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JASPER ELECTRONICS
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Fit Power Limited

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.**

**CompactPCI® and PICMG® are registered trademarks of the PCI Industrial Computer Manufacturers Group.*

Cat.# 02127-019 B

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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. ~25ºC 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%/ºC, 0º - 50ºC, 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 (PARD) ..... 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 dropping 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 .. 0º – 50ºC ambient at full load, with specified airflow. Derates linearly to 50% at +70ºC.

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 ..... -40º to 85ºC.

Altitude ..... Operating to 10,000 ft; Storage to 30,000 ft.

MTBF ..... Designed for 150,000 hrs at 25ºC.

-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.

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47 Pin I/O Connector Functions:

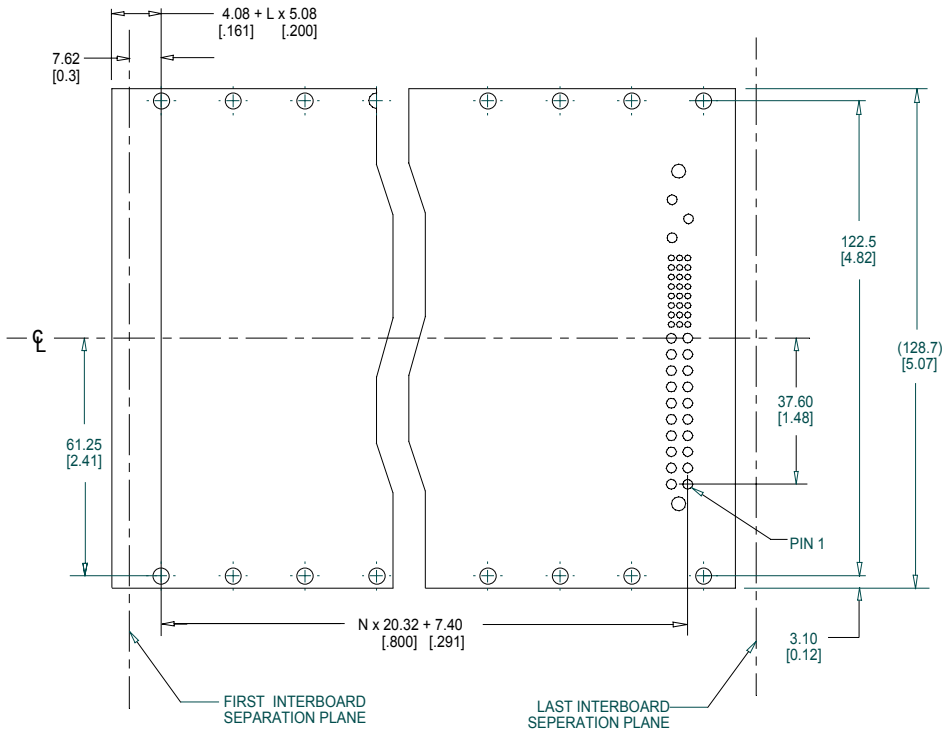
PIN#	SEQ(1)	FUNCTION	
01-04	2	+5.0V	V1 Output.
05-12	2	GND	V1+V2 Return.
13-18	2	+3.3V	V2 Output.
19	2	GND	V3 Return.
20	2	+12.0V	V3 Output.
21	2	-12.0V	V4 Output.
22	2	RTN	Signal Return.
23	2	N/C	No Connection (Reserved).
24	2	GND	V4 Return.
25,26	2	N/C	No Connection (Reserved).
27	**3**	R/EN	Remote Enable. Close circuit to GND.
28	2	N/C	No Connection (Reserved).
29	2	V1-ADJ	V1 Remote Voltage Adjust.
30	2	+S1	+5.0V (V1) Remote Sense.
31	2	N/C	No Connection (Reserved).
32	2	V2-ADJ	V2 Remote Voltage Adjust.

PIN#	SEQ(1)	FUNCTION	
33	2	+S2	+3.3V (V2) Remote Sense.
34	2	S-RTN	Sense Return for V1, V2, V3.
35	**3**	ISHR-1	+5.0V (V1) Current Share.
36	2	+S3	+12.0V (V3) Remote Sense.
37	2	N/C	No Connection (Reserved).
38	2	DEG	Thermal Degrade Signal.
39	2	R/INH	Remote Inhibit. Close circuit to GND.
40	2	N/C	No Connection (Reserved).
41	**3**	ISHR-2	+3.3V (V2) Current Share.
42	2	PF	Power Fail Signal.
43	2	N/C	No Connection (Reserved).
44	**3**	ISHR-3	+12.0V (V3) Current Share.
45	**1**	PE	Protective Earth (chassis) Ground.
46	2	Input Pwr	Neutral (N) ACC Power Input.
47	2	Input Pwr	Line (L) AC Power Input.

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

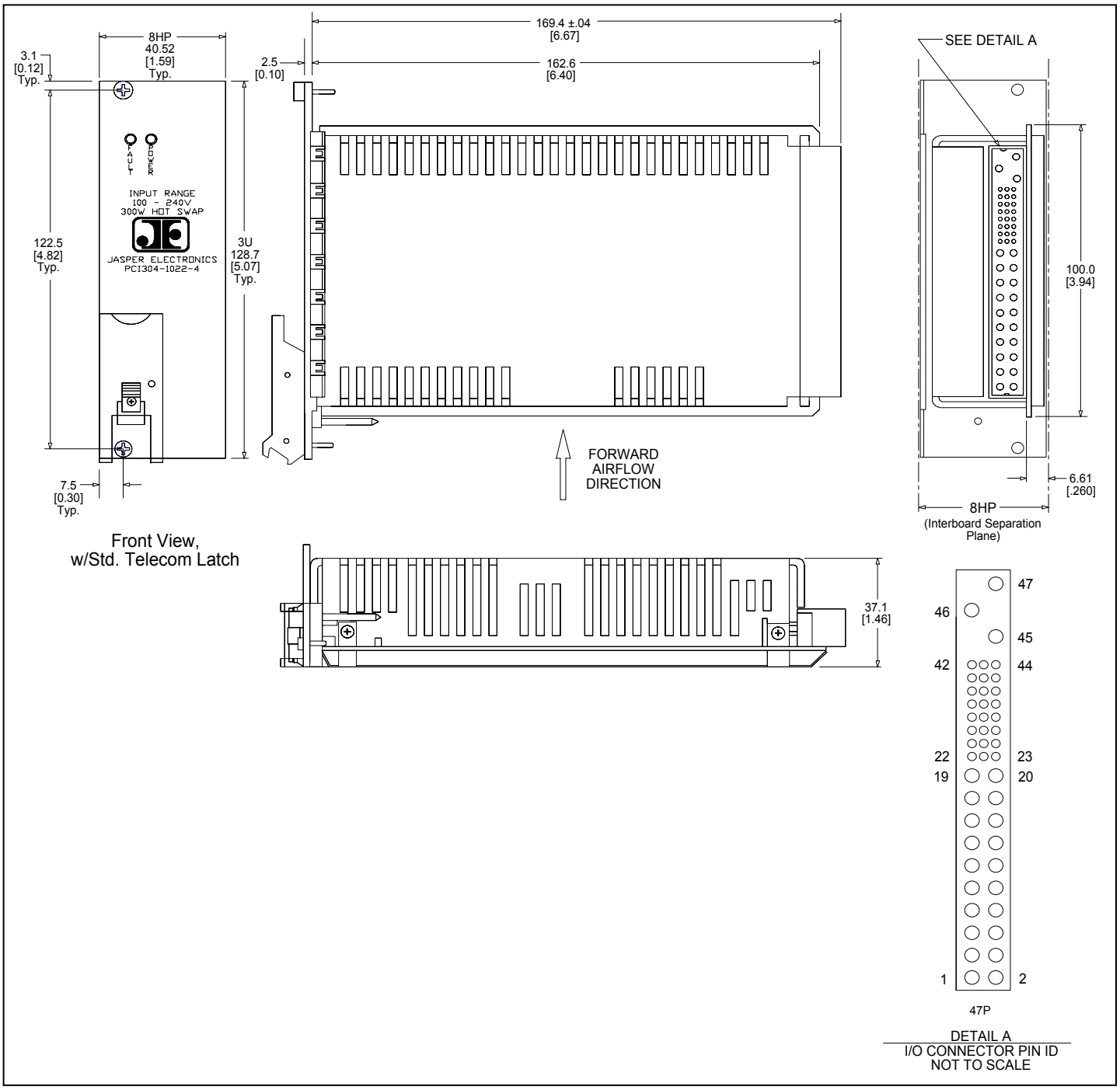
Backplane Connector Locations, Viewed from the Front of the Enclosure

(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.

ORDERING INFORMATION:

A 4 or 5-character option code is required following the base model description to define the desired model configuration. Codes added in the following sequence, 1 from each category:

*	PCI304-1022-	(1)	(2)	(3)	(4)	(5)
*Input: AC – Blank	Base Model w/ V_{out} Code. 304 – 300W, 4 Output	Connector Type	Latch Type	Overlay Type	RoHS Compliant Model	-MXXXX User Specified Config.

- * Configuration Options -

Option: Code:

(1) Connector Type..... 4 = 47 pin (PICMG standard);

(2) Latch Type .....S = Standard Telecom Type VII;
O = Optional Type IV;
N = None provided.

(3) Overlay.....S = Standard (JE Logo, model designation, etc);
B = Blank (No logo, model designation, etc);
N = No overlay provided;
NN = No overlay; in addition, the front panel including the EMI strip is also deleted. For user provided panel or custom enclosure applications. Note: Removal of the panel does not violate safety enclosure requirements or integrity. Contact the factory for panel fastener type, max penetration depth and location information.
M = Custom overlay – User specified. May require a factory assigned custom model code. (- Additional cost. Consult factory.)

(4) RoHS Compliant ..... G = Optional. Jasper products that are fully compliant with the requirements of Directive 2002/95/EC Report On Hazardous Substances (RoHS) are identified with the letter code “G” either included in or adjacent to (but detached from) the model description on the unit labels and related documents (sales orders, etc). All materials, processes and packaging used in the assembly and shipping of this product comply. ***Available in the 2nd Quarter of 2006.***

(5) Custom Configuration ..... M = Modified, followed by a factory assigned 4-digit number to identify a user specified configuration. Such models may include special or non-standard features and/or options, or be in a configuration differing sufficiently from the design of the approved similar standard model from which it is derived to require re-evaluation of all or part of the design to insure continuing compliance with all safety requirements. Option codes 2,3 may not be present in the model description as these requirements are generally included in the user specification documentation on file with the factory. Consult the factory for exact requirements.
(May incur additional cost. Consult factory.)

Examples: PCI304-1022-4-SS
PCI304-1022-4-M4662

All statements and technical information contained herein are believed by JE to be reliable as of the publication date of this document, but the accuracy or completeness is not guaranteed, and JE reserves the right to change specifications without prior notification. However, every reasonable effort will be made by JE to inform users of JE products of changes to design form, fit or function that may affect the user's applications. JE manufactures a quality product, equal to any available in the marketplace; however, these products are intended to be used in accordance with the specifications described in this catalog. Any use or application that deviates from the stated operating specifications is not recommended and may be unsafe.

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