



FLEXware Integration Enclosures and Hardware

FLEXware 1000 Enclosure

FLEXware™ 1000 Integration Hardware

Designed for applications with larger 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. With their compact design, FLEXware 1000 AC and DC enclosures accommodate all essential protective devices with ample room for additional breakers and large cable connections, and can be mounted either vertically or horizontally. The powder-coated aluminum FLEXware 1000 enclosure is ETL listed to UL508A.



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 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 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

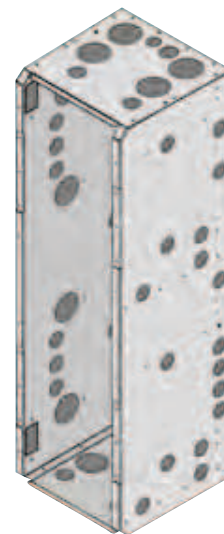
- (17) 1" knockout (1.359" diameter)

Top

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

Bottom

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





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FLEXware 1000 Enclosure

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-SBUS 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 FW-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-IOBT-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 120/208VAC 60A 21.6kW	Three Poles @ 60A 21.6kW	Three Poles @ 60A 21.6kW	Three Poles @ 60A 21.6kW

Model: FW-IOBT-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 230/400VAC 30A 20.7kW	Three Poles @ 30A 20.7kW	Three Poles @ 30A 20.7kW	Three Poles @ 30A 20.7kW

Model: FW-IOBQ-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 120/240VAC 120A 28.8kW	Four Poles @ 60A 28.8kW	Four Poles @ 60A 28.8kW	Four Poles @ 60A 28.8kW

Model: FW-IOBQ-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 230VAC 120A 27.6kW	Four Poles @ 30A 27.6kW	Four Poles @ 30A 27.6kW	Four Poles @ 30A 27.6kW



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FW1000 With FW-IOBQ-230VAC

Example of system with four VFX3048E Outback Power Inverter/Chargers in Parallel

Part #	Description	Qty
VFX3048E Inverter/Charger	3000W, 48VDC, 45A charger, 30 amps 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
PNL-175-DC	175A, 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-IOBQ-230VAC	Quad inverter Input-Output-Bypass for FW1000	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
FN-DC	FLEXnet DC Multi-channel Advanced DC System Monitor	1
FW-Cable175-36R	175A 2/0 AWG DC cable 36 inches (915 mm) long with ring terminals on both ends with red heat shrink	4
FW-Cable175-36W	175A 2/0 AWG DC cable 36 inches (915 mm) long with ring terminals on both ends with red heat shrink	4

FW1000 With FW-IOBQ-120/240VAC

Example of system with four VFX3648 Outback Power Inverter/Chargers in Series/Parallel

Part #	Description	Qty
VFX3648 Inverter/Charger	3600W, 48VDC, 45A charger, 60 amps 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
PNL-175-DC	175A, 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-IOBQ-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
HUB10	Ten Port, Up to 10 devices and one MATE	1
FN-DC	FLEXnet DC Multi-channel Advanced DC System Monitor	1
FW-X240	Auto-Transformer 4kVA 120/240VAC 60Hz	1
FW-Cable175-36R	175A 2/0 AWG DC cable 36 inches (91.5 cm) long with ring terminals on both ends with red heat shrink	4
FW-Cable175-36W	175A 2/0 AWG DC cable 36 inches (91.5 cm) long with ring terminals on both ends with white heat shrink	4

FW1000 With FW-IOBT-120/208VAC

Example of system with three VFX3648 Outback Power Inverter/Chargers for Three Phase

Part #	Description	Qty
VFX3648 Inverter/Charger	3600W, 48VDC, 45A 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
PNL-175-DC	175A, 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-IOBT-120/208VAC	Quad inverter Input-Output-Bypass for FW1000	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
FN-DC	FLEXnet DC Multi-channel Advanced DC System Monitor	1
FW-Cable175-36R	175A 2/0 AWG DC cable 36 inches (91.5 cm) long with ring terminals on both ends with red heat shrink	3
FW-Cable175-36W	175A 2/0 AWG DC cable 36 inches (91.5 cm) long with ring terminals on both ends with white heat shrink	3