



# ULTRA LEVEL TECH CO., LTD.

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

We Supply the Power Customers Need ISO9001

## 500W ~ 600W PFC SWITCHING POWER SUPPLY RL5017R SINGLE OUTPUT SERIES

### FEATURES:

- ◆ High Quality & Reliable Component Usage
- ◆ Variable Fan Speed & Low Acoustical Noise
- ◆ Peak Power 900W within 500uS duty duration
- ◆ High Power Density (Max. 9.1 watts per cubic inch)
- ◆ Active Power Factor Corrected to EN61000-3-2 class D
- ◆ Approved to UL/CUL/TUV/CB/CE & Class B Emissions
- ◆ Built-in Remote On-Off, Remote Sense, Current Monitor
- ◆ Enclosed with built-in fan



Enclosed with built-in fan Type: 9.2(L) x 4.3(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 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(for under 12V models):** Designated as **RS+** and **RS-** on CN3, voltage compensates for up to 0.5V line drop (not for current share model).

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

**Input Fusing Protection:** a T10A/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.



**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 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:**

**•EN 55032: 2015+A11: 2020**

**•EN 61000-3-2: 2014, EN 61000-3-3: 2013**

**•EN 55035: 2017+A11: 2020**

**•IEC 61000-4-2: 2008, IEC 61000-4-3: 2020**

**•IEC 61000-4-4: 2012, IEC 61000-4-5: 2014+A1:2017**

**•IEC 61000-4-6: 2013+C1: 2015, IEC 61000-4-8: 2009**

**•IEC 61000-4-11: 2020+C1:2020**

**Safety Regulation:** UL62368-1, EN62368-1, IEC62368-1.

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

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

**Cooling:** self cooled by built-in fan.

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

**Weight:** 1450g



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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				
RL5017RE5-03	90-264VAC, 8A	3.3V	2 ~ 3.3V	80A	+/- 1%	75mV	264W
RL5017RE5-05	90-264VAC, 8A	5V	5 ~ 6V	80A	+/- 1%	75mV	400W
RL5017RE5-12	90-264VAC, 8A	12V	12 ~ 15V	41.67A	+/- 1%	+/-1%	500W
RL5017RE5-16	90-264VAC, 8A	18V	16 ~ 21V	31.25A	+/- 1%	+/-1%	500W
RL5017RE5-24	90-264VAC, 8A	24V	22 ~ 30V	22.73A	+/- 1%	+/-1%	500W
RL5017RE5-36	90-264VAC, 8A	36V	31 ~ 47V	16.13A	+/- 1%	+/-1%	500W
RL5017RE5-48	90-264VAC, 8A	48V	48 ~ 56V	10.42A	+/- 1%	+/-1%	500W
RL5017RE6-03	90-264VAC, 10A	3.3V	2 ~ 3.3V	90A	+/- 1%	75mV	297W
RL5017RE6-05	90-264VAC, 10A	5V	5 ~ 6V	90A	+/- 1%	75mV	450W
RL5017RE6-12	90-264VAC, 10A	12V	12 ~ 15V	50A	+/- 1%	+/-1%	600W
RL5017RE6-16	90-264VAC, 10A	18V	16 ~ 21V	37.5A	+/- 1%	+/-1%	600W
RL5017RE6-24	90-264VAC, 10A	24V	22 ~ 30V	27.27A	+/- 1%	+/-1%	600W
RL5017RE6-36	90-264VAC, 10A	36V	31 ~ 47V	19.35A	+/- 1%	+/-1%	600W
RL5017RE6-48	90-264VAC, 10A	48V	48 ~ 56V	12.5A	+/- 1%	+/-1%	600W

### Note:

\* RL5017REy-z where y= 5, 6 for output power from 264W to 600W

z= 03 , 05, 12, 16, 20, 24, 28, 36, 40, 48, 60

\* All output ranges are in agencies certification and preset voltage same as above if any request not preset should contact us in advance.

\* 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.

\* Output is fully isolated.



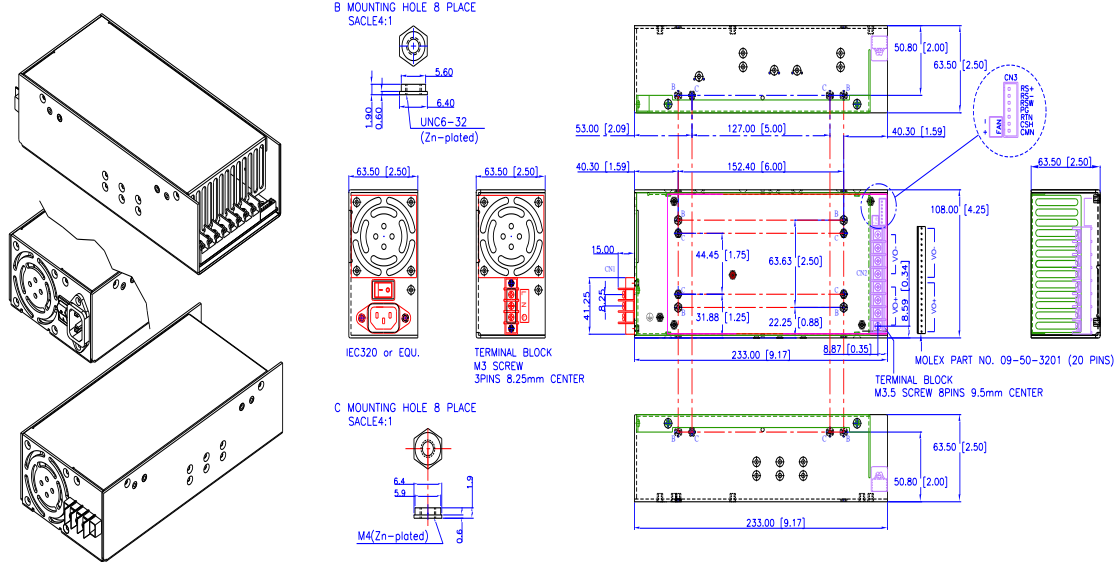
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## OUTLINE DRAWING:

- RL5017RE Series (Enclosed with built-in Fan Type): 9.17(L) x 4.25(W) x 2.5(H) inches; Weight: 1450g.



### AC Input Connector (CN1):

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

**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/500mA 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.