

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, $\pm 12V$

- 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 $\pm 10\%$
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
Output short circuit	OFF**	ON	ON	LOW

* If the input is below approx. 20 V, the FAULT LED will not illuminate

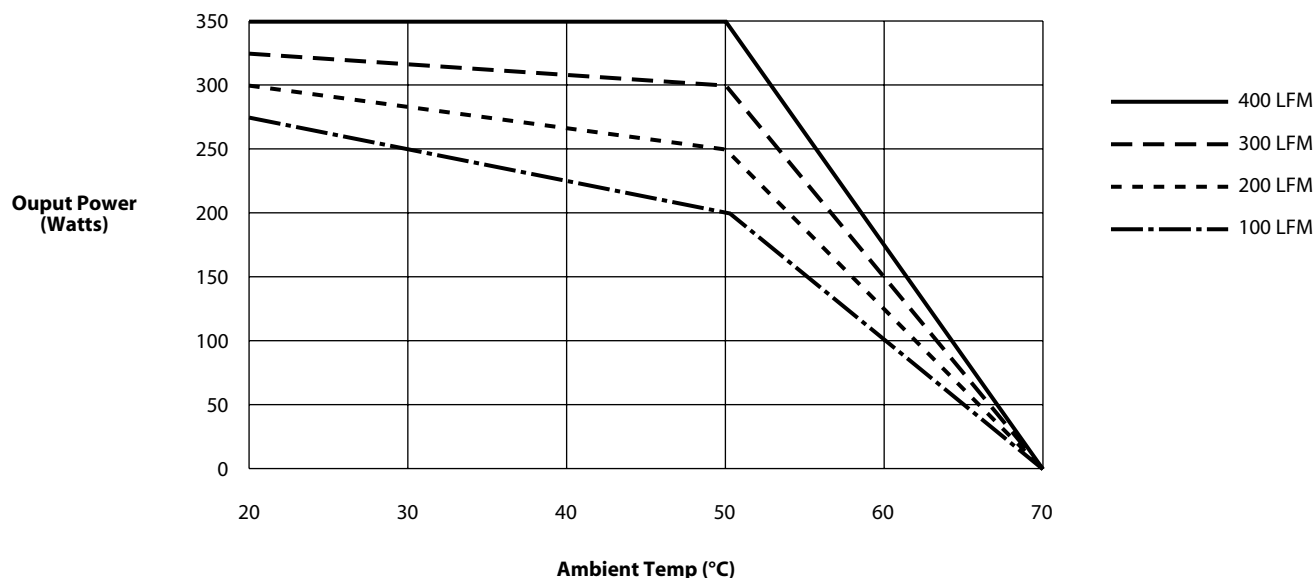
** Typically, only the output exhibiting the fault conditions will be off

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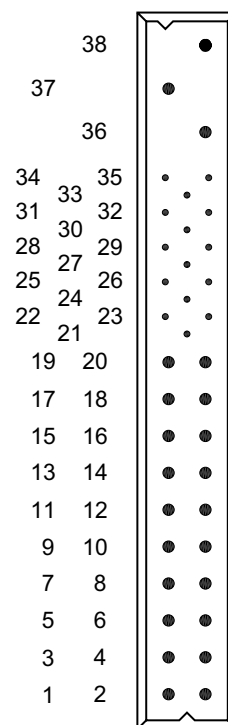
Output Power vs Temperature and Airflow



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

Connector Pinout

Pin #	Signal	Pin #	Signal	Description
1	+5V	24	+5S	Remote sense for +5V output
2	+5V	25	EN#	Connect to GND to enable power supply
3	+5V	26	-SENSE	Remote sense return for +3.3V, +5V, +12V outputs
4	+5V	27	+3.3S	Remote sense for +3.3V output
5	GND	28	RSVD	RESERVED
6	GND	29	DEG#	Open collector, low output when power supply is within 10° C of shutting down due to over-temperature
7	GND	30	+12S	Remote sense for +12V output
8	GND	31	INH#	Connect to GND to inhibit power supply
9	GND	32	+5I	Connect to paralleled power supply for +5V current sharing
10	GND	33	+3.3I	Connect to paralleled power supply for +3.3V current sharing
11	GND	34	+12I	Connect to paralleled power supply for +12V current sharing
12	GND	35	FAIL#	Open collector, low output when power supply has failed
13	+3.3V	36	CGND	Chassis ground
14	+3.3V	37	N	Neutral (AC) or 48V return (DC)
15	+3.3V	38	L	Line (AC) or -48V (DC)
16	+3.3V			
17	GND			
18	+12V			
19	RSVD			
20	RSVD			
21	-12V			
22	GND			
23	GND			



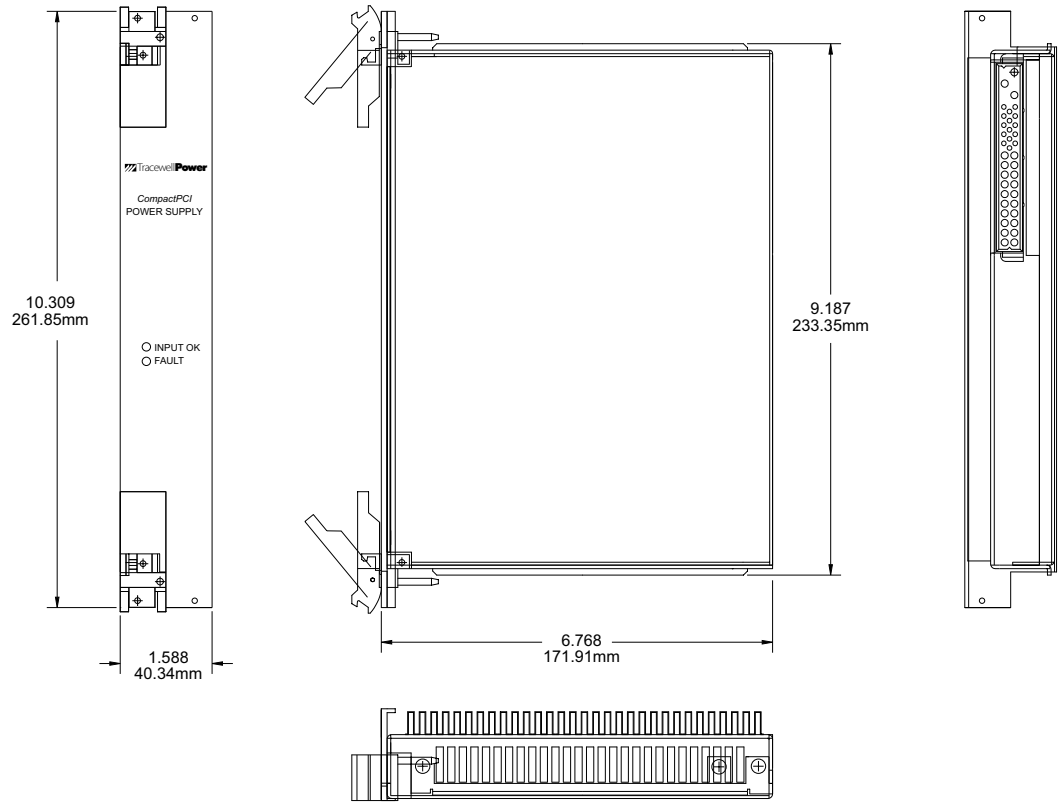
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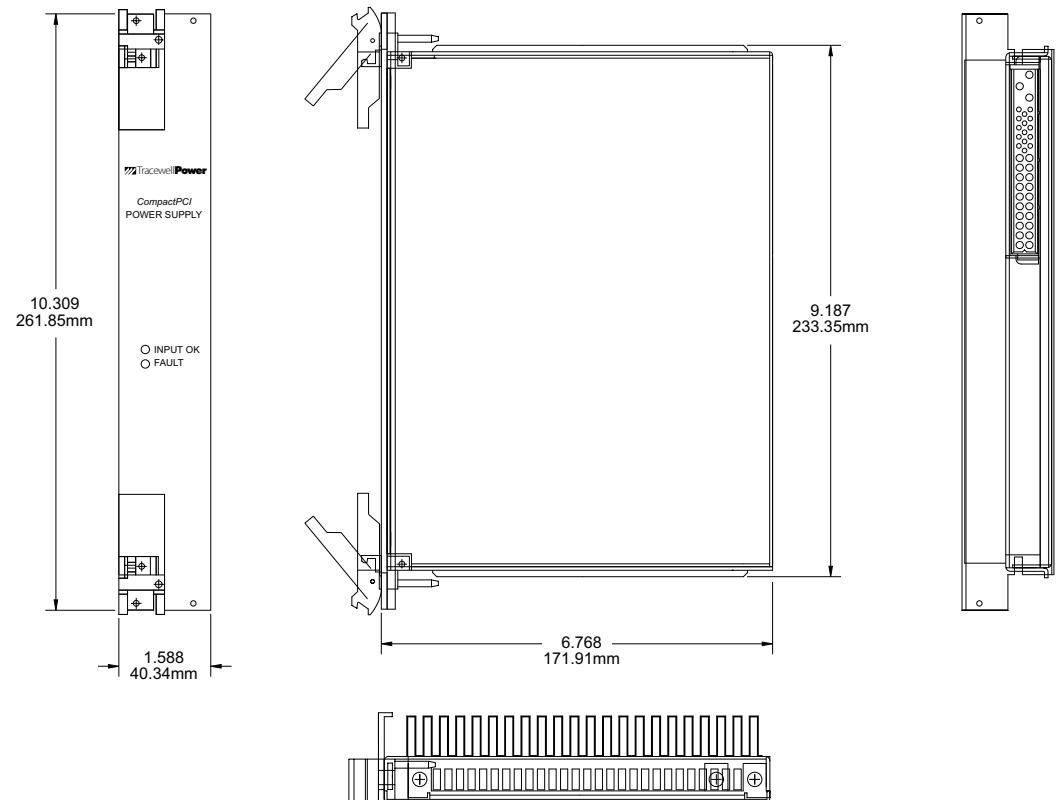


■ Dimensions

AC and 48V
Input Versions



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



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PCI Industrial Computer Manufacturer's Group

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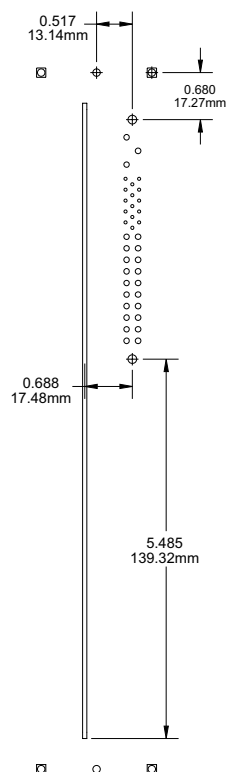


Backplane Connector Location

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.

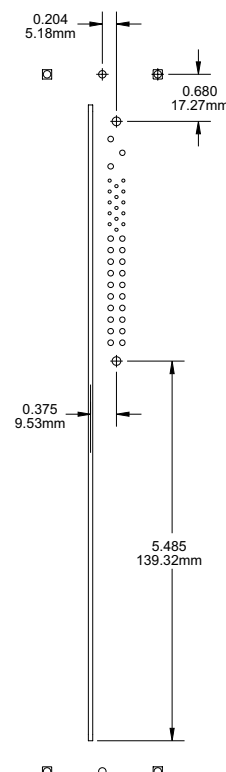
AC and 48V Input Versions

BACKPLANE POWER CONNECTOR LOCATION VIEWED FROM THE FRONT OF THE CAGE



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

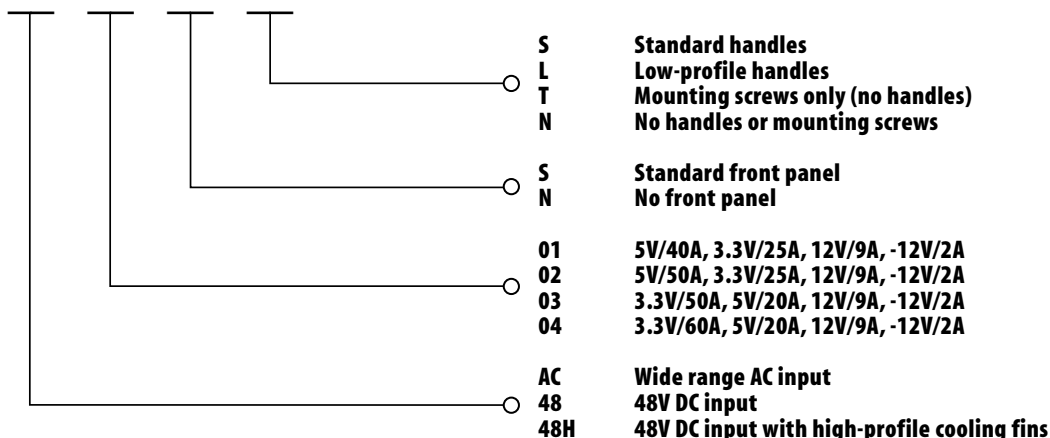
BACKPLANE POWER CONNECTOR LOCATION VIEWED FROM THE FRONT OF THE CAGE



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

Configuration

PCI350 -



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