

# CompactPCI® SYSTEM POWER SUPPLIES

## CPCI SERIES 150 to 350 Watts, Ac Input with PFC

## DPCI SERIES 150 to 350 Watts, 48 Vdc Input



EXECUTIVE MEMBER



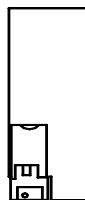
### FEATURES:

- 150 W and 200 W in 3U x 8HP, 350 W in 6U x 8HP
- Fully compliant with PICMG **CompactPCI**® specifications
- Current sharing and internal OR-ing diodes for N+1 redundancy
- High current 5 V and 3.3 V outputs
- **CompactPCI**® package requires only 15 cfm of external cooling air
- Universal ac input versions with power factor correction
- 48 Vdc input versions

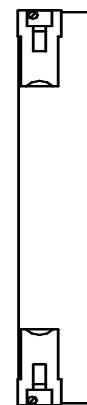
The CPCI series (ac input) and DPCI series (dc input) are highly reliable power supplies for CompactPCI systems, which are increasingly used in communications, industrial, military/aerospace, and other applications. These power supplies offer high power density in plug-in modules that meet the requirements of the PICMG® power interface specification for CompactPCI systems.

These units may be used as a single power supply for a CompactPCI system, or multiple units may be used in parallel for higher power capability as needed. In addition, all units include current sharing, internal OR-ing diodes, and a hot plug input/output connector to offer full hot swap capability and N+1 redundancy. Also, compatible ac and dc input units offer standardization on a single power supply series for a system mechanical configuration.

3U x 8 HP



6U x 8 HP



Connector	Input	Power	Model No.	Connector	Input	Power	Model No.
47 Pin Modular	Ac	150 W	CPCI-154-1203	47 Pin Modular	Ac	350 W	CPCI-354T-1203
		200 W	CPCI-204-1203		Dc	350 W	DPCI-354T-1203
	Dc	150 W	DPCI-154-1203	38 Pin Modular	Ac	350 W	CPCI-354-1203
		200 W	DPCI-204-1203		Dc	350 W	DPCI-354-1203
DIN "M"	Ac	150 W	CPCI-154-1203M				
		200 W	CPCI-204-1203M				
	Dc	150 W	DPCI-154-1203M				
		200 W	DPCI-204-1203M				



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# CompactPCI® SYSTEM POWER SUPPLIES

## CPCI SERIES 150 to 350 WATTS, AC INPUT WITH PFC, QUAD OUTPUT, HOT SWAP SPECIFICATIONS

**AC INPUT:** 90-264 Vac continuous range, 47 to 63 Hz.

**POWER FACTOR:** 0.99 typical at full load. Meets EN61000-3-2.

**INRUSH:**

**CPCI-154, 204 MODELS:** Cold start ac current is less than 15 A at 115 Vac, and 30 A at 230 Vac. Limited by thermistor.

**CPCI-354 MODELS:** Cold start ac current is less than 30 A at 115 Vac, and 60 A at 230 Vac. Limited by thermistor.

**BROWNOUT PROTECTION:** Holds regulation to 85 Vac (30 seconds maximum)

**HOLDUP TIME:** 16 ms minimum after removal of power at full load. 10 ms minimum for CPCI 200s.

**EFFICIENCY:** 70% typical.

**EMI: CONDUCTED RFI**

Meets FCC Part 15, Subpart J, class A;  
EN55022 class A; CISPR 22 class A.

**FAIL# SIGNAL:** TTL compatible signal. Signal goes low under the following conditions:

**CPCI-154 & CPCI-204 Models (all connector types):**

Outputs #1 or #2 fail; an overcurrent condition on outputs #1, #2, or #3; an overtemperature shutdown; an overvoltage shutdown; or an ac input failure (5 ms warning before outputs shutdown).

**CPCI-354 & CPCI-354T Models:**

Any of 4 outputs fail; an overtemperature shutdown; an overvoltage shutdown; or an ac input failure (5 ms warning before outputs shut down).

### AC INPUT

Model	Power	Output 1	Output 2	Output 3	Output 4	Min. Load on V1*	Maximum Output From V1 & V2
CPCI-154-1203	150 W	5.0 V @ 25A	3.3 V @ 20 A	12 V @ 5.5 A	-12 V @ 0.5 A	2.5 A	25 A
CPCI-154-1203M	150 W	5.0 V @ 25 A	3.3 V @ 20 A	12 V @ 5.5 A	-12 V @ 0.5 A	2.5 A	25 A
CPCI-204-1203	200 W	5.0 V @ 25 A	3.3V @ 30 A	12 V @ 5.5 A	-12 V @ 0.5 A	3.0 A	35 A
CPCI-204-1203M	200 W	5.0 V @ 25 A	3.3 V @ 25 A	12 V @ 5.5 A	-12 V @ 0.5 A	2.5 A	35 A
CPCI-354-1203	350 W	5.0 V @ 50 A	3.3 V @ 40 A	12 V @ 12 A	-12 V @ 4 A	5.0 A	65 A
CPCI-354T-1203	350 W	5.0 V @ 50 A	3.3 V @ 40 A	12 V @ 12 A	-12 V @ 4 A	5.0 A	65 A

\* For full output current capability on V2, V3, V4.

## DPCI SERIES 150 to 350 WATTS, QUAD OUTPUT, 48 VDC INPUT, HOT SWAP SPECIFICATIONS

**DC INPUT:** 36-72 Vdc

**EFFICIENCY:** 75% typical

**FAIL# SIGNAL:** TTL compatible signal. Signal goes low under the following conditions: Any of 4 outputs fail; an overtemperature shutdown; or an overvoltage shutdown.

### 48 VDC INPUT

Model	Power	Output 1	Output 2	Output 3	Output 4	Min. Load on V1*	Maximum Output From V1 & V2
DPCI-154-1203	150 W	5 V @ 25 A	3.3 V @ 20 A	12 V @ 5.5 A	-12 V @ 0.5 A	2.5 A	25 A
DPCI-154-1203M	150 W	5 V @ 25 A	3.3 V @ 20 A	12 V @ 5.5 A	-12 V @ 0.5 A	2.5 A	25 A
DPCI-204-1203	200 W	5 V @ 25 A	3.3 V @ 30 A	12 V @ 5.5 A	-12 V @ 0.5 A	3.0 A	35 A
DPCI-204-1203M	200 W	5 V @ 25 A	3.3 V @ 25 A	12 V @ 5.5 A	-12 V @ 0.5 A	2.5 A	35 A
DPCI-354-1203	350 W	5 V @ 50 A	3.3 V @ 40 A	12 V @ 12 A	-12 V @ 4 A	5.0 A	65 A
DPCI-354T-1203	350 W	5 V @ 50 A	3.3 V @ 40 A	12 V @ 12 A	-12 V @ 4 A	5.0 A	65 A

\* For full output current capability on V2, V3, V4.



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# CompactPCI® SYSTEM POWER SUPPLIES

## GENERAL SPECIFICATIONS

### OUTPUT

**LINE & LOAD REGULATION:**

± 2% over input range and 0 to 100% load change.

**RIPPLE & NOISE**

1% p-p or 50 mV, whichever is greater.

Measured at mating connector with 20 µF

**REMOTE SENSE**

Open sense lead protection

**TEMPERATURE COEFFICIENT**

(Outputs #1 and 2): 0.03% per degree centigrade

**STABILITY**

0.1% over 8 hours after 30 minutes warm-up.

**TRANSIENT RESPONSE**

(Outputs #1 and 2): Output voltage returns to within 1% in less than 1 ms for a 50% load change. Peak transient does not exceed 5%.

**OVERVOLTAGE PROTECTION**

(Outputs #1 and #2): Protects load against power supply induced overvoltage. Trip-point is factory set so that output voltage cannot exceed 136% of nominal. Input power must be recycled to reset.

**OVERLOAD PROTECTION**

All outputs are protected against overload and short circuit, Automatic recovery upon removal of fault.

**DEG# SIGNAL :**

TTL compatible signal. Signal goes low 20°C before an overtemperature shutdown.

**FAIL LED :**

Amber LED illuminates upon a failure condition as per the CPCI and DPCI series specifications.

**STATUS LED :**

Green LED illuminates with no presence of any failure condition.

**REMOTE ENABLE**

Contact closure to common turns on dc outputs.  
Recessed pin for “make last, break first” connection.

**REMOTE INHIBIT**

Contact closure to the negative sense line or a TTL level “0” turns off dc outputs.

**REDUNDANCY**

Built-in ORing diodes, slope program current sharing on all outputs, and self aligning connector provide hot swap and N+1 capabilities. Current sharing remains within 10% of the unit's full output rating while units are in thermal equilibrium.

**REVERSE VOLTAGE**

Protected against reverse voltage up to supply current rating, except for reverse voltage on output #4 on CPCI-200.

### ENVIRONMENTAL

**COOLING**

150 to 200 Watt:

15 cfm, 225 lfm airflow required for cooling.

350 Watt:

30 cfm, 450 lfm airflow required for cooling.

**OUTPUT ISOLATION**

Isolated from ground 50 Vdc (leakage current <20 µA)

**THERMAL PROTECTION**

Shuts down power supply if overheated.  
Automatic recovery.

**TEMPERATURE RANGE**

0 to 40° centigrade at full ratings; derate 2.5% per degree centigrade from 40° to 70° centigrade.  
Unit will start up at -20° centigrade.

### MISCELLANEOUS

**SAFETY AGENCY APPROVALS**

Models are approved to UL1950; CSA 22.2 #234; IEC 950 and TUV EN60950, Class 1 SELV., CE 72/23/EEC/93/68EEC (low voltage directive).

**GUARANTEED FOR 2 YEARS**

Two year guarantee includes labor and parts.  
Guarantee applies to operation at full published specifications at the end of 2 years.

### OPTIONS

**LOW LEAKAGE****(CPCI Models only)**

“L” option: Leakage current less than 0.5 mA per unit. Will require additional filtering for compliance to EMI specifications.

### MECHANICAL DIMENSIONS

**CPCI-154, CPCI-204, DPCI-154 & DPCI-204 Models:**

3U x 8HP W, 160 mm board depth (see outline drawing).  
Utilizes a 47 pin modular connector in accordance with PICMG® Power Interface Specification 2.11.

**CPCI-154M, CPCI-204M, DPCI-154M & DPCI-204M Models:**

3U x 8HP W, 160 mm board depth (see outline drawing).  
Utilizes a DIN “M” connector as referenced in the PICMG® Power Interface Specification 2.11.

**CPCI-354, DPCI-354 Models:**

6U x 8HP W, 160 mm board depth (see outline drawing).  
Utilizes a 38 pin modular connector as referenced in the PICMG® Power Interface Specification 2.11.

**CPCI-354T, DPCI-354T Models:**

6U x 8HP W, 160 mm board depth (see outline drawing).  
Utilizes a 47 pin modular connector in accordance with



# CompactPCI® SYSTEM POWER SUPPLIES

## POWER SUPPLY PIN ASSIGNMENTS

### Model: CPCI-354-1203

Connector: Positronics PCI38M400A1

Mating Connector: PCI38F300A1

Pin No.	Designation	Pin No.	Designation
1	+5 V	20	Not Used
2	+5 V	21	-12 V
3	+5 V	22*	GND
4	+5 V	23	GND
5	GND	24	+5 V Sense
6	GND	25*	Enable
7	GND	26	Sense Return
8	GND	27	+3.3 V Sense
9	GND	28*	Not Used
10	GND	29	DEG#
11	GND	30	+12 V Sense
12	GND	31	Inhibit
13	+3.3 V	32	Not Used
14	+3.3 V	33	Not Used
15	+3.3 V	34	Not Used
16	+3.3 V	35	Fail #
17	GND	36**	Safety Ground
18	+12 V	37	Ac Neutral
19	Not Used	38	Ac Line

\* Pins 22, 25, and 28 are last mate, first break pins.

\*\* Pin 36 is a first mate, last break pin.

### Model: DPCI-354-1203

Connector: Positronics PCI38M400A1

Mating Connector: PCI38F300A1

Pin No.	Designation	Pin No.	Designation
1	+5 V	20	Not Used
2	+5 V	21	-12 V
3	+5 V	22*	GND
4	+5 V	23	GND
5	GND	24	+5 V Sense
6	GND	25*	Enable
7	GND	26	Sense Return
8	GND	27	+3.3 V Sense
9	GND	28*	Not Used
10	GND	29	DEG#
11	GND	30	+12 V Sense
12	GND	31	Inhibit
13	+3.3 V	32	Not Used
14	+3.3 V	33	Not Used
15	+3.3 V	34	Not Used
16	+3.3 V	35	Fail #
17	GND	36**	Safety Ground
18	+12 V	37	-48 Vdc Input Return
19	Not Used	38	-48 Vdc Input

\* Pins 22, 25, and 28 are last mate, first break pins.

\*\* Pins 36 is a first mate, last break pin.

### Model: CPCI-354T-1203

#### CPCI-154-1203

#### CPCI-204-1203

Connector: Positronics PCI47M400A1

Mating Connector: PCI47F300A1

Pin No.	Designation	Pin No.	Designation
1	+5 V	25	Not Used
2	+5 V	26	Not Used
3	+5 V	27*	Enable
4	+5 V	28	Not Used
5	GND	29	Not Used
6	GND	30	+5 V Sense
7	GND	31	Not Used
8	GND	32	Not Used
9	GND	33	+3.3 V Sense
10	GND	34	Sense Return
11	GND	35	Not Used
12	GND	36	+12 V Sense
13	+3.3 V	37	Not Used
14	+3.3 V	38	DEG#
15	+3.3 V	39	Inhibit
16	+3.3 V	40	Not Used
17	+3.3 V	41	Not Used
18	+3.3 V	42	Fail #
19	GND	43	Not Used
20	+12 V	44	Not Used
21	-12 V	45**	Safety Ground
22	GND	46	Ac Neutral
23	Not Used	47	Ac Line
24	GND		

\* Pin 27 is a last mate, first break pin.

\*\* Pin 45 is a first mate, last break pin.

### Model: DPCI-354T-1203

#### DPCI-154-1203

#### DPCI-204-1203

Connector: Positronics PCI47M400A1

Mating Connector: PCI47F300A1

Pin No.	Designation	Pin No.	Designation
1	+5 V	25	Not Used
2	+5 V	26	Not Used
3	+5 V	27*	Enable
4	+5 V	28	Not Used
5	GND	29	Not Used
6	GND	30	+5 V Sense
7	GND	31	Not Used
8	GND	32	Not Used
9	GND	33	+3.3 V Sense
10	GND	34	Sense Return
11	GND	35	Not Used
12	GND	36	+12 V Sense
13	+3.3 V	37	Not Used
14	+3.3 V	38	DEG#
15	+3.3 V	39	Inhibit
16	+3.3 V	40	Not Used
17	+3.3 V	41	Not Used
18	+3.3 V	42	Fail #
19	GND	43	Not Used
20	+12 V Output	44	Not Used
21	-12 V Output	45**	Safety Ground
22	GND	46	-48 Vdc Input Return
23	Not Used	47	-48 Vdc Input
24	GND		

\* Pin 27 is a last mate, first break pin.

\*\* Pin 45 is a first mate, last break pin.

### Model: CPCI-154-1203M

#### CPCI-204-1203M

Male Connector: DIN 41612 Type "M"

Mating Connector: ERNI #914374 or AMP#148370

Pin No.	Designation	Pin No.	Designation
A13	Not Used	B17	+3.3 V
A14	Inhibit	B18	+3.3 V
A15	Not Used	B19	+12 V Output
A16	Sense Return	B20	-12 V Output
A17	+5 V Sense	B22	+5 V
A18	+3.3 V Sense	B25	GND
A19	+12 V Output	B28	Not Used
A20	-12 V Output	B31	Not Used
B2	Ac Line	C13	Enable
B5	Ac Neutral	C14	DEG#
B8	Not Used	C15	Fail #
B11	Chassis Ground	C16	+3.3 V
B13	+3.3 V	C17	+3.3 V
B14	+3.3 V	C18	+3.3 V
B15	+3.3 V	C19	+12 V Output
B16	+3.3 V	C20	-12 V Output

### Model: DPCI-154-1203M

#### DPCI-204-1203M

Male Connector: DIN 41612 Type "M"

Mating Connector: ERNI #914374 or AMP#148370

Pin No.	Designation	Pin No.	Designation
A13	Not Used	B17	+3.3 V
A14	Inhibit	B18	+3.3 V
A15	Not Used	B19	+12 V Output
A16	Sense Return	B20	-12 V Output
A17	+5 V Sense	B22	+5 V
A18	+3.3 V Sense	B25	GND
A19	+12 V Output	B28	-48 Vdc Input Return
A20	-12 V Output	B31	-48 Vdc Input
B2	Not Used	C13	Enable
B5	Not Used	C14	DEG#
B8	Not Used	C15	Fail #
B11	Chassis Ground	C16	+3.3 V
B13	+3.3 V	C17	+3.3 V
B14	+3.3 V	C18	+3.3 V
B15	+3.3 V	C19	+12 V Output
B16	+3.3 V	C20	-12 V Output



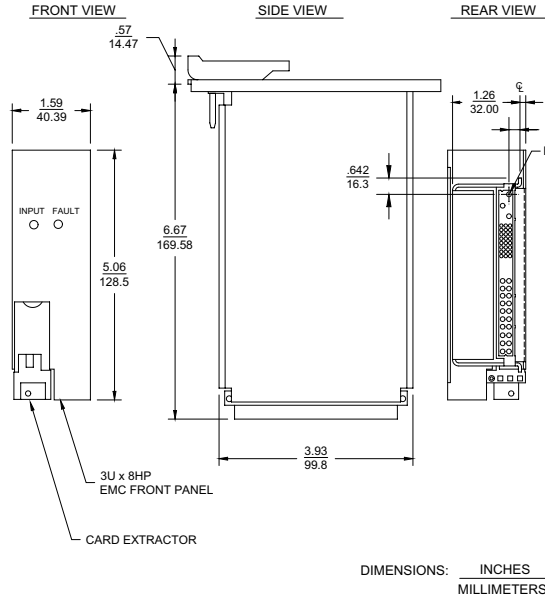
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## MECHANICAL SPECIFICATIONS:

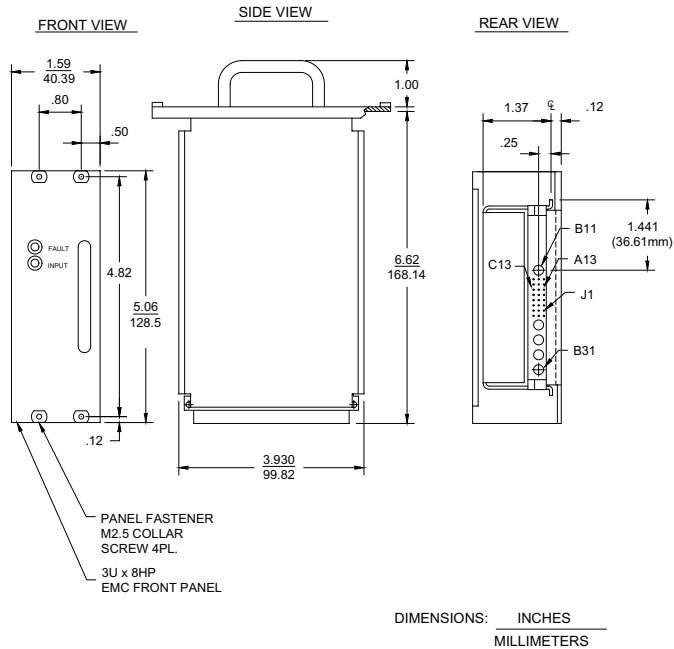
### 150-200 Watts

CPCI-154, DPCI-154  
CPCI-204, DPCI-204  
WEIGHT  
1.5 LBS - 0.68 KG



### 150-200 Watts

CPCI-154M, DPCI-154M  
CPCI-204M, DPCI-204M  
WEIGHT  
1.58 LBS .72 KG



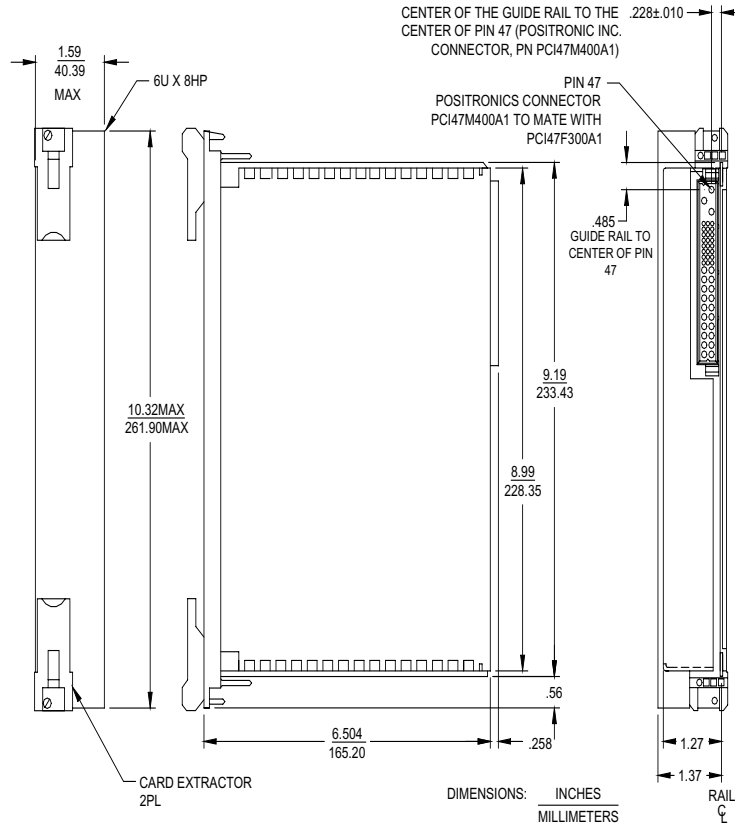
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# CompactPCI® SYSTEM POWER SUPPLIES

## MECHANICAL SPECIFICATIONS:

350 Watts

CPCI-350T, DPCI-350T  
WEIGHT  
3.8 LBS 1.7 KGS



350 Watts

CPCI-350, DPCI-350  
WEIGHT  
3.8 LBS 1.7 KGS

