

**Electrical  
Specification for:**

**CPCI-3U-DC-250W**

250W DC Input 3U Compact PCI Power Supply

**Dual Output "Long"**

**Telkoor Part  
Number:**

900-3023-0000

|           |       |           |              |          |              |     |      |
|-----------|-------|-----------|--------------|----------|--------------|-----|------|
| CUSTOMER: | SIZE  | CAGE CODE | S5417        | DWG. NO. | 3023-DOC1-10 | REV | A    |
|           | SCALE |           | RELEASE DATE | 13/03/08 | SHEET        | 1   | OF 7 |

| REVISION HISTORY |           |                       |                   |           |             |
|------------------|-----------|-----------------------|-------------------|-----------|-------------|
| Rev Level        | Rev Date  | Change Made           | Reason for Change | Effective | Approved By |
| A                | 13/3/2008 | Specification Release |                   | 13/3/2008 | S. Sadot    |
|                  |           |                       |                   |           |             |

| Approvals                     |                     |                  |
|-------------------------------|---------------------|------------------|
|                               | Name                | Date             |
| <b>Written by:</b>            | <b>S. Sadot</b>     | <b>13/3/2008</b> |
| <b>Engineering:</b>           | <b>M.Heller</b>     | <b>13/3/2008</b> |
| <b>Sales &amp; Marketing:</b> | <b>B. Steinfeld</b> | <b>13/3/2008</b> |
| <b>Management:</b>            | <b>Y. Ben Ami</b>   | <b>13/3/2008</b> |

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**Input:**

Input Voltage: 36- 72Vdc

Inrush Current: 100 A maximum at 230Vac

Efficiency >80%, full load rated power

Input Protection: Internal Line Fuse:

**Output Voltages & Currents:**

| <b>Output</b> | <b>Output Voltage</b> | <b>Adjustment Range</b> | <b>Output Current</b> | <b>Min Load</b> |
|---------------|-----------------------|-------------------------|-----------------------|-----------------|
| V1            | +5V                   | 4.8 - 5.2               | 50A                   | 0A              |
| V2            | +12V                  | 0                       | 3A                    | 0A              |
|               |                       |                         |                       |                 |
|               |                       |                         |                       |                 |

Note: 1) Maximum output power at any combination within this table is 250W

Output Power: 250W with 250LFM forced air cooling

Line Regulation: ±0.5%

Load Regulation:

V1 ±1%

V2 ±4%

Ripple & Noise 20 MHz bandwidth measured across 1uF ceramic and 120uF electrolytic. Capacitor in paralleled

V1 100mV p-p

V2 120mV p-p

Overload & Short Circuit Protection Fully protected against output overload and short circuit. Automatic recovery upon removal of overload condition

V1 150% max

V2 150% max

Initial Set Point Tolerance: ±1%

Overshoot & Undershoot: 0% at turn ON

Turn On Delay: 1 sec. Maximum.

Rise Time 40mSec from 10% to 90% of its final value.

Over-voltage Protection: 110 to 130% with latched shut down (V1, V2, V3)

Temperature Protection: System shutdown due to excessive internal temperature, automatic reset

Hold Up Time 16mSec at full load and 220VAC input

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**Monitoring Command & Control**

|                                 |  |
|---------------------------------|--|
| Remote Sense                    | Available on V1 & V2. Maximum voltage compensation for cable losses 200mV  |
| Inhibit (INH#)                  | N/A  |
| Enable (EN#)                    | Contact closure to external ground to start unit. On shortest pin (last make, first break)   |
| Power Fail (FAL#)               | TTL compatible signal, open collector active low signal. Indicates one or more outputs below 90% of specified rate.                        |
| Current Share                   | Accuracy of current share $\pm 10\%$ between units with up to 6 parallel units. Single wire current share on V1 & V2 for 50% to 100% load. |
| Hot Swap                        | Internal O-ring Diode  |
| Over Temperature Warning (DEG#) | Open collector active low 10°C before power supply shut down.  |
| I2C - Option                    | I <sup>2</sup> C Passive data: s/n, model no., revision, and/or user defined data  |

**Operation Status Indicators**

|                  |   |
|------------------|---|
| Input Voltage OK | <b>Green LED</b> - indicates when mains input voltage is present.           |
| Output Failure   | <b>Red LED</b> - Indicates one or more outputs below 90% of specified rate. |

**Environmental Specification:**

|                       |   |
|-----------------------|---|
| Operating Temperature | Operation: -10°C to +55°C full load with 250LFM Forced Air Cooling and de-rating linearly above 55°C by 2.5% per °C |
| Storage Temperature   | -40°C to +85°C  |
| Humidity              | Up to 95% RH non-condensing.  |
| Shock:                | Peak acceleration 20GPK max.  |
| Vibration             | Random vibration, 10Hz to 500Hz, 3 axis 1.9GRMS max.  |
| Altitude              | Operation 6K ft Non operation 40K ft.   |
| MTBF                  | 300,000 hours per Bellcore standard B332 Gb 30°C  |

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**Safety Regulatory & EMC Specifications:**

|   |  |
|---|--|
| Fully compliance to PICMG 2.11 CompactPCI Specification |  |
| Safety Agency Compliance                                | UL 60950, EN-60950, CE - MARK                            |
| Harmonics   | EN61000-3-2  |
| Voltage Fluctuation                                     | EN61000-4-3  |
| ESD susceptibility                                      | EN61000-4-2 level 4 8KV air                              |
| Conducted & radiated emission                           | EN55022/CISPR22 Class B with an external TBD line filter |
| Surge   | EN6100 -4-5 level 3 line-to-line 1KV line to chassis 2KV |
| Radiated susceptibility                                 | EN61000-4-3 level 3 10V/m                                |
| EFT/Burst   | EN61000-4-4 level 3 ±2KV                                 |
| Conducted disturbance                                   | EN61000-4-6 level 2 3Vrms                                |
| Power frequency magnetic field                          | EN61000-4-8 3A/m   |

**Dielectric Withstand**

|                  |          |
|------------------|----------|
| Input to Case:   | 1500VAC. |
| Input to Output: | 3000VAC  |
| Output to Case:  | 50VDC.   |

**Mechanical Dimensions**

|        |   |
|--------|---|
| Size   | 5.07"H X 1.60"W X 9"D 128.7mm x 40.6mm x 228.8mm) |
| Weight | 800 gr.   |

|           |       |              |          |          |              |     |   |
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**INPUT/OUTPUT CONNECTOR - Positronic-PCIH47M400A1/AA  
PIN ASSIGNMENT**

| Pin   | Pin Type | Signal Name. | Description                   |
|-------|----------|--------------|-------------------------------|
| 1-4   | Normal   | V1           | V1 Output                     |
| 5-12  | Normal   | RTN          | V1 Return                     |
| 13-18 | Normal   | V1           | V1 Output                     |
| 19    | Normal   | RTN          | Return                        |
| 20    | Normal   | V2           | V2 Output                     |
| 21    | Normal   | N/A          | N/A                           |
| 22    | Normal   | RTN          | Signal Return                 |
| 23    | Normal   | RTN          | Signal Return                 |
| 24    | Normal   | N/A          | N/A                           |
| 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   | N/A          | N/A                           |
| 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#         | N/A                           |
| 40    | Normal   | IPMB_SDA     | System Manager Bus (option)   |
| 41    | Normal   | N/A          | N/A                           |
| 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     | DC input "-" | DC input Negative pole        |
| 47    | Long     | DC input "+" | DC input Positive pole        |

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