PRINCETON POWER SYSTEMS

Clean Power Made Simple™

Grid-tied Inverter and Battery Controller (GTIB)

The 30kW hybrid inverter offers high efficiency, proven reliability, and unprecedented flexibility. The highly-configurable GTIB can condition power from alternative energy source, as well as Energy Storage, AC loads, and AC Microgrids.

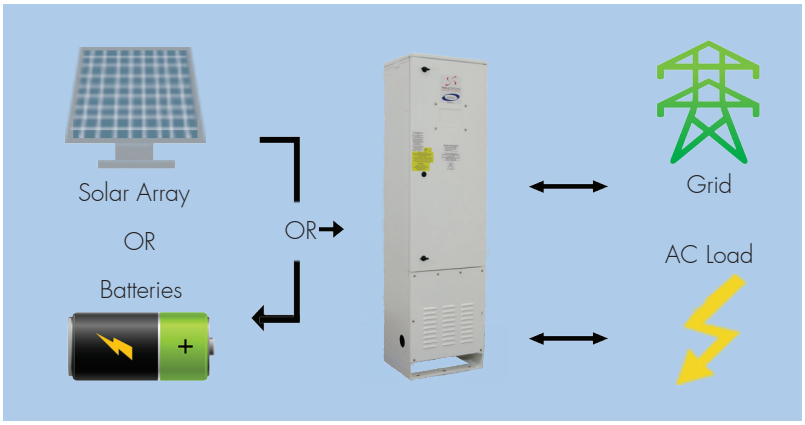
Efficient
With 95.5% efficiency, the GTIB is specifically designed for high round-trip efficiency for battery applications.

Advanced Functions
Demand Response, Peak Shaving, Island Mode, Demand Dispatch, and other functions are included in the converter.

Flexible
Compatible with advanced communication protocols and pre-configured for advanced battery compatibility. Integrated systems deployed with top-tier battery manufacturers.

AUSTRALIA SYSTEM

Approvals
– AS/NZS 4777.2:2015
– IEC 62109-1
– IEC 62109-2



Features

– Microgrid "off-grid" and back-up power capable
– Automatic transfer to off-grid with built-in transfer switch (ATS)
– TUV Certified to UL1741
– Available in 208V or 480V 3-phase configuration
– Dark Start
– DC pre-charged integrated

ABOUT PRINCETON POWER SYSTEMS

Princeton Power Systems, based in New Jersey and founded in 2001, designs and manufactures state-of-the-art technology solutions for energy management, microgrid operations and electric vehicle charging. The company is a global leader working with customers and partners across North America, Europe, Africa and the Caribbean. It manufactures UL and CE-certified power electronics that are used in advanced battery operations and alternative energy, with built-in smart functions for ancillary services. The company solves power issues to allow continued growth of distributed renewable energy by providing energy storage solutions that are proven to work, even in harsh environments. Princeton Power Systems builds integrated systems and designs, commissions and operates microgrids for leading organizations, including Fortune 500 automakers and industrials, and non-profit organizations. The company proudly manufactures its products in the USA. More information about Princeton Power Systems is available at www.princetonpower.com.

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Grid-Tied Inverter (GTIB-30)

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GTIB-30

		AUSTRALIA
Power Terminals	1 DC I 2 AC*	2 DC I 2 AC*
Power-stage Technology	High-frequency PWM	High-frequency PVM
Size	20.3 W x 16 D x 78 H in	516 x 406 x 1981 mm
Weight	650 lbs	295 kg

DC PORT SPECIFICATIONS - BATTERY

		AUSTRALIA
DC Voltage (Full Power)	280 - 830 VDC standard	280 - 830 VDC standard
DC Voltage (Full Range)	0 - 830 VDC	0 - 780 VDC
Max Discharge	32 kW	32 kW
DC Current Max	120A	120A
Battery Charge Controller/ Battery Management System	Configurable 3-stage profile for lead-acid batteries. Manual control of DC volts/amps through RS232/485 Modbus RTU	Configurable 3-stage profile for lead-acid batteries. Manual control of DC volts/amps through RS232/485 Modbus RTU
DC Voltage Ripple	<1%	<1%
DC Precharge	Internal	Internal
DarkStart from battery	Internal	Internal

DC PORT SPECIFICATIONS - PV (*Does not apply to Australia)

PV MPPT	280-830 VDC
PV Array Configuration	Ungrounded or negative grounded through optional internal (GFDI)
DC Voltage Ripple	<1%

AC GRID PORT SPECIFICATIONS

		AUSTRALIA
AC Line Voltage	208 or 480 VAC +10%, -12%, 3-phase 3/4 wire	240/415 nom, 180/312 min, 260/451 max
AC Line Frequency	59.3-60.5 Hz (per UL requirement)	50 Hz nominal 45 (NZ 47 (OZ) - 52 Hz)
Continuous AC Current	85 A RMS (208V option)	47A
	40 A RMS (480V option)	
Continuous AC Power	30kVA	30kVA
Power Factor	Greater than 0.95	Grid-tied: 10.95/min micro-grid: -1.00 to 1.00
Current Harmonics	IEEE 1547 compliant, <5% THD	AS4777 compliant, <5%

AC LOAD PORT SPECIFICATIONS

		AUSTRALIA
AC Line Voltage	208 or 480 VAC +10%, -12% 3-phase 3/4 wire	180/312 min, 240/415 nom, 260/451 max
Off-grid Control Feature	Grid-forming Voltage Source	Grid-forming Voltage Source
Automatic Transfer Switch	Yes (Internal)	Yes (Internal)
On-grid/Off-grid Auto-transfer time	160 ms	160 ms
Microgrid Compatibilities	Autonomous Power Sharing without Centralized Control Parallel Generation Compatible, Synchronized Start	Autonomous Power Sharing without Centralized Control Parallel Generation Compatible, Synchronized Start

ENVIRONMENTAL SPECIFICATIONS

		AUSTRALIA
Temperature Operating	0° to 50°C with derating above 40°C	0° to 50°C with derating above 40°C
Storage	-20°C to 60°C	-20°C to 60°C
Humidity	5-95% (non-condensing)	5-95% (non-condensing)
Cooling	Forced Air	Forced Air
Rated Max Elevation	3,000 feet	3,000 feet
Enclosure	NEMA 3R (outdoor)	IP34

USER INTERFACES

		AUSTRALIA
Front-Panel Interface	Touch Screen HMI (optional)	OLED screen with keypad
Communication	MODBUS Over RS485 and/or RS232 Native	MODBUS Over RS485 and/or RS232 Native
Performance Monitoring	Real-time, local performance data & event storage, download-able through Modbus RTU interface. 3 Year+ History Retention	Real-time, local performance data & event storage, download-able through Modbus RTU interface. 3 Year+ History Retention

EFFICIENCY

		AUSTRALIA
Peak Efficiency	95.50%	95.50%