

FEATURES

- 2 Year Warranty
- Universal AC Input
- Approved to UL CUL TUV CE and CB
- Power Factor Corrected to EN61000-3-2 Class D
- Compact Size & Power Density: 5.15 Watts/cu in.
- Providing Peak Power 600W within 500uS Duty Duration
- Low Leakage Current 500uA @ 240VAC / 200uA @ 120VAC
- U-Chassis & Enclosed with Built-in Fan Mechanical Options



U Type: (U-Chassis): 8(L) x 4.25(W) x 2(H) inches.

F Type: (Enclosed with top built-in fan): 8(L) x 4.25(W) x 2.5(H) inches.



SPECIFICATIONS: PSRL0501 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	5.5A at 90VAC full load
Inrush Current	70A max @ 230VAC with full load and cold start.
Leakage Current	Regular type 1.5mA @240VAC. (Optional for 500µA max. at 240VAC / 200µA max. at 120VAC input).

OUTPUT SPECIFICATIONS

Output Voltage	See Table
Output Power Range	350 Watts max with airflow.
Output Adjustability	Output user adjustable ±5% minimum.
Total Regulation	±1%
Output Current	See Table
Ripple & Noise (peak to peak)	±1%
Transient Response	Output voltage returns to within 1% in less than 2.5ms for a 50% dynamic load peak does not exceed 5%.
Hold-Up Time	20ms min. at 80% of full load.
Overshoot	Turn on-off overshoot not exceed 5% 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	Output voltage dropped in the event of excessive operating ambient 85°C and automatic recovery.
Over Load Protection	110-135% hiccup mode, auto-recovery.
AC Under Voltage Protection	Power shut down when V _{in} under 79 ±2V and automatic recovery once back over 86 ±3V.
Input Circuit Protection	One 250V/6.3A fuse inserted.

GENERAL SPECIFICATIONS

Efficiency	70% for 3.3V, 75% for 5V, 80% for 12V, and 82% min. for other outputs (Measuring at 230VAC and full load).
Withstand Voltage	1500 VAC input line to chassis, 3000VAC primary to secondary, and 1500VAC primary to core. All for 3 sec.
Burn In	45 ±5°C for one hour @ 230VAC with full load.
PFC	Power factor correction meets EN61000-3-2 Class D.
Power Good	Designated as PG on the PCB will go high 100-500ms after regulation and goes low 1ms before loss of regulation.
Power Supply On	Green LED designated as LED1 on the PCB.
Grounding Test	Apply 25A from the ground pin to the far most earthed connection point. Max. resistance is 0.1 ohm.

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



Wall Industries, Inc.

PSRL0501 Series
Up to 350 Watts
Single Output with Active PFC
AC/DC Switching Power Supply

SPECIFICATIONS (CONTINUED)	
ENVIRONMENTAL SPECIFICATIONS (CONTINUED)	
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	U Type (U-Chassis): 350W with forced airflow or 230W under convection. F Type (Enclosed with top built-in fan): 350W
Fan Drive	12VDC/400mA is available to drive an external fan.
MTBF	100,000 hours (according to MIL-HBK-217F) at 30°C.
PHYSICAL SPECIFICATIONS	
Weight	U Type (U-Chassis): 950g F Type (Enclosed with top built-in fan): 1050g
Dimensions	U Type (U-Chassis): 8(L) x 4.25(W) x 2(H) inches. F Type (Enclosed with top built-in fan): 8(L) x 4.25(W) x 2.5(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

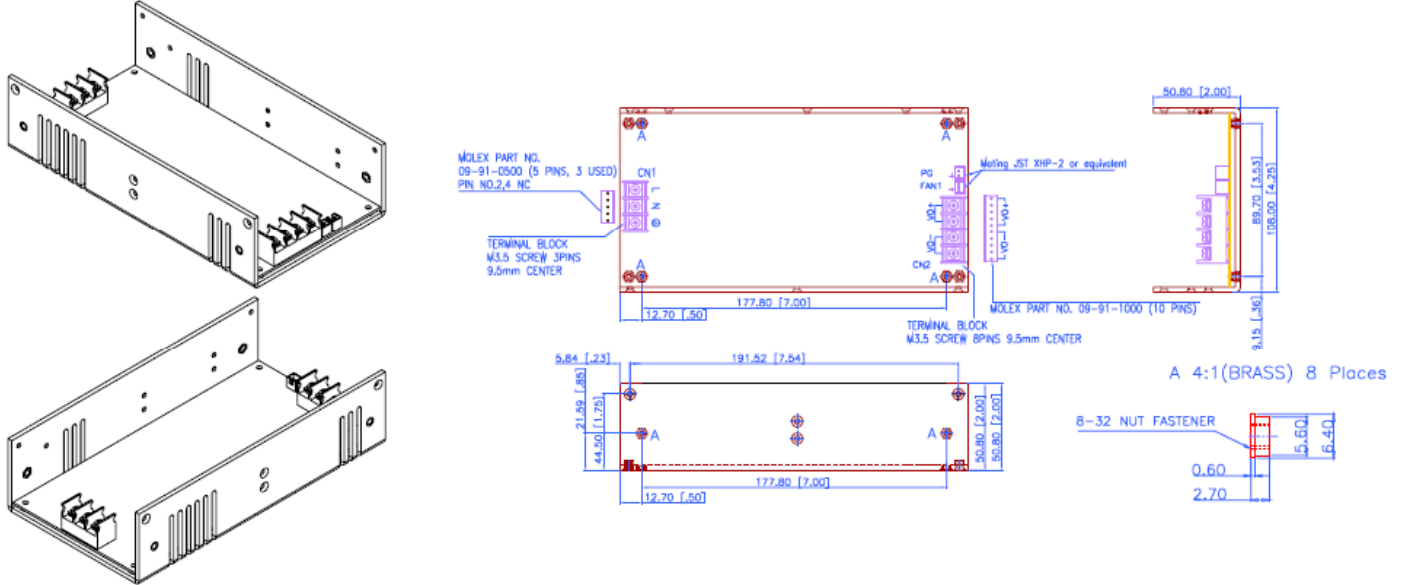
Model	Output Voltage Range	Preset Voltage	Output Current		Regulation	Ripple & Noise
			Type U & C (Convection)	Type U (with forced air) & Type F		
PSRL0501x-03	3 – 4 VDC	3.3 VDC	36.36A	72.73A	±1%	±1%
PSRL0501x-05	5 – 6 VDC	5 VDC	35A	70A	±1%	±1%
PSRL0501x-12	12 – 15 VDC	12 VDC	19.17A	29.17A	±1%	±1%
PSRL0501x-15	12 – 15 VDC	15 VDC	15.33A	23.33A	±1%	±1%
PSRL0501x-18	16 – 21 VDC	18 VDC	12.77A	19.44A	±1%	±1%
PSRL0501x-24	22 – 30 VDC	24 VDC	9.58A	14.58A	±1%	±1%
PSRL0501x-36	31 – 41 VDC	36 VDC	6.39A	9.72A	±1%	±1%
PSRL0501x-48	42 – 53 VDC	48 VDC	4.79A	7.29A	±1%	±1%
PSRL0501x-54	54 – 60 VDC	54 VDC	4.26A	6.48A	±1%	±1%

NOTES

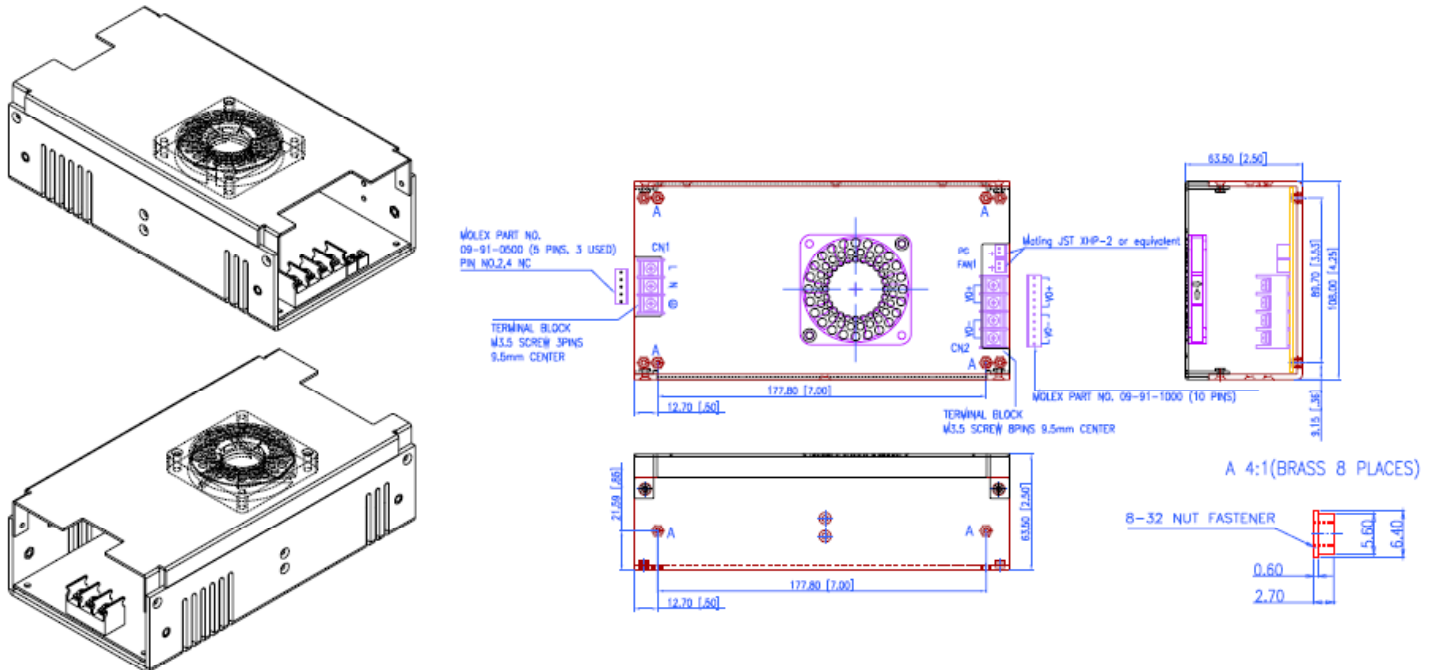
1. PSRL0501 Series is designated as PSRL0501x-y where x can be **U** (U-Chassis), **C** (U-Chassis with top cover), or **F** (Enclosed with top built-in fan), y can be 03, 05, 12, 15, 18, 24, 36, 48, or 54 for output voltage.
2. All output ranges are covered in agency certification and the preset voltage will be set as standard models. If any request is not standard output, please contact us prior to ordering.
3. Ripple & noise is measured from 10Khz to 20Mhz at output terminals with parallel 0.1µF ceramic and 22µF electrolytic capacitors.
4. PSRL0501C Series only operates under 30CFM forced airflow to achieve max rating.
5. Providing peak power to 600W within 500uS for all models, longer duty duration need contact manufacture in advance.
6. 1% minimum load is required to maintain the ripple and regulation.
7. Output is fully isolated.

MECHANICAL DRAWINGS

PSRL0501U Series (U-Chassis Type): 8(L) x 4.25(W) x 2(H) inches; Weight: 950g; Option: Top Cover.



PSRL0501E Series (Enclosed with top built-in Fan Type): 8(L) x 4.25(W) x 2.5(H) inches; Weight: 1050g.



Output Pin Connection	
Howder	Molex
Vo+ : Pins 3 – 4	Vo+ : Pins 6 – 10
Vo- : Pins 1 – 2	Vo- : Pins 1 – 5



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I/O CONNECTOR PIN ASSIGNMENT

AC Input Connector(CN1):

Howder 6-32. 3 pin Terminal block 9.5MM Center (HI-201-3P) or Molex Part No. 09-91-0500 or equivalent (5 pin,3 used).
Pin1: FG; Pin2: Neutral; Pin3: Line.

Output Connector(CN2):

Howder 6-32. 4 pin Terminal block 9.5MM Center (HI-201-4P) or Molex Part No. 09-91-1000 or equivalent (10 pins).

Output Pin Assignment:

(See Output Pin Connection table)

FAN and PG Connector:

Mating JST XHP-2 or equivalent (CHYAO SHIUNN JS-2001-02)

Mounting Inserts: 8 Places 8-32 flush nut, screws must not protrude into unit by more than 4mm sees outline drawing for location.