.3V, 75% for 5V, 80% for 12V, and 83% min. for other outputs (Measuring at 230VAC and full load).
Withstand Voltage	1500 VAC input line to chassis (10mA cut off current), 3000VAC primary to secondary, and 1500VAC primary to core. All for 3 sec.
Burn In	45 $\pm 5^\circ\text{C}$ for one hour @ 230VAC with full load.
PFC	Power factor corrected to EN61000-3-2 Class A.
Power Good	Designated as <b>PG</b> on the CN1 will go high 100-500ms after regulation and goes low 1ms before loss of regulation.
Power Supply On	Green LED designated as <b>LED1</b> on the PCB.
Grounding Test	Apply 25A from ground pin of the three prong plug to the far most earth. Max. allowable resistance is 0.1 ohm.



Wall Industries, Inc.

**PSRL9827 Series**  
**Single Output**  
**Up to 150 Watts**  
**AC/DC Switching Power Supply**

## SPECIFICATIONS (CONTINUED)

### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	0°C to +70°C ambient, derating at 2.5% per degree from 50°C to 70°C.
Storage Temperature	-20°C to +85°C
Operating Humidity	5% to 90% RH, non-condensing
Storage Humidity	5% to 95% RH, non-condensing
Vibration	5 ~ 50Hz, acceleration 7.35 m/(s x s) on X, Y, and Z axis.
Cooling	PSRL9827S Series: 150W max with 16CFM forced airflow or 100W max under convection cooling. PSRL9827F Series: 150W max. under top built-in fan flow.
Fan Drive	12VDC/300mA is available to drive an external fan.
MTBF	100,000 hours (according to MIL-HBK-217F) at 30°C.

### PHYSICAL SPECIFICATIONS

Weight	PSRL9827S Series (U-Chassis type): 400 grams PSRL9827F Series (Enclosed with top built-in fan type): 500 grams
Dimensions	PSRL9827S Series (U-Chassis Type): 5(L) x 3.2(W) x 1.5(H) inches PSRL9827F Series (Enclosed Type with top built-in fan): 5(L) x 3.2(W) x 2(H) inches
Warranty	2 years

### SAFETY

EMC Standards	CISPR 22 / EN55022 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, EN55024 CE Marked (LVD).
Safety Regulations	Approved to UL60950-1, CSA C22.2 No. 60950-1, TUV EN60950-1, and CB certificate available.

## OUTPUT VOLTAGE / CURRENT RATING CHART

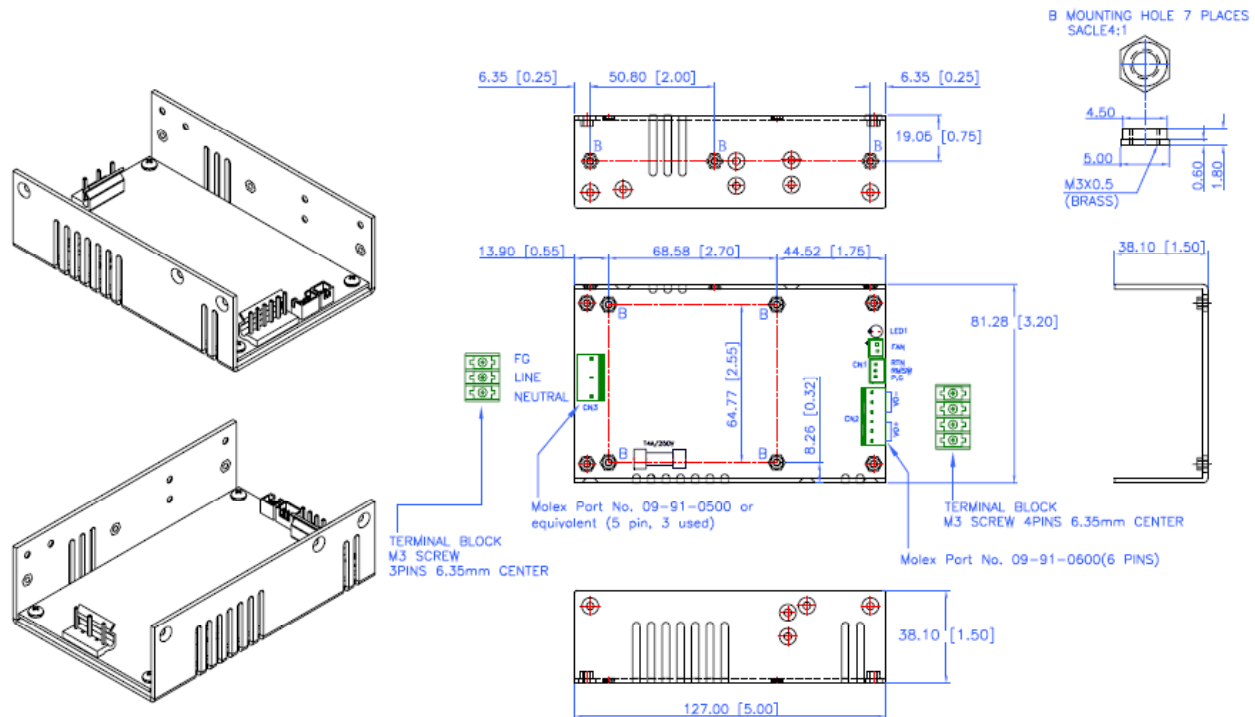
Model	Output Voltage Range	Preset Voltage	Output Current		Regulation	Ripple & Noise
			Type S (Convection)	Type S (with forced air) & Type F		
PSRL9827SA (PSRL9827FA)	3 – 4 VDC	3.3 VDC	20A	30A	±1%	50mV
PSRL9827SB (PSRL9827FB)	5 – 6 VDC	5 VDC	20A	30A	±1%	50mV
PSRL9827SC (PSRL9827FC)	12 – 16 VDC	12 VDC	8.33A	12.5A	±1%	±1%
PSRL9827SD (PSRL9827FD)	24 – 30 VDC	24 VDC	4.167A	6.25A	±1%	±1%
PSRL9827SE (PSRL9827FE)	35 – 56 VDC	48 VDC	2.083A	3.125A	±1%	±1%
PSRL9827S18 (PSRL9827F18)	17 – 23 VDC	18 VDC	5.556A	8.333A	±1%	±1%

## NOTES

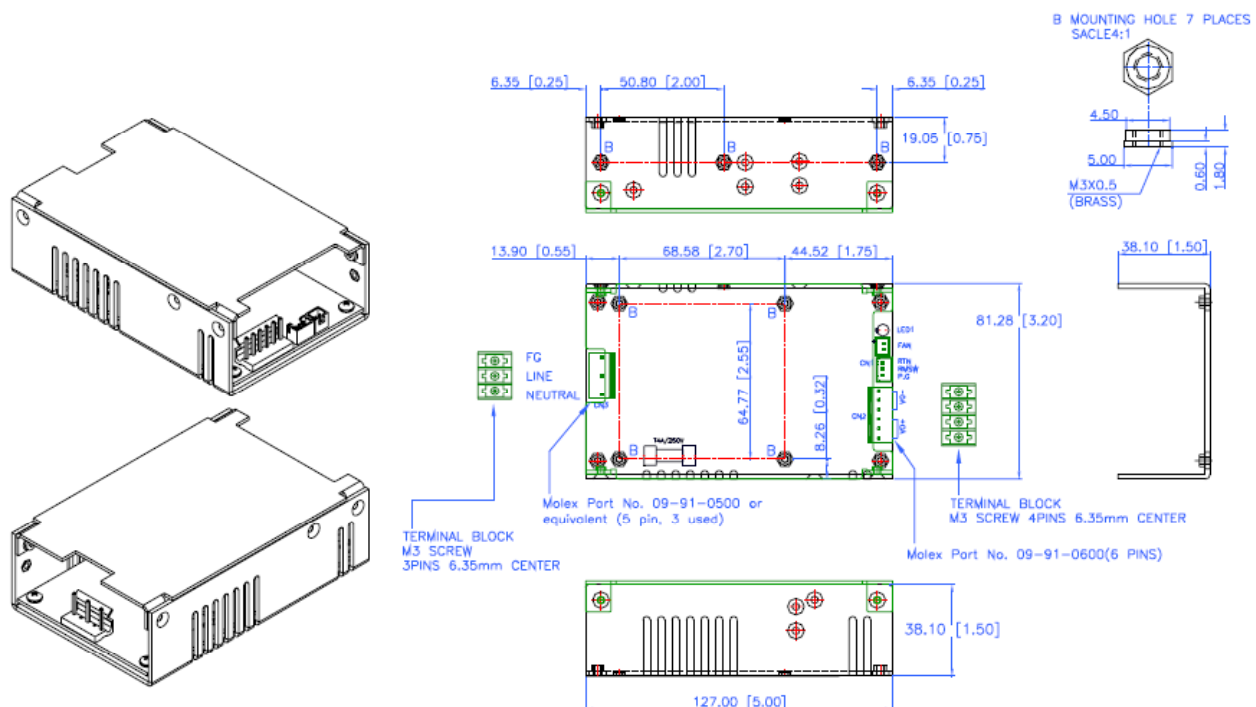
1. The output voltage is specified as a range (Ex: 17 – 23 VDC); the customer must specify what they would like the output voltage set at otherwise it will be the preset voltage.
2. PSRL9827Fx Series, identical to PSRL9827Sx except with cover and DC fan installed.
3. PSRL9827S Series: 150W max. with 16CFM forced air flow offering; 100W max. under air convection. (Option: Top Cover Type A or B)
4. PSRL9827F Series: 150W max. with Top built-in Fan flow.
5. Providing peak power to 600W within 500uS for all models, longer duty duration need contact manufacturer.
6. Ripple and noise is measured from 10KHZ to 20MHz bandwidth at output with parallel 0.1uF ceramic and 22uF electrolytic capacitors.
7. 1% minimum load is required to maintain the ripple and regulation.
8. Output is fully isolated.

## MECHANICAL DRAWINGS

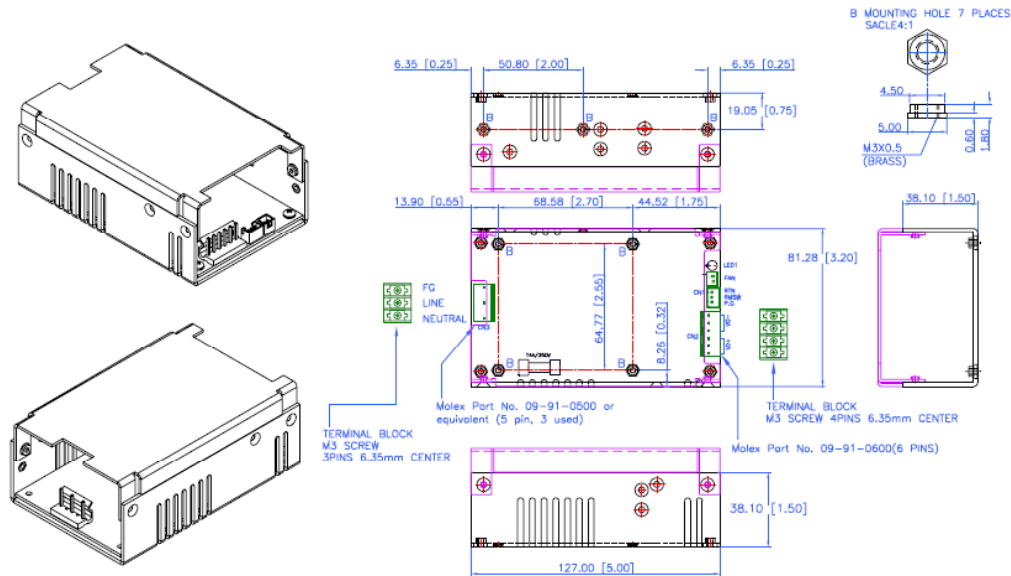
**PSRL9827S Series (U-Chassis Type): 5(L) x 3.2(W) x 1.5(H) inches; Weight: 400g**



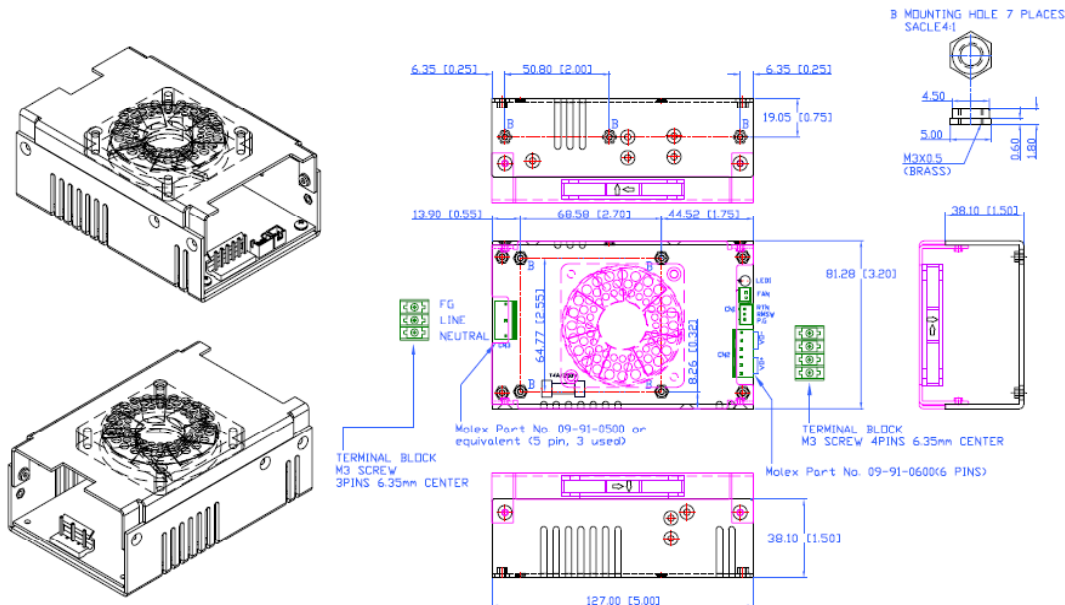
**PSRL9827S Series (U-Chassis with Type A Cover): 5(L) x 3.2(W) x 1.56(H) inches; Weight: 420g**



**PSRL9827S Series (U-Chassis with Type B Cover): 5(L) x 3.2(W) x 2(H) inches; Weight: 430g**



**PSRL9827F Series (Enclosed with Top Fan Type): 5(L) x 3.2(W) x 2(H) inches; Weight: 500g**



#### I/O CONNECTOR PIN ASSIGNMENT

**Input Connector (CN3):** Mating Molex Part No. 09-91-0500 or equivalent (5 pin, 3 used) PCB is Labeled: L = Line; N = Neutral; G = Chassis Ground Mating Pins; Molex Engineering Series 2478, 2578, 8818 or Howder M3.3 pin Terminal block 6.35MM Center (HD-601-3P).

**Output Connector (CN2):** Mating Molex Part No. 09-91-0600. Mating Pins: Molex Engineering Series 2478, 2578, 8818 or Howder M3.3 pin Terminal block 6.35MM Center (HD-601-4P) Mating JST Part No. XHP-2 or equivalent (CHYAO SHIUNN JS-2001-02).

**Power Good, Remote On/Off Mating Connectors (CN1):** Mating JST Part No. XHP-3 or equivalent (CHYAO SHIUNN JS-2001-03). Mating Pins: JST SXH-002T-P0.6 for AWG 30 to 26.

**Fan Drive:** Mating JST Part No. XHP-2 or equivalent (CHYAO SHIUNN JS-2001-02).

**Connector Pin Assignment:** See mechanical drawings.

**Mounting Inserts:** 8 Places M4. Maximum Penetration 4mm see outline drawing for location.