

FEATURES:

- ◆ Compact 400W with 1U height Power Density: 11.11 watts/cu in
- ◆ Active Power Factor Corrected to EN61000-3-2 Class D
- ◆ Built-in Remote On-Off, Power Good, Fan Fail Alarm
- ◆ Peak Power 700W within 500uS Duty Duration
- ◆ Variable Fan Speed & Low Acoustical Noise
- ◆ High Quality & Reliable Component Usage
- ◆ Output Voltage ranging from 12 ~ 60Vdc
- ◆ 4 - Mechanical Options
- ◆ Full Range AC Input



U Type: 6(L) x 4(W) x 1.5(H)"



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



F Type: 6(L) x 4(W) x 2(H)"



C Type: 6(L) x 4(W) x 1.57(H)"

PRODUCT SPECIFICATIONS:

Input Voltage: 90 ~ 264Vac full range, 47 ~ 63Hz.
Input Current: 8A at 90Vac full load.
Inrush Current: Max. 70A@230Vac & 35A@115Vac; both under cold start conditions.
Power Factor Correction: >0.9 @ Vin: 230Vac full load.
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% minimum (Measuring at 230V and full load).
Turn On Delay: 1.5 second maximum at 120 Vac.
Hold Up Time: 16mS min. at 75% of full load at 120Vac.
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 CN1, two types of logical signal provided, contact manufacturer.
Remote On-Off: Designated as INH on pin4 of CN1, requires a low signal to inhibit output.
Power Supply On: Green LED designated as LED1 on the PCB.
Power Good: Designated as PG on CN1 and TTL high 100-500mS after DC regulation. It goes low at least 1mS before loss of regulation.
Input Fusing Protection: One T8A/250V 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±5 °C, and automatic recovery.
Operating Temperature: 0°C to 70°C ambient, de-rating at 2.5% per degree from 50°C to 70°C.
Warranty: 2 years.
Switching Frequency: 68kHz PFC, 55 kHz PWM



Vibration: 5 ~ 50 Hz, acceleration ±7.35 m/s*s on X, Y and Z Axis.
Storage Temperature: -20°C to 85°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: IEC/EN/UL 62368-1
Leakage Current: < 3.5mA @ 264Vac.
 (optional for 500uA max. at 240Vac / 300uA max. at 120Vac input)
HI-POT Test: 1500 VAC input line to chassis (10mA AC 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.
Warranty: 2 years.
MTBF: 100000 Hrs (according to MIL-HBK-217F) at 30 °C .
Cooling:
 Internal fan is provided.
Enclosure:
 U Type: 6(L) x 4(W) x 1.5(H) inches.
 C Type: 6(L) x 4(W) x 1.57(H) inches.
 E Type: 7(L) x 4(W) x 1.6(H) inches.
 F Type: 6(L) x 4(W) x 2(H) inches.
Burn in: 45 +/- 5 degree C for 1 hour @230Vac with full load.
Weight: Maximum weight is 800g.

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

Model	Output Range	Preset Voltage	Max. Output Current		Regulation	Ripple & Noise
			Type U & E & F (forced air)	Type U & C (Convection)		
PRL0602Nx-12	10 ~ 13.8V	12 V	33.33A	18.33A	+/- 1%	1%
PRL0602Nx-15	14 ~ 15.5V	15 V	26.67A	14.67A	+/- 1%	1%
PRL0602Nx-18	16 ~ 20V	18V	22.22A	12.22A	+/- 1%	1%
PRL0602Nx-24	21 ~ 26V	24V	16.67A	9.17A	+/- 1%	1%
PRL0602Nx-28	27 ~ 34V	28V	14.29A	7.86A	+/- 1%	1%
PRL0602Nx-36	35 ~ 42V	36V	11.11A	6.11A	+/- 1%	1%
PRL0602Nx-48	43 ~ 50V	48V	8.33A	4.58A	+/- 1%	1%
PRL0602Nx-54	51 ~ 60V	54V	7.41A	4.07A	+/- 1%	1%

Note:

- * PRL0602N series are designated as PRL0602Nx-y where x can be **U** (U-Chassis), **C** (U-chassis with top vented cover), **E** (Enclosed Type with end side built-in fan) or **F** (Enclosed Type with top cover built-in fan) or ,y can be **12, 15, 18, 24, 28, 36, 48 or 54**.
- PRL0602NU Series:** U-Chassis @400W max. with min. 26.84CFM forced airflow or 220W convection cooled output.
- PRL0602NC Series:** U-chassis with vented cover@220W max. convection cooling.
- * **PRL0602NE Series:** Enclosed with rear side built-in fan @400W max.
- * **PRL0602NF Series:** Enclosed with top built-in fan @400W max.
- * All output ranges are covered in agency certifications and the preset voltage will be set as standard model if any request is not preset output please contact us in advance.
- * Ripple and noise are measured from 10KHZ to 20MHz bandwidth at output with parallel 0.1µF ceramic and 22µF electrolytic capacitors.
- * Providing peak power to 700W within 500uS for all models, longer duty duration need contact manufacture.
- 1% minimum load is required to maintain the ripple and regulation.
- * Output is fully isolated.

OUTLINE DRAWING:

Input and Output Connector (CN2):

Terminal block - Howder Part No. HD-121-7P or Molex - Mating JST VH series.
 Input 5 pin connector (3 pin used, pin 2 & pin 4 removed), PCB labeling: L = Line; N = Neutral;
 G = Chassis Ground. Output 10 pin connector.

Output Pin Assignment: (See table in right).

Mounting Inserts: 6 Places M4X0.7. Maximum Penetration 2mm.

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.

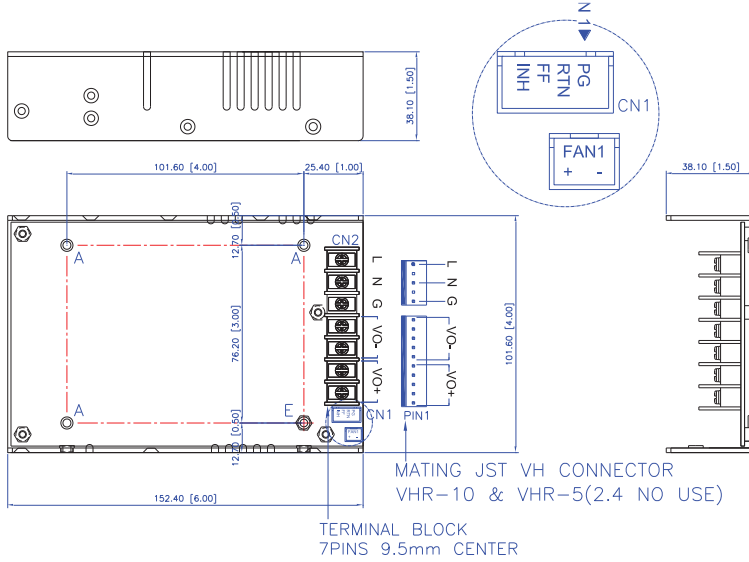
Pin 1: PG, Pin 2: RTN, PIN3: FF, Pin4: INH

Fan driver connector (FAN1):

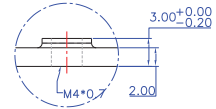
12VDC/300mA is available to drive an external fan, Mating connector JST P/N XHP-2 (2 pins 0.98 pitch), equivalent (CHYAO SHIUNN JS-2001-02).

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

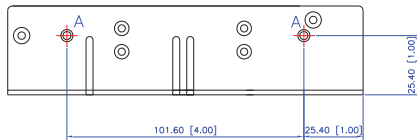
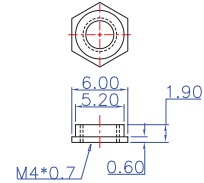
PRL0602NU Series (U-Chassis Type only): 6(L) x 4(W) x 1.5(H) inches; Weight: 600g.



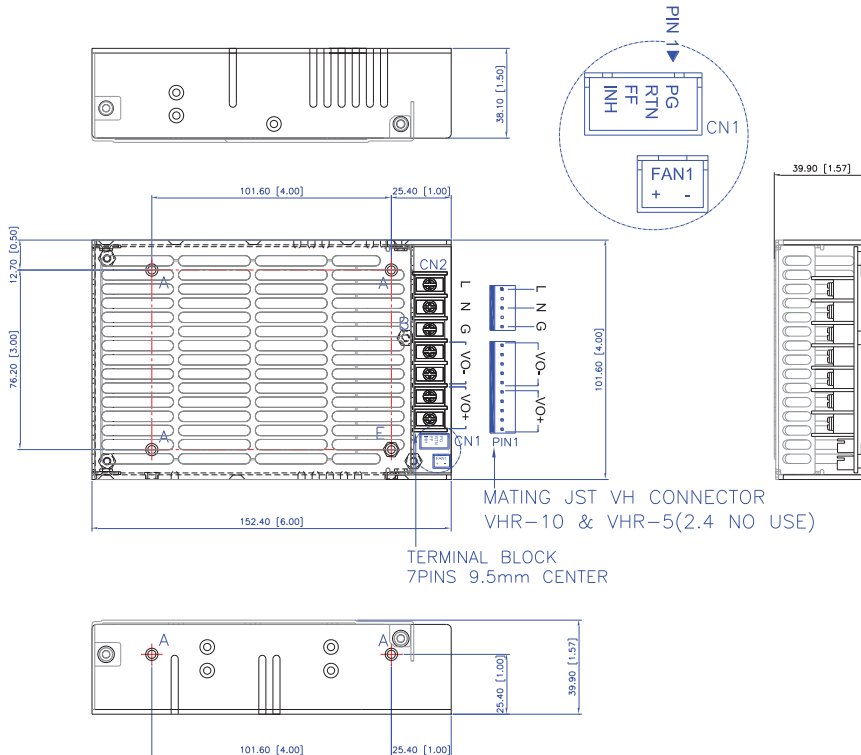
A 4:1 M4x0.7 TAP



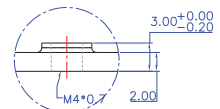
E 4:1 (1X)Zn-PLATED



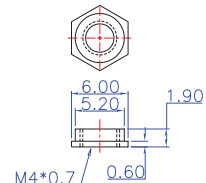
PRL0602NC Series (U chassis with Top vented cover): 6(L) x 4(W) x 1.57(H) inches; Weight: 650g.



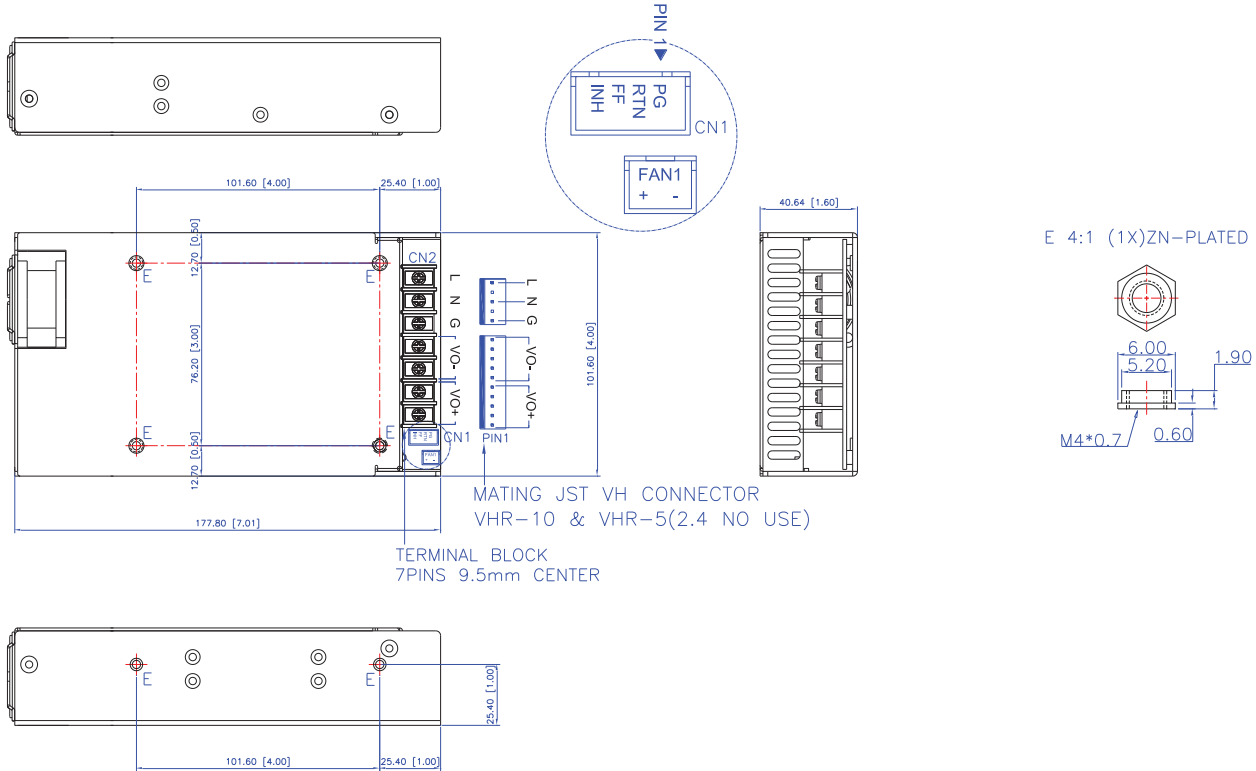
A 4:1 M4x0.7 TAP



E 4:1 (1X)Zn-PLATED



PRL0602NE Series (Enclosed with Rear Side built-in Fan Type): 7(L) x 4(W) x 1.6(H)inches; Weight: 750g.



PRL0602NF Series (Enclosed with Top built-in Fan Type): 6(L) x 4(W) x 2(H)inches; Weight: 800g.

