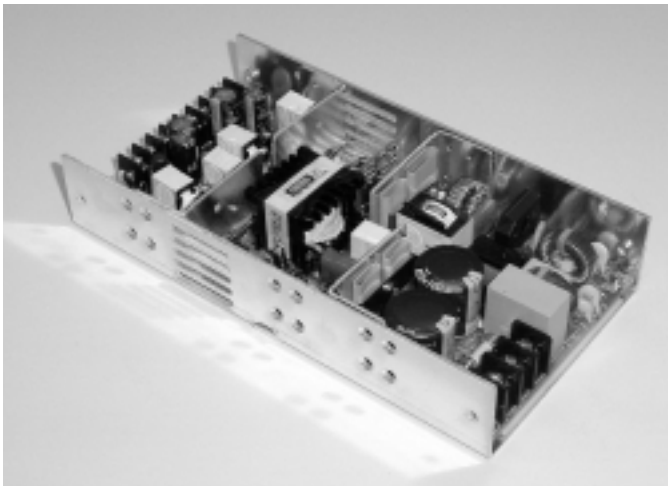
AC-DC High Power Density Chassis Mount

250 Watts
JPS250 Series

THE XPERTS IN POWER



- 200 W with Convection Cooling
- High Efficiency, Up To 90%
- Meets 1U, Low Profile Requirements
- Active PFC
- Zero Voltage Switching Technology
- Remote ON/OFF & Remote Sense
- Current Share

Specification

Input

AC Input Voltage	*90-264 VAC*
Power Factor	*0.99*
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	*2.75 A max at 115 VAC 1.40 A max at 230 VAC*
Remote On/Off	*On = Logic LOW or open circuit Off = Logic HIGH*

Output

Output Voltage	*5-48 VDC, See Table*
Output Voltage Adjustment	*±10%*
Output Power	*250 Watts*
Minimum Load	*No minimum load required*
Line Regulation	*±0.5%*
Load Regulation	*±1%*
Tolerance	*±1%*
Ripple & Noise	*±1% max (pk-pk)*
Transient Response	*4% max deviation, 500 µs recovery time for a 25% load change*
Temperature Coefficient	*±0.05%/°C*
Hold Up Time	*20 ms minimum at low line*
Remote Sense	*Compensates for up to 0.5 V drop*
Overvoltage Protection	*115% to 140%, recycle input to reset*
Overcurrent Protection	*120% to 150%, trip & restart*
Overtemperature Protection	*Shuts down at 110 °C measured internally, auto recovers*
Current Share	*Single wire current sharing (4 supplies can be paralleled)*
Fan Output	*12 V at 300 mA (not 5 V model)*

General

Efficiency	*Up to 90% typical*
Power Density	*4.96 W/in³*
MTBF	*100,000 hrs min to MIL-HDBK-217F*
Isolation Voltage	*3000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground*
Size	*4.2" x 8.0" x 1.5"*
Weight	*900 g*
Signals/Control	*AC OK, DC OK, Remote ON/OFF See Application Notes*

Environmental

Operating Temperature	*0 °C to +70 °C See Derating Curve Full power to +50 °C*
Cooling	*250 W with 18 CFM airflow 200 W Convection Cooling*
Storage Temperature	*-20 °C to +85 °C*

EMC & Safety

Safety Approvals	*UL1950, CSA C22.2 No 234, EN60950, CE Mark LVD*
EMI/EMC	*Meets EN61000-3-2, -3, EN55022 Class B & FCC 20780 Level B conducted*
Immunity & Surge	*Meets EN50082-2 (EN61000-4-2,-3, -4, -5) Performance criteria A*

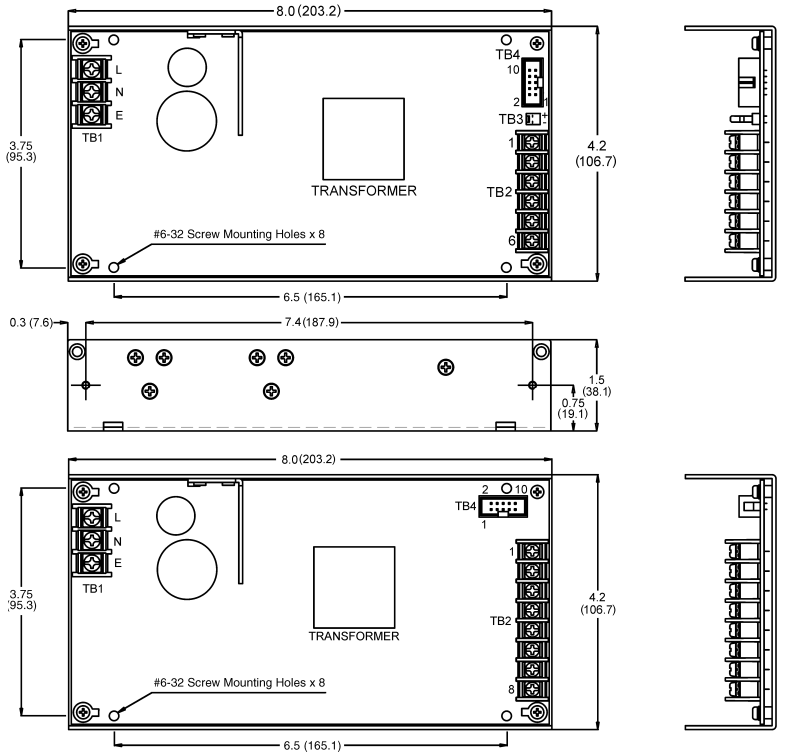
OUTPUT VOLTAGE & CURRENT RATINGS — JPS250

Maximum Power[1]	Output Voltage	Output Current[1]		Ripple & Noise Pk-Pk[3]	Efficiency Typical	Model Number[2]
		Convection Cooled	18 CFM			
225 W	5 V	36.0 A	45.0 A	50 mV	83%	**JPS250PS05C**
250 W	12 V	17.0 A	21.0 A	120 mV	86%	**JPS250PS12C**
250 W	15 V	13.5 A	17.0 A	120 mV	87%	**JPS250PS15C**
250 W	24 V	8.5 A	10.4 A	200 mV	88%	**JPS250PS24C**
250 W	48 V	4.3 A	5.2 A	200 mV	88%	**JPS250PS48C**

Notes

1. *Maximum power with 18 CFM forced air, 200 W max with convection cooling.*
2. *For non-current share version delete suffix 'C' from model number.*
3. *Measured over 20 MHz bandwidth.*

Mechanical Details



All models (except JPS250PS05)

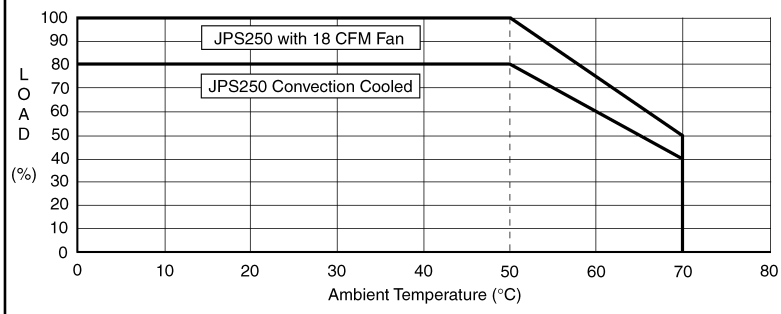
TB2 CONNECTIONS		
Pin	JPS250PS05	All Other Models
1	+5 V	+ V
2	+5 V	+ V
3	GND	+ V
4	GND	GND
5	GND	GND
6	GND	GND
7	+5 V	N/A
8	+5 V	N/A

JPS250PS05

TB4 CONNECTIONS	
Pin	Functions
1	GND
2	DC OK
3	AC OK
4	Remote ON/OFF
5	+ Sense
6	- Sense
7	Current Share
8	N/C
9	N/C
10	N/C

NOTES:
1. Dimensions shown in inches (mm).
2. Tolerance is ±0.8 mm max.
3. TB3 is for fan, 12V/300 mA with Molex 5045-02A or equivalent. Not included on JPS250PS05.
4 TB1 (AC input) and TB2 (DC output) are terminal blocks.
5. TB4 signal connector is Molex 70246-10 or equivalent.
6. Maximum mounting screw penetration is 0.16 (4.0)
7. Fan/Cover option available, order part number JPS250 COVER or alternatively add suffix '-E' to receive cover fitted to the unit.

Derating Curve & 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.