

CompactPCI[®]

300 Watt – 3U 8HP

Power Supplies

(PICMG[®] COMPLIANT*)

FEATURES:

- ✓ **Standard PCI Output Voltages: 5.0V, 3.3V, ±12.0V, with Variable Currents.**
- ✓ **Hot Swap, N+1 Redundant with Internal OR-ing Diodes.**
- ✓ **.99 Power Factor Corrected AC 90-264V Input.**
- ✓ **Current Sharing on 5.0V, 3.3V and +12.0V Outputs.**
- ✓ **Standard 47 Pin Connector Configuration.**
- ✓ **Custom Configurations To Meet User Specified Requirements.**
- ✓ **Excellent Performance, Competitively Priced.**
- ✓ **Optional RoHS Compliant Models.**
- ✓ **2 Year Warranty.**
- ✓ **Complies With All Requirements Of PICMG Power Interface Specifications.**



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GENERAL PRODUCT SPECIFICATIONS:

-INPUT-

Voltage/Current	AC 90-264V, 3.5A max, 47-63Hz, 1 Phase.
Fusing	Internal line fuse provided, non-user serviceable. AC- 6.3A, 250V.
Power Factor	Meets Harmonic Correction per IEC 1000-3-2. 0.98-0.99 line PFC typical at AC 115V, full load.
Inrush Current	Thermistor soft start. ~25°C AC cold start current 15Apk @ AC 115V; 30Apk @ AC 230V.
Transient Protection	MOV. Withstands transients as specified by IEEE C62.41 3KV (differential and common mode).
EMI Filtering	Meets FCC Class B, and EN 55022 Level B (conducted).
Efficiency	78-83% typical at AC 115V, full load.
Redundant/Hot Swap	Full power N+1 redundant, hot swap capable.
Touch Current	<0.5mA @230V.
Dielectric Withstand	Meets IEC60950 regulations.

-OUTPUTS-

Voltage/Current (V/A)	V1	V2	V3	V4
Model: PCI304-1022-4	5.0/40,	3.3/40,	+12/10,	-12/2.0.
Combined output of V1+V2 not to exceed 60A. Total loading on all outputs not to exceed 300W.				
Minimum Loading	None required.			
Line Regulation	At the sense point over full input range, ±0.05% typical, sense leads connected.			
Load Regulation	±1.0% typical for V1, V2; ±2.0% for V3; ±5.0% for V4.			
Stability	Output drift <±0.2% after 20 minute warm-up.			
Temp. Coefficient	<±0.02%/°C, 0° - 50°C, after 20 minute warm-up.			
Dynamic Response	Less than 5% deviation with a 25% load change at 1A/µsec. Output returns to within 1% in less than 500µsec.			
Ripple and Noise (PAR)	For all outputs, 50mV max or 1% peak-to-peak nominal, which ever is greater, DC to 20MHz bandwidth with a coaxial probe and 0.1µF/22µF capacitors at the output terminals.			
Current Sharing/ Parallel N+1 Operation	V1, V2, V3 Outputs. Single wire connection for ±10% current sharing between any number of units. Droop method current share for V4.			
Remote Sense	V1, V2 outputs compensate for up to 0.25V total line drop in the load cables. Outputs are internally sensed if leads are opened.			
Hold-Up Time	Outputs remain in regulation >18msec minimum following loss of AC power at low line, full load.			
Over Current/Short Circuit Protection	Current limit on all outputs, 105-130% max load typical. Automatic recovery when overload is removed.			
Over Temperature Protection	Internal temperature sensing. Causes all outputs to shut down. Automatic recovery.			
Over/Under Shoot	None at turn-on or turn-off.			
Over Voltage Protection	Non-crowbar type. Any output that exceeds 25% ±10% of nominal Vout will cause all outputs to latch off. Remote inhibit, enable or input recycle required to reset.			

Under Voltage Warning.. Any output dropping below 10% of nominal triggers the power fail warning signal.

-SIGNALS, INDICATORS and CONTROLS-

Remote Enable	Enabled by closed circuit or TTL logic 0. Disabled by open circuit or TTL logic 1.
Remote Inhibit	Enabled by open circuit or TTL logic 1. Disabled by closed circuit or TTL logic 0.
Power Fail Warning	Loss of input AC causes a TTL compatible signal to go low >4msec prior to V1 or V2 output drop- ping out of regulation. At AC turn-on, signal stays low until outputs are in regulation. AC and DC input: PF signal triggered by an under voltage condition on V1 or V2 outputs.
LED Indicator	Dual LEDs. Green indicates input power ON and outputs within regulation. Off or Amber indicates input and/or output power fault.

-OPERATING ENVIRONMENT-

Operating Temperature	0° – 50°C ambient at full load, with specified airflow. Derates linearly to 50% at +70°C.
Cooling	A minimum of 60cfm (800 lfm) direct forward airflow required to achieve full rated power and specified MTBF. Consult factory for derating guidelines with reduced or reversed airflow.
Relative Humidity	Up to 90% RH, non-condensing.
Operational Vibration	2.0G peak, 5 – 500Hz along three orthogonal axis.
Storage Temperature	-40° to 85°C.
Altitude	Operating to 10,000 ft; Storage to 30,000 ft.
MTBF	Designed for 150,000 hrs at 25°C.

-INTERCONNECT-

I/O Connectors. Request JE Outline Configuration Drawing# 02102-000 or refer to the chart in this catalog for pin function identification-
47 Circuit..... Positronic Ind. P/N PCIH47M400A1.
Mates with PI P/N PCIH47F300A1.
Note: Use of the specified mating connector is required to insure proper "make/break" sequential contact sequence.

-MECHANICAL-

Outline	3U x 8HP x 160mm Eurocard. Refer to JE Outline Dwg 02102-000 or the Mechanical Outline in this catalog. Complies with all current PICMG® CompactPCI specifications.
Power Density	7.7 Watts/Cubic Inch.
Retaining Latches	Supplied with a single Rittal #3686.135 Type VII (Telecom) Lower Latch. Other manufacturers and types available. Consult factory.
Guide Rails	Supplied with .260[6.61] offset guide rails for use with Rittal 3687.832 (or equivalent) PSU guides.
Front Panel Overlay	Supplied with Lexan overlay and JE Logo. May be deleted, or supplied with customer specified logo or other information. Consult factory.
Weight	Approx: 1.47 lbs / 666.0 gs.

-Safety-

Designed to comply with the relevant industry standards of the authorities having jurisdiction. Submittal for recognition or approvals pending JE final design configuration evaluation and acceptance.

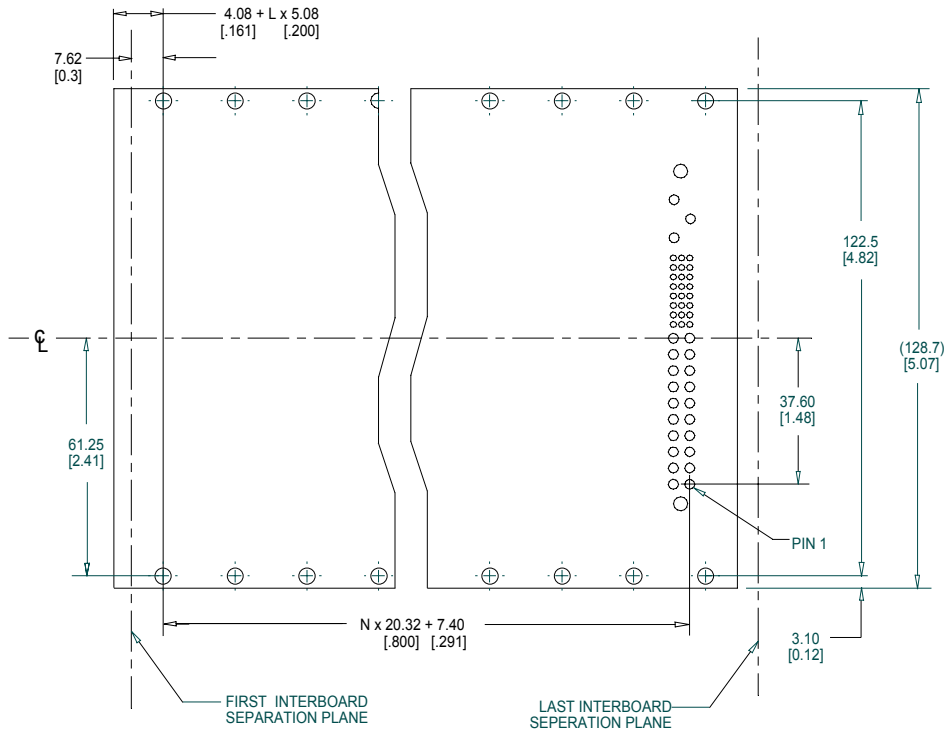
47 Pin I/O Connector Functions:

PIN#	SEQ ⁽¹⁾	FUNCTION	PIN#	SEQ ⁽¹⁾	FUNCTION
01-04	2	+5.0V V1 Output.	33	2	+S2 +3.3V (V2) Remote Sense.
05-12	2	GND V1+V2 Return.	34	2	S-RTN Sense Return for V1, V2, V3.
13-18	2	+3.3V V2 Output.	35	3	ISHR-1 +5.0V (V1) Current Share.
19	2	GND V3 Return.	36	2	+S3 +12.0V (V3) Remote Sense.
20	2	+12.0V V3 Output.	37	2	N/C No Connection (Reserved).
21	2	-12.0V V4 Output.	38	2	DEG Thermal Degrade Signal.
22	2	RTN Signal Return.	39	2	R/INH Remote Inhibit. Close circuit to GND.
23	2	N/C No Connection (Reserved).	40	2	N/C No Connection (Reserved).
24	2	GND V4 Return.	41	3	ISHR-2 +3.3V (V2) Current Share.
25,26	2	N/C No Connection (Reserved).	42	2	PF Power Fail Signal.
27	3	R/EN Remote Enable. Close circuit to GND.	43	2	N/C No Connection (Reserved).
28	2	N/C No Connection (Reserved).	44	3	ISHR-3 +12.0V (V3) Current Share.
29	2	V1-ADJ V1 Remote Voltage Adjust.	45	1	PE Protective Earth (chassis) Ground.
30	2	+S1 +5.0V (V1) Remote Sense.	46	2	Input Pwr Neutral (N) ACC Power Input.
31	2	N/C No Connection (Reserved).	47	2	Input Pwr Line (L) AC Power Input.
32	2	V2-ADJ V2 Remote Voltage Adjust.			

(1) Contact mating sequence. 1= First to make/Last to break.

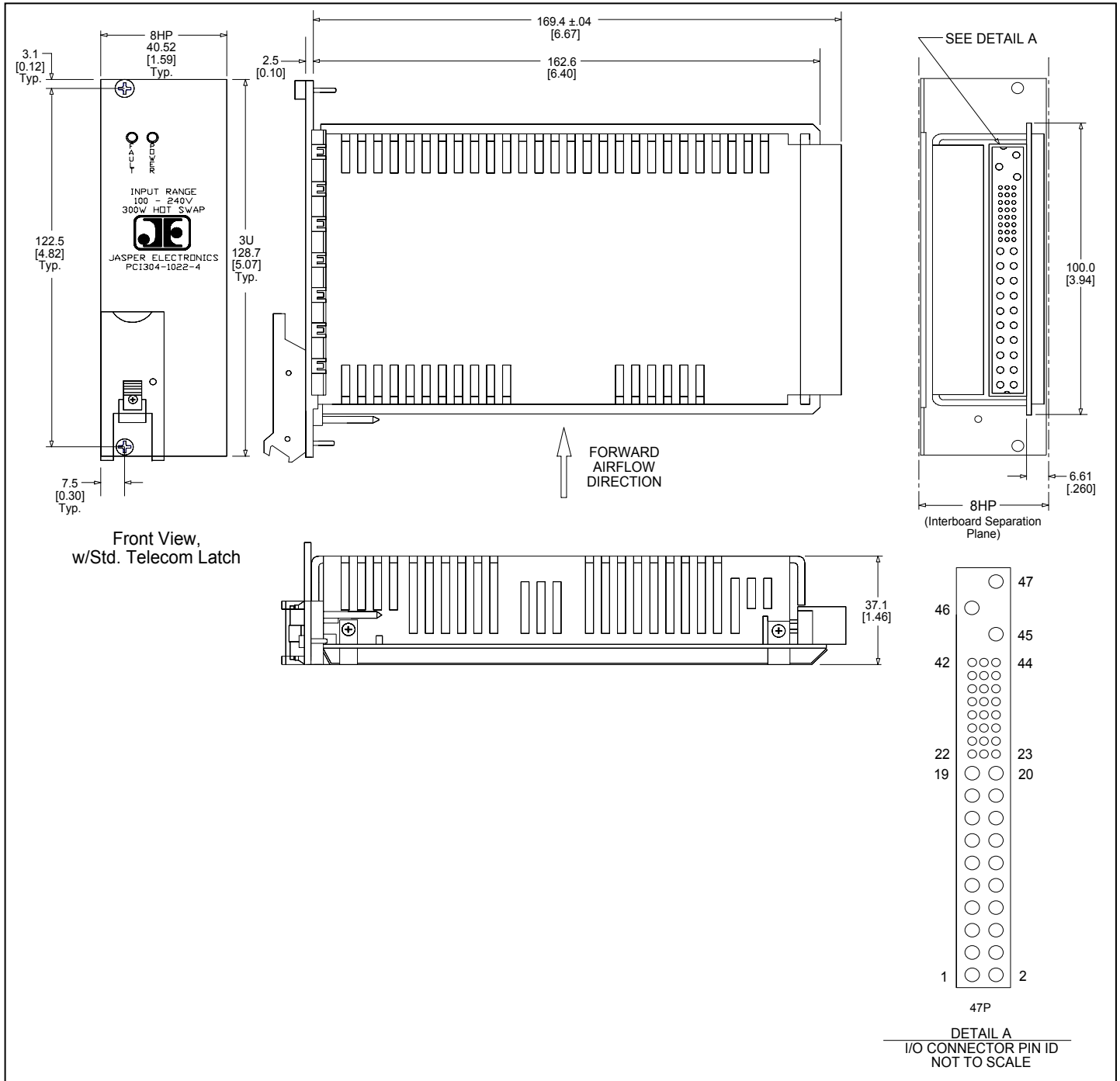
Backplane Connector Locations, Viewed from the Front of the Enclosure

(Not to Scale)



Mechanical Outline

(Dimensions in millimeters [inches])



-LIMITED WARRANTY POLICY-

All Jasper Electronics (JE) standard model power supplies and products are guaranteed to be free of defects in workmanship and materials for a minimum of two (2) years from the date of original shipment, when operated within specification. This warranty applies only to defects that result in a failure to perform to published specifications. Non-standard (custom) power supplies and products may be warranted on an individual basis. The unused portion of this warranty is fully transferable with the original equipment in which the power supply is installed.

