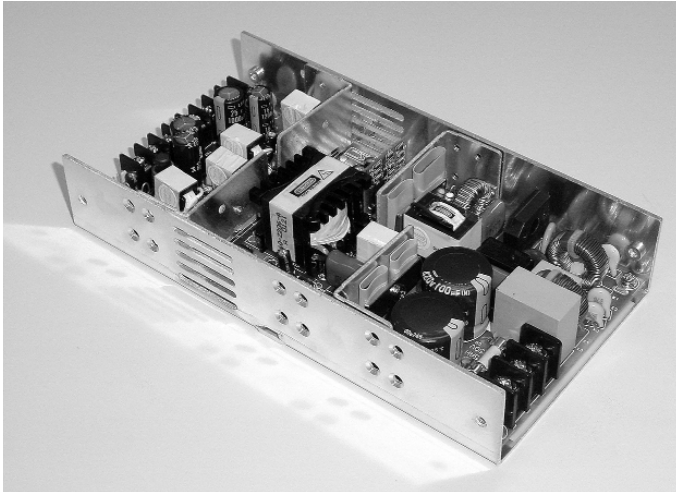


AC/DC U-Channel

250 Watts JPS250 Quad Output Series

XPiQ inc.

Intelligent Design Quality Product



Active PFC - Meets EN61000-3-2, -3

•
200 W with Convection Cooling

•
Meets 1U, Low Profile Requirements

•
Zero Voltage Switching Technology

•
Remote On/Off / Remote Sense

•
Optional Current Share

Specification

Input

AC Input Voltage	• 85-264 VAC
Input Frequency	• 47-63 Hz
DC Input Voltage	• 170-370 VDC
Inrush Current	• 30 A max at 115 VAC 60 A max at 230 VAC
Input Current	• 4 A max at 115 VAC 2 A max at 230 VAC
Remote On/Off	• Off = Logic High, or +5 V On = Logic Low, or short circuit, or open
Power Factor	• 0.98 for 115 VAC, 0.90 for 230 VAC

Output

Output Voltage	• 5-48 VDC
Output Voltage Adjustment	• On output #1 only $\pm 10\%$
Output Power	• 250 Watts
Minimum Load	• 2 A required on V1
Line Regulation	• $\pm 0.5\%$ from low line to high line
Load Regulation	• $\pm 1\%$ for V1 & V2, $\pm 5\%$ for V3 & V4
Cross Regulation	• 15% maximum
Set Point Accuracy	• $\pm 1\%$
Ripple & Noise	• $\pm 1\%$ peak to peak maximum
Transient Response	• 4% max deviation, 500 μ s recovery time for a 25% load change
Temperature Coefficient	• $\pm 0.05\%/^{\circ}\text{C}$
Hold Up Time	• 20 ms minimum at low line
Remote Sense	• V1 & V2 compensates for up to 0.5 V drop
Overvoltage Protection	• 115% to 140%, recycle input to reset

Overcurrent Protection	• 120% - 150% with auto recovery
Overtemperature Protection	• Standard
Current Share	• Single wire current sharing on V1 & V2 (optional)
Fan Output	• 12 V at 100 mA

General

Efficiency (typical)	• $> 80\%$, nominal line full load
Power Density	• 4.9 W/in ³
MTBF	• 255,000 hrs min to MIL-HDBK-217F
Withstand Voltage	• 3000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground
Size	• 8.0" x 4.2" x 1.5"
Weight	• 770 grams approx
Signals	• AC OK = Logic Hi, DC OK = Logic Hi

Environmental

Operating Temperature	• 0 $^{\circ}\text{C}$ to +70 $^{\circ}\text{C}$ See Derating Chart Full power to 50 $^{\circ}\text{C}$
Cooling	• 250 W with 18 CFM airflow 200 W Convection Cooling
Storage Temperature	• -20 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$

Safety and EMC

Safety Approvals	• UL60950, CSA C22.2 No 234, EN60950, CE Mark LVD
EMI/EMC	• EN61000-3-2, -3, EN55022 Class B and FCC 20780 Level B conducted
Immunity & Surge	• EN50082-2 (EN61000-4-2,-3, -4, -5) Performance criteria A

* Preliminary datasheet - see website for current specs

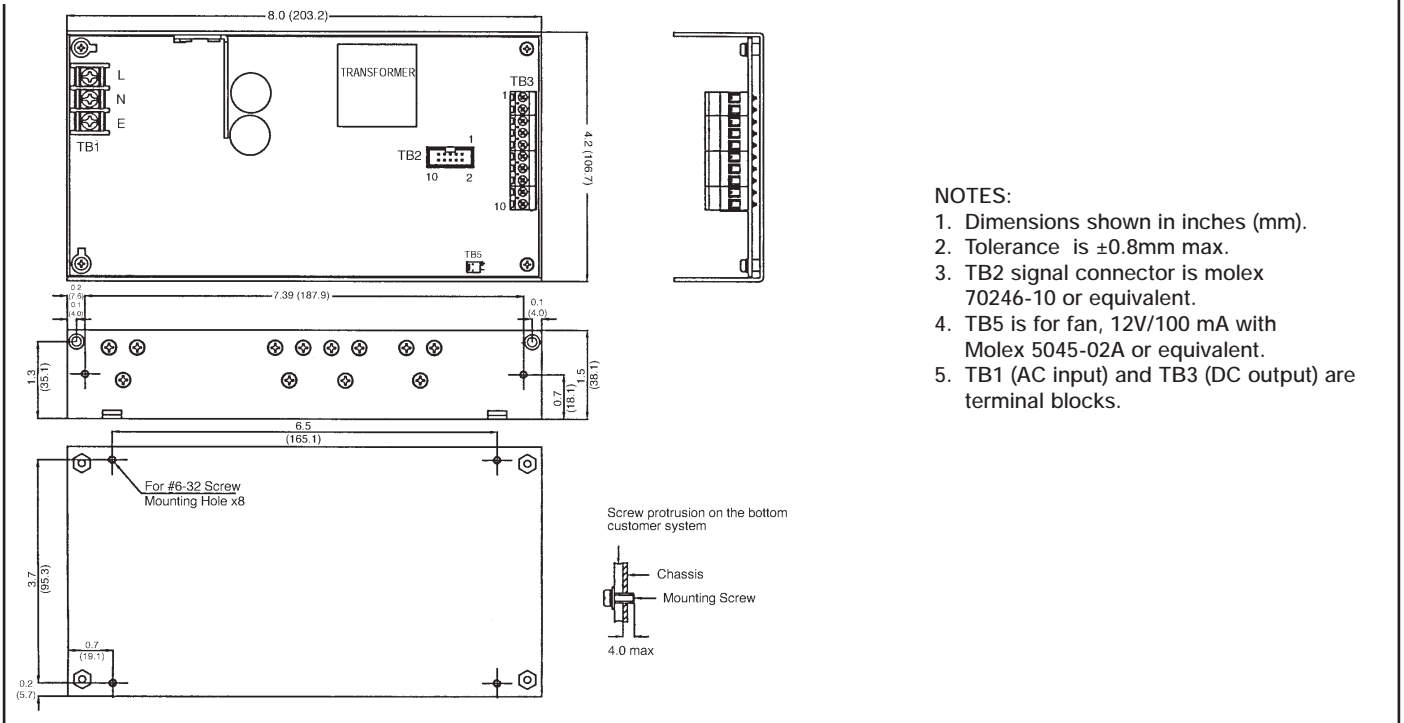
OUTPUT VOLTAGE & CURRENT RATINGS												JPS250Q
Output 1			Output 2			Output 3			Output 4			Model Number
Output V1	Conv. Cooled	Max 18 CFM	Output V2	Conv. Cooled	Max 18 CFM	Output V3	Conv. Cooled	Max 18 CFM	Output V4	Conv. Cooled	Max 18 CFM	
3.3 V	16.0 A	20.0 A	5.0 V	12.0 A	20.0 A	12.0 V	5.0 A	6.0 A	-12.0 V	1.0 A	2.0 A	JPS250PQ46
5.0 V	17.5 A	30.0 A	12.0 V	7.0 A	8.0 A	-12.0 V	2.0 A	3.0 A	-5.0 V	1.0 A	2.0 A	JPS250PQ41
5.0 V	20.0 A	25.0 A	12.0 V	4.0 A	6.0 A	24.0 V	2.0 A	3.0 A	-12.0 V	1.0 A	2.0 A	JPS250PQ47*
5.0 V	20.0 A	25.0 A	15.0 V	3.0 A	5.0 A	24.0 V	2.0 A	3.0 A	-15.0 V	1.0 A	2.0 A	JPS250PQ48*

* Preliminary models JPS250PQ47 & JPS250PQ48 will be released in Q3 2003 - see website for current specs.

Notes

1. Maximum power with 18 CFM forced air, is 250 Watts, or 200 Watts with convection cooling.
2. For current share option add suffix "C" to part number.
3. Current share models are built to order.
4. All models require 2 A minimum load on V1. On V2, JPS250PQ46 requires 1 A and JPS250PQ41 requires 0.5 A.

Mechanical Details



NOTES:

1. Dimensions shown in inches (mm).
2. Tolerance is $\pm 0.8\text{mm}$ max.
3. TB2 signal connector is molex 70246-10 or equivalent.
4. TB5 is for fan, 12V/100 mA with Molex 5045-02A or equivalent.
5. TB1 (AC input) and TB3 (DC output) are terminal blocks.

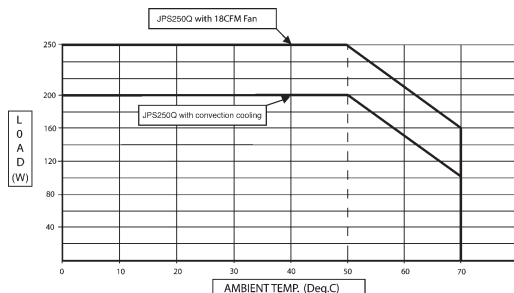
Pin Chart

TB2	1	2	3	4	5	6	7	8	9	10
JPS250PQ46	+Sense 3.3 V	-Sense 5V	Share 3.3 V	DC OK	+Sense 5 V	-Sense 3.3 V	Share 5.0 V	Enable	AC OK	GND
JPS250PQ41	+Sense 5 V	-Sense 5V	Share 12.0 V	DC OK	+Sense 12 V	-Sense 5.0 V	-Sense 12.0 V	Enable	AC OK	GND

* Preliminary models JPS250PQ47 & JPS250PQ48 will be released in Q3 2003 - see website for current specs.

TB3	1	2	3	4	5	6	7	8	9	10
JPS250PQ46	3.3 V	3.3 V	GND	GND	GND	GND	12.0 V	-12.0 V	5.0 V	5.0 V
JPS250PQ41	5.0 V	5.0 V	GND	GND	GND	-5.0 V	-12.0 V	12.0 V		

Derating Graph - 250 Watts



* Preliminary datasheet - see website for current specs and application notes.

Application Notes

1. To turn off the output, apply 5 V to the remote ON/OFF.
2. AC OK is a TTL signal which goes LOW when input falls below 60 VAC at rated load.
3. DC OK is a TTL signal which goes LOW when PSU is in an overcurrent condition, overvoltage condition, disabled or when output falls out of regulation.
4. For AC OK and DC OK signals, source current is 1 mA, sink current is 6 mA.