PCI 350

350 Watt CompactPCI Power Supply

Tracewell**Power**

Features

- 350 Watts in 6U x 8HP (two slots) x 160mm
- Wide-range AC or 48 Volt DC input
- Standard PCI voltages: 5V, 3.3V, ±12V
- Four output-current options:

5V/40A	**3.3V/25A**	**12V/9A**	**-12V/2A**
5V/50A	**3.3V/25A**	**12V/9A**	**-12V/2A**
3.3V/50A	**5V/20A**	**12V/9A**	**-12V/2A**
3.3V/60A	**5V/20A**	**12V/9A**	**-12V/2A**

- Power factor correction (PFC)
- N+1 redundant and hot swap
- Internal OR-ing diodes
- Single-wire current sharing on 5V, 3.3V, +12V outputs
- Fully shielded
- IEEE1101.10 compliant front panels
- Ruggedized mechanical design
- Optional high-profile cooling fins available on 48V input version
- UL, cUL approved
- CE mark
- EMC approved
- Two year warranty

ISO 9001

PCI 350 AC input power supply shown with optional low-profile handles

Description

The PCI 350 is a high-performance power supply for use in 6U CompactPCI computer, test and telecom systems. The PCI 350 meets all of the requirements of the PICMG CompactPCI specification plus N+1 redundant and hot swap. High-density cooling fins are positioned directly in the airstream. All input and output connections are through the backplane. LED status indicators are located on the front panel.

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Specifications

Output Voltage/Current Options ... 5V/40A, 3.3V/25A, +12V/9A, -12V/2A
5V/50A, 3.3V/25A, +12V/9A, -12V/2A
3.3V/50A, 5V/20A, +12V/9A, -12V/2A
3.3V/60A, 5V/20A, +12V/9A, -12V/2A

Output Power ... DC Input: 350 Watts max
AC Input: 350 Watts max 105-264 Vac
300 Watts max 90-105 Vac

Input Voltage/Current ... AC: 100-240 Vac (90-264 Vac tolerant range), 47-63Hz, 6 A max, single phase
DC: 48 Vdc (40-72 Vdc tolerant range), 12 A max

Power Factor ... 0.99 typical

Inrush Current ... AC: 40A max
DC: 15A max

Efficiency ... DC input: 75% min
AC input: 65% min
Efficiency increases with line voltage

Holdup Time ... 20 msec min. from input power failure until FAIL# signal drops, at full load and 90-264 Vac

AC Fail Warning ... 5 msec min. continued operation after FAIL# signal drops

Paralleling ... Any number of power supplies can be operated in parallel and will share 3.3V/5V/+12V current to within 10%. Remote Sense must be used when paralleling with current sharing

Redundant/Hot Swap ... Full power N+1 redundant and hot-swap

Remote Sense ... Compensates for up to 0.25V total distribution voltage drop on the 3.3V/5V/+12V outputs

Line/Load Regulation ... 1% max. over input range and 0-100% load except -12V output which is ±10%

Minimum Load ... None required

Ripple/Noise ... 50 mV max. for all outputs, peak-to-peak, DC to 20 MHz with coaxial probe and 0.1uF/22uF capacitors at the connector

Overshoot/Undershoot ... None at turn-on or turn-off

Turn-on Time ... 1 sec max. from power up. All output voltages come up within 10 msec of each other.

Over-Voltage ... Shutdown at 130% of nominal Vout. Recycle power to reset

Over-Temperature ... Shutdown upon internal heatsink temperatures exceeding limits. Recycle power to reset

Current Limiting ... All outputs protected against overload and short circuit. Straight-line current limiting, does not fold-back or latch-up during startup or load transients. Automatic recovery

Safety. ... UL, cUL, and CB report UL1950 and EN60950

EMC ... Emissions below EN55022 class A and EN61000-3-2, 3. Immunity to EN61000-4-2, 4, 5

Input Fuse. ... Internal fusing included

Output Isolation ... All outputs and control signals are SELV circuits referenced to GND with reinforced insulation to the AC primary. GND should be connected to chassis ground in the system.

Leakage Current ... 1.0 mA max. at 240 Vac

Dielectric Strength ... AC: 2200 Vdc from input to chassis ground
DC: 500 Vdc from input to chassis ground

Indicators ... Green LED indicating INPUT OK
Red LED indicating a power supply FAULT

Connector ... Positronic part no. PCI38M400A1
Mating connector part no. PCI38F300A1

Cooling ... 15 cfm/400 lfm forced air required through power supply cooling fins and enclosure

Operating Temperature ... -20°C to 50°C operating temperature with specified air flow. Derate output power with reduced airflow conditions (consult factory)

Storage Temperature ... -40°C to 85°C

Shock/Vibration ... Ruggedized construction

Note: Specifications subject to change without notice

PCI 350 Status Indications

Condition	Power Supply On/Off	Input OK LED	Fault LED	FAIL #
EN# low, Inputs/Outputs OK	ON	ON	OFF	OPEN
INH# signal low	OFF	ON	ON	LOW
INH# high, EN# high	OFF	ON	ON	LOW
Inhibit switch depressed	OFF	ON	ON	LOW
Low AC or DC input	OFF	OFF	ON*	LOW
Internal over-temperature	OFF	ON	ON	LOW
Output under-voltage	OFF**	ON	ON	LOW
Output over-voltage	OFF**	ON	ON	LOW
Ouput short circuit	OFF**	ON	ON	LOW

** If the input is below approx. 20 V, the FAULT LED will not illuminate*
*** Typically, only the ouptut exhibiting the fault conditions will be off*

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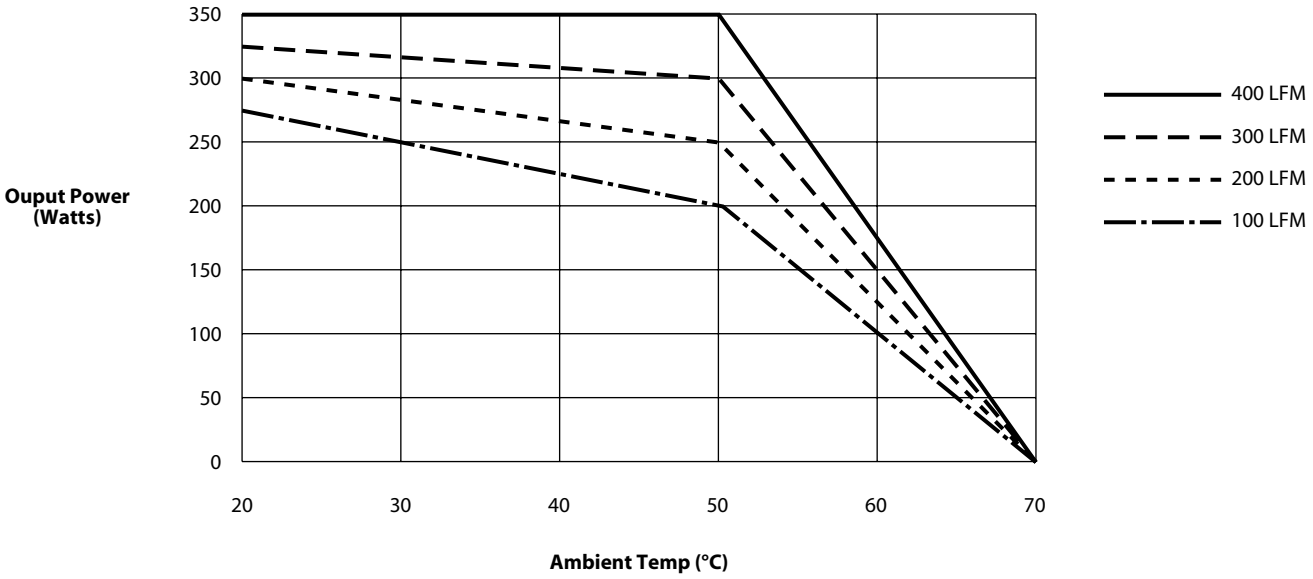
Output Power vs Temperature and Airflow

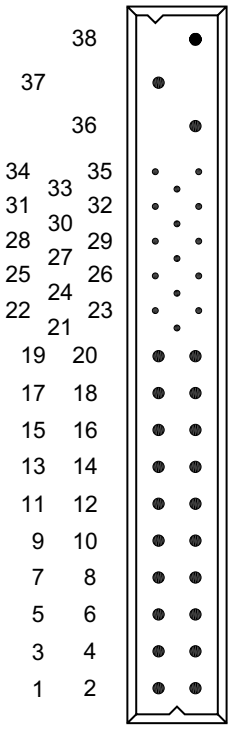


Note: LFM is the airflow in feet per minute through the power supply fins and enclosure

Connector Pinout

Pin #	Signal
1	+5V
2	+5V
3	+5V
4	+5V
5	GND
6	GND
7	GND
8	GND
9	GND
10	GND
11	GND
12	GND
13	+3.3V
14	+3.3V
15	+3.3V
16	+3.3V
17	GND
18	+12V
19	RSVD
20	RSVD
21	-12V
22	GND
23	GND

Pin #	Signal	Description
24	+5S	Remote sense for +5V oputput
25	EN#	Connect to GND to enable power supply
26	-SENSE	Remote sense return for +3.3V, + 5V, +12V outputs
27	+3.3S	Remote sense for +3.3V output
28	RSVD	RESERVED
29	DEG#	Open collector, low output when power supply is within 10° C of shutting down due to over-temperature
30	+12S	Remote sense for +12V output
31	INH#	Connect to GND to inhibit power supply
32	+5I	Connect to paralleled power supply for +5V current sharing
33	+3.3I	Connect to paralleled power supply for +3.3V current sharing
34	+12I	Connect to paralleled power supply for +12V current sharing
35	FAIL#	Open collector, low output when power supply has failed
36	CGND	Chassis ground
37	N	Neutral (AC) or 48V return (DC)
38	L	Line (AC) or -48V (DC)



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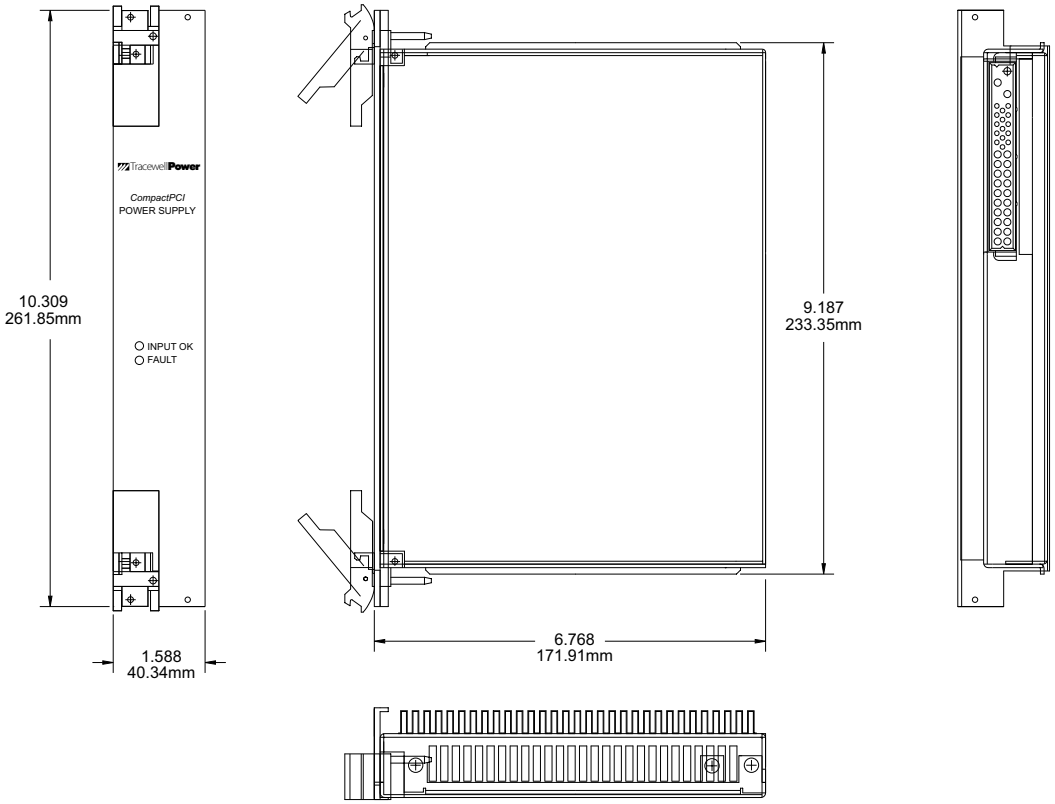
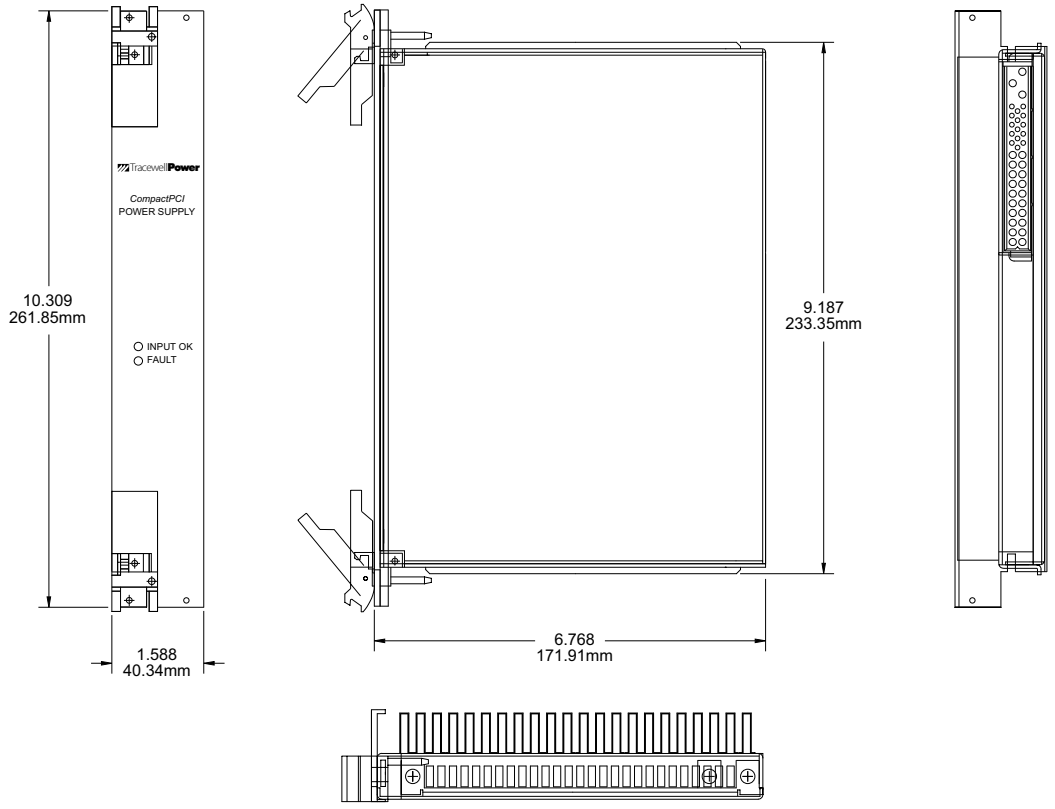
Dimensions

AC and 48V Input Versions



Optional High-Profile Cooling Fin Version (48V input only)



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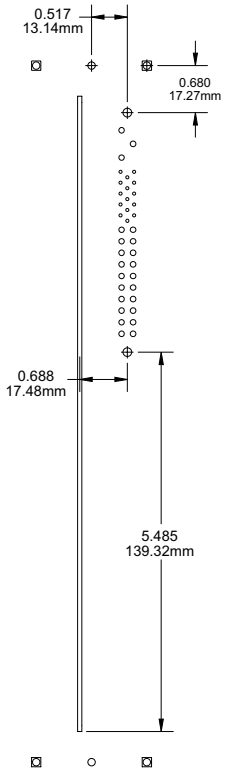
Backplane Connector Location

Power backplanes are available for both the AC and 48V power supplies: 2-slot (for one power supply) and 4-slot (for two power supplies). Consult factory for details.

AC and 48V Input Versions

BACKPLANE POWER CONNECTOR LOCATION VIEWED FROM THE FRONT OF THE CAGE



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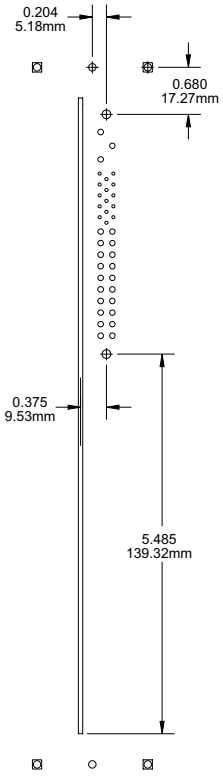

Note: Please reference Section 4 (Mechanical Requirements) of the CompactPCI Specification PICMG 2.0 R2.1

Configuration

PCI350 - ____ ____ ____ ____

S	**Standard handles**
L	**Low-profile handles**
T	**Mounting screws only (no handles)**
N	**No handles or mounting screws**
S	**Standard front panel**
N	**No front panel**
01	**5V/40A, 3.3V/25A, 12V/9A, -12V/2A**
02	**5V/50A, 3.3V/25A, 12V/9A, -12V/2A**
03	**3.3V/50A, 5V/20A, 12V/9A, -12V/2A**
04	**3.3V/60A, 5V/20A, 12V/9A, -12V/2A**
AC	**Wide range AC input**
48	**48V DC input**
48H	**48V DC input with high-profile cooling fins**

Example: *PCI350-AC01SL AC version with 01 output configuration, standard front panel and low profile handles*