

The FLEXware System

FLEXware is the latest example of OutBack's continuous efforts to bring you the most value packed and technologically advanced products available.

Our integrating partners, dealers, installers, and system owners spoke—and we listened. The resulting FLEXware is the most integrated, modular, and spacious installation system OutBack has ever designed. Its components are more versatile, the wiring space is larger, and the all-aluminum, powder-coated construction not only resists corrosion longer, but is lighter and easier to handle than our previous steel construction. OutBack's new FLEXware makes for a great looking installation that will continue to look great for years.

Designed to work as a modular “building block” architecture, FLEXware offers more versatility than ever before. From single inverter back-up systems to a multiple inverter village power system, FLEXware is the solution.

The FLEXware 250 offers the lowest cost solution for single inverter/charger installations when space and budget are primary concerns.

The FLEXware 500 supports up to two inverter/chargers and two charge controllers in an attractive, versatile and code-compliant package when more power is needed.

The FLEXware 1000 accommodates up to four inverter/chargers and four charge controllers. It can also be used for large systems with multiple power panels for systems up to 36 kW.

Both the FLEXware 500 and FLEXware 1000 systems provide ample locations for additional breakers, DC current shunts, an auto-transformer and other components required in higher kW systems.

The new FLEXware MP (mounting plate) shows the versatility of the FLEXware system with its compatibility with both the FLEXware 500 and FLEXware 1000 systems.

All of the FLEXware options have also been simplified, making the design, ordering and installation of power systems easier than ever.



 FLEXware™

FLEXware™ 500

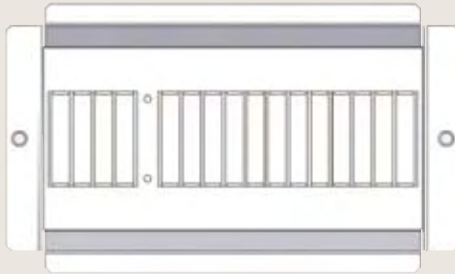
For applications with medium power requirements such as homes, light commercial or larger back-up power systems.

The FLEXware 500 system architecture can support up to two OutBack FX Series Inverter/Chargers, up to two OutBack charge controllers and all the associated AC and DC components. Thanks to a very compact design, FLEXware 500 AC and DC enclosures mount with a FLEXware MP in either a horizontal or vertical orientation to allow installation in more space-limited locations for a fast and professional looking wall-mounted installation. The FLEXware 500 accommodates all of the essential protective devices in two enclosures.



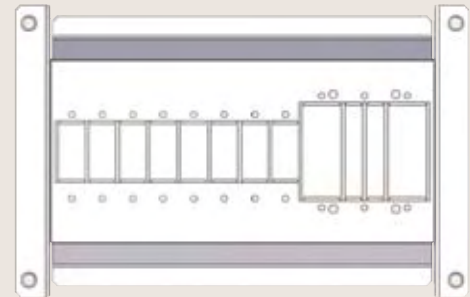
Breaker Configuration Diagram

AC Side



Holds up to sixteen DIN mount AC breakers (not included). Support for optional AC Input-Output-Bypass Assembly. AC breakers are rated from 10-16 Amps of AC current.

DC Side



Holds up to eight 0.75" (19 mm) wide breakers rated for 180 Amps of DC current, three 1" (26 mm) wide breakers rated for 100 or 125 Amps of DC current, or two 1.5" (32 mm) wide breakers rated for 175 or 250 Amps of DC current.

Knockout Location Diagram

Back

- (2) 2" knockout (2.468" diameter)

Left

- (5) 1" knockout (1.359" diameter)
- (2) 2" knockout (2.468" diameter)
- (2) Duplex GFCI Outlet knockout

Right

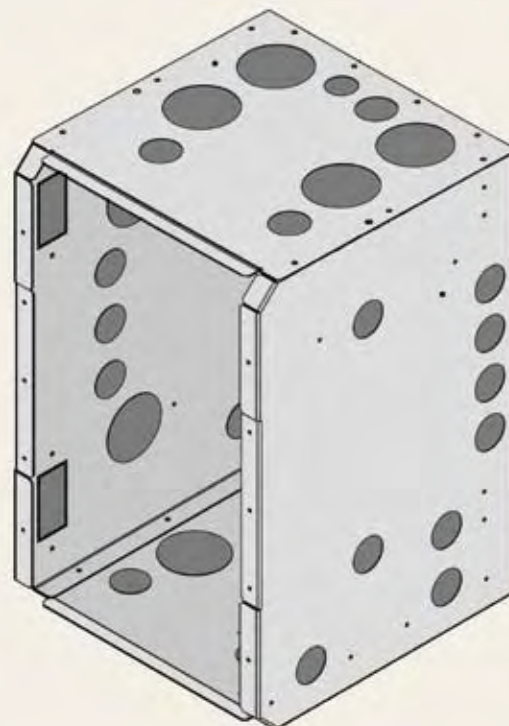
- (9) 1" knockout (1.357" diameter)

Top

- (3) 1" knockout (1.359" diameter)
- (1) ¾" knockout (1.093" diameter)
- (4) 2" knockout (2.468" diameter)

Bottom

- (3) 1" knockout (1.359" diameter)
- (1) ¾" knockout (1.093" diameter)
- (4) 2" knockout (2.468" diameter)



FLEXware 500

Model: FW500-DC

Description: DC enclosure which mounts at the DC side of one or two FX Series Inverter/Chargers. Supports up to six terminal bus bars (not including GBB) and up to three shunt assemblies depending on configuration

Includes: Ground bus bar, 500 Amp DC shunt assembly, positive bus, breaker mounting hardware, FW-BBUS and enclosure mounting hardware

Unit Dimensions (H x W x D)	Shipping Dimensions (H x W x L)	Shipping Weight	Enclosure Type
18.2 x 11.4 x 12.1" (46.2 x 29 x 30.7 cm)	14.5 x 13.4 x 20.3" (36.8 x 34.1 x 51.6 cm)	15 lbs. (6.8 kg)	Type-1 indoor (IP30)

Model: FW500-AC

Description: AC enclosure which mounts at the AC side of one or two FX Series Inverter/Chargers. Supports six terminal bus bars and one FW-X240

Includes: Ground bus bar, DIN mounting bracket, communication cable conduit and enclosure mounting hardware

Unit Dimensions (H x W x D)	Shipping Dimensions (H x W x L)	Shipping Weight	Enclosure Type
18.2 x 11.4 x 12.1" (46.2 x 29 x 30.7 cm)	14.5 x 13.4 x 20.3" (36.8 x 34.1 x 51.6 cm)	15 lbs. (6.8 kg)	Type-1 indoor (IP30)

- The FW500 system utilizes one FW-MP (mounting plate) and a set of the DCA and ACA conduit adapters for each inverter/charger.
- DC and AC breakers, Input-Output-Bypass Assemblies and all other additional components sold separately.

FLEXware 500 AC Input-Output-Bypass Assemblies

Field-installable kit for bypassing the AC input to the AC output for inverter maintenance or installation. Also provides over-current protection.

Model: FW-IOB-D-120/240VAC

Includes: Six 60A 120VAC single pole DIN mount breakers, sliding bypass interlock plate, wire and hardware kit

System Rating	Bypass Breaker	Input Breaker	Output Breaker
Split Phase 120/240 VAC 60 Amps 14.4 kW	Two Poles @ 60 Amps 14.4 kW	Two Poles @ 60 Amps 14.4 kW	Two Poles @ 60 Amps 14.4 kW

Model: FW-IOB-D-120VAC

Includes: Four 60A 120VAC single pole DIN mount breakers, one 60A 120VAC dual pole DIN mount breaker, sliding bypass interlock plate, wire and hardware kit

System Rating	Bypass Breaker	Input Breaker	Output Breaker
Single-Phase 120 VAC 120 Amps 14.4 kW	Two Poles @ 60 Amps 14.4 kW	Two Poles @ 60 Amps 14.4 kW	Two Poles @ 60 Amps 14.4 kW

Model: FW-IOB-D-230VAC

Includes: Six 30A 230VAC single pole DIN mount breakers, sliding bypass interlock plate, wire and hardware kit

System Rating	Bypass Breaker	Input Breaker	Output Breaker
Single-Phase 230 VAC 60 Amps 13.8 kW	Two Poles @ 30 Amps 13.8 kW	Two Poles @ 30 Amps 13.8 kW	Two Poles @ 30 Amps 13.8 kW

Sample Bill of Materials

FW500 With FW-IOB-D-120VAC - Example of system with one VFX3648 Outback Power Inverter/Charger

Part #	Description	Qty
VFX3648 Inverter/Charger	3600 W, 48 VDC, 45 Amp charger, 60 Amp AC input	1
FW-ACA	AC Conduit Adapter for all FX Series Inverter/Chargers to AC enclosure.	1
DCA	DC Conduit Adapter for all FX Series Inverter/Chargers to DC enclosure.	1
FW500-DC	DC breaker enclosure – fits at the DC side of one or two FX Series Inverter/Chargers	1
OBB-175-125VDC-PNL	175 Amp, 125VDC breaker with 3/8" stud terminals	1
FW500-AC	AC breaker enclosure – fits at the AC side of one or two FX Series Inverter/Chargers	1
FW-IOB-D-120VAC	Dual inverter Input-Output-Bypass for FW500	1
FW-MP	Mounting Plate for FW500 or FW1000 system	1
MATE	System Display and Controller	1
HUB4	Four Port, Up to 4 devices and one MATE	1
RTS	For use with FX, VFX or Charge Controller (Includes 15' (5m) cable)	1
FW-Cable175-36R	175 Amp 2/0 AWG DC cable 36 inches (915 mm) long with ring terminals on both ends with red heat shrink	1
FW-Cable175-36W	175 Amp 2/0 AWG DC cable 36 inches (915 mm) long with ring terminals on both ends with white heat shrink	1

FW500 With FW-IOB-D-120/240VAC - Example of system with dual VFX3648 Outback Power Inverter/Chargers in Series

Part #	Description	Qty
VFX3648 Inverter/Charger	3600 W, 48 VDC, 45 Amp charger, 60 Amp AC input	2
FW-ACA	AC Conduit Adapter for all FX Series Inverter/Chargers to AC enclosure.	2
DCA	DC Conduit Adapter for all FX Series Inverter/Chargers to DC enclosure.	2
FW500-DC	DC breaker enclosure – fits at the DC side of one or two FX Series Inverter/Chargers	1
OBB-175-125VDC-PNL	175 Amp, 125VDC breaker with 3/8" stud terminals	2
FW500-AC	AC breaker enclosure – fits at the AC side of one or two FX Series Inverter/Chargers	1
FW-IOB-D-120/240VAC	Dual inverter Input-Output-Bypass for FW500	1
FW-MP	Mounting Plate for FW500 or FW1000 system	1
MATE	System Display and Controller	1
HUB4	Four Port, Up to 4 devices and one MATE	1
RTS	For use with FX, VFX or Charge Controller (Includes 15' (5m) cable)	1
FW-X240	Autotransformer 4 kVA 120/240VAC 60Hz	1
FW-Cable175-36R	175 Amp 2/0 AWG DC cable 36 inches (915 mm) long with ring terminals on both ends with red heat shrink	2
FW-Cable175-36W	175 Amp 2/0 AWG DC cable 36 inches (915 mm) long with ring terminals on both ends with white heat shrink	2

FW500 With FW-IOB-D-230VAC - Example of system with dual VFX3024E OutBack Power Inverter/Charger in Parallel

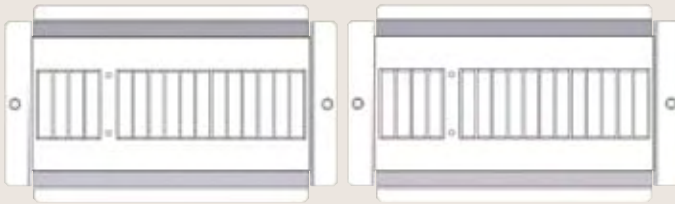
Part#	Description	Qty
VFX3024E	3000 W, 24VDC, 85 Amps DC charger, 30 Amps AC input	2
FW-ACA	AC Conduit adapter for all FX Series Inverter/Chargers to AC enclosure	2
DCA	DC Conduit adapter for all FX Series Inverter/Chargers to DC enclosure	2
FW500-DC	DC breaker enclosure - fits at the DC side of one or two FX Series Inverter/Chargers	1
OBB-250-125VDC-PNL	250 Amp, 125VDC, 3/8" stud terminals	2
FW500-AC	AC breaker enclosure - fits at the AC side of one or two FX Series Inverter/Chargers	1
FW-IOB-D-230VAC	Dual inverter Input-Output-Bypass for FW500	1
FW-MP	Mounting Plate for FW500 or FW1000 System	1
MATE	System display and Controller	1
HUB4	Four Port, up to 4 devices and one MATE	1
RTS	For use with FX, VFX or Charge Controller (Includes 15' (5m) cable)	1

For applications with large power requirements such as large residential, commercial or village power systems. The FLEXware 1000 system architecture is capable of supporting up to four OutBack FX Series Inverter/Chargers, four OutBack charge controllers, and all the required AC and DC components and wiring. Utilizing a compact design, FLEXware 1000 AC and DC enclosures accommodate all of the essential protective devices with lots of room for additional breakers and large cable connections and can be mounted either vertically or horizontally.



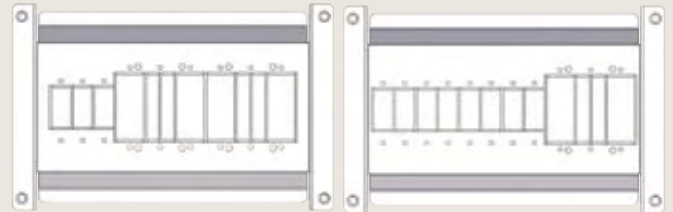
Breaker Configuration Diagram

AC Side



Holds up to thirty-two DIN mount AC breakers (not included). Support for optional AC Input-Output-Bypass Assembly. AC breakers are rated from 10-60 Amps of AC current.

DC Side



Holds up to eleven 0.75" (19 mm) wide breakers rated for 1-80 Amps of DC current, nine 1" (26 mm) wide breakers rated for 100 or 125 Amps of DC current or six 1.5" (32 mm) wide breakers rated for 175 or 250 Amps of DC current.

Knockout Location Diagram

Left

- (4) 2" knockout (2.468" diameter)
- (9) 1" knockout (1.359" diameter)
- (2) Duplex GFCI Outlet knockout

Back

- (2) 2" knockout (2.468" diameter)
- (2) 1" knockout (1.359" diameter)

Right

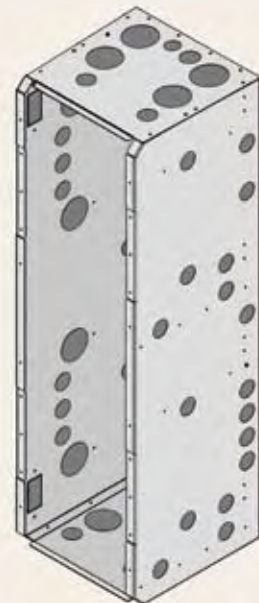
- (17) 1" knockout (1.359" diameter)

Top

- (3) 1" knockout (1.359" diameter)
- (1) ¾" knockout (1.093" diameter)
- (4) 2" knockout (2.468" diameter)

Bottom

- (3) 1" knockout (1.359" diameter)
- (1) ¾" knockout (1.093" diameter)
- (4) 2" knockout (2.468" diameter)



FLEXware 1000

Model: FW1000-DC

Description: DC enclosure which mounts at the DC side of three or four FX Series Inverter/Chargers. Supports up to eight terminal bus bars (not including GBB) and up to three shunt assemblies depending on configuration

Includes: Ground bus bar, 1000 Amp DC shunt assembly, positive bus, breaker mounting hardware, enclosure mounting hardware, two FW-SBUSs and one FLEXware 1000 breaker bus

Unit Dimensions (H x W x D)	Shipping Dimensions (H x W x L)	Shipping Weight	Enclosure Type
38.5 x 11.4 x 12.1" (97.8 x 29.0 x 30.7 cm)	14.5 x 13.6 x 40.6" (36.8 x 34.5 x 103.1 cm)	21 lbs. (9.5 kg)	Type-1 indoor (IP30)

Model: FW1000-AC

Description: AC enclosure which mounts at the AC side of three or four FX Series Inverter/Chargers. Supports eight terminal bus bars and one FW-X240

Includes: Ground bus bar, two DIN mounting brackets and FLEXware 1000 wiring raceway

Unit Dimensions (H x W x D)	Shipping Dimensions (H x W x L)	Shipping Weight	Enclosure Type
38.5 x 11.4 x 12.1" (97.8 x 29.0 x 30.7 cm)	14.5 x 13.6 x 40.6" (36.8 x 34.5 x 103.1 cm)	21 lbs. (9.5 kg)	Type-1 indoor (IP30)

- The FW1000 system utilizes two FW-MPs (mounting plates) and a set of the DCA and ACA conduit adapters for each inverter/charger.
- DC and AC breakers, Input-Output-Bypass Assemblies and all other additional components sold separately.

FLEXware 1000 AC Input-Output-Bypass Assemblies

Field installable kit for bypassing the AC input to the AC output for inverter maintenance or installation. Also provides over-current protection.

Model: FW-IOB-T-120/208VAC

Includes: Nine 60A 120VAC single pole DIN mount breakers, sliding bypass interlock plate, wire and hardware kit

System Rating	Bypass Breaker	Input Breaker	Output Breaker
Three-Phase 120/208 VAC 60 Amps 21.6 kW	Three Poles @ 60 Amps 21.6 kW	Three Poles @ 60 Amps 21.6 kW	Three Poles @ 60 Amps 21.6 kW

Model: FW-IOB-T-230/400VAC

Includes: Nine 30A 230VAC single pole DIN mount breakers, sliding bypass interlock plate, wire and hardware kit

System Rating	Bypass Breaker	Input Breaker	Output Breaker
Three-Phase 230/400 VAC 30 Amps 20.7 kW	Three Poles @ 30 Amps 20.7 kW	Three Poles @ 30 Amps 20.7 kW	Three Poles @ 30 Amps 20.7 kW

Model: FW-IOB-Q-120/240VAC

Includes: Eight 60A 120VAC single pole DIN mount breakers, two 60A 120VAC dual pole DIN mount breakers, sliding bypass interlock plate, wire and hardware kit

System Rating	Bypass Breaker	Input Breaker	Output Breaker
Split Phase 120/240 VAC 120 Amps 28.8 kW	Four Poles @ 60 Amps 28.8 kW	Four Poles @ 60 Amps 28.8 kW	Four Poles @ 60 Amps 28.8 kW

Model: FW-IOB-Q-230VAC

Includes: Twelve 30A 230VAC single pole DIN mount breakers, sliding bypass interlock plate, wire and hardware kit

System Rating	Bypass Breaker	Input Breaker	Output Breaker
Single-Phase 230 VAC 120 Amps 27.6 kW	Four Poles @ 30 Amps 27.6 kW	Four Poles @ 30 Amps 27.6 kW	Four Poles @ 30 Amps 27.6 kW

Sample Bill of Materials

FW1000 With FW-IOB-D-120VAC - Example of system with two VFX3648 Outback Power Inverter/Chargers in Parallel

Part #	Description	Qty
VFX3648 Inverter/Charger	3600 W, 48 VDC, 45 Amp charger, 60 Amp AC input	2
FW-ACA	AC Conduit Adapter for all FX Series Inverter/Chargers to AC enclosure.	2
DCA	DC Conduit Adapter for all FX Series Inverter/Chargers to DC enclosure.	2
FW1000-DC	DC breaker enclosure – fits at the DC side of up to four FX Series Inverter/Chargers	1
OBB-175-125VDC-PNL	175 Amp, 125VDC breaker with 3/8" stud terminals	2
FW1000-AC	AC breaker enclosure – fits at the AC side of up to four FX Series Inverter/Chargers	1
FW-IOB-D-120VAC	Quad inverter Input-Output-Bypass for FW1000	1
FW-MP	Mounting Plate for FW500 or FW1000 system	2
MATE	System Display and Controller	1
HUB-10	Ten Port, Up to 10 devices and one MATE	1
RTS	For use with FX, VFX or Charge Controller (Includes 15' (5 m) cable)	1
FW-Cable175-36R	175 Amp 2/0 AWG DC cable 36 inches (915 mm) long with ring terminals on both ends with red heat shrink	2
FW-Cable175-36W	175 Amp 2/0 AWG DC cable 36 inches (915 mm) long with ring terminals on both ends with white heat shrink	2

FW1000 With FW-IOB-D-120/240VAC - Example of system with two VFX3648 Outback Power Inverter/Chargers in Series

Part #	Description	Qty
VFX3648 Inverter/Charger	3600 W, 48 VDC, 45 Amp charger, 60 Amp AC input	2
FW-ACA	AC Conduit Adapter for all FX Series Inverter/Chargers to AC enclosure.	2
DCA	DC Conduit Adapter for all FX Series Inverter/Chargers to DC enclosure.	2
FW1000-DC	DC breaker enclosure – fits at the DC side of up to four FX Series Inverter/Chargers	1
OBB-175-125VDC-PNL	175 Amp, 125VDC breaker with 3/8" stud terminals	2
FW1000-AC	AC breaker enclosure – fits at the AC side of up to four FX Series Inverter/Chargers	1
FW-IOB-D-120/240VAC	Quad inverter Input-Output-Bypass for FW1000	1
FW-MP	Mounting Plate for FW500 or FW1000 system	2
MATE	System Display and Controller	1
HUB-10	Ten Port, Up to 10 devices and one MATE	1
RTS	For use with FX, VFX or Charge Controller (Includes 15' (5 m) cable)	1
FW-X240	Autotransformer 4 kVA 120/240VAC 60Hz	1
FW-Cable175-36R	175 Amp 2/0 AWG DC cable 36 inches (915 mm) long with ring terminals on both ends with red heat shrink	2
FW-Cable175-36W	175 Amp 2/0 AWG DC cable 36 inches (915 mm) long with ring terminals on both ends with white heat shrink	2

Sample Bill of Materials

FW1000 With FW-IOB-Q-120/240VAC - Example of system with four VFX3648 Outback Power Inverter/Chargers in Series/Parallel

Part #	Description	Qty
VFX3648 Inverter/Charger	3600 W, 48 VDC, 45 Amp charger, 60 Amp AC input	4
FW-ACA	AC Conduit Adapter for all FX Series Inverter/Chargers to AC enclosure.	4
DCA	DC Conduit Adapter for all FX Series Inverter/Chargers to DC enclosure.	4
FW1000-DC	DC breaker enclosure – fits at the DC side of up to four FX Series Inverter/Chargers	1
OBB-175-125VDC-PNL	175 Amp, 125VDC breaker with 3/8" stud terminals	4
FW1000-AC	AC breaker enclosure – fits at the AC side of up to four FX Series Inverter/Chargers	1
FW-IOB-Q-120/240VAC	Quad inverter Input-Output-Bypass for FW1000	1
FW-MP	Mounting Plate for FW500 or FW1000 system	2
MATE	System Display and Controller	1
HUB-10	Ten Port, Up to 10 devices and one MATE	1
RTS	For use with FX, VFX or Charge Controller (Includes 15' (5 m) cable)	1
FW-X240	Autotransformer 4 kVA 120/240VAC 60Hz with 25 Amp \$390	1
FW-Cable175-36R	175 Amp 2/0 AWG DC cable 36 inches (915 mm) long with ring terminals on both ends with red heat shrink	4
FW-Cable175-36W	175 Amp 2/0 AWG DC cable 36 inches (915 mm) long with ring terminals on both ends with white heat shrink	4

FW1000 With FW-IOB-T-120/208VAC - Example of 3-phase system with three VFX3648 Outback Power Inverter/Chargers

Part #	Description	Qty
VFX3648 Inverter/Charger	3600 W, 48 VDC, 45 Amp charger, 60 Amp AC input	3
FW-ACA	AC Conduit Adapter for all FX Series Inverter/Chargers to AC enclosure.	3
DCA	DC Conduit Adapter for all FX Series Inverter/Chargers to DC enclosure.	3
FW1000-DC	DC breaker enclosure – fits at the DC side of up to four FX Series Inverter/Chargers	1
OBB-175-125VDC-PNL	175 Amp, 125VDC breaker with 3/8" stud terminals	3
FW1000-AC	AC breaker enclosure – fits at the AC side of up to four FX Series Inverter/Chargers	1
FW-IOB-T-120/208VAC	Triple inverter Input-Output-Bypass for FW1000	1
FW-MP	Mounting Plate for FW500 or FW1000 system	2
MATE	System Display and Controller	1
HUB-10	Ten Port, Up to 10 devices and one MATE	1
RTS	For use with FX, VFX or Charge Controller (Includes 15' (5 m) cable)	1
FW-Cable175-36R	175 Amp 2/0 AWG DC cable 36 inches (915 mm) long with ring terminals on both ends with red heat shrink	3
FW-Cable175-36W	175 Amp 2/0 AWG DC cable 36 inches (915 mm) long with ring terminals on both ends with white heat shrink	3

FW1000 With FW-IOB-T-230/400VAC - Example of 3-phase system with three VFX3024E OutBack Power Inverter/Chargers

Part#	Description	Qty
VFX3024E	3000W, 24VDC, 85 Amps DC charger, 30 Amps AC input	3
FW-ACA	AC Conduit adapter for all FX Series Inverter/Chargers to AC enclosure	3
DCA	DC Conduit adapter for all FX Series Inverter/Chargers to DC enclosure	3
FW1000-DC	DC breaker enclosure - fits at the DC side of up to four FX Series Inverter/Chargers	1
OBB-250-125VDC-PNL	DC Breaker 250 Amps	3
FW1000-AC	AC breaker enclosure - fits at the AC side of up to four FX Series Inverter/Chargers	1
FW-IOB-T-230/400VAC	Triple inverter Input-Output-Bypass for FW500	1
FW-MP	Mounting Plate for FW500 or FW1000 System	2
MATE	System display and Controller	1
HUB10	Ten Port, up to 10 devices and one MATE	1
RTS	For use with FX, VFX or Charge Controller (Includes 15' (5m) cable)	1