

# Components

## OutBack PV Ground Fault Protection System

Ground fault protection is required by the NEC for PV arrays mounted on or within a specified vicinity of residential dwelling roofs as a safety precaution. The OutBack PV Ground Fault Protection System protects wiring and system components for one or two PV arrays when used in a FLEXware 250, FLEXware 500 or FLEXware 1000.



Model	Description	Terminals	Width
OBB-GFP-80D-125VDC-PNL	OutBack PV Ground Fault Protection 80 Amp 125VDC dual pole panel mount	1/4" stud	2.25" (57 mm)

Uses three 3/4" wide panel mount breaker spaces

## FW-X240 Auto-transformer

Designed to be housed within the FLEXware 500 or FLEXware 1000 AC enclosures. The FW-X240 Auto-transformer with a 120 volt/30 Amp primary and secondary winding can be used for step-up, step-down, generator and split-phase output balancing for series stacked inverters. It can transfer 2kW from one 120 VAC leg of a generator or the total rating of an OutBack stacked series/parallel 120/240 VAC inverter/charger configuration.



Model	Description	Includes
FW-X240	Auto-transformer 4 kVA 120/240VAC 60Hz with 25 Amp dual pole breaker for mounting inside of FLEXware 500-AC or FLEXware 1000-AC	Auto-transformer , 25 Amp dual pole breaker and mounting hardware

## DC Bus Bars

OutBack Power Systems DC bus bars are designed to enable the most complex of code compliant DC cable connections.



Model	Description	Includes
FW-BBUS	Breaker Bus allows connection of two 175-250 Amp, three 100-125 Amp, four 1-80 Amp DC breakers or three 500 Amp DC current shunts	Plated copper plate rated for 500 Amps and two 5/16 inch bolts for mounting
FW-CBUS-8	Combiner Bus connects up to eight DIN mounted breakers or six DIN mounted fuse holders	Two 2/0 AWG box lug terminals - plated copper plate rated for 200 Amps
FW-CBUS-12	Combiner Bus connects up to twelve DIN mounted breakers or eight DIN mounted fuse holders	Two 2/0 AWG box lug terminals - plated copper plate rated for 200 Amps
FW-SBUS	Shunt Bus allows up to four high current cable connections on same side of DC shunt	Two 3/8 inch bolts solid brass rated for 1000 Amps

## DC Current Shunts

When used with an amp hour meter OutBack Power Systems DC current shunt kits can provide valuable insight into the status of your batteries or DC power source. One shunt kit is included standard on FLEXware 500 and FLEXware 1000 DC enclosures.



Model	Description	Includes
FW-SHUNT250	500 Amp DC current shunt with terminal bus bar for mounting on top of a FX Series Inverter/Charger	Shunt, mounting hardware and terminal bus bar for connection to FX Inverter's DC negative terminal
FW-SHUNT500	500 Amp DC current shunt with terminal bus bar	Shunt, terminal bus bar and one white insulator and mounting screws