

CPCI Series / DPCI Series 200 Watts CompactPCI® System Power Supplies

CPCI SERIES 200 Watts, Ac Input with PFC

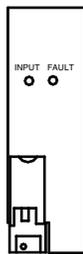
DPCI SERIES 200 Watts, 48 Vdc Input



EXECUTIVE MEMBER



CPCI200



3U x 8 HP



CPQ400 (shown with optional interface board)

FEATURES:

- 200 W in 3U 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.

The CPQ400 is a power supply assembly that is made up of two CPCI/DCPI 204s. Two supplies are enclosed with a fan to provide an alternative mounting configuration to the Compact PCI format. This is used for maximizing the number of a customer's revenue slots by relocating the power supply while still keeping the CPCI/DCPI electrical characteristics. These supplies can be used in parallel to provide 400 watts of output power or as a 200 watt N+1 redundant power supply system. An optional interface board brings the input and output connectors to convenient screw terminals and Molex type connectors. The individual model ratings depend on the specific units chosen and you should refer to the standard CPCI/DCPI data sheets. When used as a single 400 watt unit, you can simply double the single unit specifications.

AC INPUT

Model	Power	Connector	Output 1	Output 2	Output 3	Output 4	Min. Load on V1*	Max. Output From V1 & V2
CPCI-204-1203	200 W	47 Pin	5.0 V @ 25 A	3.3 V @ 30A	12 V @ 5.5 A	-12 V @ 0.5 A	3.0 A	35 A
CPCI-204-1203 M	200 W	DIN "M"	5.0 V @ 25 A	3.3 V @ 25 A	12 V @ 5.5 A	-12 V @ 0.5 A	3.0 A	35 A

CPCI SERIES SPECIFICATIONS

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

POWER FACTOR: 0.99 typical at full load.

Meets EN61000-3-2 Class A.

INRUSH:

CPCI : Cold start ac current is less than 27 A at 115 Vac, and 50 A at 230 Vac. Limited by thermistor.

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

HOLDUP TIME: 10 ms minimum after removal of power at full load.

EFFICIENCY: 70% typical.

EMI: CONDUCTED RFI

Meets FCC Part 15, Class A; EN55022 Class A.

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

DC INPUT

Model	Power	Connector	Output 1	Output 2	Output 3	Output 4	Min. Load on V1*	Max. Output From V1 & V2
DPCI-204-1203	200 W	47 Pin	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	DIN "M"	5 V @ 25 A	3.3 V @ 25 A	12 V @ 5.5 A	-12 @ 0.5 A	3.0 A	35 A

DPCI SERIES 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.



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CPCI Series / DPCI Series 200 Watts CompactPCI® System Power Supplies

Power Supply Pin Assignments

Model: CPCI-204-1203

Connector: Positronics PCI47M400A1
Mating Connector: PCIH47F300A1

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	Ac Neutral
23	Not Used	47	Ac Line
24	GND		

Model: DPCI-204-1203

Connector: Positronics PCI47M400A1
Mating Connector: PCIH47F300A1

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		

Model: 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	+3.3V Output
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-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 Gnd	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

OUTPUT

LINE & LOAD REGULATION:

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

RIPPLE & NOISE

1% p-p or 50 mV, whichever is greater.
Measured at mating connector with 20 μ F

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

200 Watt:

15 cfm, 225 lfm airflow required for cooling.

OUTPUT ISOLATION

Isolated from ground 50 Vdc (leakage current <20 μ A)

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 only)

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

MECHANICAL DIMENSIONS

CPCI-204, & 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-204M, and DPCI-204M Models:

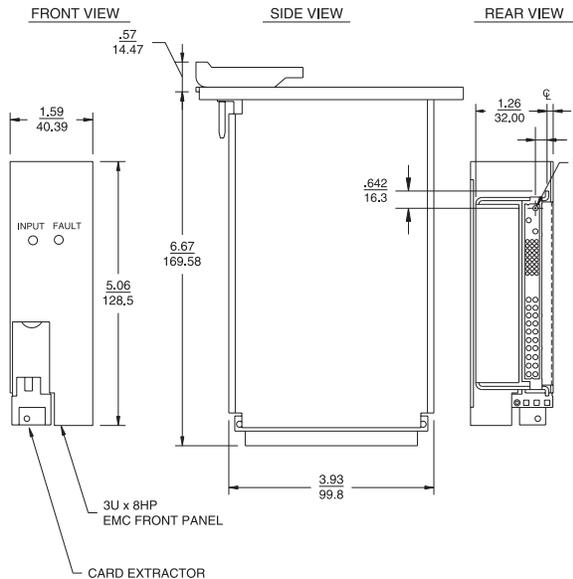
3U x 8HP W, 160 mm board depth (see outline drawing). Utilizes a DIN “M” connector as referenced in the PICMG[®] Power Interface Specification 2.11.

CPCI-204 & DPCI-204 Models:

3U x 8HP W, 160 mm board depth

Utilizes a 47 pin modular connector in accordance with PICMG® Power Interface Specification 2.11.

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



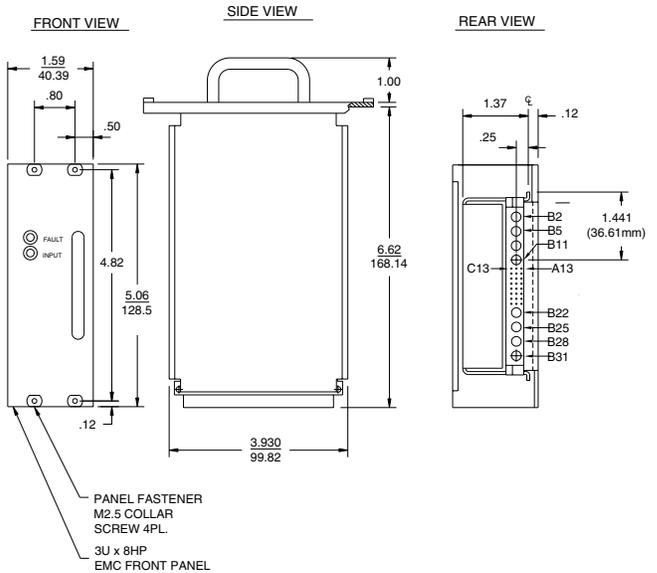
DIMENSIONS: INCHES
MILLIMETERS

CPCI-204M & DPCI-204M Models:

3U x 8HP W, 160 mm board depth

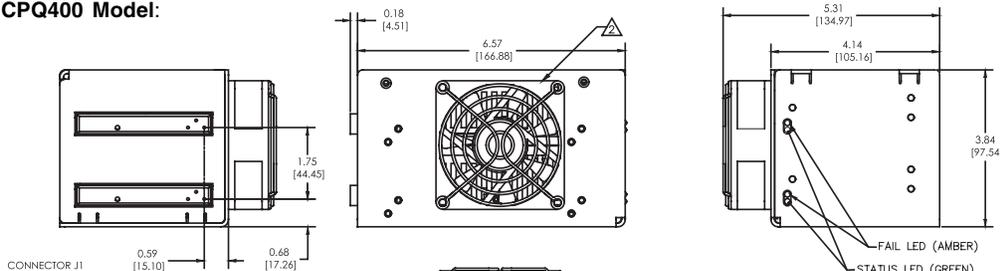
Utilizes a DIN "M" connector as referenced in the PICMG® Power Interface Specification 2.11.

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



DIMENSIONS: INCHES
MILLIMETERS

CPQ400 Model:



CONNECTOR J1
MODEL: CPQ400-1203 (DPQ400-1203)
CONNECTOR: POSITRONIC PCI47M400A1
MATING CONNECTOR: POSITRONIC PCI47F300A1

PIN NO.	DESCR.	PIN NO.	DESCR.
1	+5V	25	N/C
2	+5V	26	N/C
3	+5V	27	ENABLE
4	+5V	28	N/C
5	GND	29	N/C
6	GND	30	+5V SENSE
7	GND	31	N/C
8	GND	32	N/C
9	GND	33	+3.3V SENSE
10	GND	34	SENSE RETURN
11	GND	35	N/C
12	GND	36	+12V SENSE
13	+3.3V	37	N/C
14	+3.3V	38	DEG#
15	+3.3V	39	INH-BIT
16	+3.3V	40	N/C
17	+3.3V	41	N/C
18	+3.3V	42	FAIL #
19	GND	43	N/C
20	+12V	44	N/C
21	+12V	45	SAFETY GROUND
22	GND	46	AC NEUTRAL (-48 DC RTN ON DPQ MODEL)
23	N/C	47	AC LINE (-48 VDC INPUT ON DPQ MODEL)
24	GND		

NOTES:

- △ MAX. SCREW PENETRATION INTO CHASSIS = .175" [4.45]
- △ FAN: 80 x 25mm, 35 CFM @ .13 IN-H2O
- 3 WEIGHT: 4.1 LB. [1.9 KG]



CPQ400 shown with optional interface board detached