



ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

3U PCI / DPCI SERIES

AC/DC & DC/DC COMPACT PCI

250 Watt – 3U 8HP

Power Supplies

PCI-3U250 / DPCI-3U250-48



General Description

	+	PCI-3U250	-48	(1)	(2)
AC – Blank DC – D		Base Model	DC Input voltage (nom.)	Current Share	Latch Type

- (1) 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).
(2) Latch Type.....S= Standard Telecom Type VII;
O= Optional Type IV;
N= None provided.

Input	
Input Voltage Range:	90-264 Vac
Input Current:	2.9A max.
Input DC Voltage Range:	36-72 Vdc (48Vdc)
Input Current:	6.55A
Frequency:	47-63Hz
Phase:	Single
Inrush Current:	15Apk @ AC 115V; 30Apk @ AC 230V. (Thermistor soft start. ~25°C AC cold start current)
EMI Filtering:	Meets IFCC Level A, and EN 55022 Level A (conducted).

Features
1. Standard PCI Output Voltages: 5.0V, 3.3V, ±12.0V, with Variable Currents.
2. Hot Swap, N+1 Redundant with Internal OR-ing Diodes.
3. .99 Power Factor Corrected AC 90-264V Input, or DC 36-72V.
4. Current Sharing on 5.0V and 3.3V +12.0V Outputs.
5. Standard 47 Pin Connector Configurations.
6. Excellent Performance, Competitively Priced.
Options
N/A

Output Characteristic	Unit	PCI-3U250				PCI-3U250-48			
		V1*	V2*	V3	V4	V1*	V2*	V3	V4
Output Voltage	Vdc	+5	+3.3	+12	-12	+5	+3.3	+12	-12
Output Current	A	33	33	6.0	1.5	33	33	6.0	1.5
Minimum Loading		5% minimum on V1.							
Current Sharing/ Parallel N+1 Operation		V1, V2, V3 Outputs. Single wire connection for ±10% current sharing between any number of units.							
Ripple Noise (max)	mVpp	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.							
Hold up time	mS	Outputs remain in regulation >15msec minimum following loss of AC power at low line, full load.							
Regulation									
a. Line Regulation	mV	At the Sense Point, Over Full Input Range <±1%, sense leads connected							
b. Load Regulation	mV	Output voltage droops with increasing load.							
c. Temperature coefficient	°C	<±0.02%/°C, 0° - 50°C, after 20 minute warm-up.							
d. Dynamic Response		Less than 3% deviation with a 25% load change at 1A/µsec. Output returns to within 1% in less than 300µsec.							
e. Stability	mV	Output drift <±0.2% after 20 minute warm-up.							

Efficiency	%	78% typical at AC 115V, full load.
Power Factor		0.99 line PFC typical at AC 115V, full load.

*Total loading on all outputs not to exceed 250W.
Combined load on V1 + V2 not to exceed 55.0A



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Environmental Specification	
Operating Temperature	0° - 50°C ambient at full load, with specified airflow. Derates linearly to 50% at 70°C.
Storage Temperature	-40° - +75°C
Relative Humidity	Up to 90% RH, non-condensing.
Storage Humidity	less than 85%/RH (non-condensing)
Operational Vibration	0.75G peak, 5 - 500Hz along three orthogonal axes.
Altitude	Operating to 10,000 ft; Storage to 30,000 ft.
MTBF	Designed for 150,000 hrs at 25°C.
Cooling	A minimum of 600 lfm direct forward airflow required to achieve full rated power and specified MTBF. Consult factory for derating guide-lines with reduced or reversed airflow.
Function/Protection	
Fusing	Internal line fuse provided, non-user serviceable. AC- 4.0A, 250V; DC- 10.0A.
Transient Protection	MOV. Withstands transients as specified by IEEE C62.41 3KV (differential and common mode).
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.
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 resetting.
Over/Under Shoot	None at turn-on or turn-off.
Under Voltage Warning	Any output dropping below 10% of nominal triggers the power fail warning signal.
Series Operation	available
Parallel Operation	not available
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.
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.
Interconnect	
I/O Connectors (Refer to JE Outline Configuration or the chart in this data sheet for pin function identification)	
47 Circuits	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.	



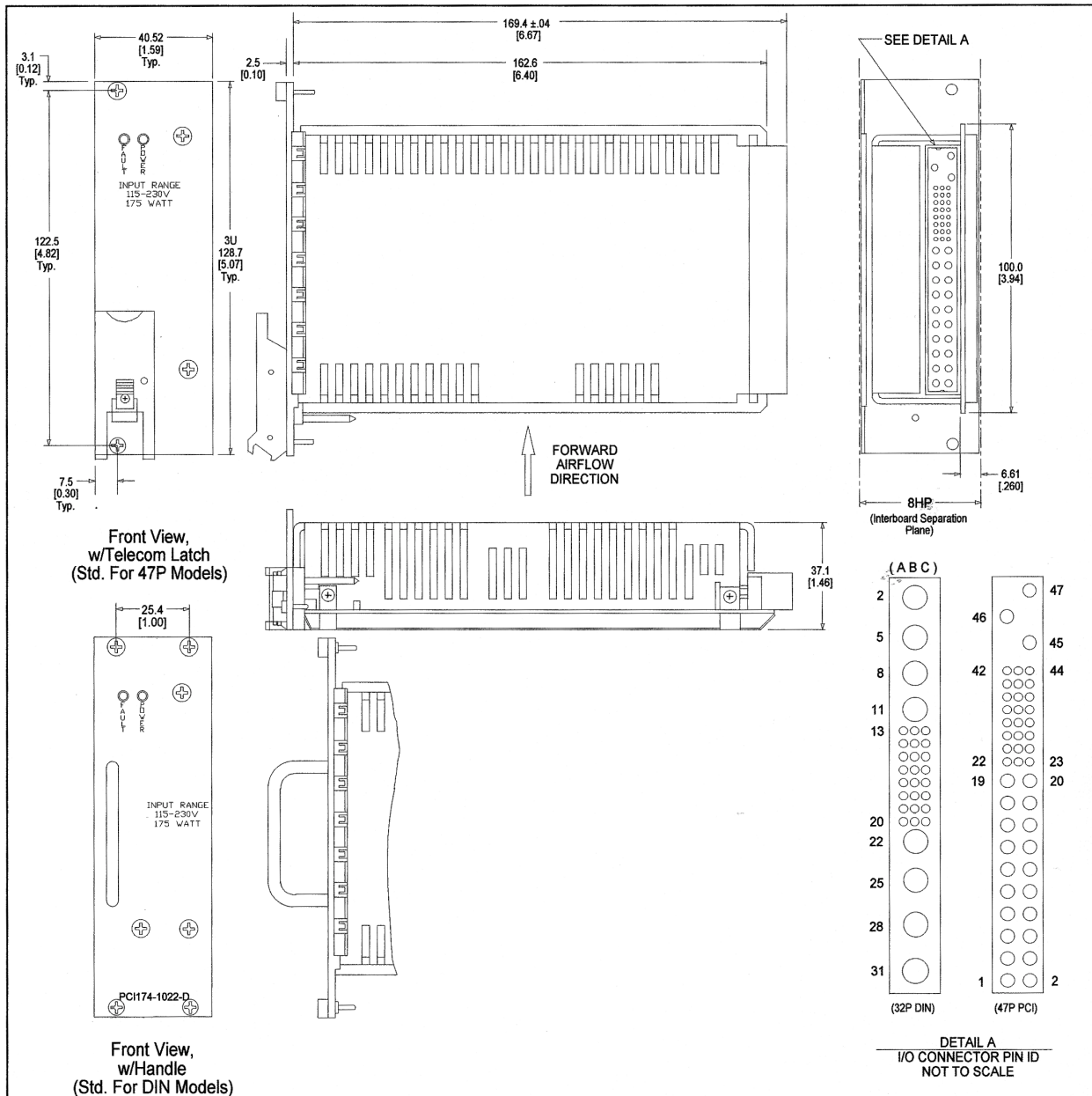


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Mechanical	
Retaining Latches	Supplied with a single Rittal #3686.135 Type VII (Telecom) Lower Latch. Other manufacturers and types available. Consult factory.
Guide Rails	Supplied with .260[6.61] offset guide rails for use with Rittal 3687.832 (or equivalent) PSU guides.
Weight	Approx: 1.8 lbs / 1.06 kgs.

DIMENSION DIAGRAM (mm)



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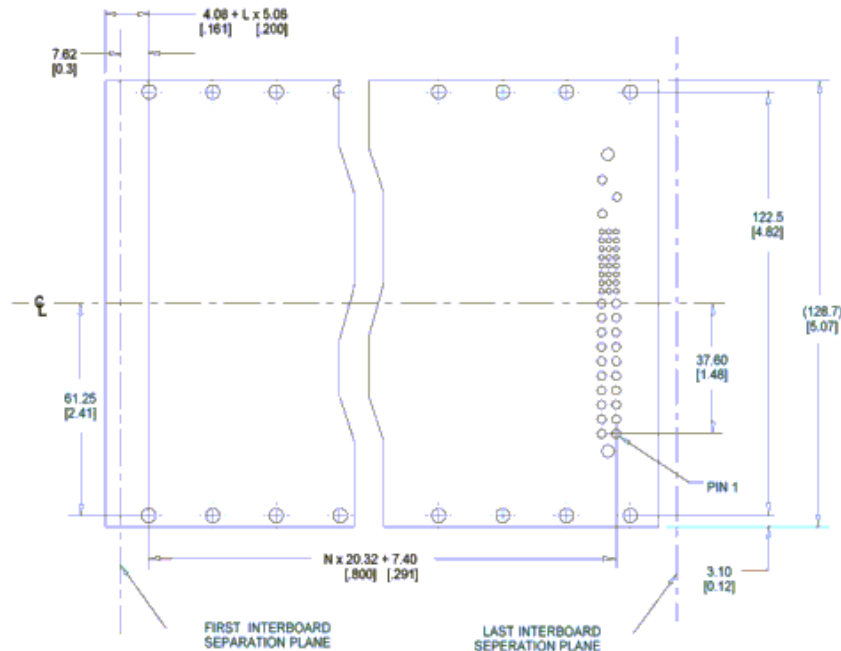
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47 Pin I/O Connector Functions

Backplane Connector Locations, Viewed from the Front of the Enclosure

(Not to Scale)



PIN	SEQ*	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

PIN	SEQ*	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 PCI: Neutral (N) ACC Power Input
47	2	Input Pwr PCI: Line (L) AC Power Input.

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



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