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CompactPCI®

175 and 200 Watt

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, DC 36-72V (48V nom), or DC 18-32V (24V nom).**
- ✓ **Current Sharing on 5.0V and 3.3V Outputs.**
- ✓ **Standard 47 Pin or 32 Pin DIN Connector Configurations.**
- ✓ **Custom Configurations To Meet User Specified Requirements.**
- ✓ **Excellent Performance, Competitively Priced.**
- ✓ **2 Year Warranty.**
- ✓ **Complies With All Requirements Of PICMG Power Interface Specifications.**
- ✓ **Fully Compliant with the EU RoHS Directive.****
- ✓ **cULus, TUV, CE Marked.**

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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***See Ordering Information.*

Cat.# 02127-002 S

GENERAL PRODUCT SPECIFICATIONS:

-INPUT-

Voltage/Current ..... **AC** 90-264V, 47-63Hz, 1 Phase,
2.8A max @ 175W, 3.2A max @ 200W output;
DC 36-72V (48V nom),
6.9A max @ 175W, 7.9A max @ 200W output;
DC 18-32V (24V nom),
12.6A max @ 175W, 14.4A max @ 200W output

Fusing ..... Internal line fuse provided, non-user serviceable.
AC- 3.15A, 250V;
36V DC- 10.0A; 24V DC - 30.0A.

AC Power Factor ..... 0.99 line PFC typical at AC 115V, full load.

AC 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 IFCC Level B, and EN 55022 Level B (conducted).

Efficiency ..... 70% typical at AC 115V, full load.

Redundant/Hot Swap ..... Full power N+1 redundant, hot swap capable.

-OUTPUTS-

Voltage/Current (V/A)	V1	V2	V3	V4
Model: **PCI174-1022**	5.0/25,	3.3/20,	+12/6.0,	–12/1.0.
DPCI174-1022	5.0/25,	3.3/20,	+12/6.0,	–12/1.0.

Total loading on all outputs not to exceed 175W.
Combined load on V1 + V2 not to exceed **30A**.

Model: **PCI204-1022**	5.0/30,	3.3/25,	+12/6.0,	–12/1.0.
DPCI204-1022	5.0/33,	3.3/33,	+12/6.0,	–12/1.0.

Total loading on all outputs not to exceed 200W.
Combined load on V1 + V2 not to exceed **38A**.

Model: **PCI204-1022 / P***	5.0/25,	3.3/25,	+12/6.0,	–12/1.0.
DPCI204-1022 / P*	5.0/25,	3.3/33,	+12/6.0,	–12/1.0.

Total loading on all outputs not to exceed 200W.
Combined load on V1 + V2 not to exceed **35A**.

Line Regulation ..... At the Sense Point, Over Full Input Range <±1%, sense leads connected.

Load Regulation ..... Output voltage droops with increasing load.
V1: 0.25V min load to full load;
V2: 0.15V no load to full load;
V3: 0.25V no load to full load.

*Minimum Loading ..... 5% minimum on V1 for standard models. None required for option "P" models.

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 3% deviation with a 25% load change at 1A/µsec. Output returns to within 1% in less than 300µsec.

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. Droop method standard. Optional single wire design in development. Consult factory for availability.

Remote Sense ..... V1, V2, V3 outputs compensate for up to 0.25V total line drop in the load cables. Outputs are internally sensed if leads are opened.

Over/Under Shoot ..... None at turn-on or turn-off.

Hold-Up Time ..... Outputs remain in regulation >15msec minimum following loss of AC power at low line, full load.

Over Current/Short Circuit Protection ..... Current limit on all outputs. Automatic recovery when overload is removed.

Over Temperature Protection ..... Internal temperature sensing. Causes all outputs to shut down. Automatic recovery.

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

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.

-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 any output dropping out of regulation. At AC turn-on, signal stays low until all outputs are in regulation. PF signal also triggered by an under voltage condition on any output.

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.

Cooling ..... A minimum of 15 cfm / 400 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 ..... 0.75G 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. Refer to JE Outline Configuration Drawing #02102-000 or the chart in this catalog for pin function identification-

47 Circuit ..... Positronic Ind. P/N PCIH47M400A1.
Mates with PI P/N PCIH47F300A1.

32 Circuit (AC only) .... Contact factory.

Note: Use of the specified mating connector is required to insure proper "make/break" sequential contact sequence.

-MECHANICAL-

Outline ..... 3U x 8HP front panel. Refer to JE Outline Dwg #02102-000 or the Mechanical Outline in this catalog. Complies with all current PICMG® CompactPCI PSU specifications.

Weight ..... Approx: 1.8 lbs / 1.06 kgs.

Retaining Latches ..... Supplied with a single Rittal #3688.779 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.

-SAFETY-

All AC Models,
48V DC only ..... Recognized to U.S. and Canadian Bi-National Standard CSA C22.2 No. 60950 / UL 60950, Third (3rd) Edition (cULus);
TUV approved to TUV EN60950/A1-A4/A11.
CE Marked. CB Reports available on request.

24V DC Models ..... Pending.

32 Pin DIN I/O Connector Functions:

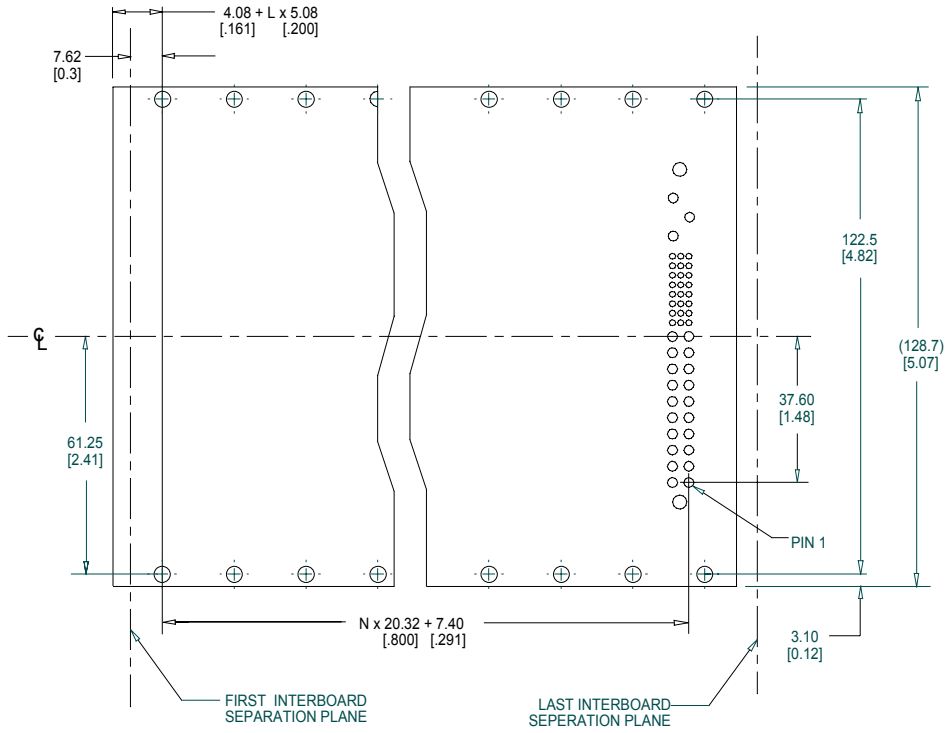
PIN#	SEQ(1)	FUNCTION	
2B	2	Input Pwr	Line (L) AC Power Input.
5B	2	Input Pwr	Neutral (N) ACC Power Input.
8B		N/C	No Connection.
11B	**1**	PE	Protective Earth (chassis) Ground.
13A	2	N/C	No Connection.
13-18B	2	+3.3V	V2 Output.
13C	**3**	R/EN	Remote Enable. Close circuit to GND.
14A	2	R/INH	Remote Inhibit. Close circuit to GND.
14C	2	DEG	Thermal Degrade Signal.
15A	2	N/C	No Connection.
15C	2	PF	Power Fail Signal.
16A	2	S-RTN	Sense Return.
16,18C	2	N/C	No Connection.
17A	2	+S1	+5.0V (V1) Remote Sense.
17C	2	N/C	No Connection.
18A	2	+S2	+3.3V (V2) Remote Sense.
19A,C	2	N/C	No Connection.
19B	2	+12.0V	V3 Output.
20A,C	2	N/C	No Connection.
20B	2	-12.0V	V4 Output.
22B	2	+5.0V	V1 Output.
25B	2	DC Com	DC Common Return.
28,31B		N/C	No Connection.

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.
28,29	2	N/C	No Connection (Reserved).
30	2	+S1	+5.0V (V1) Remote Sense.
31,32	2	N/C	No Connection (Reserved).
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 (Option C).
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 (Option C).
42	2	PF	Power Fail Signal.
43	2	N/C	No Connection (Reserved).
44	**3**	ISHR-3	+12.0V (V3) Current Share (Option C).
45	**1**	PE	Protective Earth (chassis) Ground.
46	2	Input Pwr	PCI: Neutral (N) ACC Power Input DPCI: +DC.
47	2	Input Pwr	PCI: Line (L) AC Power Input. DPCI: -DC.

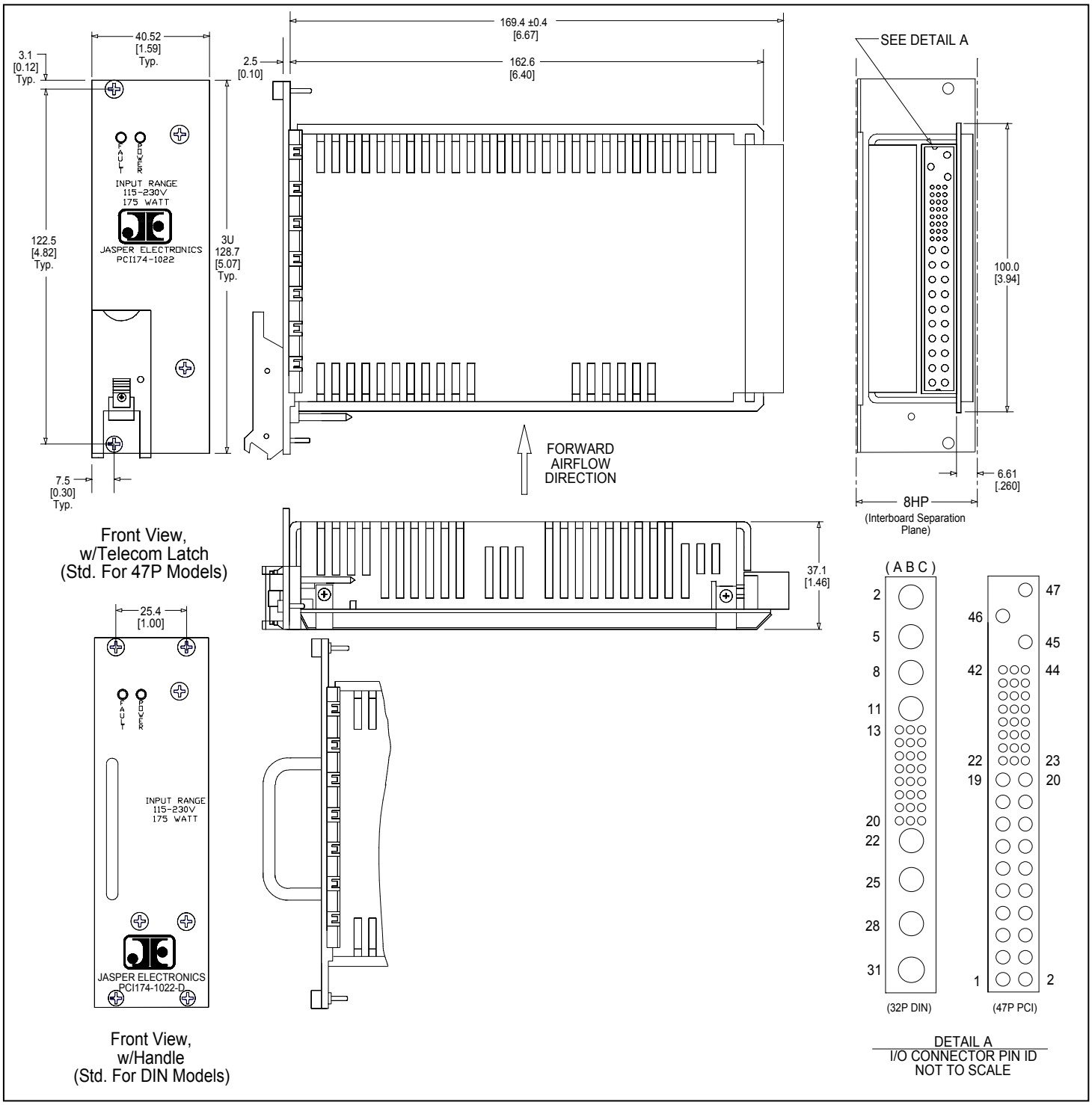
(1) Contact mating sequence. 1= First to make/Last to break.

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 work-manship 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. Contact the factory and request JE Document # 01109-002 for additional information.

ORDERING INFORMATION:

A 4 to 8-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:

*	PCI174-1022- PCI204-1022-	(1)	/(2)	-(3)	(4)	(5)	(6)	(7)	(8)
*Input: AC – Blank DC – D	Base Model w/ V_{out} Code. 174 – 175W 204 – 200W	Connector Type	Input Voltage	Current Share	Internal V1 Preload	Latch Type	Overlay Type	-MXXXX User Specified Config.	RoHS Compliant Model

- * Configuration Options -

Option: Code:

(1) Connector Type .....4 = 47 pin (PICMG standard);
D = 32 pin DIN41612 (available on AC input models only).

(2) 24V DC Input .....Blank = No code for AC or 48V DC input used;
/24 = Required for 24V DC input models only.

(3) Current Sharing ...Blank = Standard configuration. Droop method (no code letter required);
C = Optional single wire I-SHR for V1, V2, V3 (47 I/O circuit models only).
(Consult factory for availability.)

(4) Internal Preload ...Blank = Standard configuration. Refer to minimum external preload requirements in the general specifications.
P = Optional internal preload on V1.

(5) Latch Type ..... S = Standard Telecom Type VII; or, for 32P DIN models, standard handle;
O = Optional Type IV; no options for 32P DIN models;
N = None provided (no latch for 47P PCI models or handle for 32P DIN models).

(6) 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 – User specified. See (7).

(7) 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 3,4,5,6 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.)

(8) RoHS 6 Compliant .....G = Jasper products that are fully compliant with the requirements of Directive 2002/95/EC Restrictions of Hazardous Substances (RoHS) are identified with the letter code "G" either included in or adjacent to 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.

Examples: PCI204-1022-4-PSNG
DPCI204-1022-D-M5793 (Custom config.)
DPCI174-1022-4/24-SS

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