



# ULTRA LEVEL TECH CO., LTD.

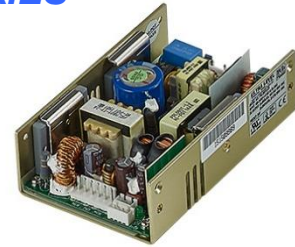
www.ultralevel.com.tw Tel:+886-2-29180118 Fax:+886-2-29181465

We Supply the Power Customers Need ISO9001

## 120W ~ 240W AC-DC PFC SWITCHING POWER SUPPLY PRL0801D DUAL OUTPUT SERIES

### FEATURES:

- ◆ Compact 240W with 1U height Power Density: 10.41 watts/cu in
- ◆ Built-in Remote On-Off, Power Good, Fan Fail Alarm
- ◆ 5/ 12/ 24/ 48V Dual Output Optional Combinations
- ◆ Power Factor Corrected to EN61000-3-2 Class D
- ◆ Variable Fan Speed & Low Acoustical Noise
- ◆ High Quality & Reliable Component Usage
- ◆ Approved to UL TUV CE CB
- ◆ 4 - Mechanical Options
- ◆ Full Range AC Input



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



E Type (Enclosed with end built-in fan):  
3.2(W) x 6.5(L) x 1.6(H) inches



U Type (With Top cover):  
3.2(W) x 5(L) x 1.66(H) inches.



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

### PRODUCT SPECIFICATIONS:



**Input Voltage:** 90 ~ 264Vac full range, 47 ~ 63Hz.

**Input Current:** 5A at 90Vac.

**Inrush Current:** Max. 70A@230Vac & 35A@115Vac; cold start.

**Power Factor Correction:** PF>0.95 typical.

**Transient Response:** Returns to within 1% in less than 2.5mS for a 50% load change and the peak transient does not exceed 5%.

**Overshoot:** Turn-on & off overshoot 5% over nominal voltage.

**Efficiency:** 75% ~ 89% depends on model.

**Turn On Delay:** 1 second maximum at 230 Vac.

**Hold Up Time:** 16mS min. at 80% of full load.

**Adjustability:** Output user adjustable +/-5% minimum.

**Fan Drive:** 12VDC/300mA offering to drive an external fan.

**Fan Fail (FF) Alarm:** Designated as FF on pin 3 of CN3, two types of logical signal provided, contact manufacturer.

**Remote On-Off:** Designated as INH on pin4 of CN3, requires a low signal to inhibit output.

**Power Supply On:** Green LED designated as LED1 on the PCB.

**Power Good:** PG on CN3 goes high 100-500mS after DC regulation and low at least 1mS before loss of regulation (Open collector).

**Input Fusing Protection:** One F5A/350V fuse inserted in primary.

**Over-Power Protection:** 110~140% of I-Max; Auto-recovery.

**Short Circuit Protection:** Trip without damage and auto-recovery.

**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 and automatic recovery.

**Switching Frequency:** PFC 40K~66K Hz; PWM 55K~75K Hz.

**Warranty:** 2 years.

**Storage Temperature:** -20°C to 85°C.

**Operating Temperature:** 0°C to 70°C ambient, de-rating at 2.5% per degree from 50°C to 70°C.

**Operating Humidity:** 5% to 90% RH, Non-condensing.

**Storage Humidity:** 5% to 95% RH, Non-condensing.

**EMC:** EN55032 class B conducted / radiated, EN61000-3-2, EN61000-3-3; EN55024 (IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8, IEC61000-4-11).

**Safety Regulation:** UL60950-1, EN60950-1, IEC60950-1.

**Vibration:** 5 ~ 50 Hz, acceleration 7.35 m/s\*s on X,Y and Z Axis.

**Leakage Current:** < 1mA @ 264Vac.

**HI-POT Test:** 1500 VAC input line to chassis (10mA DC cut off current); Isolating 3000VAC primary to secondary windings; Primary to core 1500VAC. All for 3 sec.

**Grounding Test:** Apply 25 A from ground pin of the three prong plug to the far most earth. Max allowable resistance 0.1 ohm.

**MTBF:** 100000 Hrs (according to MIL-HBK-217F) at 30 °C .

#### Cooling:

U Type: U-Chassis @240W max. with 25CFM airflow or 120W max. under air convection (same output ratings w/ top cover option).

F Type: U-Chassis with top built-in fan @240W max.

E Type: Enclosed with a built-in fan in the input end @240W max.

Burn in: 45 +/- 5 degree C for 1 hour @230Vac with full load.

#### Enclosure:

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

U Type with top cover option: 5(L) x 3.2(W) x 1.66(H) inches.

F Type: 5(L) x 3.2(W) x 2(H)inches.

E Type: 3.2(L) x 6.5(W) x 1.6(H)inches

**Weight:** Maximum U-type weight is 500g.



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## OUTPUT VOLTAGE / CURRENT RATING CHART: Measured at output power connector.

Model Number	Output Voltage	Max. Output Current		Regulation	Ripple & Noise
		Type U (force air) & E & F	Type U (Convection)		
PRL0801Dx-0512	V1:+ 5V	24A	12A	+/- 5%	1%
	V2:+ 12V	13.33A	6.67A	+/- 5%	1%
PRL0801Dx-0524	V1:+ 5V	24A	12A	+/- 5%	1%
	V2:+ 24V	6.67A	3.33A	+/- 5%	1%
PRL0801Dx-0548	V1:+ 5V	24A	12A	+/- 5%	1%
	V2:+ 48V	3.33A	1.67A	+/- 5%	1%
PRL0801Dx-1224	V1:+ 12V	13.33A	6.67A	+/- 5%	1%
	V2:+ 24V	6.67A	3.33A	+/- 5%	1%

### Note:

\* PRL0801D series are designated as PRL0801Dx-y where x can be **U** (U-Chassis only or with optional vented top cover), **F** (U-chassis with top cover and fan installed) or **E** (Enclosed Type with rear side built-in fan) , y can be **0512, 0524, 0548, 1224**.

\* **U Type:** U-Chassis @240W max. with min. 25CFM forced airflow or 120W max. under air convection (Option: vented top cover).

\* **E Type:** Enclosed with rear side built-in fan @240W max.

\* **F Type:** U-Chassis with top built-in fan @240W max.

\* 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.

\* Output is fully isolated.

## OUTLINE DRAWING:

### Input Connector (CN1):

U and F Type: Mating Molex Part No. VHR-5N or equivalent (5pin, 3 used), or Terminal Block: Howder M3 screws 3 pin 6.35mm center Part No. HD-601-3P; PCB Labeling: L=Line; N=Neutral; G=Chassis Ground .

E Type: IEC320 snap-in mounting type or Terminal Block: Howder HD-602-3P.

### Output Connector (CN2):

Molex Part No. VHR-8N

Terminal block – Howder M3 Part No. HD-816-3P

### Output Pin Assignment:

(See table in right).

### Mounting Inserts:

6 Places M3X0.7. Maximum Penetration 4mm sees outline drawing for location.

### Logic signal connector (CN3):

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 (FAN1):

Mating connector is JST P/N XHP-3 (3 pins 0.98 pitch) or equivalent (CHYAO SHIUNN JS-2001-03).

Howder	Molex
V1 : Pin 3	V1 : Pin 6~8
RTN : Pin 2	RTN : Pin 2~5
V2 : Pin 1	V2 : Pin 1

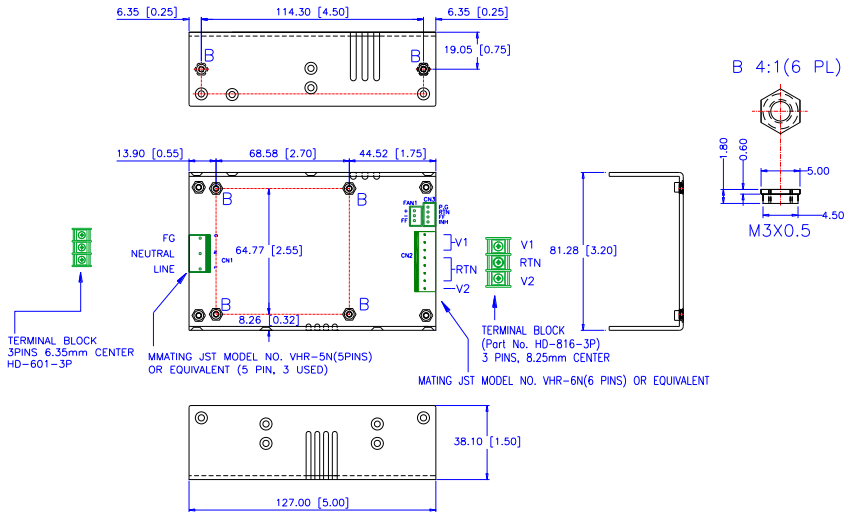
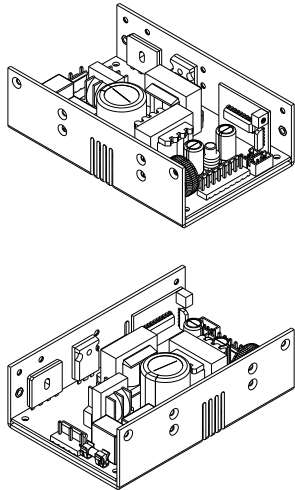


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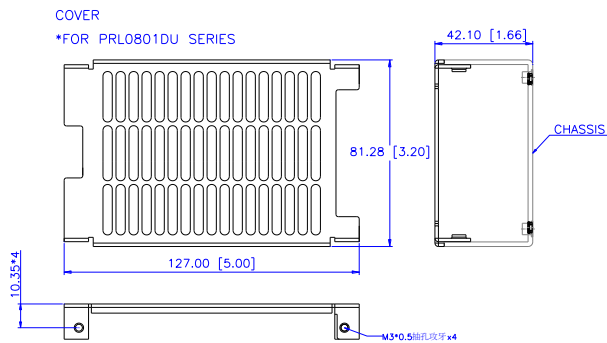
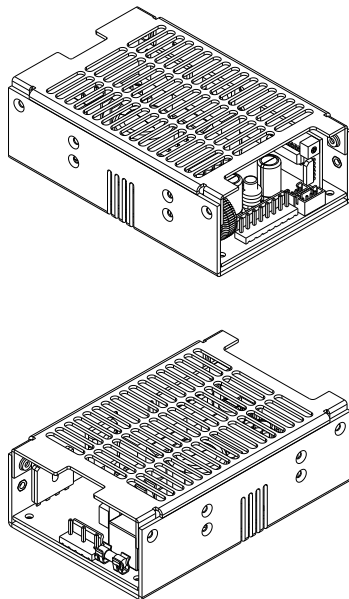
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U Type (U-Chassis only): 5(L) x 3.2(W) x 1.5(H) inches; Weight: 500g.



U Type (U-Chassis with Top Cover): 5(L) x 3.2(W) x 1.66(H) inches; Weight: 550g.



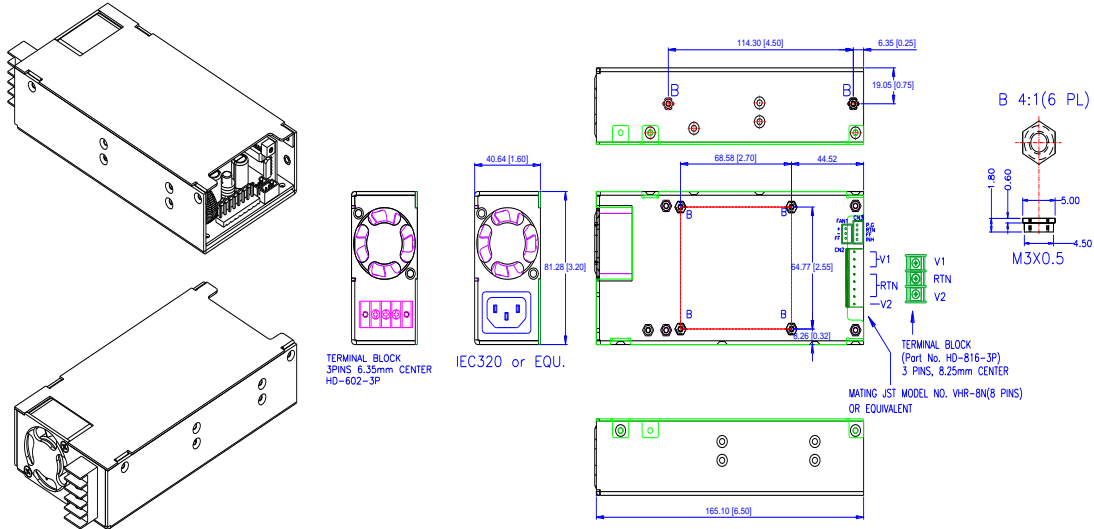


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## E Type (Enclosed with Rear Side built-in Fan): 6.5(L) x 3.2(W) x 1.6(H)inches; Weight: 650g.



## F Type (U-Chassis with Top built-in Fan): 5(L) x 3.2(W) x 2(H) inches; Weight: 600g.

