

Grid-Connected Photovoltaic Inverter GC-1000 Model Series

Description

The GC-1000 is a 1KW DC-to-AC grid-tied inverter designed for residential and commercial on-site power generation systems. Manufactured for both indoor and outdoor use, this complete inverter package meets all code requirements and provides maximum efficiency, reliability, and ease of installation. The inverter can be purchased as a single unit or as part of a packaged system which includes a string combiner, GFI protection, and DC and AC disconnects. An optional interactive data monitor is also available.



Standard Features

- ~ 1000 Watt, single-phase AC output at 25°C
- ~ 93% peak efficiency with DC input range of 52 to 92 Volts*
- ~ Maximum Power Point Tracking over 55 to 70 VDC input range
- ~ No-load power consumption of only 2.4 Watts
- ~ Nighttime losses eliminated by using control power from PV array
- ~ Meets UL 1741 and IEEE 929 requirements including anti-islanding and under/over frequency and voltage shift detection
- ~ Automatically limits array current at high temperatures
- ~ UL Listed, NEC Article 690-compliant
- ~ Standard outdoor-rated enclosure
- ~ Innovative thermal design requires no fans and maximizes efficiency
- ~ Removable casing allows for easy installation
- ~ Rugged, industrial-rated components with low inverter parts count
- ~ Standard five-year warranty
- ~ Certified by the California Energy Commission

Optional Code-Compliant Package System

String Combiner

- ~ Detachable outdoor-rated combiner housing allows for wiring flexibility and alternate DC disconnect location
- ~ Fused 10 Amp, six input combiner accepts up to #8 AWG wire from each string
- ~ Six string combiner inputs allow for a wide range of PV module configurations/power

GFI, DC/AC Disconnects, and Surge Protection

- ~ Tandem DC/GFI Disconnect disables the array under system ground fault conditions (meets requirements of NEC Article 690-5 for residential rooftop installations)
- ~ Optional AC Disconnect provides means for local inverter output disconnect
- ~ Weatherproof disconnect boot allows easy access for fault isolation and servicing
- ~ AC silicon oxide surge protector required for warranty coverage

Specifications

DC Input

Input Range*	48 V/60 V MPP nominal; 100 V max.
Operating Input Range	52 to 92 VDC standard; 44 to 75 VDC low voltage version
Utility Feedback Current	15 A max.
Array Short-Circuit Current	25 A max. total

AC Output

Output Voltage†	120 V nominal; 106 to 127 VAC operating
Output Frequency†	60 Hz nominal; 59.5 to 60.5 Hz operating
Output Current	8.0 A max.; < 5% THD

Performance

Temp. Range	-40 to +60°C
Efficiency	93% max.
Tare Losses	2.4 Watts

Mechanical

Weight	43 lbs. net, 45 lbs. ship
Dimensions	19"x8"x6.5" inverter alone 28.5"x8"x6.5" with string combiner
Enclosure	Outdoor rated

28 Riverview Mill
PO Box 262
Wilton, NH 03086
USA

Phone:
(603) 654-9322

Fax:
(603) 654-9324

Email:
info@advancedenergy.com

Web:
www.advancedenergy.com

*Advanced Energy is
the recognized leader in
the innovative design and
manufacture of utility-
interactive inverters.*

*Low input voltage (36 V nominal) version available. †220/240 V, 50 Hz versions also available