JB400D Series 400W Dual Outputs

200W ~ 400W AC-DC PFC MEDICAL & ITE APPROVED POWER SUPPLY JB400D DUAL OUTPUT SERIES

FEATURES:

- Safety Approvals to IEC/EN/UL60601-1 3rd Edition
- High Quality & Reliable Component Usage
- Variable Fan Speed & Low Acoustical Noise
- 5/ 12/ 24V Dual Output Optional Combinations
- U-Chassis Type drive max 250W under air convection
- Active Power Factor Corrected to EN61000-3-2 class D
- U-Chassis & Enclosed with built-in fan Mechanical Options

PRODUCT SPECIFICATIONS:

Input Voltage: 90 ~ 264Vac full range, 47 ~ 63Hz.
Input Current: 6.35A at 90VAC full load.
Inrush Current: 70A Max @ 230VAC with full load and cold start.
Power Factor Correction: 0.98 @ Vin: 230Vac full load.
Fan Drive: 12VDC/400mA is available to drive an external fan.
Transient Response: Returns to within 1% in less than 2.5mS for a 50% load change and the peak transient does not excess 5%.
Overshoot: Turn-on/off not exceed 5% over nominal voltage.
Efficiency: 752% ~ 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 the CN3, requires a low signal to inhibit output.
Power Supply On: Green LED designated as **LED 1** on the PCB.
LED display: Bi-color green **LED** in front panel (RL0402DE only); Any protection occurred or RSW applied low signal will emit orange.
Power Good: PG on CN3 goes high 100-500mS after DC regulation and low at least 1mS before loss of regulation (Open collector).
Input Circuit Protection (primary): Two T8A/250V fuses inserted.
Input Voltage Protection: Power shut down under 80 +/-5Vac, and recovered over 86Vac.
Over-Power Protection: 110~140% of I-Max and auto-recovery.
Over-Voltage Protection: Latching down will occur when output voltage exceed 130% and recycle AC input to reset.
Over Temp. Protection: Protected at ambient 85C; Auto-recovery.

Short Circuit Protection: Trip without damage and auto-recovery.
Operating Temperature: 0℃ to +70℃ ambient, de-rating at 2.5% per degree from +50℃ to +70℃.
Switching Frequency: 30KHZ fixed frequency.
Storage Temperature: -20 to +85 degrees C.
Operating Humidity: 5% to 90% RH, Non-condensing.
Storage Humidity: 5% to 95% RH, Non-condensing.
Vibration: Frequency 5 to 50 Hz, acceleration +/-7.35 M/(SxS) on X,Y and Z Axis.
EMC: EMC: EN60601-1-2/EN61204-3 Class B conducted / radiated; EN61000-3-2,3; IEC61000-4-2, 3, 4, 5, 6, 8, 11.
Safety: EN/ IEC/ UL60601-1 3rd edition; EN / IEC / UL62368-1.
Leakage Current: Medical degree < 200uA; ITE degree < 1.5mA.
HI-POT Test: 1600 VAC between input line and chassis (2mA DC cut off current); 4000VAC between primary and secondary windings; Primary to core 1800VAC. All for 3 sec.
Grounding Test: Apply 40 A from ground pin to the earthed connection point. Maximum allowable resistance is 0.1ohm.
Warranty: 2 years.
MTBF: 100000 Hrs (according to MIL-HBK-217F) at 30℃.
Cooling: :JB400DU Series: U-Chassis @400W max. with 23CFM airflow or 250W max. under convection cooling.
JB400DE Series: Enclosed with side built-in fan @400W max. **Burn in:** 45 +/- 5 degree C for 1 hour @230Vac with full load. **Enclosure:** JB400DU Series: 8(L) x 5(W) x 1.6(H) inches. JB400DE Series: 9(L) x 5(W) x 1.6(H) inches.
Weight: JB400DU Series: 1.3KG; JB400DE Series: 1.6KG.

JB400D Series 400W Dual Outputs

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

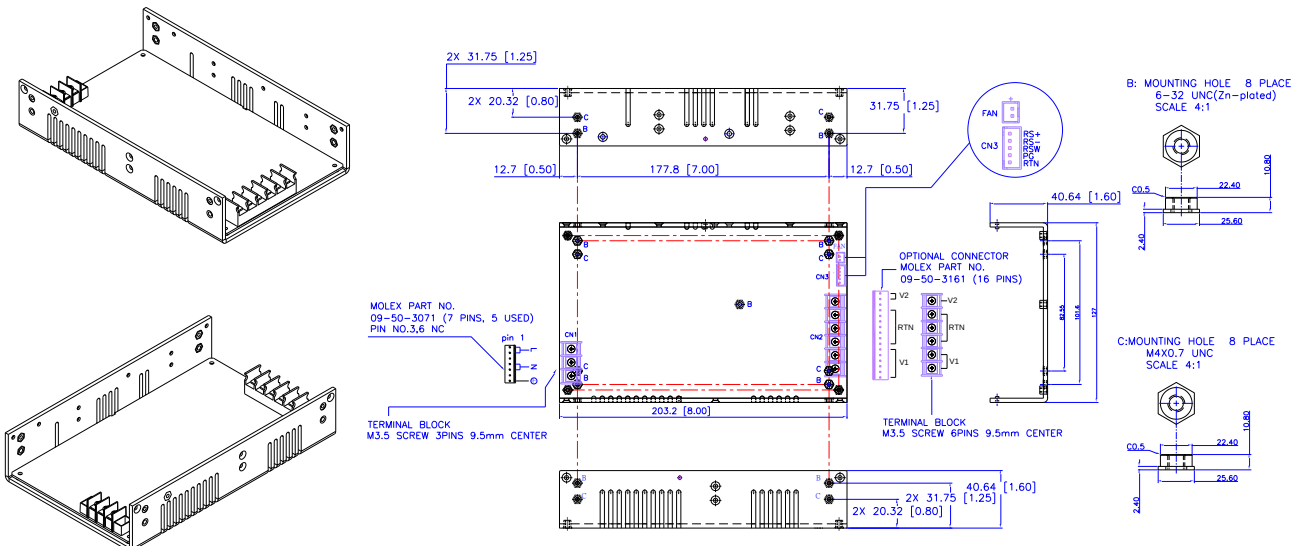
Model Number	Output Voltage	Max. Output Current		Total Regulation	Ripple & Noise
		Convection	22.95CFM		
JB400Dx0512	V1: +5V	30A	40A	+/- 5%	+/-1%
	V2: +12V	16.7A	25A	+/- 5%	+/-1%
JB400Dx0524	V1: +5V	30A	40A	+/- 5%	+/-1%
	V2: +24V	8.34A	12.5A	+/- 5%	+/-1%
JB400Dx1224	V1: +12V	16.7A	25A	+/- 5%	+/-1%
	V2: +24V	8.33A	12.5A	+/- 5%	+/-1%

NOTE:

* JB400Dxy Series where x = **E** (Enclosed with built-in Fan Type) or **U** (U-Chassis Type), y =**0512, 0524 and 1224**.
* 10% minimum load is required for all outputs to maintain the ripple and regulation. Output is fully isolated.
* Total combined power of V1 and V2:
  400W Max. with 22.95 CFM forced air and 250W convection cooling forJB400DU1224; 400W for JB400DE1224 by self-cooling. 300W Max. with 22.95 CFM forced air and 200W convection cooling for other JB400DUy; 300W for other JB400DEy by self-cooling.

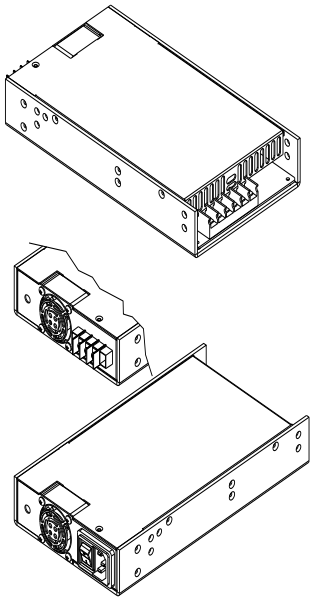
OUTLINE DRAWING:

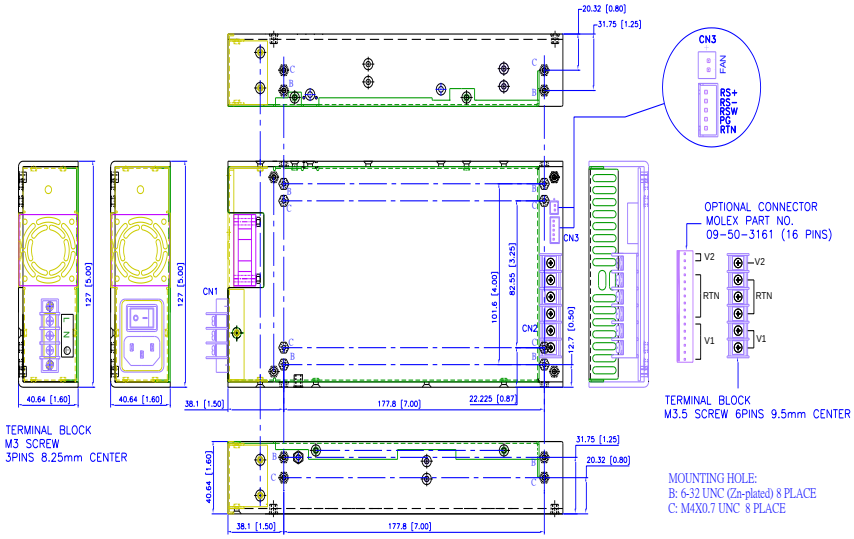
JB400DU Series (U-Chassis Type): 8(L) x 5(W) x 1.6(H)inches; Weight: 1.3kg



JB400D Series 400W Dual Outputs

JB400DE Series (Enclosed with built-in Fan Type): 9(L) x 5(W) x 1.6(H)inches; Weight: 1.6kg.





I/O Connector pin assignment:

AC Input Connector(CN1):
JB400DU Series: Mating Molex Part No. 09-50-3071 or equivalent (7 pin, 5 used) or Howder Terminal block (HD-121-3P / screw torque 15.7 lb-in).
JB400DE Series: IEC320 or equivalent Snap-in mounting type or ECE Terminal block (ETB51 / screw torque 4.5 lb-in).

Output Connector (CN2): Mating Molex Part No. 09-50-3161 (16 pins), or Howder (HD-121-6P / screw torque 15.7 lb-in) M3.5, 8 pins terminal block, 9.5MM Center.

Output Pin Assignment: (See below table).

	V1	V2	RTN
MOLEX	PINS 1-6	PINS 14-16	PINS 7-13
HOWDER	PINS 1-2	PINS 6	PINS 3-5

Logic signal connectors (CN3):
Mating JST XHP-5 or equivalent (CHYAO SHIUNN JS-2001-05).
Mating Pins: JST SXH-002T-P0.6 FOR AWG 30 to 26.

Mounting Inserts: 6-32 (screw torque 21 lb-in) , M4 (screw torque 13 lb-in) 4 Places individually with maximum penetration 0.15 inches on bottom side and 0.25 inch on both side.

Specifications subject to change without notice.