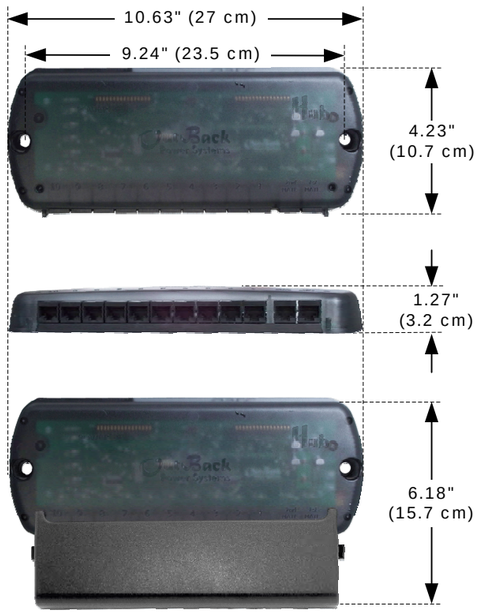
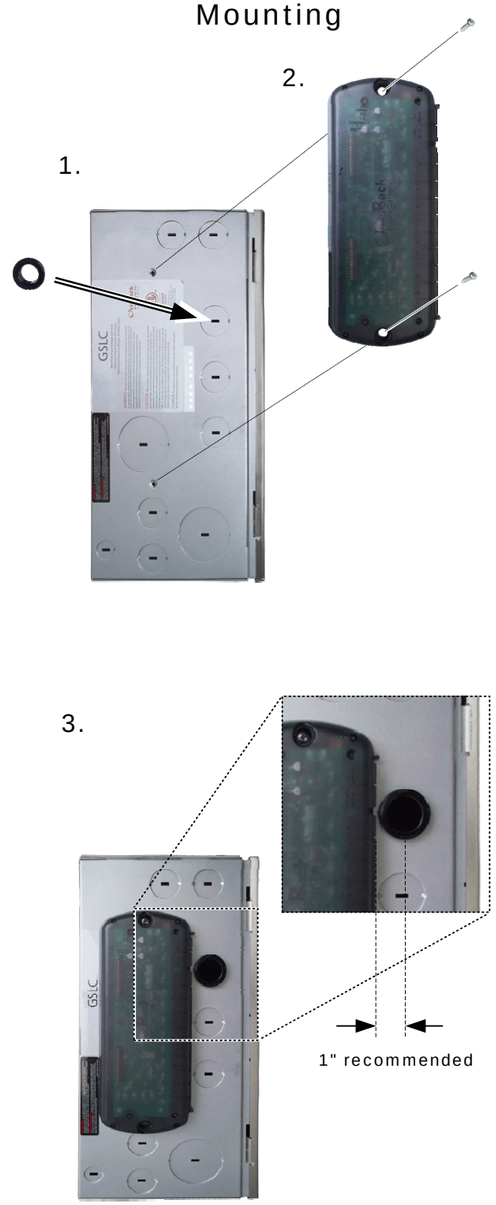
OutBack POWER™
member of The Alpha Group™

Dimensions



Parts List	
HUB10.3	HUB Wiring Cover
#10 x ½" Screws x 2	Cable, CAT5e, 3' (1 m) x 2
Shutter Bushing x 2	Cable, CAT5e, 6' (2 m) x 3
Snap Bushing x 2	Cable, CAT5e, 10' (3 m) x 4

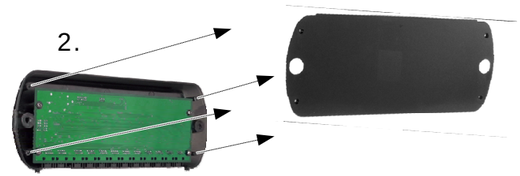
Mounting



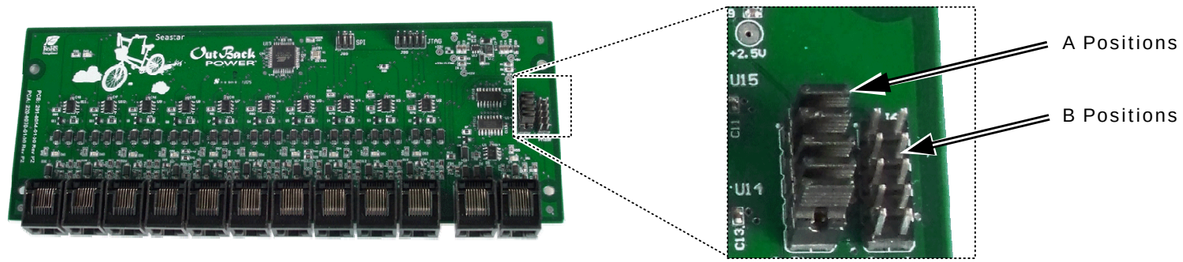
Changing Jumpers

1. Back of HUB 10.3

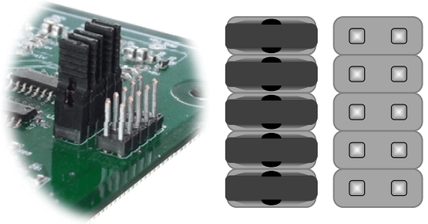
2.



3.



4a.



Used for Subphase Master stacking in FX and GS inverters (both three-phase and series configurations).

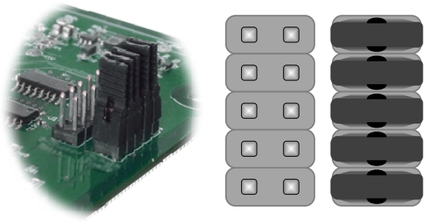
For these applications, place all jumpers in the positions noted in the photograph and the diagram.

NOTE: This option requires MATE3 firmware revision 002.013.000 or higher.

Jumper position identified by MATE3 on power-up:

```
Searching for Devices
Found
HUB10.3
```

4b.



This is the factory-installed initial position.

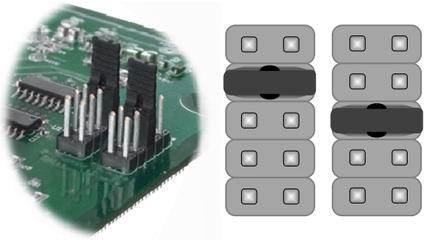
Used for classic series, OutBack series, and parallel stacking. Also used for three-phase OutBack stacking with models GVFX(E) and GTFX(E) .

For these applications, place all jumpers in the positions noted in the photograph and the diagram.

Jumper position identified by MATE3 on power-up:

```
Searching for Devices
Found
HUB10.3
```

4c.



Used for three-phase OutBack stacking with FX, VFX, FX(E) or VFX(E) inverters.

For these applications, place *only two jumpers* in the positions noted in the photograph and the diagram.

Remove all remaining jumpers. No others are used for this configuration.

Jumper position identified by MATE3 on power-up:

```
Searching for Devices
Found
HUB10.3 Sub-phase Master
```

Contact Technical Support:
Telephone: +1.360.618.4363
Email: Support@outbackpower.com
Website: www.outbackpower.com

IMPORTANT:
Not intended for use with life support equipment.

900-0154-01-00 REV B.vsd\2014-02-18

Stacking (Parallel) HUB 10.3

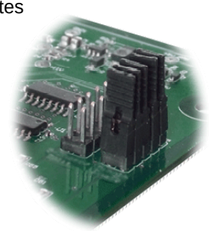
Models
FX / VFX (all series, including E, J, M, N, and W)
GS8048
GS8048A
GS4048A
GS7048E
GS3548E
GFX
GFX (E Series)
GTFX (E Series)
GVFX (ESeries)

Parallel Stack

- Up to 10 inverters or other devices
- All inverters use common AC output bus
- Master inverter always active; regulates power output based on load
- Slave inverters remain in Power Save mode; Master activates Slave inverters based on load

Output
Single-phase inverters: Single-phase output
Split-phase inverters: Split-phase output

Jumper position (see step 4b on front page)

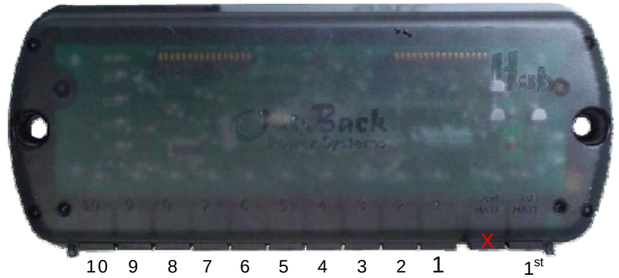


Inverter Stacking — Port 1
Stack Mode: Master or 1-2phase Master

Master (port 1 only)

Inverter Stacking — Port 2
Stack Mode: Slave or OB Slave L1

Slave (port 2, port 3, etc.)



or

(with FX-class inverter)

Stacking (Series) HUB 10.3

Models
FX / VFX (includes J, M, N Series)
GTFX
GVFX
GTFX (LA Series)
GVFX (LA Series)
GFX

Series Stack (Classic)

- 2 inverters; up to 8 other devices
- Master and single Slave inverter use separate output AC buses (L1 and L2)
- Both inverters always active (no Power Save mode); outputs are loaded independently but output regulation is controlled by load on Master

Jumper position (see step 4b on front page)

Inverter Stacking — Port 1
Stack Mode: Master or 1-2phase Master

Master (port 1 only)

Inverter Stacking — Port 2
Stack Mode: Classic Slave

Slave (port 2)

Output
Single-phase inverters: Split-phase output

or


Slave (L2)


Master (L1)

Series Stack (OutBack)

- Up to 10 inverters or other devices; requires balancing transformer
- Master inverter and half of the Slave inverters use common output AC bus (L1)
- The remaining Slave inverters use a separate common AC bus (L2)
- Master inverter is always active; regulates output based on load; can power both L1 and L2 buses using balancing transformer
- Slave inverters remain in Power Save mode; Master activates any Slave inverters for either L1 or L2 based on load

Jumper position (see step 4b on front page)

Inverter Stacking — Port 1
Stack Mode: Master or 1-2phase Master

Master (port 1 only)

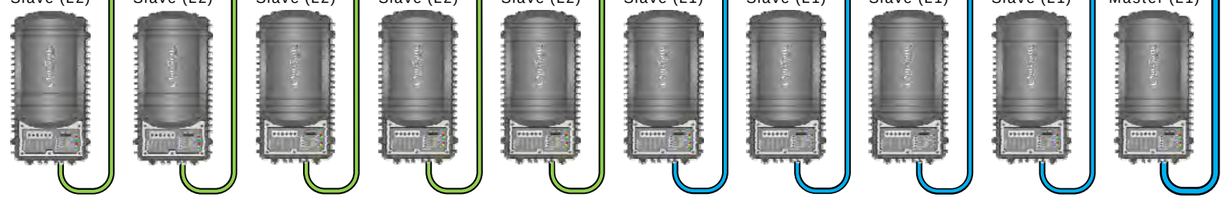
Inverter Stacking — Port 2
Stack Mode: OB Slave L1 or OB Slave L2

Slave (port 2)
Ports 2 to 10 can be assigned to either OB Slave L1 or OB Slave L2; equal numbers of inverters should be assigned to each side

Models
FX / VFX (includes J, M, N Series)

Output
Single-phase inverters: Split-phase output

or



Models
FX / VFX (all series, including E, J, M, N, and W)

Three-Phase Stack

- 3 inverters; up to 7 other devices
- Master and two Slave inverters use separate output AC buses (A, B,and C)
- All inverters always active (no Power Save mode);
  outputs are loaded independently but output regulation
  is controlled by load on Master

Output

Single-phase inverters:
Three-phase output

PHASE A
PHASE B
PHASE C

Jumper position
(see step 4c
on front page)

Inverter Stacking Port 1
Stack Mode Master

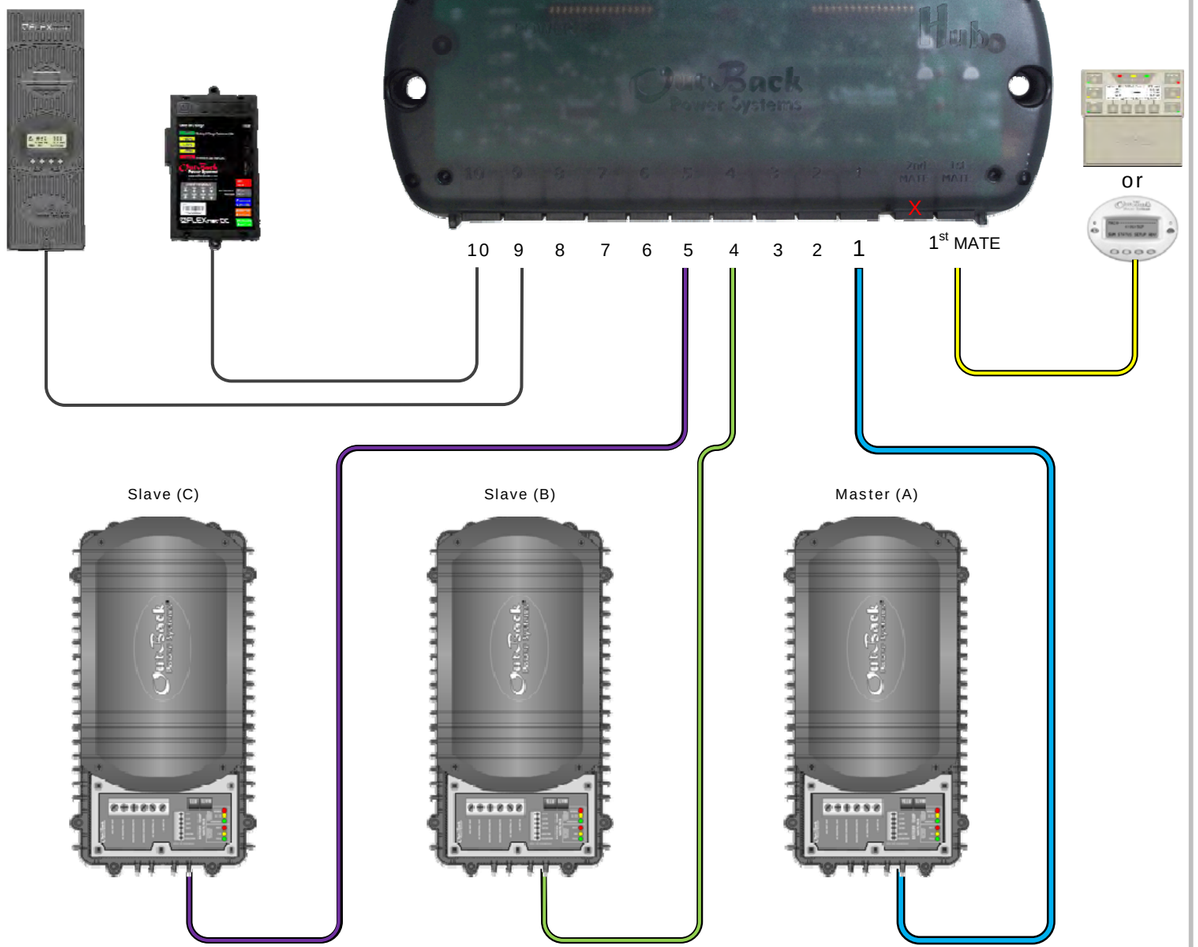
Master (port 1 only)

Inverter Stacking Port 4
Stack Mode 3ph Slave

Slave B (port 4 only)

Inverter Stacking Port 5
Stack Mode 3ph Slave

Slave C (port 5 only)



Stacking (Three-Phase) HUB 10.3

Models
GTFX (E Series)
GVFX (E Series)

Three-Phase Stack

- Up to 9 inverters; 1 other device
- Master and two Slave inverters use separate output AC buses (A, B,and C)
- All inverters always active (no Power Save mode);
  outputs are loaded independently but output regulation
  is controlled by load on Master

Output

Single-phase inverters:
Three-phase output

PHASE A
PHASE B
PHASE C

Jumper position
(see step 4b
on front page)

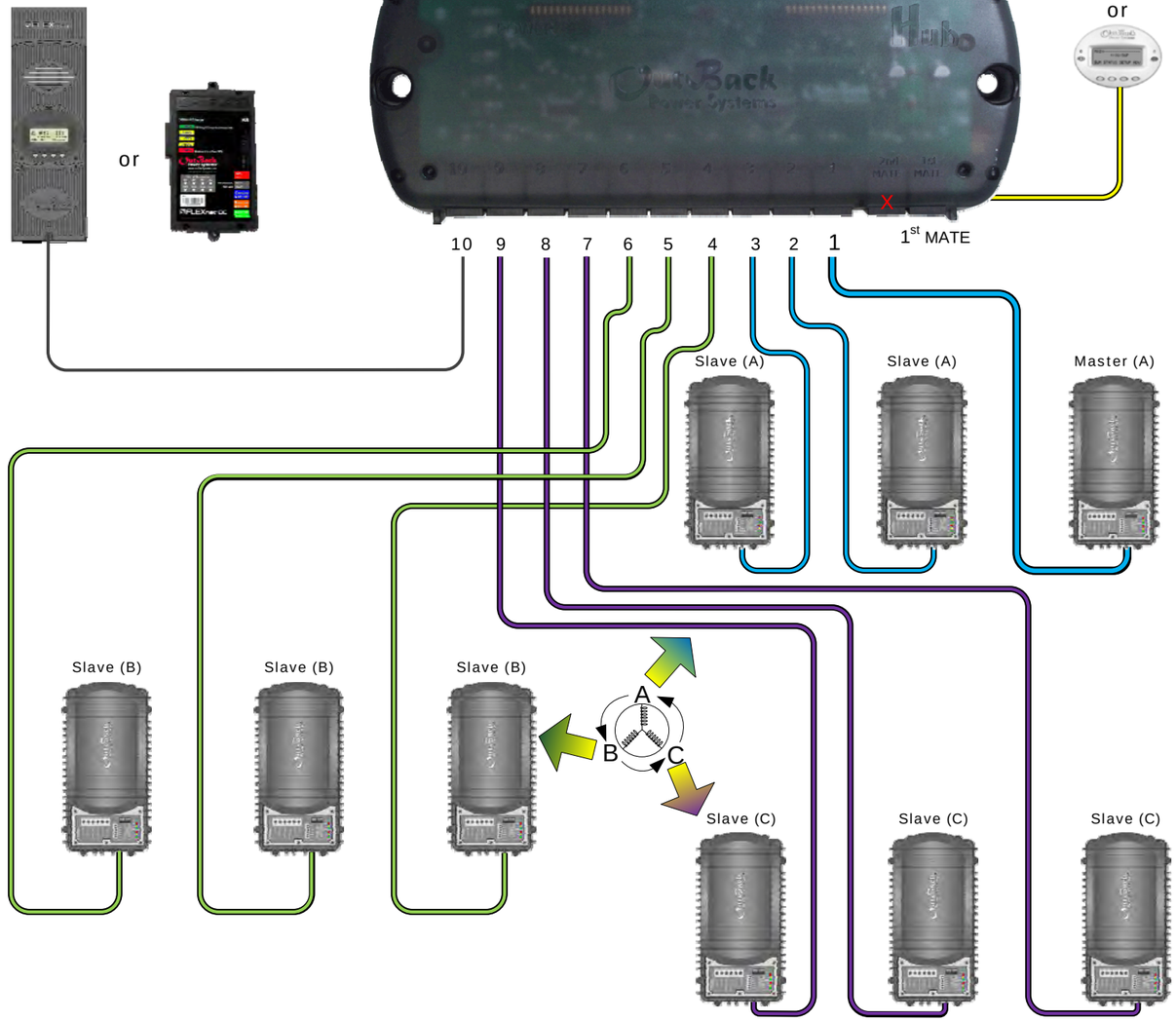
Inverter Stacking Port 1
Stack Mode Master

Master (port 1 only)

Inverter Stacking Port 2
Stack Mode 3phase OB Slave A
3phase OB Slave B
3phase OB Slave C

Slave A, B, or C (port 2, port 3, etc.)

Ports 2 to 10 can be assigned any 3phase OB Slave stack mode; no more than 3 inverters per mode



900-0154-01-00 REV B.vsd\2014-03-03
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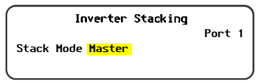
Models
GFX

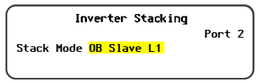
Output — Single-phase inverters: Split-phase output

Series Stack (Subphase Master)

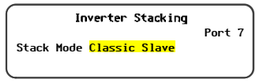
- Up to 8 inverters (ports 1 to 4, 7 to 10); 2 other devices (ports 5, 6); No balancing transformer required
- Master inverter and half of the Slave inverters use common output AC bus (L1); ports 2 to 4 are L1 slaves
- Subphase Master inverter and half of the Slave inverters use a separate common AC bus (2); ports 8 to 10 are L2 Slave inverters despite the screen selection (OB Slave L1)
- Port 7 is the L2 Subphase Master despite the screen selection (Classic Slave); this port is required regardless of the number of Slave inverters
- Master and Subphase Master are always active; each type of Master regulates output based on its own load
- Slave inverters remain in Power Save mode; Master activates L1 Slave inverters based on its load, while the Subphase Master independently activates L2 Slave inverters based on its own load



Master (port 1 only)

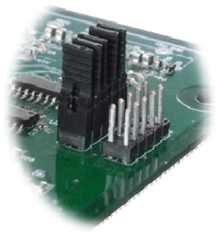


Slave (port 2)
Also ports 3, 4, 8, 9, and 10



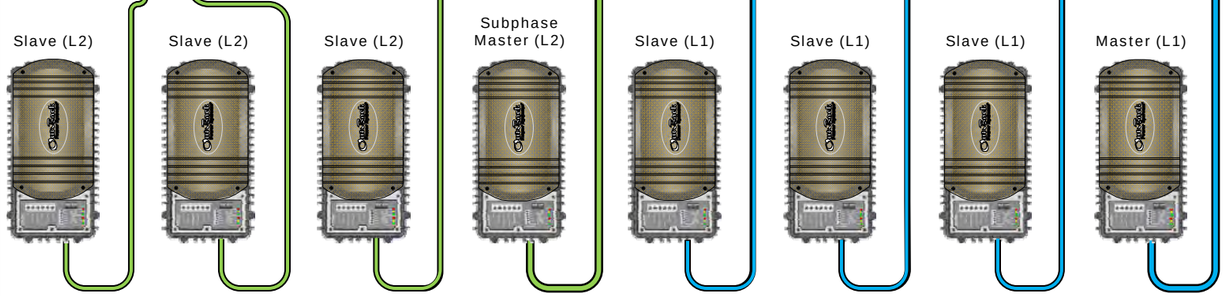
Subphase Master (port 7)

1st MATE



Jumper position (see step 4a on front page)

or



Stacking (Subphase Master) HUB 10.3

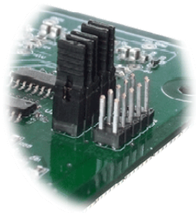
Models
GS7048E
GS3548E
GFX
GFX (E Series)

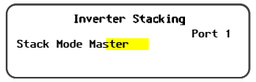
Output — Single-phase inverters: Three-phase output
A, B, C
PHASE A
PHASE B
PHASE C

Three-Phase Stack (Subphase Master)

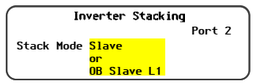
- Up to 9 inverters (ports 1 to 9); 1 other device (port 10); MATE3 only
- Master inverter (required on port 1) and up to two Slave inverters (ports 3 & 3) use Phase A output AC bus
- Subphase Master inverter (required on port 4) and up to two Slaves (ports 5 & 6) use Phase B output AC bus
- Subphase Master inverter (required on port 4) and up to two Slaves (ports 8 & 9) use Phase C output AC bus
- Phase A, B, and C Slave inverters should be equal in number; Slave selection screen may display Slave but could display OB Slave L1 depending on model
- Master and Subphase Masters are always active; each type of Master regulates output based on its own load
- Slave inverters remain in Power Save mode; the Master activates Phase A Slave inverters based on its load, while the Subphase Masters independently activate Phase B or C Slave inverters based on their own loads

Jumper position (see step 4a on front page)

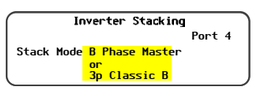




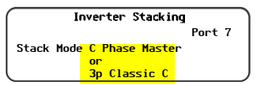
Master (port 1 only)



Slave (port 2)
Also ports 3, 5, 6, 8, and 9



Subphase Master (port 4)

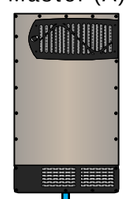


Subphase Master (port 7)

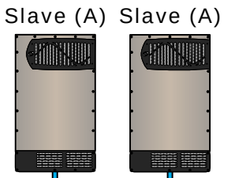
1st MATE

Rev 002.013.000 or higher

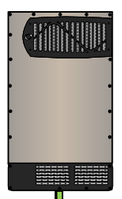
Master (A)



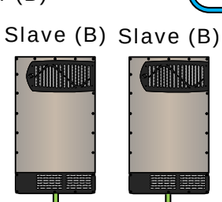
Slave (A) Slave (A)

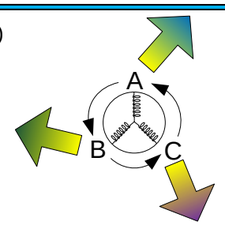


Subphase Master (B)

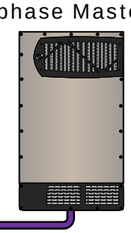


Slave (B) Slave (B)

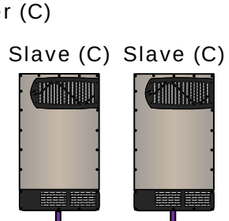




Subphase Master (C)



Slave (C) Slave (C)



or

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