



# DRL5017R-N Series

## 600-800 Watt PFC Switching Power Supply,

### FEATURES:

- Universal AC Input / Full Range
  - Optional N+1 Active Current Sharing
  - High Quality & Reliable Component Usage
  - Variable Fan Speed & Low Acoustical Noise
  - Peak Power 900W within 500uS duty duration
  - Power Factor Corrected to EN61000-3-2 class D
  - High power density (Max. 9.1 watts per cubic inch)
  - Approved to UL/CUL/TUV/CB/CE & Class B Emissions
  - U-Chassis & Enclosed with built-in fan Mechanical Options
- Built-in Remote On-Off/ Remote Sense/ Power Good/ Current Monitor



E Type: 9.2(L) x 4.3(W) x 2.5(H) inches.



F Type: 8(L) x 4.4(W) x 3.4(H) inches.



U Type: 8(L) x 4.4(W) x 2.5(H) inches.

### PRODUCT SPECIFICATIONS:

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

**Inrush Current:** 70A Max @ 230VAC with full load cold start.

**Power Factor Correction:** 0.98 @ 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:** 70% ~ 85% depends on model.

**Turn On Delay:** 1.5 second maximum at 230 VAC.

**Hold Up Time:** 20mS min. at 80% of full load.

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

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

**Remote Sense:** Designated as **RS+** and **RS-** on CN3, total voltage compensation for cable losses with respect to the main output. (NOT available for current sharing models.)

**LED display:** Bi-color **LED1** emit Green for Power On; And emit Orange when protection is enable or RSW is applied a low signal.

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

**Current Sharing:** Designated as **CSH** on the CN3, optional single wired for forced current sharing function and parallel up to 4 units within 10% accuracy at full load.

**Current Monitor (Option):** Designated as **CMN** on the CN3 is a 0.5V to 3VDC output voltage to represent 0% to 100% output current.

**Input Fusing Protection:** a T12A/250V fuse is inserted in primary.

**Input Voltage Protection:** Power shut down under 80 +/-5Vac, and recovered over 86Vac.

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

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

**Leakage Current:** 2mA max. @ 264Vac.



**Over Voltage Protection:** Unit latching down when output voltage reach to 130% maximum and recycle AC input to reset.

**Over-Temperature Protection:** Unit protected of excessive operating ambient 85 °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.

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

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

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

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

**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:** UL60950-1, EN60950-1, IEC60950-1

**Hi-POT Withstand Voltage:** 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.

**Warranty:** 2 years.

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

**Enclosure:**

E Type: 9.17(L) X 4.25(W) X 2.5(H) inches.

U Type: 8(L) x 4.33(W) x 2.5(H) inches.

F Type: 8(L) x 4.33(W) x 3.4(H) inches.

**Cooling:**

E & F Type: self-cooled by built-in fan.

U Type: 25 CFM to achieve maximum power.

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

**Weight:** E & F Type: 1500g; U Type: 1400g.



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

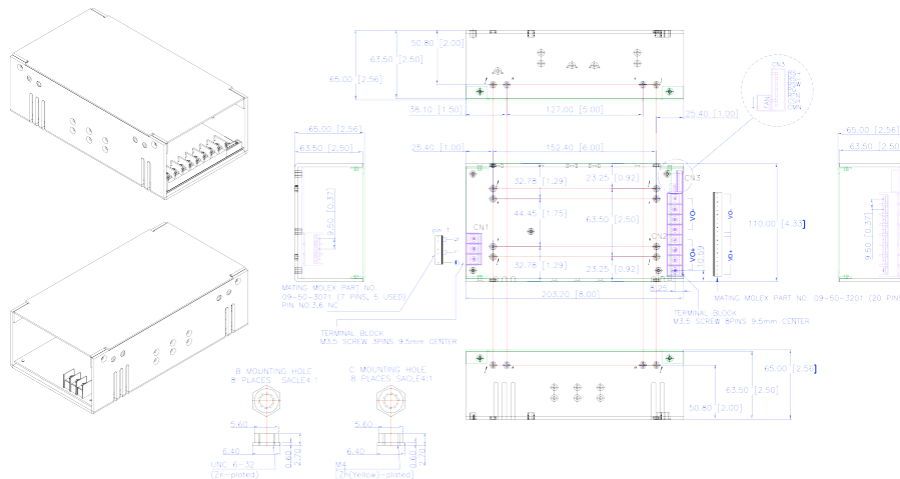
Model	Input Rating	Output Voltage		Max Output Current	Regulation	Ripple & Noise	Max. Power
		Preset	Range				
DRL5017Rx6-12N(I)	90-264VAC, 10A	12V	12 ~ 14V	50A	+/- 1%	1%	600W
DRL5017Rx6-15N(I)	90-264VAC, 10A	15V	15 ~ 19V	40A	+/- 1%	1%	600W
DRL5017Rx6-24N(I)	90-264VAC, 10A	24V	20 ~ 26V	30A	+/- 1%	1%	600W
DRL5017Rx6-36N(I)	90-264VAC, 10A	36V	27 ~ 36V	22.22A	+/- 1%	1%	600W
DRL5017Rx6-40N(I)	90-264VAC, 10A	40V	37 ~ 47V	16.22A	+/- 1%	1%	600W
DRL5017Rx6-48N(I)	90-264VAC, 10A	48V	48 ~ 60V	12.5A	+/- 1%	1%	600W
DRL5017Rx8-12N(I)	90-264VAC, 12A	12V	12 ~ 14V	62.5A	+/- 1%	1%	750W
DRL5017Rx8-15N(I)	90-264VAC, 12A	15V	15 ~ 19V	50A	+/- 1%	1%	750W
DRL5017Rx8-24N(I)	90-264VAC, 12A	24V	20 ~ 26V	40A	+/- 1%	1%	800W
DRL5017Rx8-36N(I)	90-264VAC, 12A	36V	27 ~ 36V	29.63A	+/- 1%	1%	800W
DRL5017Rx8-40N(I)	90-264VAC, 12A	40V	37 ~ 47V	21.62A	+/- 1%	1%	800W
DRL5017Rx8-48N(I)	90-264VAC, 12A	48V	48 ~ 60V	16.67A	+/- 1%	1%	800W

**Note:**

- \* **DRL5017RN** series are designated as **DRL5017Rxy-z** where x can be **E** (enclosed type with end side built-in fan), **U** (U-chassis with a optional cover) or **F** (enclosed with top fan), y can be **6** or **8** for output power from 600 to 800W, z can be **12N** or **12NI**, **15N** or **15NI**, **24N** or **24NI**, **36N** or **36NI**, **40N** or **40NI**, **48N** or **48NI** where I denote the models which have forced current sharing option.
- \* All output ranges are in agencies certification and preset voltage same as above if any request not preset should contact us in advance.
- \* U-Chassis Type need external forced airflow min. 25 CFM to achieve maximum power.
- \* Ripple & noise are measured from 10KHZ to 20MHz bandwidth at output with parallel 0.1uF ceramic and 22uF electrolytic capacitors.
- \* Providing peak power to 900W within 500uS for all models, longer duty duration need contact manufacturer.
- \* 1% minimum load is required to maintain the ripple and regulation.
- \* Cover is optional for U-Chassis Type.
- \* Output is fully isolated.

**OUTLINE DRAWING:**

- **DRL5017RU-N Series (U-Chassis Type): 8(L) x 4.33(W) x 2.5(H) inches; Weight: 1350g; (Option: Top Cover)**
- **(Option: Top Cover)**

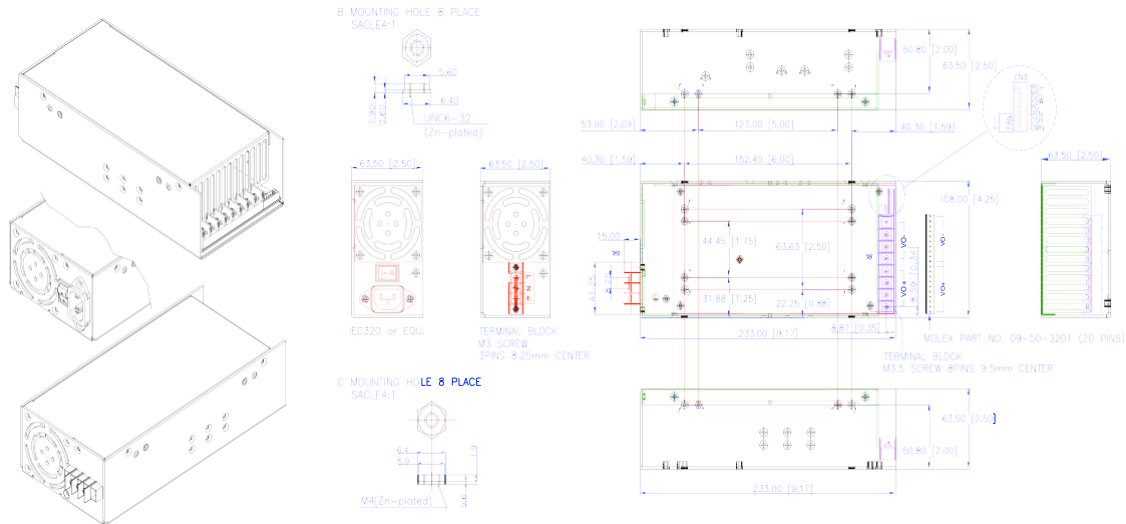




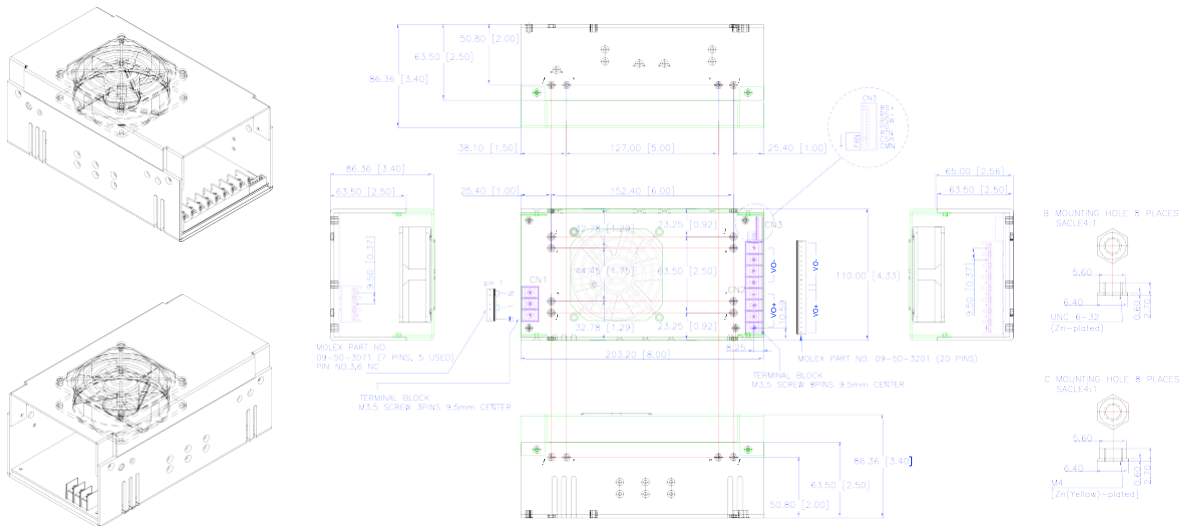
# DRL5017R-N Series

600-800 Watt PFC Switching Power Supply,

- DRL5017RE-N Series (Enclosed with built-in Fan Type): 9.17(L) x 4.25(W) x 2.5(H) inches; Weight: 1450g.



- DRL5017RF-N Series (Enclosed with Top Fan Type): 8(L) x 4.33(W) x 3.4(H) inches; Weight: 1450g.



**AC Input Connector (CN1):**

E Type: IEC320 or equivalent Snap-in mounting type or DINKLE Terminal block Part No. DT-35-A02W-03 (3 pin).

U & F Type: Mating Molex Part No. 09-50-3071 or equivalent (7 pin, 5 used) or Howder Terminal block Part No. HD-121-3P.

**Output Connector (CN2):** Mating Molex Part No. 09-50-3201 (20 pin) or Howder Terminal block Part No. HD-121-8P (8 pin).

**Output Pin Assignment:** Optional two type - **Molex:** VO+ (Pins 1-10), VO- (Pins 11-20); **Howder:** VO+ (Pins 1-4), VO- (Pins 5-8).

**Logic signal connectors (CN3):** Mating JST XHP-7 or equivalent (CHYAO SHIUNN JS-2001-07).

**Fan Drive:** 12VDC/400mA Mating JST XHP-2 or equivalent (CHYAO SHIUNN JS-2001-02).

**Mounting Inserts:** 6-32, M4 4 Places individually with maximum penetration 0.2 inch on bottom side and 0.25 inch on both side..