

CompactPCI® SYSTEM POWER SUPPLIES

CPCI SERIES 150 to 350 Watts, Ac Input with PFC

DCPI 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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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 B;

EN55022 class A; CISPR 22 class B.

All 150 W and 200 W models 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 (5ms 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 (5ms 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.



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

15 cfm, 400 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 H 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 H 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 H 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 H 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.



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

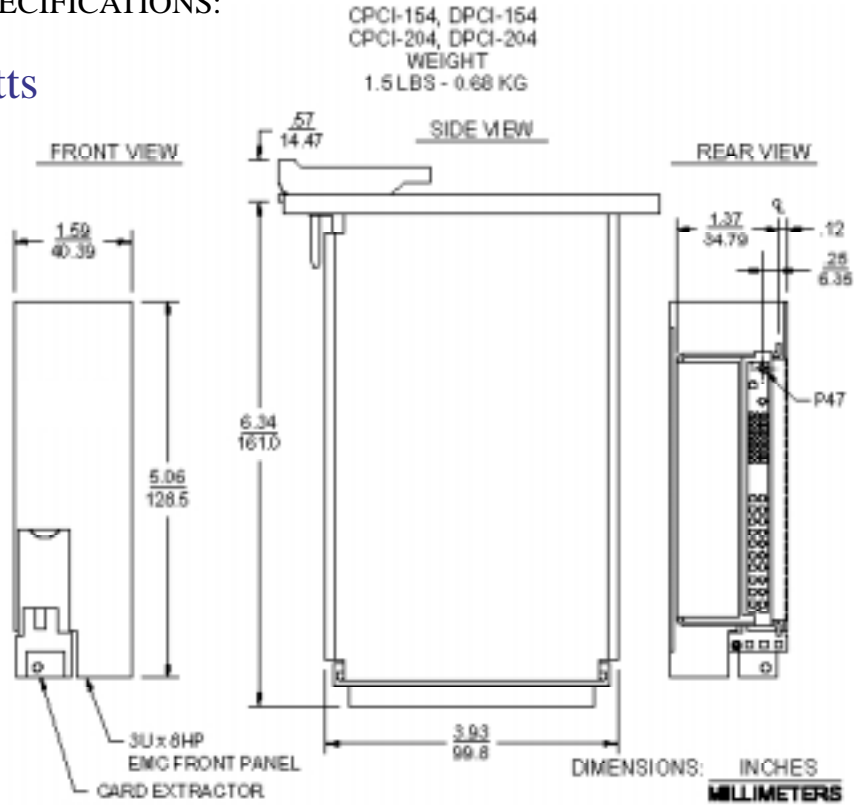
Pin No.	Designation	Pin No.	Designation
A13	Not Used	B17	+3.3 V
A14	Inhibit	B18	+3.3 V
A15	Not Used	B19	+12 V Output
A16	Sense Return	B20	-12 V Output
A17	+5 V Sense	B22	+5 V
A18	+3.3 V Sense	B25	GND
A19	+12 V Output	B28	-48 Vdc Input Return
A20	-12 V Output	B31	-48 Vdc Input
B2	Not Used	C13	Enable
B5	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



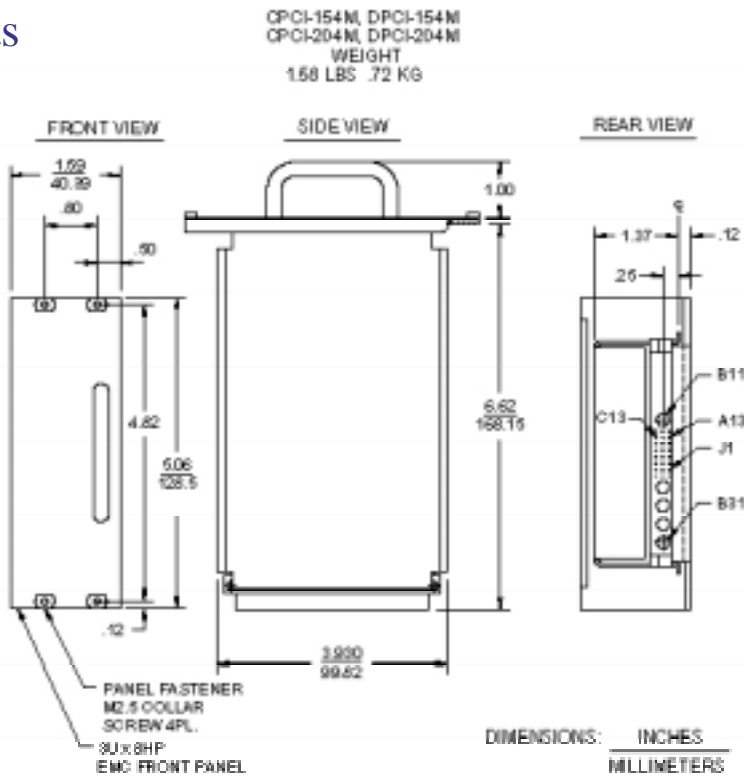
CompactPCI® SYSTEM POWER SUPPLIES

MECHANICAL SPECIFICATIONS:

150-200 Watts



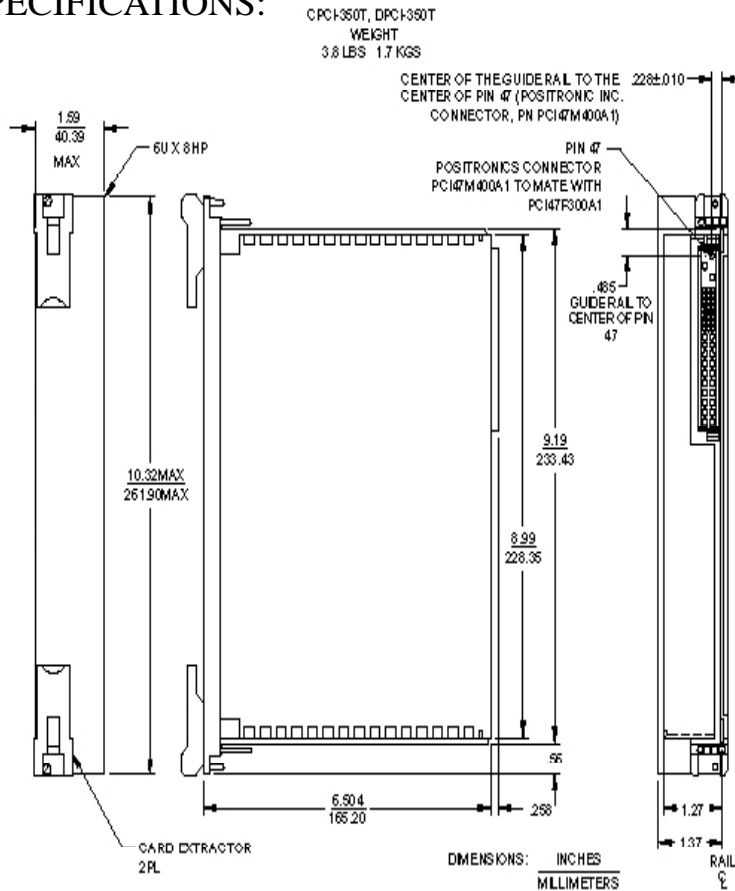
150-200 Watts



CompactPCI® SYSTEM POWER SUPPLIES

MECHANICAL SPECIFICATIONS:

350 Watts



350 Watts

