

## 200W-250W Dual Output Series

### FEATURES:

- ◆ Smallest 250W with 1U Height Power Density: 10.4 Watts/Cu in.
- ◆ Low Leakage Current 500uA @ 240Vac / 300uA @ 120VAC
- ◆ U-Chassis with Cover & Built-in Fan or Cover Only Options.
- ◆ 3.3/5/12/24/48V Dual Output Combinations
- ◆ Power Factor Corrected to EN61000-3-2 Class A
- ◆ Approved to UL CUL TUV CB and CE.
- ◆ Auto-Selectable AC Input Range
- ◆ Output Voltages from 2 ~ 60VDC.



U Series (U-Chassis with no cover) type: 5(L) x 3.2(W) x 1.5(H) inches.

UC Series (U-Chassis with cover) type: 5(L) x 3.2(W) x 1.56(H) inches.

UT Series (U-Chassis with cover & top-mounted fan) type: 5(L) x 3.2(W) x 2(H) inches.

### PRODUCT SPECIFICATIONS:

**Input Voltage:** 90-132 / 180-264Vac, 47-63Hz auto selectable.

**Input Current:** 6/3A at 110-120 / 200-240VAC.

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

**PFC:** Power factor corrected to EN61000-3-2 class A.

**Transient Response:** Output voltage returns to within 1% in less than 2.5mS for a 50% load change, peak does not exceed 5%.

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

**Efficiency:** 70% minimum (Measuring at 230V and full load).

**Turn On Delay:** 1 second maximum at 120 Vac.

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

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

**Input Fusing Protection:** One T6A/250V fuse inserted in primary.

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

**Over-Power Protection:** Fold back mode 110-140%; Auto-recovery.

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

**Over-Temperature Protection:** Unit protected of excessive operating ambient 85 °C, and automatic recovery.

**Operating Temperature:** 0 to 50°C ambient.

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

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

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

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

**Switching Frequency:** 25K Hz fixed frequency.

**Remote On-Off:** Designated as **RMSW** on the CN1, requires a low signal to inhibit output. Hicccough mode.

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

**Power Good:** Designated as **PG** on the CN1 will go high 100-500mS after regulation and goes low 1mS before loss of regulation.

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

**EMC Standards:** CISPR 22 / EN55022 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, EN55024 CE Marked (LVD).

**Safety Regulation:** Approved to UL60950-1, CSA C22.2 No. 60950-1, TUV EN60950-1 and CB certificate available.

**Leakage Current:** Regular Type 1.5mA @ 240Vac. (optional for 500uA max. at 240Vac / 300uA max. at 120Vac input)

**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.

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

**Cooling:**

U/UC Series: 250W / 135W max. @ 35CFM forced airflow / convection.

UT Series: 250W max. with top built-in fan flow.

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

**Enclosure:**

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

UC Series (Enclosed with no fan): 5(L) x 3.2(W) x 1.56(H) inches.

UT Series (Enclosed with Top fan): 5(L) x 3.2(W) x 2(H) inches.

**Weight:** U Series: 450g; UC Series: 470g; UT Series: 550g.

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

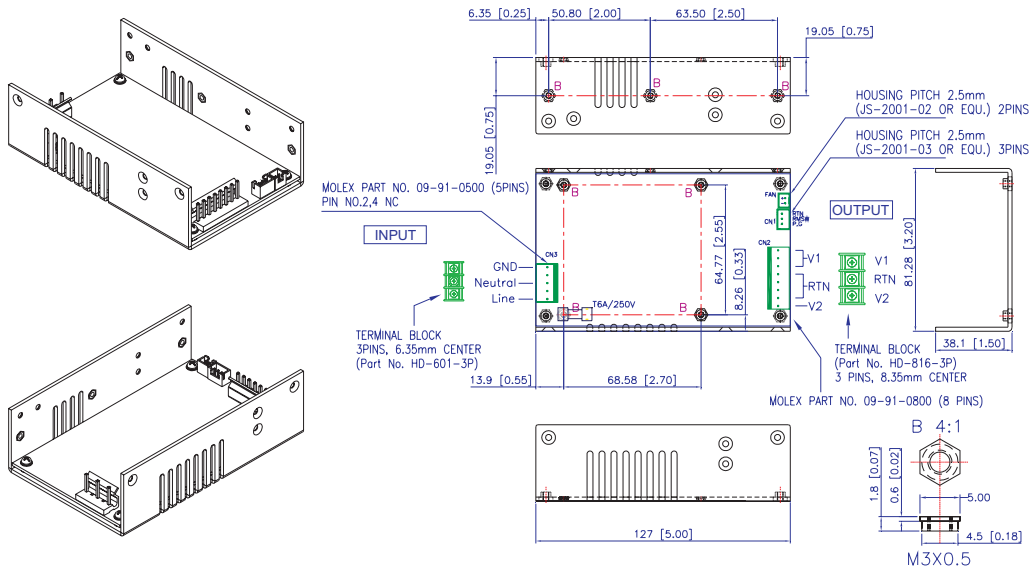
Part Number	Output Voltage	Max. Output Current		Regulation	Ripple & Noise
		Type U (with forced air) & F	Type U (Convection)		
U2200U-0312y	V1:+3.3V	24A	12A	+/- 5%	50mV
	V2:+12V	12A	7A	+/- 5%	1%
U2200U-0324y	V1:+3.3V	24A	12A	+/- 5%	50mV
	V2:+24V	6A	4A	+/- 5%	1%
U2200U-0512y	V1:+5V	24A	12A	+/- 5%	1%
	V2:+12V	12A	7A	+/- 5%	1%
U2200U-0524y	V1:+5V	24A	12A	+/- 5%	1%
	V2:+24V	6A	4A	+/- 5%	1%
U2200U-0548y	V1:+5V	24A	12A	+/- 5%	1%
	V2:+48V	3A	2A	+/- 5%	1%
U2250U-1224y	V1:+12V	12A	7A	+/- 5%	1%
	V2:+24V	6A	4A	+/- 5%	1%

### NOTE:

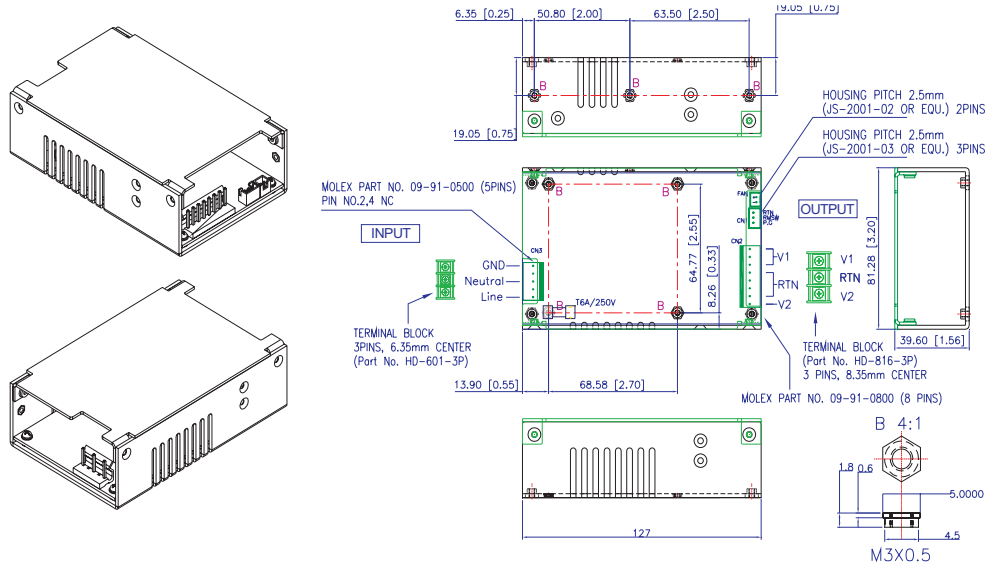
- \* The series is designated where **y** can be **C** (U-Chassis with cover option); or **T** (U-Chassis with cover & top-mounted fan); or blank for no cover.
- \* U-Chassis & T types (with min. 16CFM forced air) Max. 250W total combined power of V1 and V2 for U2250U-1224/T and 200W for other models.
- \* U-Chassis & C types (with convection cooling): Max. 135W total combined power of V1 and V2 for U2250U-1224/C and 100W for other models.
- \* Providing peak power to 600W within 500uS for all models, longer duty duration need contact manufacturer.
- \* Ripple and noise is measured from 10KHZ to 20MHz bandwidth at output with parallel 0.1uF ceramic and 22uF electrolytic capacitors.
- \* 10% minimum load is required for all outputs to maintain the ripple and regulation.
- \* Output is fully isolated.

### OUTLINE DRAWING:

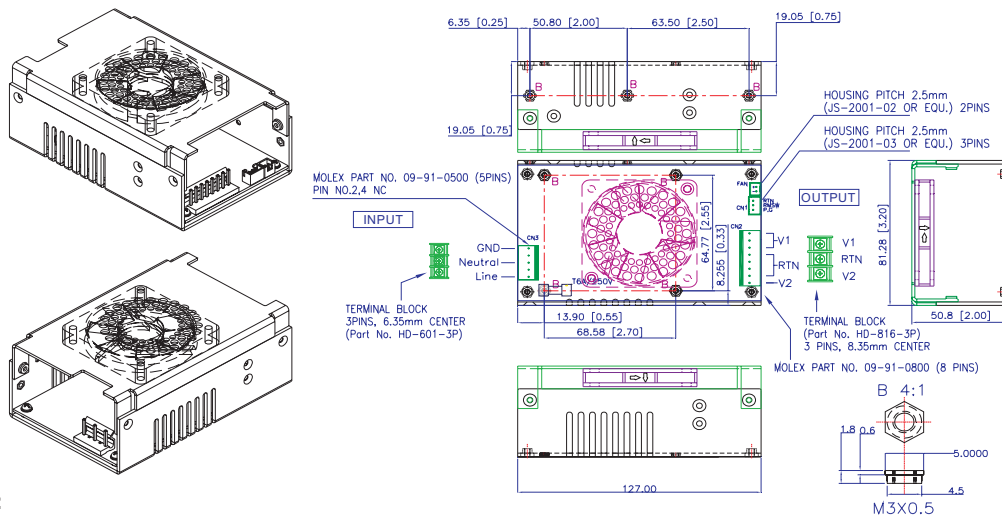
**U Series (U-Chassis Type): 5(L) x 3.2(W) x 1.5(H) inches; Weight: 450g.**



**UC Series (U-Chassis with Top Cover): 5(L) x 3.2(W) x 1.56(H) inches; Weight: 470g.**



**UT Series (Enclosed with Top Fan Type): 5(L) x 3.2(W) x 2(H) inches; Weight: 550g.**



**NOTES:**

**Input Connector(CN3):** Mating Molex Part No. 09-91-0500 or equivalent (5 pin, 3 used) PCB Labeling: L = Line; N = Neutral; G = Chassis Ground; Molex Engineering Series 2478, 2578, 8818 or Howder M3. 3 pin Terminal block 6.35MM Center (HD-601-3P).

**Output Connector (CN2):** Mating Molex Part No. 09-91-0600. Mating Pins: Molex Engineering Series 2478, 2578, 8818 or Howder M3. 3 pin Terminal block 8.25MM Center (HD-819-3P).

**Connector Pin Assignment: (See table in right).**

**Power Good, Remote On/Off mating connectors (CN1):**

Mating JST Part No. XHP-3 or equivalent (CHYAO SHIUNN JS-2001-03).

Mating Pins: JST SXH-002T-P0.6 FOR AWG 30 to 26.

**Signal Pin Assignment:**

Pins 1 : Power good .

Pins 2 : Remote Switch.

Pins 3 : RTN.

**Fan Drive:** Mating JST Part No. XHP-2 or equivalent (CHYAO SHIUNN JS-2001-02).

**Mounting Inserts:** 7 Places M3. Maximum Penetration 3.8mm sees outline drawing for location.

Molex	Howder
Pins 1: V2	Pins 1: V2
Pins 2-5: RTN	Pins 2: RTN
Pins 6-8: V1	Pins 3: V1