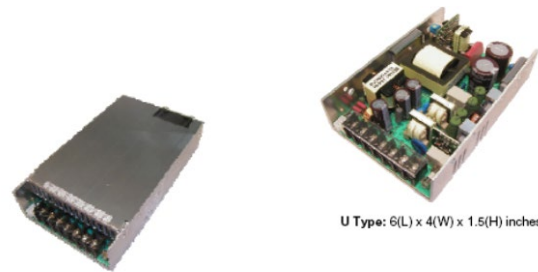


FEATURES

- Smallest 320W with 1U Height Power Density: 8.9 Watts/cu in
- Low Leakage Current 500uA @ 240VAC / 300uA @ 120VAC
- Power Factor Corrected to EN61000-3-2 Class A
- Peak Power 700W within 500uS Duty Duration
- Approved to UL CUL TUV CB and CE
- AC Input Range Auto-Selectable
- Output Voltages from 2 ~ 60VDC
- 4 - Mechanical Options



E Type: 7(L) x 4(W) x 1.6(H) inches.



SPECIFICATIONS: PSRL0601 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-ranging
Input Frequency	47 to 63Hz
Input Current	8 / 4A at 100 - 120 / 200 - 240VAC
Inrush Current	Max 70A @ 230VAC and 35A @ 115VAC; cold start.
Leakage Current	Regular type 1.5mA @240VAC. (Optional for 500µA max. at 240VAC / 300µA max. at 120VAC input).

OUTPUT SPECIFICATIONS

Output Voltage	See Table
Output Power Range	320 Watts max with 22CFM airflow. (See Notes 2, 3, 4, and 5)
Output Adjustability	Output user adjustable ±5% minimum.
Total Regulation	±1%
Output Current	See Table
Ripple & 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	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; automatic recovery.
Over Power Protection	C.C. mode 110-140%; auto-recovery.
Input Fusing Protection	One T8AL250V fuse inserted in primary.

GENERAL SPECIFICATIONS

Switching Frequency	23KHz 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; 1500VAC primary to core. All for 3 sec.
Burn In	45 ±5°C for one hour @ 230VAC with full load.
PFC	Power factor correction pass EN61000-3-2 Class A.
Power Good	Designated as PG on CN1 and TTL high 100-500ms after regulation. It goes low at least 1ms before loss of regulation and has ability to sink 100mA.
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.
Fan Fail (FF) Alarm	Designated as FF on pin 3 of CN1 is an open collector output rated for 15VDC/5mA sink current maximum; it will go high when a fan failure is detected.



Wall Industries, Inc.

Rev C

PSRL0601 Series
Single Output
Up to 320 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): 320W max with 22CFM forced airflow or 180W under convection cooling. C Type (U-Chassis with top cover): 170W max convection cooling. E Type (Enclosed with rear side built-in fan): 320W max. F Type (Enclosed with top built-in fan): 320W max.
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): 600g C Type (U-Chassis with top cover): 650g E Type (Enclosed with rear side built-in fan): 750g F Type (Enclosed with top built-in fan): 800g
Dimensions	U Type (U-Chassis): 6(L) x 4(W) x 1.5(H) inches. C Type (U-Chassis with top cover): 6(L) x 4(W) x 1.55(H) E Type (Enclosed with rear side built-in fan): 7(L) x 4(W) x 1.6(H) F Type (Enclosed with top built-in fan): 6(L) x 4(W) x 2(H) inches.
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 ⁽¹¹⁾ , CSA C22.2 No. 60950-1, TUV EN60950-1, and CB certificate available.

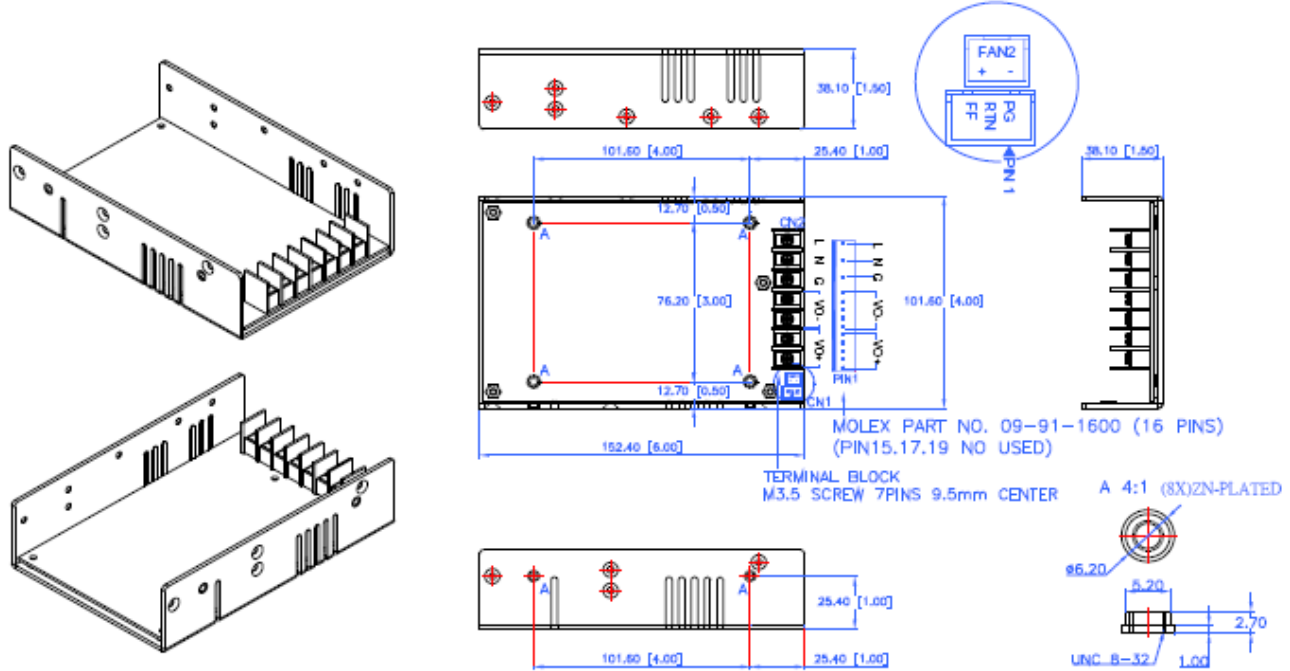
MODEL SELECTION TABLE							
Model	Output Voltage Range	Preset Voltage	Max. Output Current or Power			Regulation	Ripple & Noise
			Type U (Convection)	Type C (Convection)	Types E, F, and U (forced air)		
PSRL0601x-05	2 – 5.5 VDC	5 VDC	27.28A	25A	45A	±1%	50mV
PSRL0601x-09	6 – 11 VDC	9 VDC	16.37A	13.64A	29.1A	±1%	±1%
PSRL0601x-12	12 – 13.5 VDC	12 VDC	180W	170W	320W	±1%	±1%
PSRL0601x-15	13.6 – 15 VDC	15 VDC	180W	170W	320W	±1%	±1%
PSRL0601x-18	16 – 20 VDC	18 VDC	180W	170W	320W	±1%	±1%
PSRL0601x-24	21 – 26 VDC	24 VDC	180W	170W	320W	±1%	±1%
PSRL0601x-28	27 – 34 VDC	28 VDC	180W	170W	320W	±1%	±1%
PSRL0601x-36	35 – 42 VDC	36 VDC	180W	170W	320W	±1%	±1%
PSRL0601x-48	43 – 50 VDC	48 VDC	180W	170W	320W	±1%	±1%
PSRL0601x-54	51 – 60 VDC	54 VDC	180W	170W	320W	±1%	±1%

NOTES

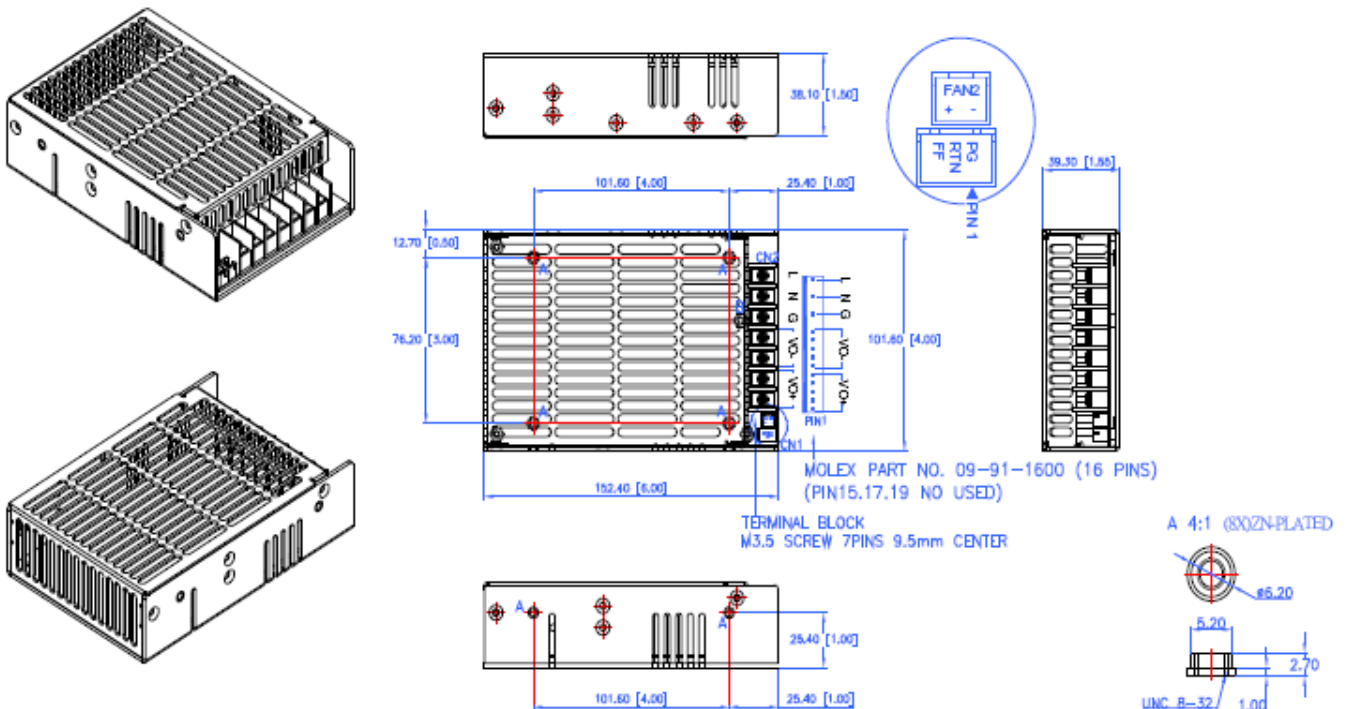
- PSRL0601 Series is designated as PSRL0601x-y where x can be **U** (U-chassis), **C** (U-chassis with top cover) **E** (Enclosed type with rear side built-in fan) or **F** (Enclosed type with top side built-in fan), y can be 05, 09, 12, 15, 18, 24, 28, 36, 48, 54 for output voltage.
 - PSRL0601U Series:** U-Chassis @ 320W max. with 22CFM max. forced airflow or 180W convection cooled output.
 - PSRL0601C Series:** U-Chassis @ 170W max convection cooled.
 - PSRL0601E Series:** Enclosed with rear side built-in fan @ 320W max.
 - PSRL0601F Series:** Enclosed with top built-in fan @ 320W max.
 - Ripple and noise is measured from 10KHZ to 20MHZ bandwidth at output with parallel 0.1µF ceramic and 22µF electrolytic capacitors.
 - Providing peak power to 700W within 500µs for all models, longer duty duration must contact manufacturer.
 - All output ranges are covered in agency certifications and the preset voltage will be set as standard models if nothing different is requested. If desired preset output does not appear, please contact us.
 - 1% minimum load is required to maintain the ripple and regulation.
 - Output is fully isolated
 - This product is Listed to applicable standards and requirements by UL.
- *Due to advances in technology, specifications subject to change without notice.*

MECHANICAL DRAWINGS

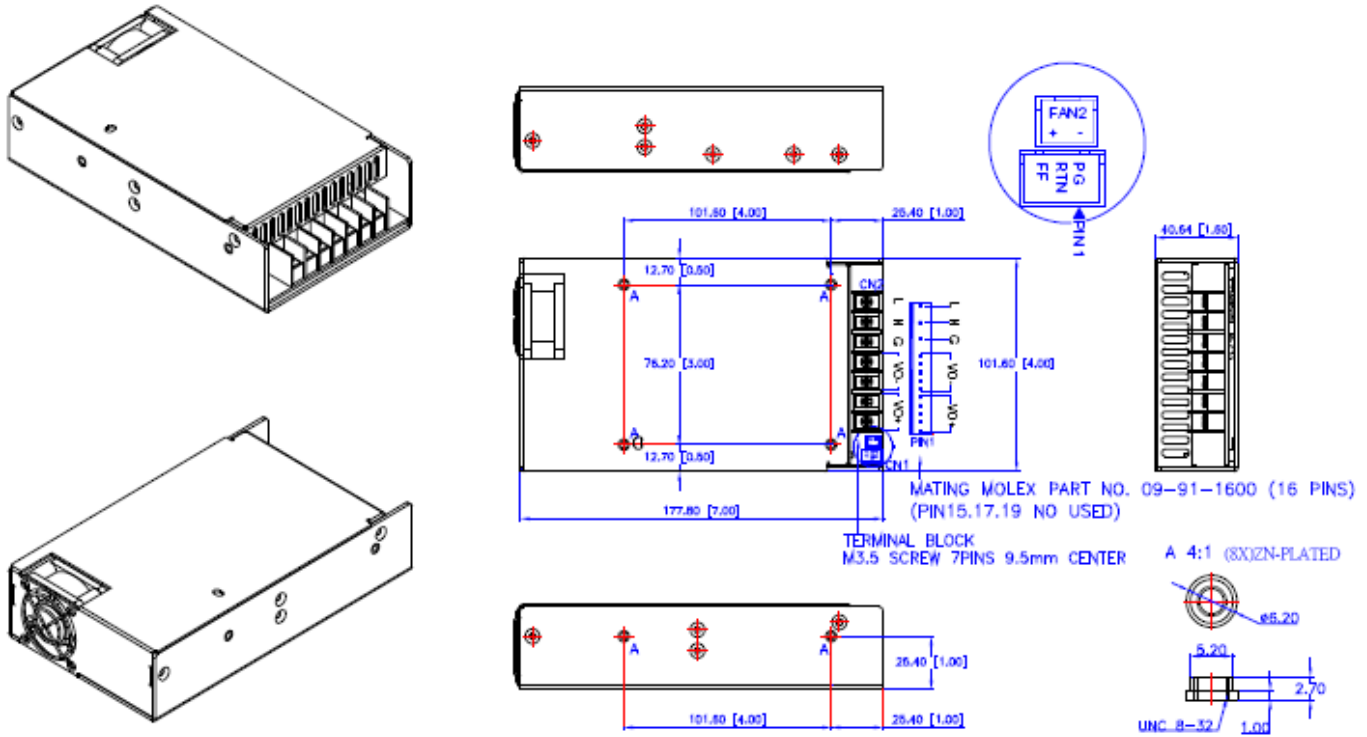
PSRL0601U Series (U-Chassis Type only): 6(L) x 4(W) x 1.5(H) inches; Weight: 600g



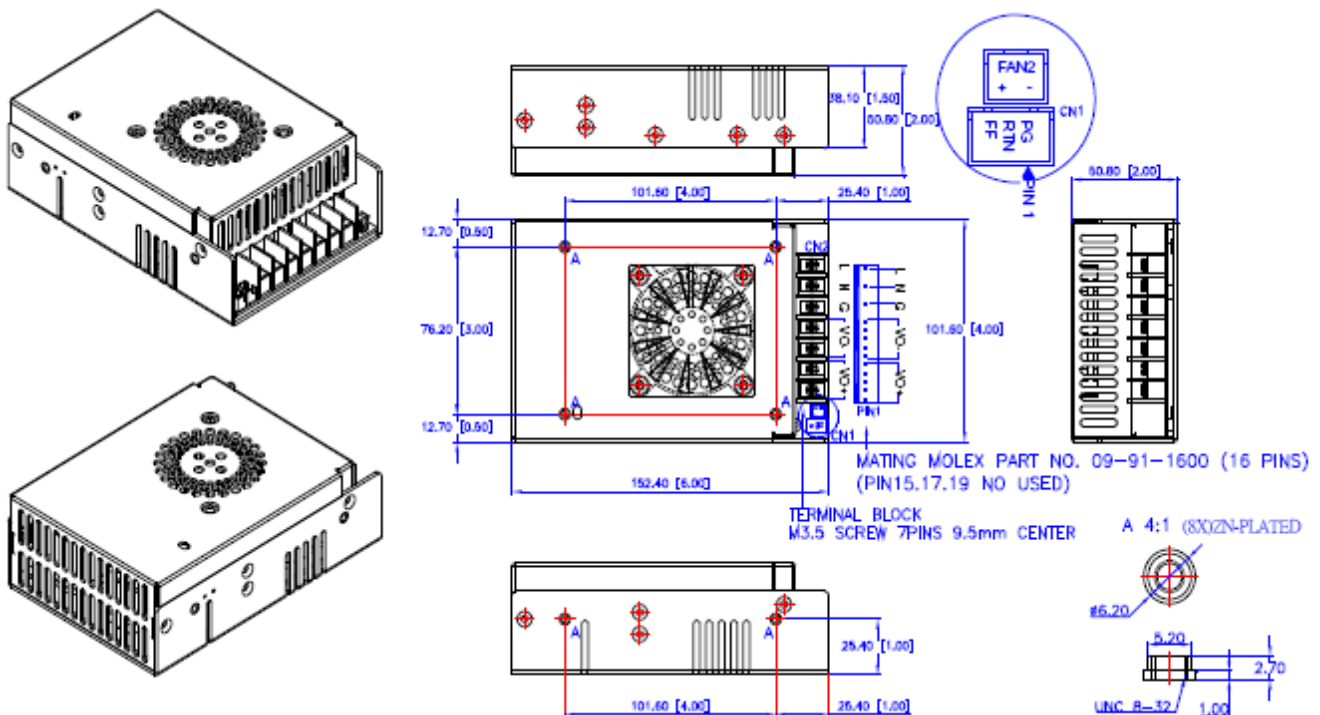
PSRL0601C Series (U-Chassis with Top Cover): 6(L) x 4(W) x 1.55(H) inches; Weight: 650g



PSRL0601E Series (Enclosed with Rear Side built-in Fan Type): 7(L) x 4(W) x 1.6(H) inches; Weight: 750g



PSRL0601F Series (Enclosed with Top built-in Fan Type): 6(L) x 4(W) x 2(H) inches; Weight: 800g





I/O CONNECTOR PIN ASSIGNMENT

Input and Output Connector (CN2):

Howder Terminal block Part No. HB-95-7P or Mating Molex Part No. 09-91-1600 (16 pin).

Output Pin Assignment:

(See table below).

Logic signal connector (CN1): Mating JST XHP-3 or equivalent (CHYAO SHIUNN JS-2001-03);

Mating Pins: ST SXH-002T-P0.6 FOR AWG 30 to 26.

Mounting Inserts: 8 Places M4X0.7 (8-32 Optional). Maximum Penetration 4mm sees outline drawing for location.

Fan driver connector (FAN2): Mating connector is a Molex P/N 22-01-1022 (2 pins 0.98 pitch) or equivalent with Series 2759 or 5159 terminals.

OUTPUT PIN ASSIGNMENT	
Howder	Molex
Pins 1 ~ 2: V+	Pins 1 ~ 5: V+
Pins 3 ~ 4: V-	Pins 6 ~ 10: V-
Pin 5: GND	Pin 12: GND
Pin 6: Neutral	Pin 14: Neutral
Pin 7: Line	Pin 16: Line

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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