



# DRL0801D Series

## 120-240 Watt AC-DC PFC Switching Power Supply, Dual Output

### 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



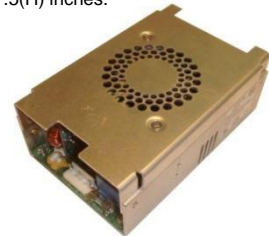
U Type (U-Chassis only):  
3.2(W) x 5(L) x 1.5(H) inches.



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:** EN55022 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, IEC61000-4-11).  
**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.





# DRL0801D Series

## 120-240 Watt AC-DC PFC Switching Power Supply, Dual Output

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

Model Number	Output Voltage	Max. Output Current		Regulation	Ripple & Noise
		TypeU (force air) & E & F	TypeU (Convection)		
DRL0801Dx-0512	V1:+ 5V	24A	12A	+/- 5%	1%
	V2:+ 12V	13.33A	6.67A	+/- 5%	1%
DRL0801Dx-0524	V1:+ 5V	24A	12A	+/- 5%	1%
	V2:+ 24V	6.67A	3.33A	+/- 5%	1%
DRL0801Dx-0548	V1:+ 5V	24A	12A	+/- 5%	1%
	V2:+ 48V	3.33A	1.67A	+/- 5%	1%
DRL0801Dx-1224	V1:+ 12V	13.33A	6.67A	+/- 5%	1%
	V2:+ 24V	6.67A	3.33A	+/- 5%	1%

#### Note:

\* DRL0801D series are designated as DRL0801Dx-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. 035977-0590 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. 035977-0890

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).

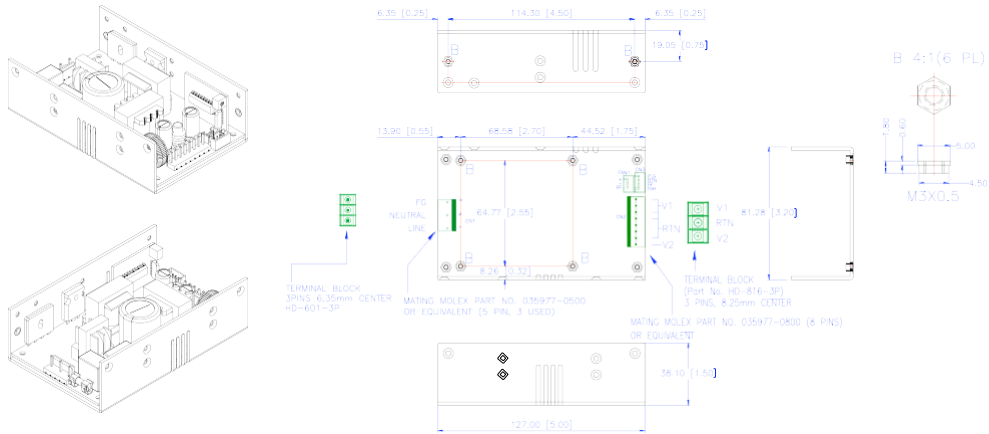
Howder	Molex
V1 : Pin 3	V1 : Pin 6~8
RTN : Pin 2	RTN : Pin 2~5
V2 : Pin 1	V2 : Pin 1



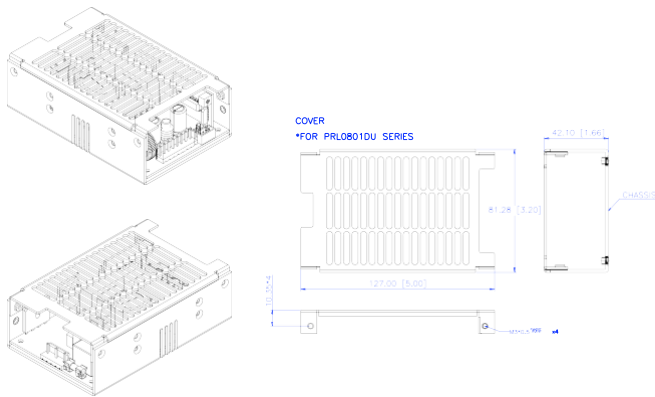
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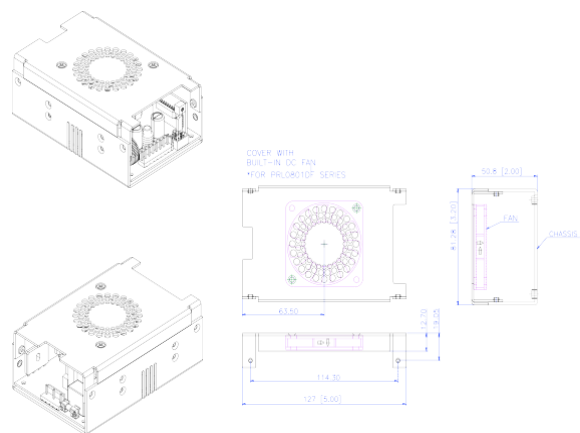
**U Type (U-Chassis only): 5(L) x 3.2(W) x 1.5(H) inches; Weight: 500g.**



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



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



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

