VICOR CUSTOM
NORTHWEST POWER

**Data Sheet**

# PowerBank PB1004PFC

## AC/DC Power Supply
## 4 Outputs, 1000W
## Low-Profile 1.75" (1U)
## SEMI F47 Compliant




All specifications are at nominal input, full load, 25°C, unless otherwise noted.

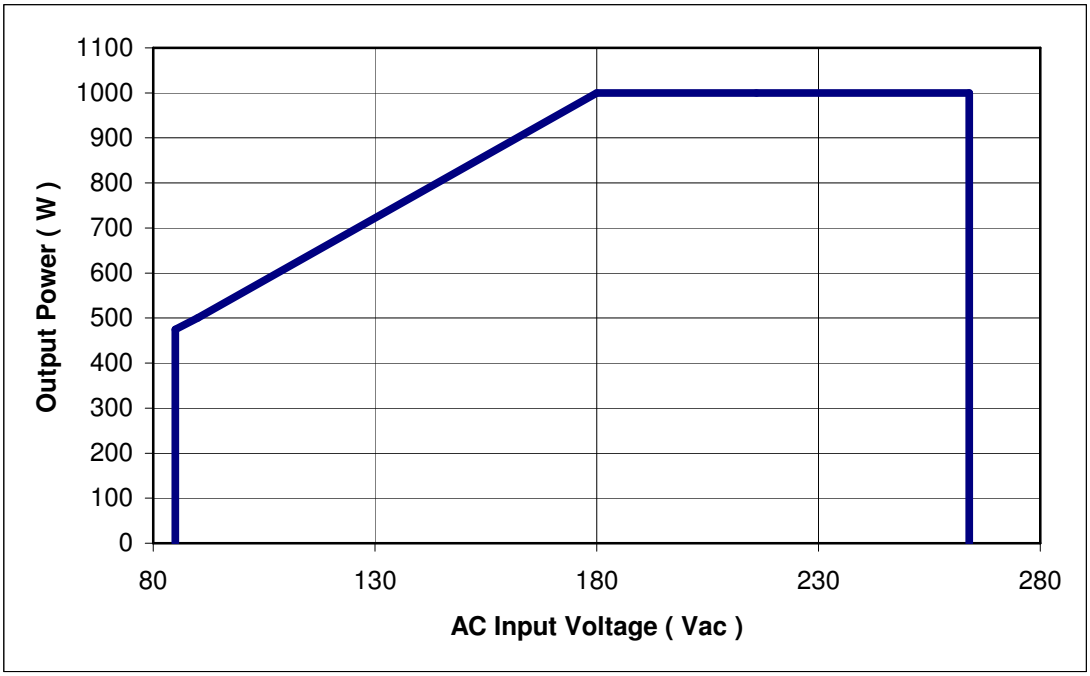
| **Input** | |
|---|---|
| Input Voltage (nominal) | 115/230Vac |
| Input Voltage Range | 90-264Vac |
| Input Frequency | 47-63 Hz |
| Inrush Current (cold start.) | <20 A at 115Vac, <40A at 230Vac |
| Input Fuse (internal) | 20A |
| Power Factor (minimum) | 0.95 |
| Input Harmonics | EN 61000-3-2 Compliant |
| Line dropout | SEMI F47 Compliant when operated at 180-264Vac |

| **Output** | | | | |
|---|---|---|---|---|
| Output | **A** | **B** | **C** | **D** |
| Maximum Output Current (Connector Limit) | 80A | 80A | 40A | |
| Output Voltage (Factory configurable) | 1.8 to 52 V | 1.8 to 52 V | 1.8 to 52 V | |
| Module Size | **Maxi** | **Mini** | **Micro** | **Micro** |
| Output Voltage Setpoint (50% load) | ±1.2% | ±1.2% | ±1.2% | ±1.2% |
| Load Regulation, No load to full load (max) | ±0.2% | ±0.2% | ±0.5% | ±0.5% |
| Line Regulation, Low Line to High Line (max) | ±0.2% | ±0.2% | ±0.5% | ±0.5% |
| Remote Sense | Yes | Yes | No | No |
| Output Trim | Yes | Yes | Yes | Yes |
| Output Ripple and Noise | See individual Vicor module specifications. | | | |
| Maximum Output Power (Individual output) | 600W | 300W | 150W | 150 W |
| Maximum Output Power (Total all outputs) | 1000W, See output power derating chart on page 2. | | | |

| **Environmental** | |
|---|---|
| Operating Temperature Range<br>(see output power derating on page 2) | -20°C to 50°C |
| Thermal Shutdown | 100°C internal module shutdown, non-latching |
| Storage Temperature Range | -40°C to 70°C |
| Relative Humidity | 5% -95% non-condensing |

| **Safety** | |
|---|---|
| Agency Approvals | cTUVus, CE |
| Safety Standard Compliance | EN 60950 |
| Isolation, Primary-to-Secondary | 3000Vrms |
| Isolation, Primary-Earth | 1500Vrms |
| Isolation, Secondary-Earth | 250Vrms |

## Output Power Derating




At 25°C. Output power may be further limited at higher ambient temperature. Contact factory for details.

| EMI and EMC | |
|---|---|
| Conducted Noise | EN55022 Class A (150kHz-30MHz) |

| Mechanical | |
|---|---|
| Dimensions<br>(Approximate. See Mechanical Drawing for details.) | 10.28" x 8.08" x 1.74" |
| Mounting Options (contact factory for details) | Universal Mounting Brackets<br>Short Front Panel or Full 19" Front Panel |
| Cooling | Internal Fans |
| Weight (Typical, depends on configuration) | 5.5 lb. (2.5 kg) |

| Input Power Connections | | |
|---|---|---|
| **Connector** | **Details** | |
| IEC320 | Standard pin configuration | |
| Optional Cord Retainer | Long Wire Bail<br>NPI P/N 4340, Qualtek #730B-00/05 | Short Wire Bail<br>NPI P/N 4013, Qualtek #730B-00/00 |

| Front Panel LEDs | One Red/Green LED for each main output | |
|---|---|---|
| **Color** | **Signal Description** | **Details** |
| Green | Output OK | Corresponding output voltage is correct, i.e. sufficiently high if output is populated or zero if output is not populated. |
| Red | Output Not OK | Corresponding output voltage is too low. |

| Output Power Connections for Channels A and B | | | | |
|---|---|---|---|---|
| Pin | Signal Description | Details | | |
| | | Molex Minifit Sr. Connector (Option -M) (Molex 42820-4212) | Straight Bus Bar (Option -B) | Right-Angle Bus Bar (Option -R) |
| 1 | + | Positive Terminal, 49A max | Positive Terminal, 1/4" hole, 100A max | Positive Terminal, Tapped 1/4-20 hole, 100A max |
| 2 | + | Positive Terminal, 49A max | | |
| 3 | - | Negative Terminal, 49A max | Negative Terminal, 1/4" hole, 100A max | Negative Terminal, Tapped 1/4-20 hole, 100A max |
| 4 | - | Negative Terminal, 49A max | | |

| Output Power Connections for Channels C and D (Molex 42820-4212) | | |
|---|---|---|
| Pin | Signal Description | Details |
| 1 | + | Output D, Positive Terminal, 49A max |
| 2 | - | Output D, Negative Terminal, 49A max |
| 3 | + | Output C, Positive Terminal, 49A max |
| 4 | - | Output C, Negative Terminal, 49A max |

| Trim/Remote Sense Connections for Channels A and B (AMP 102617-1)<br>(Remote sense is active only if Maxi or Mini size module is installed.) | | |
|---|---|---|
| Pin | Signal Description | Details |
| 1 | +Sense B | Positive Sense Connection<br>(Internally connected to positive output through 50 Ω resistor fused by 0.17A Polyfuse) |
| 2 | Trim B | Connect this pin with a resistor to Pin 1 for trim up, or to Pin 3 for trim down. |
| 3 | - Sense B | Negative Sense Connection<br>(Internally connected to negative output through 50 Ω resistor) |
| 4 | +Sense A | Positive Sense Connection<br>(Internally connected to positive output through 50 Ω resistor fused by 0.17A Polyfuse) |
| 5 | Trim A | Connect this pin with a resistor to Pin 1 for trim up, or to Pin 3 for trim down. |
| 6 | - Sense A | Negative Sense Connection<br>(Internally connected to negative output through 50 Ω resistor) |

| I/O Connections (Molex 70555-0038) | Note: All control signals are isolated; Input - 3,000 Vrms; Output - 250 Vrms; Chassis - 250 Vrms | |
|---|---|---|
| Pin | Signal Description | Details |
| 1 | 12V Aux | 12V/100mA Auxiliary Stand-By Output |
| 2 | Pgood | Open Collector, 40V/5mA, Active Low = Power Good |
| 3 | Inhibit | Connect to Pin 4 (Control Return) to inhibit all outputs, except 12V Aux. |
| 4 | Control Return | Reference for all signals on I/O connector. Return for 12V Aux. |

Information furnished by NORTHWEST POWER is believed to be accurate and reliable. However, no responsibility is assumed by NORTHWEST POWER or Vicor for its use. No license is granted by implication or otherwise under any patent or patent rights of NORTHWEST POWER or Vicor. NORTHWEST POWER products are not designed to be used in applications, such as life support systems, wherein a failure or malfunction could result in injury or death. All sales are subject to NORTHWEST POWER 's Terms and Conditions of Sale, which are available upon request.

**Specifications are subject to change without notice.**

Vicor Custom Power - Northwest

♦ 4211 SE International Way, Suite F♦ Milwaukie, OR, USA

Tel: 503-652-6161 ♦ Fax: 503-652-6868 ♦ www.npi-inc.com