



FGT Series Solar Power Supply

FGT SERIES 2700 – 5000 WATT GRID – TIE SOLAR INVERTER POWER SUPPLIES

PERFORMANCE

- ◆ Maximizes your Solar Systems return on investment with Best in Class Efficiency
- ◆ Maximum energy harvest with Accurate Input Voltage MPPT Tracking
- ◆ True Sine-Wave AC output with < 3% total harmonic distortion.
- ◆ Front panel LCD display monitor quickly confirms the status of critical operating parameters (standard item on all models).
- ◆ Front panel *INPUT OK* and *OUTPUT OK* independent LED indicators.
- ◆ Remote operation / monitor capability via the integrated RS-232 / RS-485 Interface.

INSTALLATION

- ◆ Lightweight and versatile easy-mount bracket included as standard
- ◆ Easy access PVDC and AC-Grid terminal block facilitates easy wiring connection.
- ◆ NEMA 3R inverter enclosure permits reliable outdoor and indoor locations
- ◆ Flexible module selection and sizing.

SERVICEABILITY

- ◆ 10-year Standard warranty.
- ◆ Inverter systems are delivered pre-configured and pre-tested. On-site wiring, testing, servicing and replacement issues are significantly reduced.
- ◆ The front panel door has a built-in security key lock.
- ◆ All FGT Series models are complete with a built-in DC Disconnect that is NEC compliant, lockable and load-breakable. Installing an external DC disconnect or cabling is not necessary.

KEY FEATURES

- ◆ Up to 97% Efficiency, Low Noise and Compact Size
- ◆ True Sine-Wave output, < 3% total harmonic distortion
- ◆ UL1741-2005/IEEE 1547 certified
- ◆ Wide Range 195-550 VDC Input Voltage
- ◆ Expansion Slot Provides Easy Upgrades
- ◆ Front Panel *Power OK* LED indicators
- ◆ Front Panel LCD Display performance monitor
- ◆ 10-Year Warranty Standard
- ◆ Convection Cooled
- ◆ High reliability >200,000hrs

INTRODUCTION

The FGT Series Power Grid Tie Solar Inverters directly convert 195-550 VDC power produced by PhotoVoltaic Solar Cell Modules into utility-grade 220 VAC power. The AC power may be used for home and office applications or may be sold back to the local electrical utility. The FGT Series offers up to 97% efficiency, low installed costs, a clean compact design, high reliability and long lasting durability.

TECHNOLOGY

- ◆ A proven high-frequency design reduces size and weight while producing high efficiency.
- ◆ Heat management design techniques avoids requirement for a noisy cooling fan.
- ◆ Integrated UL approved DC & AC disconnects reduces installation time and complexity.
- ◆ LCD Display status monitor provides performance and diagnostic operation information. (Standard item on all models).



SPECIFICATIONS AND RATINGS

Electrical Specifications - Output

	Model		Model		Model	
	FGT28-208/240		FGT38-208/240		FGT50-208/240	
Nom. Output Voltage (Vac)	208	240	208	240	208	240
Max AC Power Output (W)	2700	2800	3500	3800	4500	5000
AC Output Voltage Range (Vac)	183-229	211-264	183-229	211-264	183-229	211-264
AC Frequency Nominal (Hz)	60					
AC Frequency Range (Hz)	59.3 – 60.5					
Max. Continuous Output Current (A)	13.0	11.8	16.8	15.8	21.0	22.0
Max. Output Over-current protection (A)	15		25	20	30	
Max. Utility back-feed current (A)	0					
Total Harmonic Distortion (THD)	< 3%					
Power Factor – Rated Power	> 0.99					
Power Factor – Full Power Range	> 0.95					
Unit Monitoring, Islanding Protection	UL1741-2005 / IEEE1547					
Output Characteristics	Current Source					
Output Current Waveform	True Sine Wave					

Electrical Specifications - Input

Max. array open circuit voltage (Vdc)	600					
MPPT Volt Range (CEC & CSA) (Vdc)	195 – 550		195 - 550		240 – 550	
MPPT Operating Range (Vdc)	195 - 550		195 - 550		235 – 550	
Max. Input Current (Adc)	14.9	15.4	19.5	20.8	20.0	22.0
Max. Array Short-circuit Current	24.0					
Reverse Polarity Protection	Internal Diode					
Ground Fault Protection	Internal GFDI; per UL 1741-2005 and NEC Article 690					
Max. Inverter Efficiency	97.0 %					
CEC Efficiency	(Note 1)					
Night Time Power Consumption (W)	1					

Environmental Specifications

Operating Temperature Range	-13°F to 149°F (-25°C to 65°C)					
Enclosure Type	NEMA 3R (Outdoor Rated – Rain Proof)					
Inverter Weight	49.0 lb (22.2 kg)		58.0 lb (25.8 kg)		58.0 lb (25.8 kg)	
Shipping Weight	57.0 lb (25.9 kg)		65.0 lb (27.2 kg)		65.0 lb (27.2 kg)	
Inverter Dimensions (H x W x D)	28.5 x 16 x 5.75 " (72.4 x 40.3 x 14.5 cm)					
Shipping Dimensions (H x W x D)	34 x 20.5 x 10.75 " (86.6 x 51.87 x 26.2 cm)					

Mechanical Specifications

Mounting	Wall mount (mounting bracket included)					
Input and Output Terminal Wiring	AC & DC terminals accept wires sizes of #14 to #6 AWG					
PV / Utility Disconnect	Eliminates need for external PV (DC) disconnect. Complies with NEC Requirements					
Cooling	Convection cooled, fan not required					
Visual Indicators	Two Green LEDs: "Input OK" and "Output OK"					
Display Status Monitor	Backlit, two-line 16-character liquid crystal display					
Remote Communications Ports	Integrated RS-232 / RS-485 Interface					
Wiring box	PV, Utility, Ground and Communications. Inverter can be separated from wiring box					
Warranty	10-Year Standard					

Note 1: - Contact us for details.

