

Multi-Purpose Grid-Tie Inverters

In addition to converting solar power into utility grade electricity for local loads and export, a multi-purpose inverter provides back up power capabilities when utility failures occur. These inverters use batteries for energy storage. Backup capacity is limited by the size of the battery bank installed with the system. We recommend a minimum 200 Ah @ 48 Vdc battery bank for any multi-purpose grid-tie system. Each 100 Ah @ 48 Vdc stores approximately 3.5 kW/hr of usable energy.

In most cases, the back-up power capability of the inverter(s) will not be sufficient to power the entire home. Generally, the most important loads such as communications, refrigeration, lighting, etc., will be re-wired to a sub panel powered by either the utility or the inverter. Multi-purpose grid-tie systems are complex because batteries, MPPT controller(s), high current switch gear, and changes to a home's AC electrical distribution panel(s) are required. In addition to the inverters listed here, SunWize assembles complete Power Centers for grid-tie backup. Please see page 21 for more product information and pricing.



PS1 System
with optional battery enclosure

OutBack Power

GTFX and GVFX Inverters

The FX inverter from OutBack Power has established itself as a real star in the off-grid world (see page 48 for more information on FX inverters and accessories). Now they bring their expertise to the multi-purpose grid-tie marketplace with the GTFX and the GVFX models that provide automatic backup power when utility outages occur.

The GTFX is sealed and includes a turbo fan kit. GVFX models are vented and no fan is necessary. Use of an MPPT controller such as the OutBack's MX 60 will greatly increase the energy harvested from

the PV array (see page 37). Multiple GTFX or GVFX inverters can be connected in series for 240 Vdc, parallel for 120 Vdc. Two-year warranty. Extended warranty available direct from manufacturer. All models are ETL listed to UL 1741.

PS1-3000

The new PS1-3000 from OutBack includes a GVFX 3648 inverter, MX60 MPPT charge controller, and all AC and DC switch gear and pre-wiring necessary for a fully functional multi-purpose grid-interactive system. It is housed in a single, easy to install enclosure which is NEMA 3R rated for outdoor, rainproof installation. An optional battery enclosure large enough for four deep-cycle Group 31 batteries is also NEMA 3R outdoor rated. Battery cables from PS1-3000 and interconnects for four batteries are included. The PS1-3000 has a 5-year standard warranty. ETL listed to UL 1741.

PS1 System with covered enclosures



Model	Efficiency %	DC Input Voltage	Continuous Power Watts	Charger Current (Amps)	AC Volts Output	Dimensions in.	Weight lb.
GTFX2524 (with fan)	91	24	2500	55	120	16.25 x 8.25 x 9.65	66
GTFX3048 (with fan)	92	48	3000	35	120	16.25 x 8.25 x 9.65	66
GVFX3524 (vented)	91	24	3500	85	120	16.25 x 8.25 x 9.65	66
GVFX3648 (vented)*	93	48	3600	45	120	16.25 x 8.25 x 9.65	66
PS1-3000	91	48	3000	35	120	31.30 x 17.25 x 12.90	120
PS1 Battery Enclosure (c/w necessary battery cables for connection to PS1 and 4 batteries)						36.25 x 17.25 x 12.55	29
Accessories							
See page 48 for a complete listing of GFX Accessories.							

* CEC rated at 91%, 3037 watts continuous power efficiency