

## CompactPCI<sup>®</sup>: 175 & 200 WATT MULTI-OUTPUT SWITCHERS 3U High x 8HP Width, AC or DC Input, PICMG<sup>®</sup> Compliant

### FEATURES

- Standard CompactPCI Outputs, 5, 3.3, ±12VDC
- Hot-Swap, N+1 Redundant Operation
- AC or DC Input
- Integral LED Status Indicators
- 5.4 Watts/Cubic Inch Power Density
- Power Factor Corrected (AC Input)
- Standard 47 Pin PICMG Connector
- ORing Diodes on All Outputs
- Active Current Sharing on V1, V2 & V3
- Class B EMI Input Filter
- Universal 90 to 264VAC Input
- Wide Range 36 to 72 VDC Input
- Complies with PICMG Power Interface Specification
- Control & Monitoring Features

### TWO-YEAR WARRANTY



### STANDARD MODELS

Max. Watts	V1 Output	V2 Output	V3 Output	V4 Output	Model No. AC Input	Model No. DC Input
175W	+5.0V @ 25A	+3.3V @ 20A	+12.0V @ 6.0A	-12.0V @ 1.0A	CPCIB2933	CPCIBQ2933
200W	+5.0V @ 30A	+3.3V @ 25A	+12.0V @ 6.0A	-12.0V @ 1.0A	CPCIC2933	-
200W	+5.0V @ 33A	+3.3V @ 33A	+12.0V @ 6.0A	-12.0V @ 1.0A	-	CPCICQ2933

NOTE: The maximum combined V1+V2 current on 175W models is 30A and on 200W models is 35A.

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### SAFETY STANDARDS

UL60950  
 CSA22.2, No. 60950  
 EN60950

## GENERAL SPECIFICATIONS

Typical at Nominal 115/230VAC Line or 48VDC, Full Load and 25°C Unless Otherwise Noted.

### Input Specifications

Voltage/Current.....	AC 90-264V, 47-63Hz, Single Phase. 2.8A max @ 175W output. 3.2A max @ 200W output. DC 36-72V (48V nominal). 6.9A max @ 175W output. 7.9A max @ 200W output.
Fusing.....	Internal line fuse provided, non-user serviceable AC - 3.15A, 250V. 48VDC - 10.0A.
AC Power Factor.....	0.99 line PFC typical at 115VAC, full load.
AC Inrush Current.....	Thermistor soft start. ~25°C AC cold start current 15Apk @ 115VAC; 30Apk @ 230VAC.
Transient Protection.....	MOV. Withstands transients as specified by IEEE C62.41 - 3KV (differential and common mode).
EMI Line Filtering.....	Meets IFCC Level B, and EN55022 Level B.
Efficiency.....	70% typical at 115VAC, full load.
Redundant/Hot Swap....	Full power N+1 redundant, hot-swap capable.

### Output Specifications

Line Regulation.....	<±1%, at the sense point, over full input range with sense leads connected.
Load Regulation.....	V1: 0.25V min load to full load. V2: 0.15V no load to full load. V3: 0.25V no load to full load. Output voltage droops with increasing load.
Minimum Loading.....	None required.
Stability.....	<±0.2% output drift after 20 minutes warm-up.
Temp. Coefficient.....	<±0.02%/°C, 0°- 50°C, after 20 minute warm-up.
Dynamic Response.....	<3% deviation with a 25% load change at 1A/µsec. Output returns to within 1% in less than 300µsec.
Ripple and Noise.....	<50mV for all outputs, or 1% pk-pk nominal, which ever is greater, DC to 20MHz bandwidth with a coaxial probe and 0.1µF/22µF capacitors at the output terminals.
Current Sharing/ N+1 Operation.....	V1, V2, V3 outputs, droop method standard.
Remote Sense.....	V1, V2, V3 outputs compensate for up to 0.25V total line drop in the load cables. Outputs are internally sensed if leads are opened.
Over/Under Shoot.....	None at turn-on or turn-off.
Hold-Up Time.....	>15msec following loss of AC power at low line, full load.
Over Current/Short Circuit Protection.....	Current limit on all outputs. Automatic recovery when overload is removed.
Over Temperature Protection.....	Internal temperature sensing. Causes all outputs to shut down. Automatic recovery.
Under Voltage Alarm....	Any output dropping below 10% of nominal triggers the power fail warning signal.

OVP..... Any output that exceeds 25% ±10% of nominal  
Vout will cause all outputs to latch off. Remote  
inhibit, enable or input recycle required to reset.

### Signal & Control Line, Indicators

Remote Enable.....	Enabled by closed circuit or TTL logic 0. Disabled by open circuit or TTL logic 1.
Remote Inhibit.....	Enabled by open circuit or TTL logic 1. Disabled by closed circuit or TTL logic 0.
Power Fail Warning.....	Loss of input AC causes a TTL compatible signal to go low >4msec prior to any output dropping out of regulation. At AC turn-on, signal stays low until all outputs are in regulation. Also triggered by an under voltage condition on any output.
LED Indicator.....	Dual LEDs. Green indicates input power ON and outputs within regulation. OFF or Amber indicates input and/or output power fault.

### Operating Environment

Temperature Range Operating.....	0° to 50°C ambient at full load, with specified airflow.
Storage Temperature....	-40° to 85°C.
Cooling.....	A minimum of 15cfm/400lfm direct forward airflow required to achieve full rated power and specified MTBF. Consult factory for derating guidelines with reduced or reversed airflow.
Relative Humidity.....	Up to 90% RH, non-condensing.
Operational Vibration....	0.75G peak, 5-500Hz along three orthogonal axes.
Altitude.....	Operating to 10,000 ft. Storage to 30,000 ft.
MTBF.....	Designed for 150,000 hrs at 25°C.

### Mechanical

Outline.....	3U x 8HP front panel. Refer to Mechanical Outline on page 3. Complies with all current PICMG® CompactPCI PSU specifications.
Weight (Approx.).....	1.8lbs / 1.06kgs.
Retaining Latches.....	Supplied with a single Rittal #3686.135 Type VII.

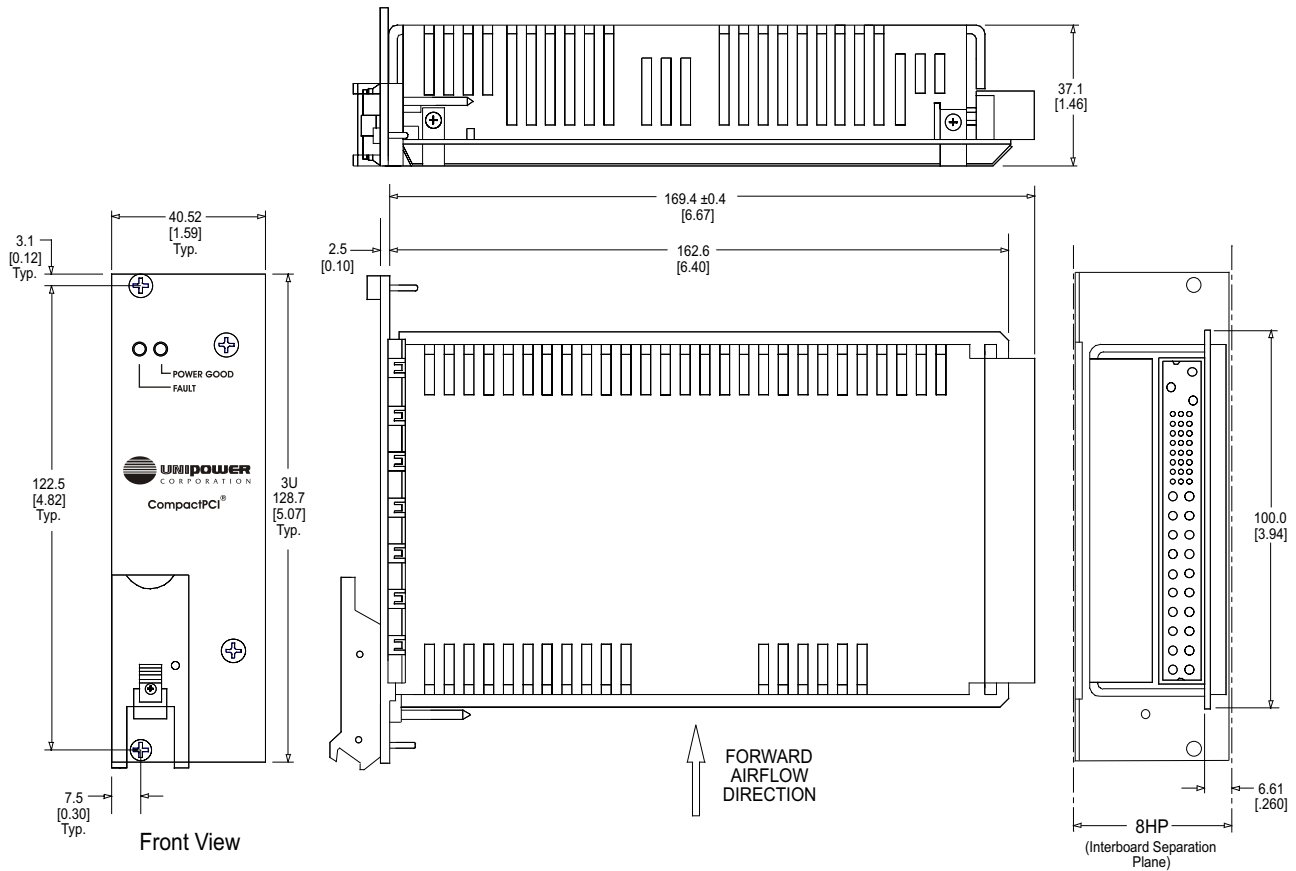
### Safety

Recognised to U.S. and Canadian Bi-National Standard CSA22.2  
 No. 60950 / UL60950, 3rd Edition (cULus).  
 CE Marked in accordance with LVD73/23/EEC and EN60950/A1-A4/A11.

### Interconnect

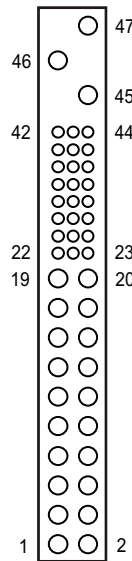
47 Circuit.....	Positronic Ind. P/N PCIH47M400A1. Mates with PI P/N PCIH47F300A1.1. Use of the specified mating connector is required to ensure proper contact sequence.
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### DIMENSIONS & CONNECTOR PINOUTS



#### PIN CONNECTIONS - 47 PICMG

PIN	FUNCTION	PIN	FUNCTION
1	V1 Out (+5V)	25	N/C
2	V1 Out (+5V)	26	N/C
3	V1 Out (+5V)	27	Remote Enable
4	V1 Out (+5V)	28	N/C
5	V1 & V2 Return	29	N/C
6	V1 & V2 Return	30	Remote Sense V1 (+5V)
7	V1 & V2 Return	31	N/C
8	V1 & V2 Return	32	N/C
9	V1 & V2 Return	33	Remote Sense V2 (+3.3V)
10	V1 & V2 Return	34	Sense Return (V1, V2 & V3)
11	V1 & V2 Return	35	Current Share V1
12	V1 & V2 Return	36	Remote Sense V3 (+12V)
13	V2 Out (+3V3)	37	N/C
14	V2 Out (+3V3)	38	Thermal Degrade
15	V2 Out (+3V3)	39	Remote Inhibit
16	V2 Out (+3V3)	40	N/C
17	V2 Out (+3V3)	41	Current Share V2
18	V2 Out (+3V3)	42	Input Power Fail
19	V3 Return	43	N/C
20	V3 Out (+12V)	44	Current Share V3
21	V4 Out (-12V)	45	Chassis Ground
22	Signal Return	46	AC Neutral / +DC Input
23	N/C	47	AC Live / -DC Input
24	V4 Return		



Pin staging:  
 Pin 45 is leading and first to connect.  
 Pins 27, 35, 41 & 44 are lagging and last to connect.