

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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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 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.



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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

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 |



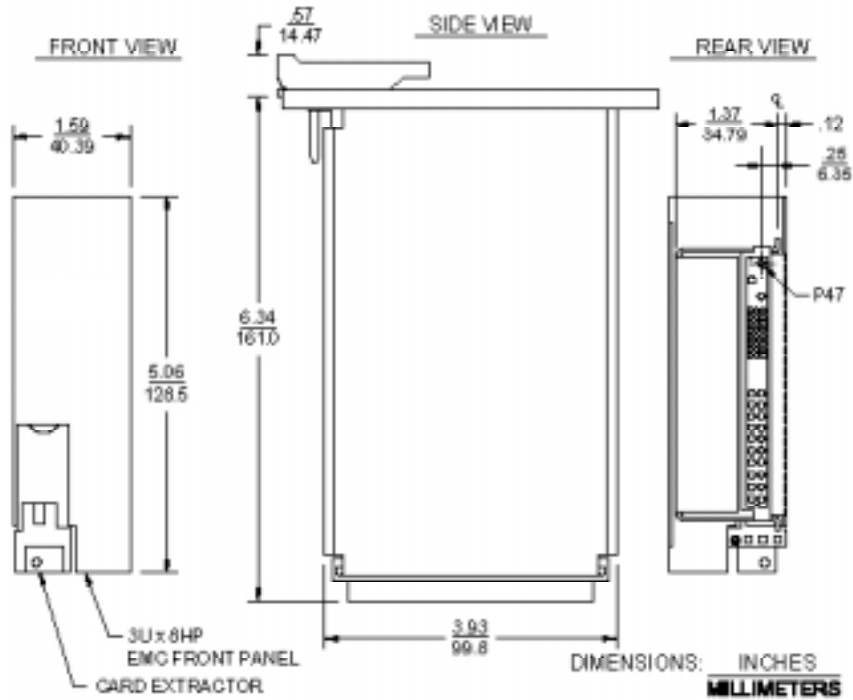
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MECHANICAL SPECIFICATIONS:

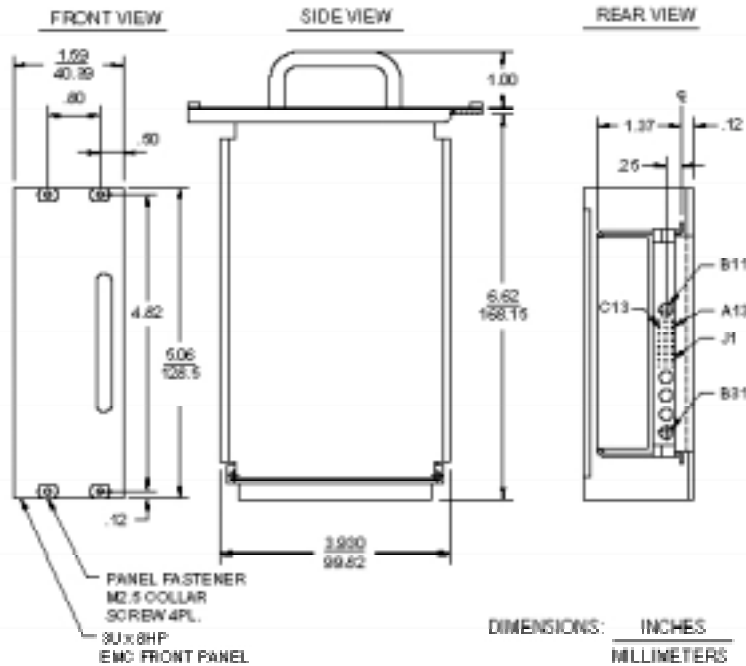
150-200 Watts

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
1.68 LBS .72 KG

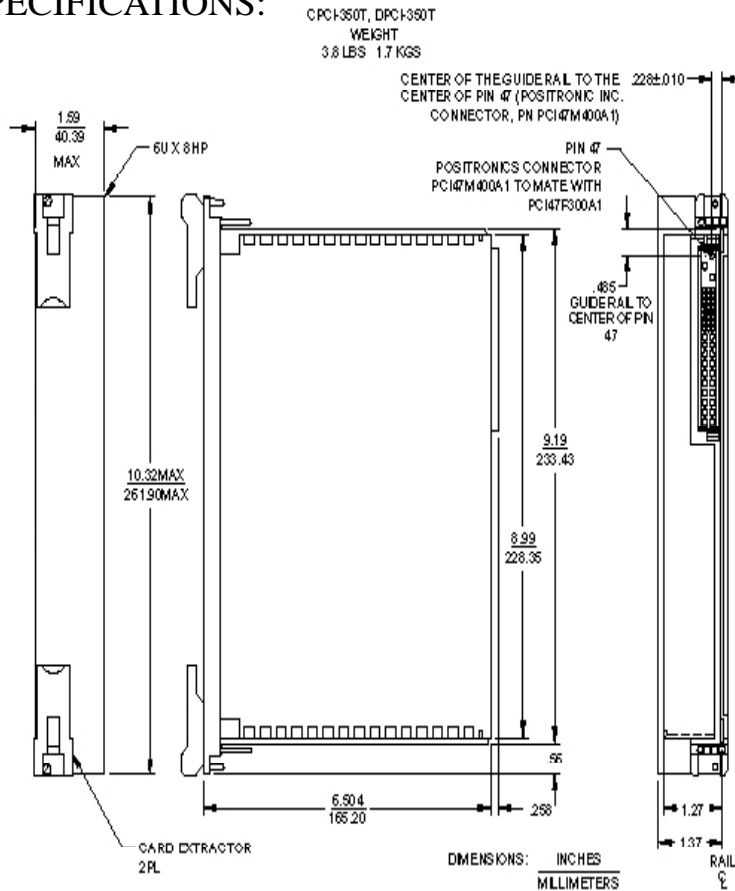


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CompactPCI® SYSTEM POWER SUPPLIES

MECHANICAL SPECIFICATIONS:

350 Watts



350 Watts

