Wall Industries, Inc.

PSPRL9802 Series
Active PFC
200 Watt Single Output
AC/DC Switching Power Supply

FEATURES

- **2 Year Warranty**
- **Optional Top Cover**
- **90 ~ 264VAC Universal AC Input**
- **Approved to UL CUL TUV CE and CB**
- **Power Factor Corrected to EN61000-3-2 Class D**
- **Compact 1U Size & Power Density: 5.2 Watts/cu in.**
- **Providing Peak Power 600W within 500uS Duty Duration**
- **Convection-Cooled and with Forced Air Cooling Rating Options**
- **Protections: Short Circuit/ Over Load/ Over Voltage/ Over Temp**



SPECIFICATIONS: ***PSPRL9802 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 – 264VAC Full Range
Input Frequency	47 to 63Hz
Input Current	4A at 100VAC full load
Inrush Current	35A max @ 110VAC with full load and cold start.
Leakage Current	1.5mA max @ 240VAC
Remote ON/OFF	Designated as **REMO** on the CN3, requires a low signal to inhibit output. Hiccup mode.
OUTPUT SPECIFICATIONS	
Output Voltage	See Table
Output Power Range	200 Watts max.
Output Adjustability	Output user adjustable ±5% minimum.
Total Regulation	±1%
Output Current	See Table
Ripple & Noise (peak to peak)	See Table
Transient Response	Output voltage returns to within 1% in less than 500µs for a 50% dynamic load, peak does not excess 5%.
Hold-Up Time	20ms min. at 80% of full load.
Overshoot	Turn-on/off not exceed 5% over nominal voltage.
Turn On Delay	1 second maximum at 120VAC.
Remote Sense	Designated as RS+ and RS- on the CN3
PROTECTION	
Over Voltage Protection	Latching down will occur when output voltage exceeds 130% and recycle AC input to reset.
Short Circuit Protection	Trip without damage and auto-recovery.
Over-Temperature Protection	Protected in the event of excessive operating ambient 85°C and automatic recovery.
Over-Power Protection	Hiccup mode 110-140%; auto-recovery.
Input Circuit Protection	A protected 250V/5A fuse inserted.
GENERAL SPECIFICATIONS	
Efficiency	70% for 3.3V, 75% for 5V, 80% for 12V, and 83% minimum for other outputs @ 230VAC and full load.
Withstand Voltage	1500 VAC input line to chassis (10mA DC cut off current, isolating 3000VAC primary to secondary windings. Primary to core 1500VAC. All for 3 seconds.
Burn In	45 ±5°C for one hour @ 230VAC with full load.
PFC	Active power factor correction meets EN61000-3-2 class D.
Power Good	Designated as PG on the CN3 will go high 100-500ms after regulation and goes low 1ms before loss of regulation.
Power Supply On	Green LED designated as LED 1 on the PCB.
Grounding Test	Apply 25A from ground pin of the three-prong plug to the far most earth. Max allowable resistance 0.1 ohm.

SPECIFICATIONS (CONTINUED)	
ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature	0°C to +70°C ambient, de-rating 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	Frequency 5 ~ 50Hz, acceleration ±7.35 m/(s x s) on X, Y, and Z axis.
Cooling	200W max. with 17CFM airflow or 150W max. convection cooling.
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	650 grams max.
Dimensions	6.8(L) x 3.8(W) x 1.5(H) inches U-case
Warranty	2 years
SAFETY	
Emissions	FCC part15, CISPR 22 Class B, Conducted.
Safety Regulations	Approved to UL60950-1, CSA C22.2 No. 60950-1-03, TUV EN60950-1, CE Mark (LVD) EN61000-3-2,3, and IEC61000-4 Series Regulations and CB.

OUTPUT VOLTAGE / CURRENT RATING CHART

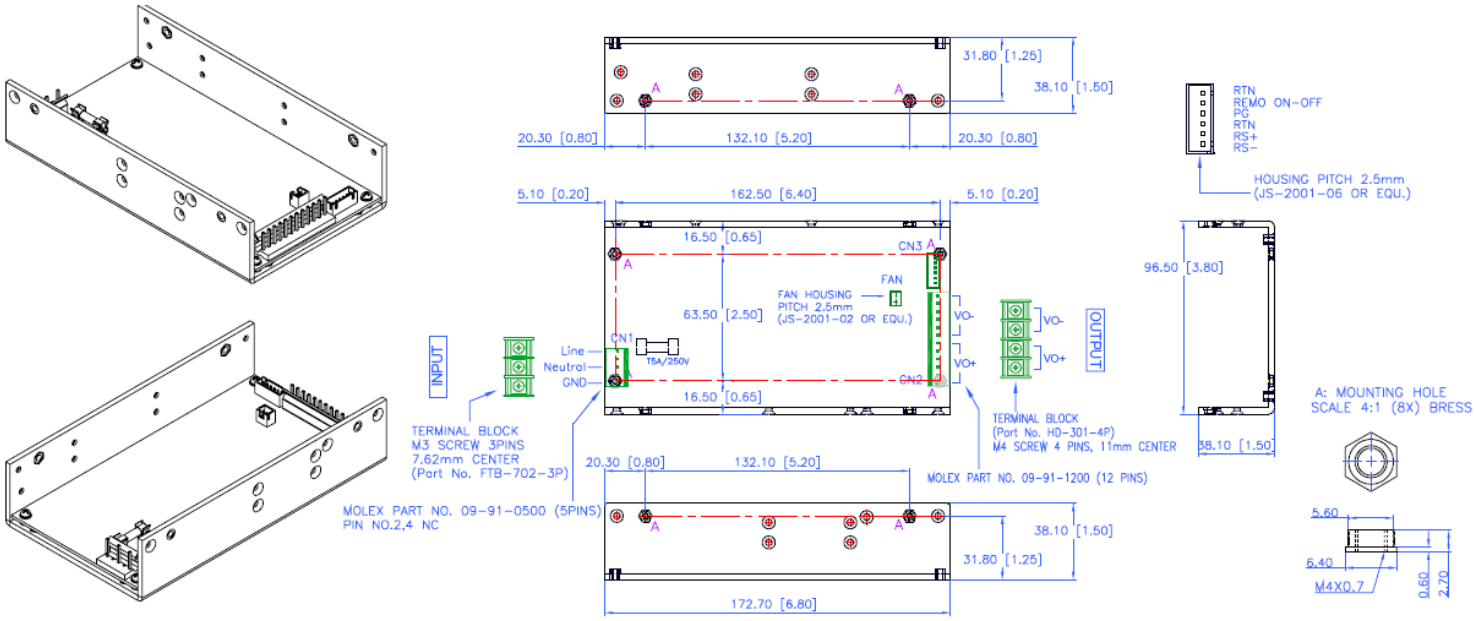
Model	Output Voltage Range	Preset Voltage	Output Current		Regulation	Ripple & Noise
			With Forced Air	Convection		
PSPRL9802SA	3 – 4 VDC	3.3 VDC	30A	22A	± 1%	50mV
PSPRL9802SB	5 – 6 VDC	5 VDC	40A	22A	± 1%	50mV
PSPRL9802SC	12 – 18 VDC	12 VDC	16.67A	12.5A	± 1%	± 1%
PSPRL9802SD	24 – 30 VDC	24 VDC	8.33A	6.25A	± 1%	± 1%
PSPRL9802SE	36 – 56 VDC	48 VDC	4.17A	3.13A	± 1%	± 1%

NOTES

1. Providing peak power to 600W within 500uS for all models, longer duty duration need contact manufacture.
2. All output ranges are covered in agency certifications and the preset voltage will be set as standard models if nothing different is requested.
3. Maximum 200W continuous output, with minimum 17 CFM forced ventilation.
4. Maximum 150W continuous output with air convection, except PSPRL9802SA and PSPRL9802SB which power is limited to 22A.
5. Output is fully isolated.
6. 1% minimum load is required to maintain the ripple and regulation.
7. Ripple and noise measured from 10KHZ to 20MHz at output terminals with parallel 0.1uF ceramic and 22uF electrolytic capacitors.
8. Optional top cover available please call factory for more details.

MECHANICAL DRAWINGS

Overall Size: 6.8(L) x 3.8(W) x 1.5(H) inches; Weight: 650g.



Output Pin Assignment	
Howder	**Molex**
Vo+: Pins 1 – 2	Vo+: Pins 1 – 6
Vo-: Pins 3 – 4	Vo-: Pins 7 – 12

AC Input Connector (CN1):
Mating Molex Part No. 09-91-0500 or equivalent (5pin, 3used) PCB is Labeled: L = Line; N = Neutral; G = Chassis Ground
Mating Pins; Molex Engineering Series 2478, 2578, 8818 or Howder Terminal block Part No. FTB-702-3P (3 pin).

Output Connector (CN2):
Mating Molex Part No. 09-91-1200 (12 pin) or Howder Terminal block Part No. HD-301-4P (4 pin).

Output Pin Assignment:
(See table above).

Logic signal connectors (CN3):
Mating JST XHP-5 or equivalent (CHYAO SHIUNN JS-2001-06).
Mating Pins: JST SXH-002T-P0.6 for AWG 30 to 26.

Fan Drive:
Mating JST XHP-2 or equivalent (CHYAO SHIUNN JS-2001-02).

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