

F Type



Size: 6" x 4" x 2" inches

E Type



Size: 7" x 4" x 1.6"

C Type



Size: 6" x 4" x 1.57"

U Type



Size: 6" x 4" x 1.5"

OPTIONS

- Case Type
- Output Voltage

FEATURES

- Compact 400W with 1U height power density: 11.11 watts/cu in
- Built-in Remote On/Off, Power Good, Fan Fail Alarm
- 5/12/24/48VDC Dual Output Optional Combinations
- Power Factor Corrected to EN61000-3-2 class D
- Input Fusing, Over Power, Short Circuit, Over Voltage, and Over Temperature Protection
- RoHS Compliant
- Variable Fan Speed & Low Acoustical Noise
- High Quality & Reliable Component Usage
- UL, CUL, TUV, CB, and CE approvals
- 4-Mechanical Options
- Full Range AC Input

DESCRIPTION

The PSPRL0602D series of AC/DC switching power supplies have a dual output, universal input, and output power up to 400 watts. Models are available in U-Chassis (U Type), U-Chassis with a top cover (C Type), Enclosed with rear side built-in fan (E Type), and Enclosed with top built-in fan (F Type) designs. Output connectors are Howder terminal block design. Optional Mating Molex 16 pin outputs are also available. Please contact factory for ordering details.

MODEL SELECTION TABLE

Model Number ⁽¹⁾	Input Voltage Range	Output Voltage	Max. Output Current		Ripple & Noise ⁽²⁾	Regulation	Maximum Output Power ⁽³⁾		Efficiency
			C, U Type (Convention)	E, F, U Type (Forced Air)			C, U Type (Convention)	U, E, F Type (Forced Air)	
PSPRL0602Dx-0512	V1	90~264VAC	+5VDC	15A	1%	±5%	180W Max.	320W Max.	75% Min.
	V2		+12VDC	10.42A					
PSPRL0602Dx-0524	V1	90~264VAC	+5VDC	15A	1%	±5%	180W Max.	320W Max.	75% Min.
	V2		+24VDC	5.2A					
PSPRL0602Dx-0548	V1	90~264VAC	+5VDC	15A	1%	±5%	180W Max.	320W Max.	75% Min.
	V2		+48VDC	2.6A					
PSPRL0602Dx-1224	V1	90~264VAC	+12VDC	12.5A	1%	±5%	200W Max.	400W Max.	75% Min.
	V2		+24VDC	6.25A					

SPECIFICATIONS

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.

SPECIFICATION	TEST CONDITIONS	TEST CONDITIONS			Unit
		Min	Typ	Max	
INPUT SPECIFICATIONS					
Input Voltage Range	Full Range	90		264	VAC
Input Current	@90VAC		8		A
Inrush Current	@230VAC, Cold start			70	A
	@115VAC, Cold start			35	
Power Factor Correction	@Vin: 230VAC, Full Load	0.9			
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Regulation			±5		%
Adjustability	Output User Adjustable	±5			%
Remote On-Off	Designated as INH on pin4 of CN1, requires a low signal to inhibit output				
Output Power		See Table			
Output Current		See Table			
Ripple & Noise ⁽²⁾			1		%
Transient Response	Returns to within 1% in less than 2.5mS for a 50% load change and the peak transient does not exceed 5%				
Turn On Delay	@120VAC			1.5	Sec
Hold Up Time	@120VAC and 75% of rated maximum load	16			Msec
Overshoot	Turn-On & Off Overshoot <5% over nominal voltage.				

SPECIFICATIONS

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.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
PROTECTION					
Input Fusing Protection	One T8A/250V fuse inserted in primary				
Short Circuit Protection	Trip without damage and auto-recovery				
Over Power Protection	Auto-Recovery	110		140	% of I-Max
Over Voltage Protection	Unit latching down when output exceed 130% and recycle AC input to reset				
Over Temperature Protection	Unit protected of excessive operating ambient 110°C±5°C, and automatic recovery				
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature	Ambient, De-Rating at 2.5% per degree from 50°C to 70°C	0		70	°C
Storage Temperature		-20		85	°C
Operating Humidity	Non-Condensing	5		95	% RH
Storage Humidity	Non-Condensing	5		95	% RH
Vibration	Acceleration 7.35 m/s*s on X, Y, and Z Axis	5		50	Hz
Cooling	Internal fan is provided.				
MTBF	According to MIL-HBK-217F @30°C		100,000		Hours
GENERAL SPECIFICATIONS					
Efficiency	Measuring at 230V and Full load	75			%
Switching Frequency	PFC 68 kHz, PWM 55 kHz for D1224 & 50 kHz for other models				
Fan Drive	12VDC/300mA offering to drive an external fan				
Fan Fail (FF) Alarm	Designated as FF on pin 3 of CN1 to monitor the status of the fan. This signal is an open collector output rated for 15VDC/5mA sink current maximum, it will go higher when a fan failure is detected.				
Power Supply On	Green LED designated as LED1 on the PCB				
Power Good	Designated as PG on CN1 and TTI high 100-500mS after DC regulation. It goes low at least 1mS before loss of regulation				
Leakage Current ⁽⁴⁾	@264VAC			3.5	mA
HI-POT Test	15000VAC input line to chassis (10mA DC cut off current); Isolating 3000VAC primary to secondary windings; Primary to core 15000VAC. All for 3 sec.				
Grounding Test	Apply 25A from ground pin of the three prong plug to the far most earth. Max allowable resistance: 0.1Ω				
Burn-In	45 ±5°C for 1 hour @230VAC with full load.	100,000			hrs
PHYSICAL SPECIFICATIONS					
Weight	U Type			1.32lb (600g)	
	C Type			1.43lb (650g)	
	E Type			1.65lb (750g)	
	F Type			1.76lb (800g)	
Dimensions (L x W x H)	U Type			6in x 4in x 1.5in (152.4mm x 101.6mm x 38.1mm)	
	C Type			6in x 4in x 1.57in (152.4mm x 101.6mm x 39.878)	
	E Type			7in x 4in x 1.6in (177.8mm x 101.6mm x 40.64mm)	
	F Type			6in x 4in x 2in (152.4mm x 101.6mm x 50.8mm)	
SAFETY & EMC CHARACTERISTICS					
Safety Regulation		UL60950-1 CSA C22.2 No. 60950-1 CB			
EMC		EN55022 IEC61000-4-3,4,5,6,11		Class B conducted / radiated	

NOTES

- PSPRL0602 Series is designated as PSPRL0602Dx-y where x can be U (U-Chassis), C (U-Chasses with top cover), E (Enclosed type with rear side built-in fan), or F (Enclosed type with top built-in fan). Y can be 0512, 0659, or 1224 for output voltage.
- Ripple and Noise is measured from 10KHz to 20MHz bandwidth at output with parallel 0.1µF ceramic and 22µF electrolytic capacitors. 10% minimum load is required to maintain the ripple and regulation.
- Models U chassis type need external forced airflow, min. 26.84 CFM to achieve maximum power.
-U, E, and F, type with forced air cooling: Total combined power of V1 and V2 not to exceed 400W for PSPRL0602Dx-1224 and 320W for other models.
- U & C type with convention cooling: Total combined power of V1 and V2 not to exceed 200W for PSPRL0602D-1224 and 180W for other models.
- Optional for 500uA max. at 240VAC/300uA max. at 120VAC input

OUTLINE DRAWING

Input and Output Connector (CN2):

Terminal block: Howder Part No. HD-121-7P or Molex: Mating JST VH series.
PCB labeling: L=Line; N=Neutral; G=Chassis Ground

Output Pin Assignment: (See Table on Right)

Howder	Molex
Pin 1: V1	Pins 1~3: V1
Pin 2~3: RTN	Pins 4~8: RTN
Pin 4: V2	Pins 9~10: V2
Pin 5: GND	Pin 12: GND
Pin 6: Neutral	Pin 14: Neutral
Pin 7: Line	Pin 16: Line

Mounting Inserts:

6 Places M4X0.7. Maximum Penetration 2mm sees outline drawing for location.

Logic Signal Connector (CN1):

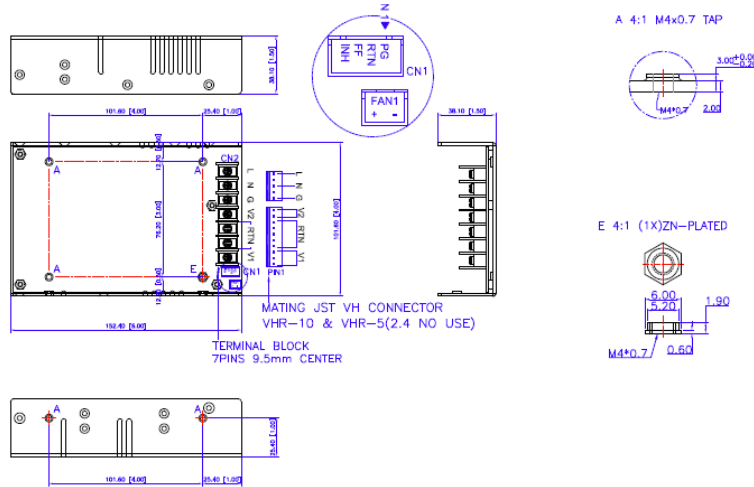
Mating: JST XHP-4 or equivalent) CHYAO SHIUNN JS-2001-04);
Mating Pins: JST SXH-002T-P0.6 FOR AWG 30 to 26

Fan Driver Connector (FAN2):

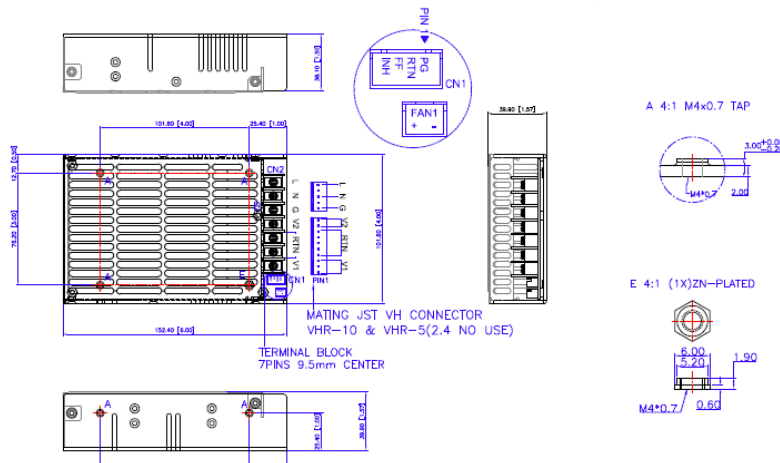
12VDC/300mA is available to drive an external fan. Mating: JST XHP-2 (2 pubs 0.98 pitch) or equivalent (CHYAO SHIUNN JS-2001-02).

MECHANICAL DRAWINGS

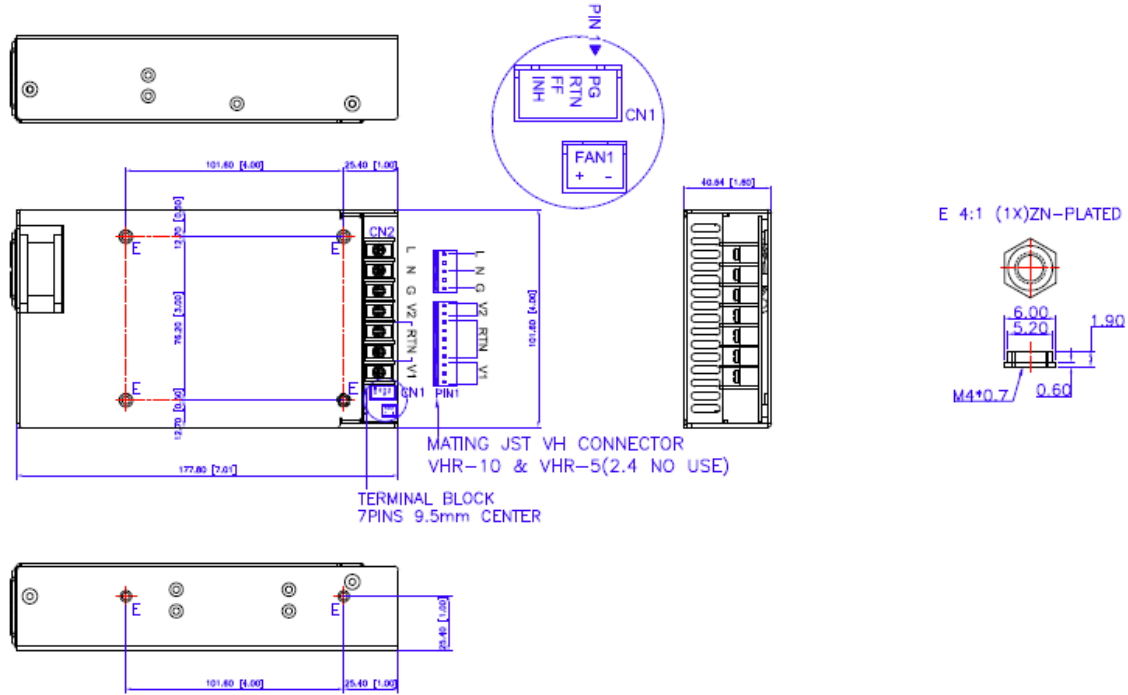
PSPRL0602DU (U-Chassis Type): 6" x 4" x 1.5"; Weight: 1.32lb (600g)



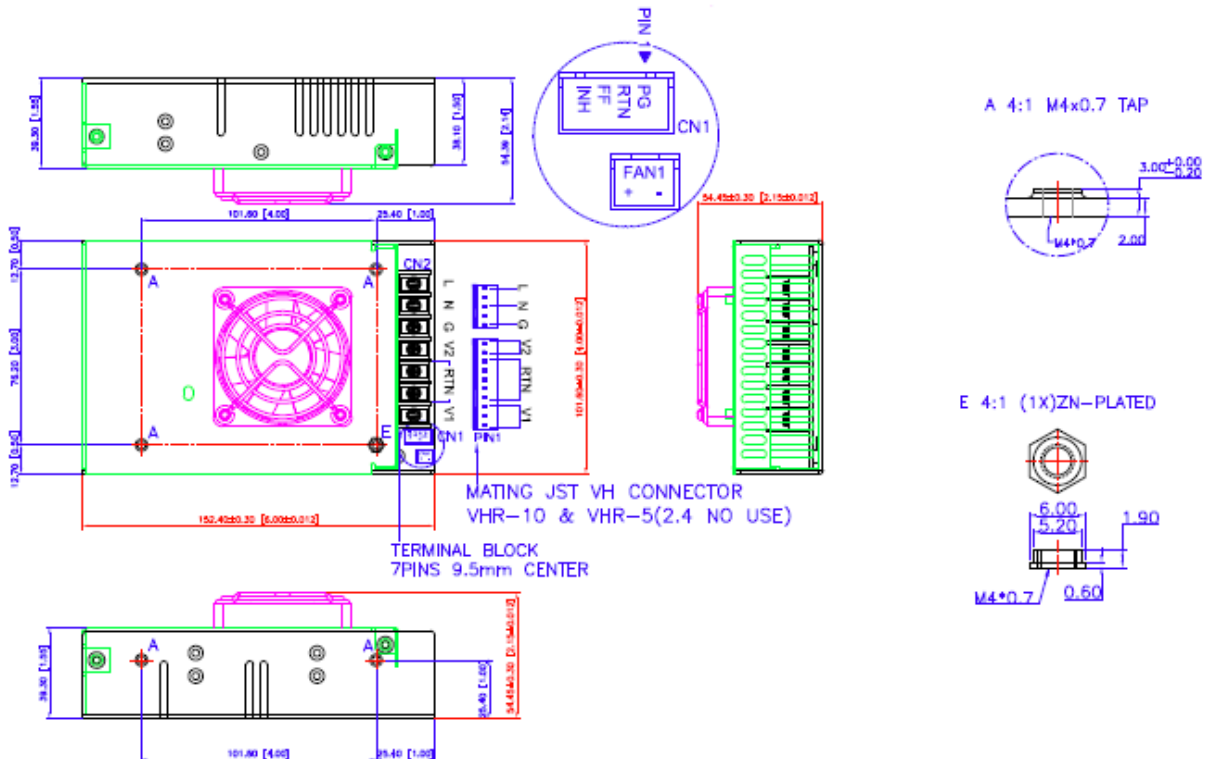
PSRPL0602DC (U-Chassis with Top Vented Cover): 6" x 4" x 1.57"; Weight: 1.43lb (650g)



PSPRL0602DE (Enclosed with Side built-in Fan Type): 7" x 4" x 1.6"; Weight: 1.65lb (750g)



PSPRL0602DF (Enclosed with Top Built-In Fan Type): 6" x 4" x 2"; Weight: 1.76lb (800g)



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 ISO9001-2008 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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