

FEATURES

- 2 Year Warranty
- Output Voltages from 2 ~ 60VDC
- AC Input Range Auto-Selectable
- Approved to UL CUL TUV CB and CE
- Power Factor Corrected to EN61000-3-2 Class A
- Providing Peak Power 600W within 500uS Duty Duration
- Low Leakage Current 500uA @ 240VAC / 300uA @ 120VAC
- U-Chassis & Enclosed with Built-in Fan Mechanical Options
- Smallest 250W with 1U Height Power Density: 10.4 Watts/cu in.



U Type: (U-Chassis): 5(L) x 3.2(W) x 1.5(H) inches.

F Type: (Enclosed with top built-in fan): 5(L) x 3.2(W) x 2(H) inches.



SPECIFICATIONS: PSRL0603 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 - 264 VAC, Auto-Selectable
Input Frequency	47 to 63Hz
Input Current	6 / 3A at 110 - 120 / 200 - 240 VAC.
Inrush Current	Max. 70A @ 230VAC and 35A @ 115VAC; cold start.
Leakage Current	Regular type 1.5mA @240VAC. (Optional for 500uA max. at 300VAC / 200uA max. at 120VAC input).
Remote On-Off	Designated as RMSW on the CN1, requires a low signal to inhibit output. Hiccough mode.

OUTPUT SPECIFICATIONS

Output Voltage	See Table
Output Power Range	250 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)	$\pm 1\%$
Transient Response	Output voltage returns to within 1% in less than 2.5ms for a 50% load change, peak does not exceed 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 T6A/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 DC cut off current). 3000VAC primary to secondary windings 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 PG 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 LED1 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.

PSRL0603 Series
Single Output
Up to 250 Watts
AC/DC Switching Power Supply

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	5 ~ 50Hz, acceleration 7.35 m/(s x s) on X, Y, and Z axis.
Cooling	U Type (U-Chassis): 250W max. with forced airflow or 135W under convection cooling. F Type (Enclosed with top built-in fan): 250W max.
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	U Type (U-Chassis): 400g F Type (Enclosed with top built-in fan): 500g
Dimensions	U Type (U-Chassis): 5(L) x 3.2(W) x 1.5(H) inches. (Option: Top Cover Type A or B available) F Type (Enclosed 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

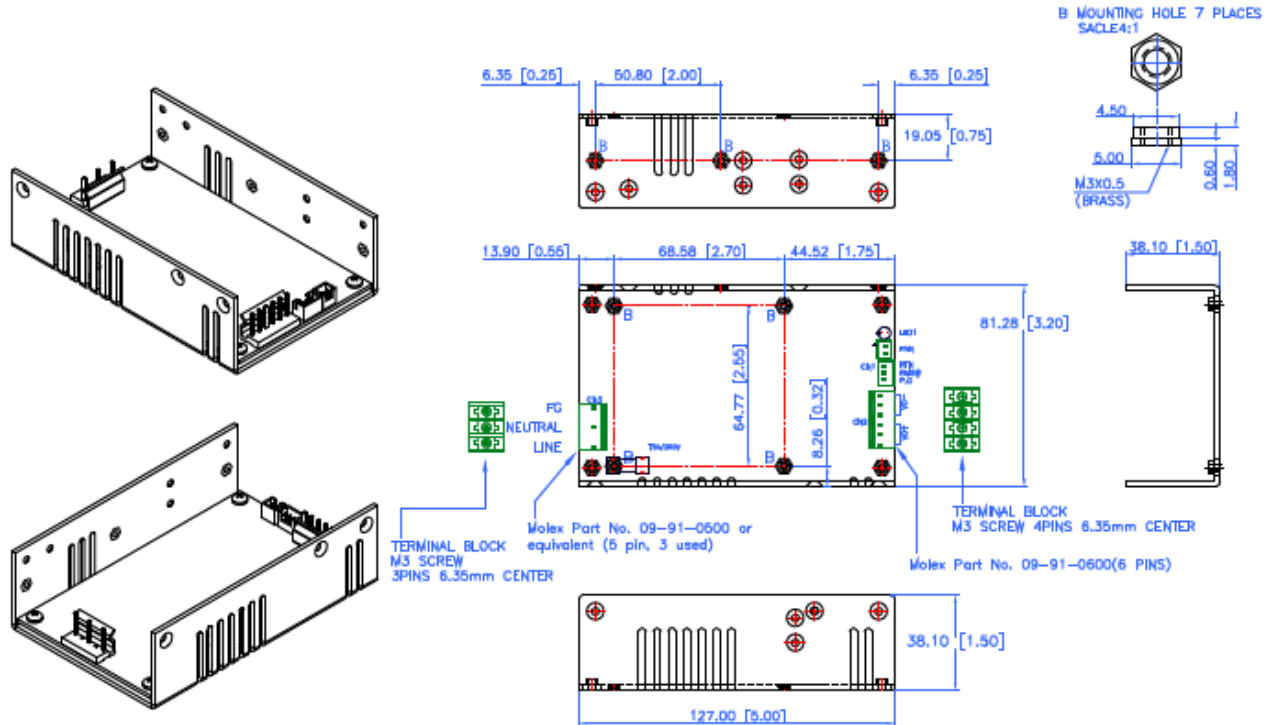
Model	Output Voltage Range	Preset Voltage	Output Current		Regulation	Ripple & Noise
			Type L (Convection)	Type U & F (with forced air)		
PSRL0603x-05	2 – 5 VDC	5 VDC	20A	40A	±1%	1%
PSRL0603x-09	6 – 10 VDC	9 VDC	13.5A	25A	±1%	1%
PSRL0603x-12	11 – 13.8 VDC	12 VDC	12.27A	22.73A	±1%	1%
PSRL0603x-15	14 – 15.5 VDC	15 VDC	9.64A	17.86A	±1%	1%
PSRL0603x-18	16 – 20 VDC	18 VDC	8.44A	15.62A	±1%	1%
PSRL0603x-24	21 – 26 VDC	24 VDC	6.43A	11.9A	±1%	1%
PSRL0603x-28	27 – 34 VDC	28 VDC	5A	9.26A	±1%	1%
PSRL0603x-36	35 – 42 VDC	36 VDC	3.86A	7.14A	±1%	1%
PSRL0603x-48	43 – 50 VDC	48 VDC	3.14A	5.81A	±1%	1%
PSRL0603x-54	51 – 60 VDC	54 VDC	2.65A	4.9A	±1%	1%

NOTES

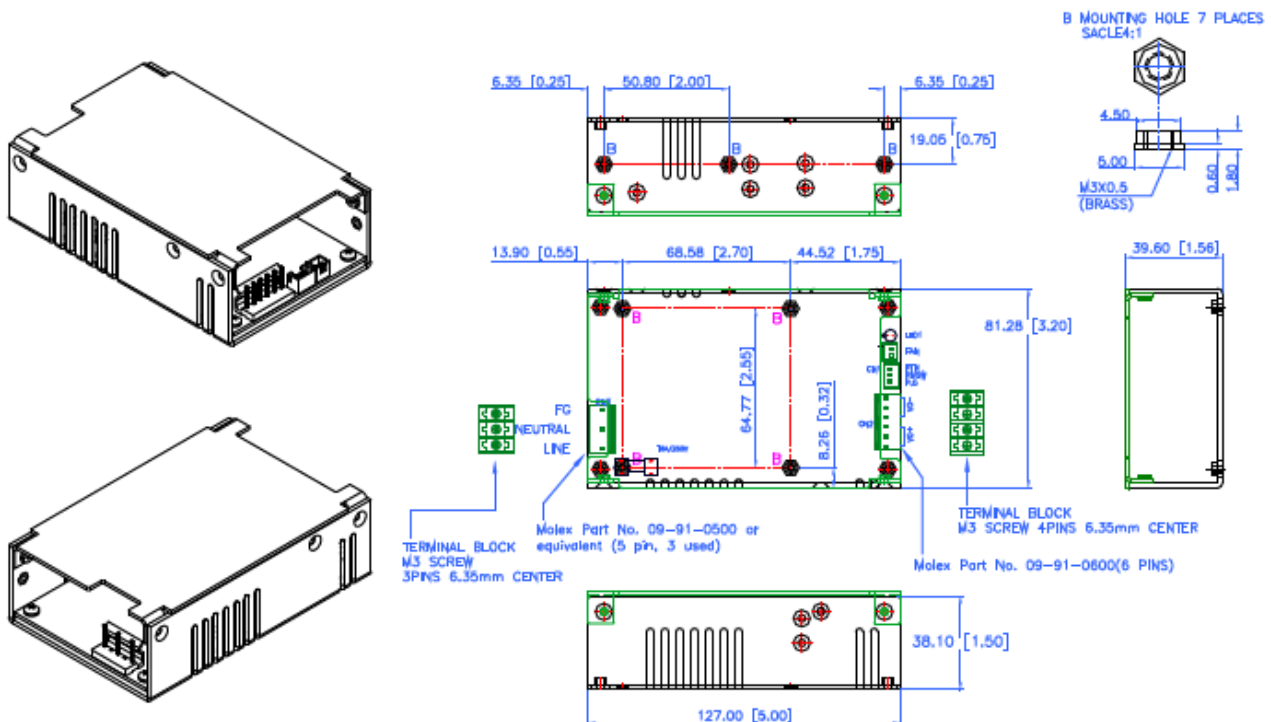
- PSRL0603 Series is designated as PSRL0603x-y where x can be U (U-chassis type), F (Enclosed with top built-in fan), or L (U-chassis with convection cooling only), y can be 05, 09, 12, 15, 18, 24, 28, 36, 48, 54.
- Two optional top covers available (Type A or B) for U-Chassis type. Please call factory for ordering details.
- PSRL0603U Series: 250W max. with 16CFM forced air flow offering; 135W max. under air convection.
- PSRL0603F Series: 250W max. with Top built-in Fan flow.
- Providing peak power to 600W within 500uS for all models, longer duty duration need contact manufacturer.
- Ripple and noise is measured from 10KHZ to 20MHz bandwidth at output with parallel 0.1uF ceramic and 22uF electrolytic capacitors.
- 1% minimum load is required to maintain the ripple and regulation.
- Output is fully isolated.
- All output ranges are covered in agency certifications and the preset voltage will be set as standard models if any request is not preset output then should contact us in advance.

MECHANICAL DRAWINGS

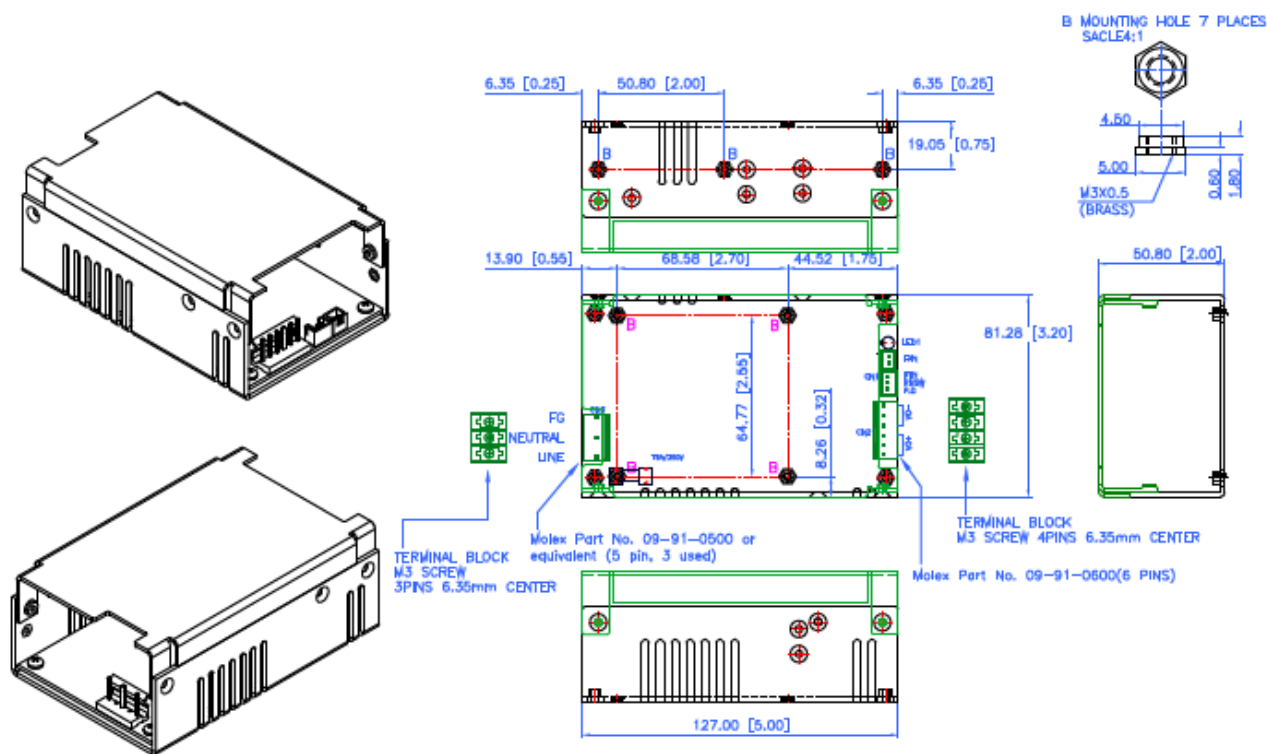
PSRL0603U Series (U-Chassis Type): 5(L) x 3.2(W) x 1.5(H) inches; Weight: 400g



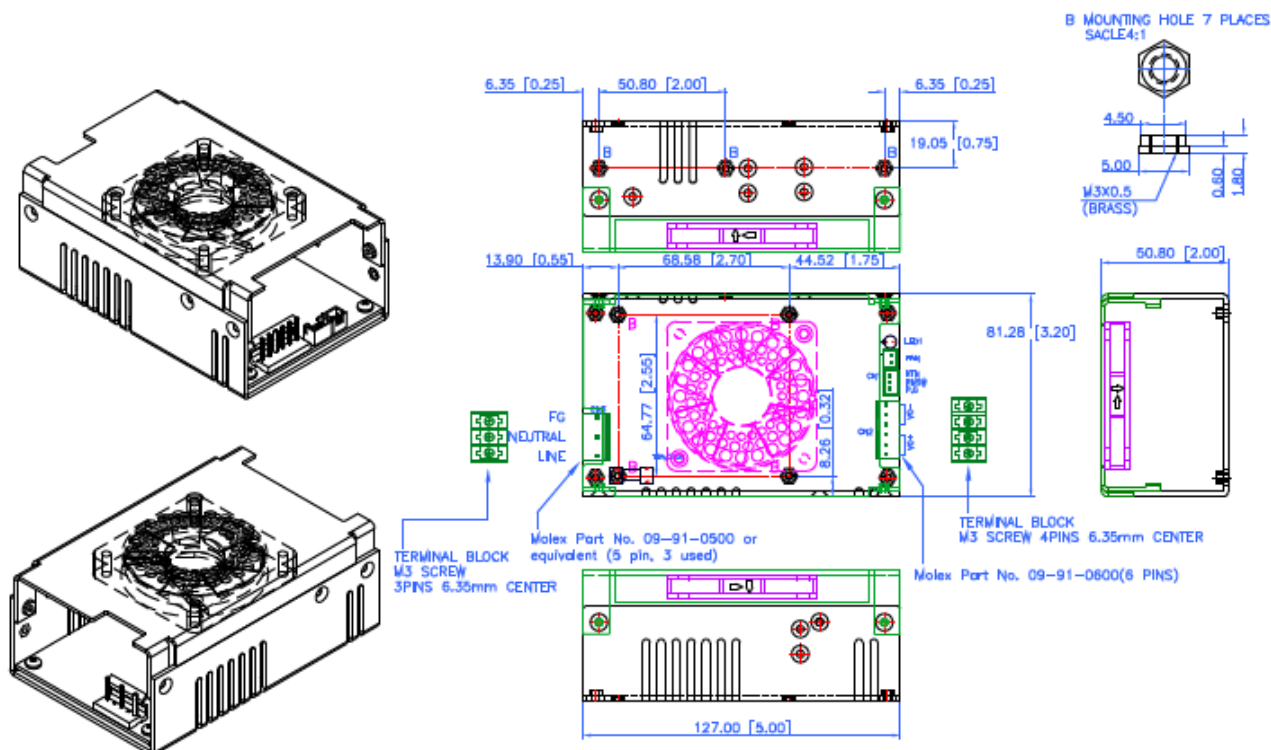
PSRL0603U Series (U-Chassis with Type A Cover): 5(L) x 3.2(W) x 1.56(H) inches; Weight: 420g.



PSRL0603U Series (U-Chassis with Type B Cover): 5(L) x 3.2(W) x 2(H) inches; Weight: 430g.



PSRL0603F Series (Enclosed with Top Built-in Fan Type): 5(L) x 3.2(W) x 2(H) inches; Weight: 500g.





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I/O CONNECTOR PIN ASSIGNMENT

Input Connector(CN3): Mating Molex Part No. 09-91-0500 or equivalent (5pin, 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. 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).

Connector Pin Assignment:

(See table below).

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.

Signal Pin Assignment:

Pins 1 : Power good .

Pins 2 : Remote Switch.

Pins 3 : RTN.

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

Mounting Inserts: 7 Places M3. Maximum Penetration 3.8mm sees outline drawing for location.

OUTPUT PIN CONNECTION	
Howder	Molex
V+ : Pins 1 – 2	V+: Pins 1 – 3
V- : Pins 3 – 4	V- : Pins 4 – 6