

CPCI-3U-AC SERIES | COMPACT PCI

200–300 Watt Compact-PCI Power Supply

MODEL: CPCI-3U | CATEGORY: AC-DC | RATED POWER: 200W~300W | FORM: Rack Mount

PRODUCT OVERVIEW



Key Product Features

- Up to 300W output power
- 3U CompactPCI form factor
- Wide input: 85-264VAC
- High current outputs (+3.3V, +5V up to 40A)
- Accurate current sharing (up to 6 units)
- Internal ORing FETs for redundancy
- Power factor correction (>0.9 typical)
- High reliability in harsh environments
- PICMG 2.11 compliant

PRODUCT DESCRIPTION

The CPCI-3U AC-DC power supplies provide up to 300W output with wide AC input ranges, delivering stable multi-output performance for high-reliability systems. Designed for telecom, transportation, and defense applications, these converters support redundant operation and harsh environments.







RUGGEDIZED OPTION



Ruggedized models are available as an option by adding an “R” suffix to the standard model number, providing enhanced durability for harsh and mission-critical environments.

- Conformal coating added
- Enhanced shock & vibration performance
- Ruggedized construction for harsh environments
- Military/COTS positioning + Cage Code (59947)

Applications

- | | |
|--|---|
|  Defense and military systems |  Transportation and rail systems |
|  Telecom and networking infrastructure |  Embedded computing (CompactPCI systems) |
|  Industrial automation and control systems |  DC power distribution systems |

ELECTRICAL SPECIFICATIONS

Model Information

Model	Output Power	V1 (+5V)	V2 (+3.3V)	V3 (+12V)	V4 (-12V)	Efficiency	NSN
CPCI-AC-3U-200	200W	20A	30A	3A	0.5A	79-81%	—
CPCI-AC-3U-300	300W	30A	40A	5A	1.0A	79-81%	—
CPCI-AC-3U-200R	200W	20A	30A	3A	0.5A	79-81%	6130-01-591-7607
CPCI-AC-3U-300R	300W	30A	40A	5A	1.0A	79-81%	6130-01-526-6793

Input Specifications

Parameter	Specification
Input Voltage	85-264VAC
Power Factor	>0.90/0.95 typical @ 110/220 VAC (full load)
Hold-up Time	20 ms minimum (full load)
Inrush Current	<30/60 A @ 110/230 VAC
Operating Temperature Range	-5°C to 55°C with derating; full power with 250 LFM airflow
Current Sharing Accuracy (V1 and V2)	10% sharing, up to 6 units

Output Specifications

Parameter	Specification
Line Regulation	±0.5% for minimum to maximum voltage input
Transient Response	For a step load of 50% max load peak transient <5% & output recovers to 1% in less than 0.5 ms
Over-Voltage Protection	110-125% of V1/V2/V3 (latched shutdown)
Overload Protection	V1 and V2: 125% / V3 and V4: 200% auto recovery
Load Regulation	V1 and V2: ±1% maximum, V3 and V4: ±5% maximum
Min Load Requirement	None
Turn-On Delay	2 seconds maximum
Initial Setting Accuracy	V1 and V2 ±0.4% @ 50% load, V3 and V4 ±2% @ 50% load
Ripple/Noise (20MHz BW)	V1 and V2: 60 mV, V3 and V4: 120 mV (20 MHz bandwidth)

For quotes and customization requests, contact Digital Power sales at (877) 634-0982 or sales@digipwr.com.

ELECTRICAL SPECIFICATIONS

Note

Output Adjustment Range

V1 = 4.8V–5.4V; V2 = 3.1V–3.5V; V3 = 0V; V4 = 0V

200W Models (CPCI-AC-3U-200)

Maximum total output power at any combination of outputs shall not exceed 200W.

300W Models (CPCI-AC-3U-300)

Maximum total output power at any combination of outputs shall not exceed 300W.

Combined output power limits:

- V1 (+5V) and V3 (+12V) shall not exceed 185W
- V2 (+3.3V) and V4 (-12V) shall not exceed 138W

EMC & Safety Certifications

Parameter	Specification
Electrostatic Discharge	EN61000-4-2, ±kV Contact / ±8kV Air Discharge
Radiated Susceptibility	EN61000-4-3, 26–1000 MHz, 10 V/m, 80% AM
EFT / Bursts	EN61000-4-4, ±1kV
Surges	EN61000-4-5, ±2kV Line-Earth, ±1kV Line-Line
Conducted Immunity	EN61000-4-6, 0.15–800 MHz, 10V, 80% AM
Voltage Dips	EN61000-4-11, 30% dip for 10 ms, 60% dip for 100 ms
Voltage Interruptions	EN61000-4-11, 95% reduction, 5 s
Fluctuations & Flicker	EN61000-3-3
Safety Approvals	UL/cUL 60950-1, IEC/EN 60950-1
Emissions	EN 55022 Level B with external filter

Environmental Specifications

Parameter	Specification
Operating Temperature Range	-5°C to 55°C (23°F to 131°F); De-rate of 2.5% per 1°C to 70°C (34°F to 158°F)
Storage Temperature Range	-40°C to 85°C (-40°F to 185°F)
Cooling	200W and 300W models: 250 LFM airflow required for full power at 55°C
Humidity	Up to 95% RH non-condensing
Shock & Vibration	Storage: EN 300 019-2-1 class 1.2; Transportation: EN 300 019-2-2 class 2.3; Use: EN 300 019-2-3 class 3.3
MTBF	>400,000 hours per Bellcore 332 issue 6

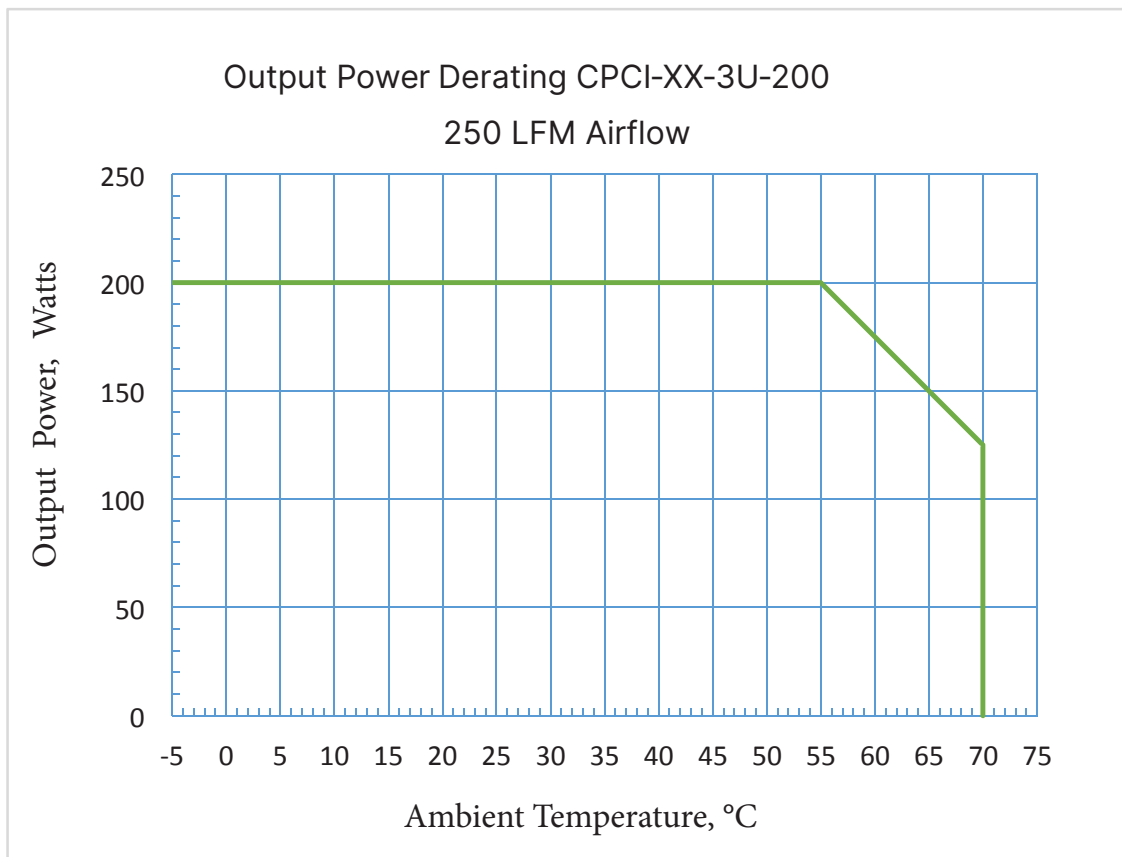
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ELECTRICAL SPECIFICATIONS

Status / Control

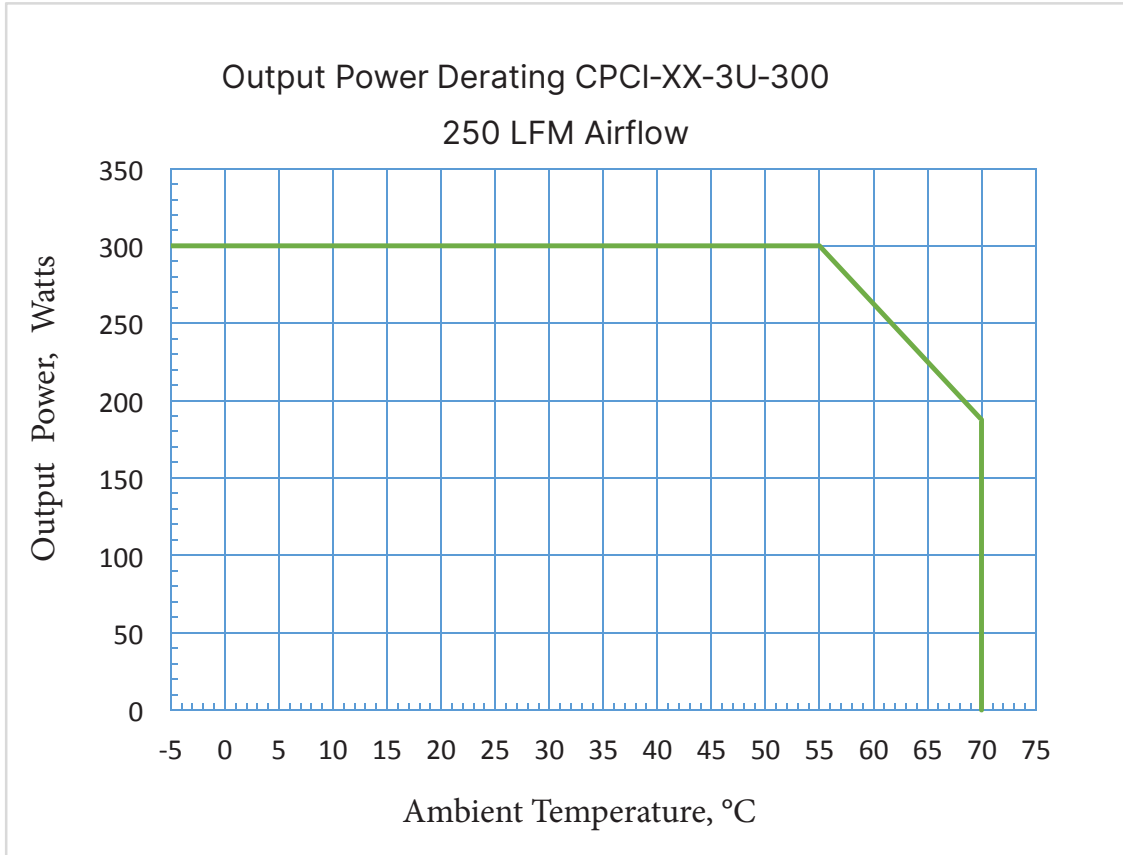
Parameter	Specification
Remote Inhibit	Inhibited with GND or TTL "0" = Off
DC Fail	Open collector — Active Low signal; indicates one or more outputs below 90% of specified rating
Over Temperature Warning	Open collector Active Low nominally 10°C before shutdown
Remote Sense	Available V1 and V2; total voltage compensation up to 300 mV drop
Current Share	Single wire (V1 and V2) $\pm 10\%$ up to 6 parallel units
Front Panel Green LED	Outputs OK
Front Panel Red LED	Fault condition

Output Power Derating



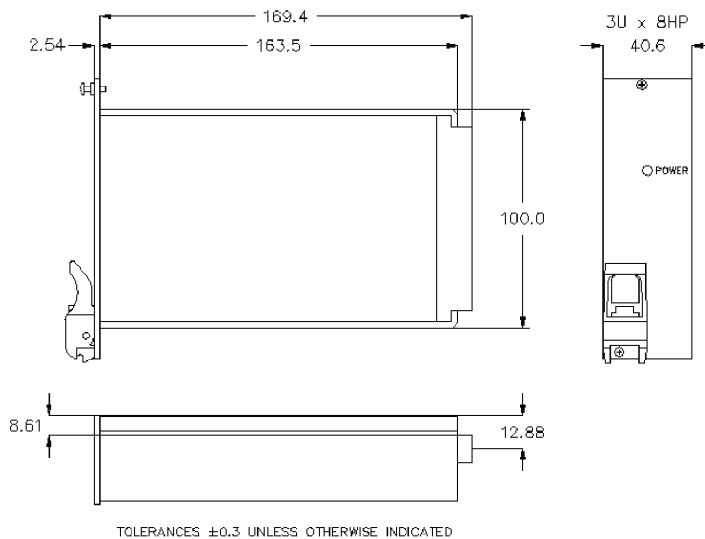
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MECHANICAL SPECIFICATIONS



Mechanical Outline

OVERALL SIZE: 5.07"H x 1.60"W x 6.40"D (128.7mm x 40.6mm x 162.5mm) WEIGHT: 800 gr.



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MECHANICAL SPECIFICATIONS

OUTPUT CONNECTOR - Positronic-PCIH47M400A1/AA PIN ASSIGNMENT

Pin	Pin Type	Signal Name	Description
1-4	Normal	V1	V1 Output
5-12	Normal	RTN	V1 and V2 Return
13-18	Normal	V2	V2 Output
19	Normal	RTN	V3 Return
20	Normal	V3	V3 Output
21	Normal	V4	V4 Output
22	Normal	RTN	Signal Return
23	Normal	RTN	Signal Return
24	Normal	RTN	V4 Return
25	Normal	GA-0	Geographic ADD-0 (option)
26	Normal	Reverse	Reverse
27	Short	EN#	Enable
28	Normal	GA-1	Geographic ADD-1 (option)
29	Normal	NC	Not Connected
30	Normal	V1 Sense	V1 Remote Sense
31	Normal	GA-2	Geographic ADD-2 (option)
32	Normal	NC	Not Connected
33	Normal	V2 Sense	V2 Remote Sense
34	Normal	S RTN	Sense Return
35	Normal	V1 Share	V1 Current Share
36	Normal	NC	Not Connected
37	Normal	IPMB_SCL	System Manager Bus (option)
38	Normal	DEG#	Degrade Signal
39	Normal	INH#	Open – ON Low - OFF
40	Normal	IPMB_SDA	System Manager Bus (option)
41	Normal	V2 Share	V2 Current Share
42	Normal	FAL#	Fail Signal
43	Normal	IPMB_PWR	Power–System Manager (option)
44	Normal	NC	Not Connected
45	Long	Chassis GND	Chassis GND
46	Long	AC Neutral	AC input Neutral
47	Long	AC Line	AC Input Line

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