



## Grid-tied Inverter (GTIB)

GTIB 480-100 • 100 kW Grid-Tied Inverter

Performance, Reliability, and Flexibility  
For Commercial Solar Applications

### Beyond Power Generation

The GTIB 480-100 is a 100kW grid-tied inverter that offers high efficiency, proven reliability, and flexibility as a bidirectional inverter. This highly efficient system not only offers reliable power generation from alternative energy sources, but its additional terminal permits the integration of energy storage or backup power.

### Efficient

*Maximize power and minimize cost.*

With 96.5% efficiency, GTIB offers maximum solar array output with advanced MPPT tracking.

### Reliable

*Eliminate downtime and decrease demand.*

Reduced failure rate, increased lifespan, and advanced, high-capacity switches allow the GTIB system to operate at low temperatures and provide back-up power in times of need and during peak demand.

### Flexible

*Highly compatible and easily integrated.*

GTIB is compatible with commercial-scale solar arrays, wind turbines, energy storage systems, DC generators, and various AC loads. Additionally, the GTIB offers a wide voltage input range adding to its flexibility.



### Features & Options

- Microgrid “off-grid” and back-up power capable
- Ground fault detection and interruption
- LCD and keypad allows user optimization
- Web-based remote performance monitoring, control, fault clearing, firmware upgrade
- Revenue-grade kWh meter
- AC and DC disconnects and combiner box
- Ethernet Compatible
- Web UI access



## Grid-tied Inverter (GTIB)

GTIB 480-100  
 100 kW Grid-Tied Inverter

Performance, Reliability, and Flexibility  
 for Commercial Solar Applications



Princeton Power GTIB 480-100



### About Princeton Power

Princeton Power Systems designs and manufactures high-performance power electronic converters and systems for commercial, industrial, and military distributed generation applications.

Specifications subject to change without notice, contact manufacturer for updated information.  
 Copyright © 2011 Princeton Power Systems, Inc.  
 All rights reserved. Printed in the USA

#### GENERAL SPECIFICATIONS

Inverter Technology	High-frequency PWM
Size Inches	36 W x 18 D x 75 H

#### INPUT SPECIFICATIONS

DC Voltage	280-750 VDC (UL Certified to 600 VDC)
DC Maximum Power Voltage	330-750 VDC (UL Certified to 600VDC)

#### INPUT SPECIFICATIONS - PV

PV MPPT	280-580 VDC
PV Array Configuration	Transformerless: Ungrounded With Optional Isolation Transformer: Monopole positive or negative grounded or bipolar neutral grounded

DC Voltage Ripple	< 1%
-------------------	------

#### INPUT SPECIFICATION - BATTERY

Max Input Power (Discharge)	105kW
Max Output Power (Charging)	95kW
Configurable	3-stage charging profile

#### GRID CONNECTION PORT SPECIFICATIONS

AC Line Voltage	480 VAC +10%, -12%, 3-phase
AC Line Frequency	60 Hz nominal 57-60.5 Hz range (field adjustable)
Continuous AC Current	133 A RMS
Continuous AC Power	100kW
Power Factor	>0.95 above 20% rated power
Current Harmonics	IEEE 1547 Compliant, <5% THD

#### AC OUTPUT PORT SPECIFICATIONS

AC Output Voltage	480 VAC ± 10%, 3-phase
Voltage Harmonics	IEEE 1547 compliant, <3% THD (Resistive Load)
Maximum Load Power	100kW
Allowable Load Power Factor	1.00 -0.85 (Lagging)
Maximum Load Current	142A
Backup Auto-transfer time:	To Backup: 250ms To Line: 250ms

#### ENVIRONMENTAL SPECIFICATIONS

Temperature Operating	0 to 50°C
Storage: -20 to 60°C	
Humidity	5-95% (non-condensing)
Cooling	Forced-air cooled
Rated Max Elevation	6,000 Feet
Enclosure	NEMA 1 (Indoor)

#### SAFETY FEATURES

Faults	Over/Under Voltage, Over/Under Frequency, Over Current, Overload, Over-temperature
Standards Compliance	IEEE 1547, CEC, UL 1741 Certified (#72090351.01)
Safety Features	Anti-islanding (grid fault detection, isolation & auto-reconnect) UL-compliant trip points (field adjustable)

#### USER INTERFACE FEATURES

Front-Panel Interface	4x20 LCS, Keypad, Fault LED's
Communication	We offer a wider variety of communication Options
Performance Monitoring	Real-time & Historic, web-based performance data
Analog & Digital I/O	Analog: (3) inputs, (1) output; 0-10 V or 4-20mA Digital: (3) inputs 0-24V, (2) output relays

#### EFFICIENCY

Peak Efficiency	96.5%
CEC Efficiency	95.0%
Nighttime TARE Losses	170W
Energy-saving Features	Automatic internal subsystems power-down, Nighttime transformer auto-disconnect

#### Princeton Power Systems, Inc.

3175 Princeton Pike, Lawrenceville, NJ 08648 USA

Tel: (609) 955-5390 • Fax: (609) 751-9225

info@princetonpower.com • Press Inquiries: press@princetonpower.com • Sales: sales@princetonpower.com

[www.princetonpower.com](http://www.princetonpower.com)