

## Quick Installation Guide

**IMPORTANT:** Before installing, connecting to supply, or operating your Vertiv™ Liebert® ITA2 MBC, please review the Safety and Regulatory Statements sheet. For detailed installation, operating, maintenance and troubleshooting information visit the ITA2 product page for the ITA2 MBC Installer/ User Guide available at [www.VertivCo.com](http://www.VertivCo.com) or use the QR code below.



### Unpacking and Inspection

Unpack and inspect the UPS and its accessories. If damage is visible, do not proceed. File a damage claim with the carrier immediately and send a copy to:

Vertiv Corporation  
1050 Dearborn Drive  
P.O. Box 29186  
Columbus, Ohio 43085 USA

### Selecting Power Cables

**NOTE:** Before connecting the cables between the MBC and UPS, make sure that all the circuit breakers on the MBC front panel are open. Ensure that the feeder breakers are open, locked, and tagged to prevent inadvertent operation by unauthorized personnel.

When connecting wiring, follow the local wiring regulations, and take

the environment situation into account.

**NOTE:** The conduit size and wiring method must be in accordance with all local, regional, and national codes and regulations, including NEC ANSI/NFPA 70.

The maximum current for operating modes, the recommended wire sizes, and the recommended power cables and plugs are listed in Tables 1 to 3, below.

### Connecting MBC Input-Power Cables

Prepare for connection by removing the conduit box from the MBC, opening knockout holes, and routing cables through the conduit.

**Table 1 Liebert ITA2 MBC currents and cables — User and UPS rectifier input**

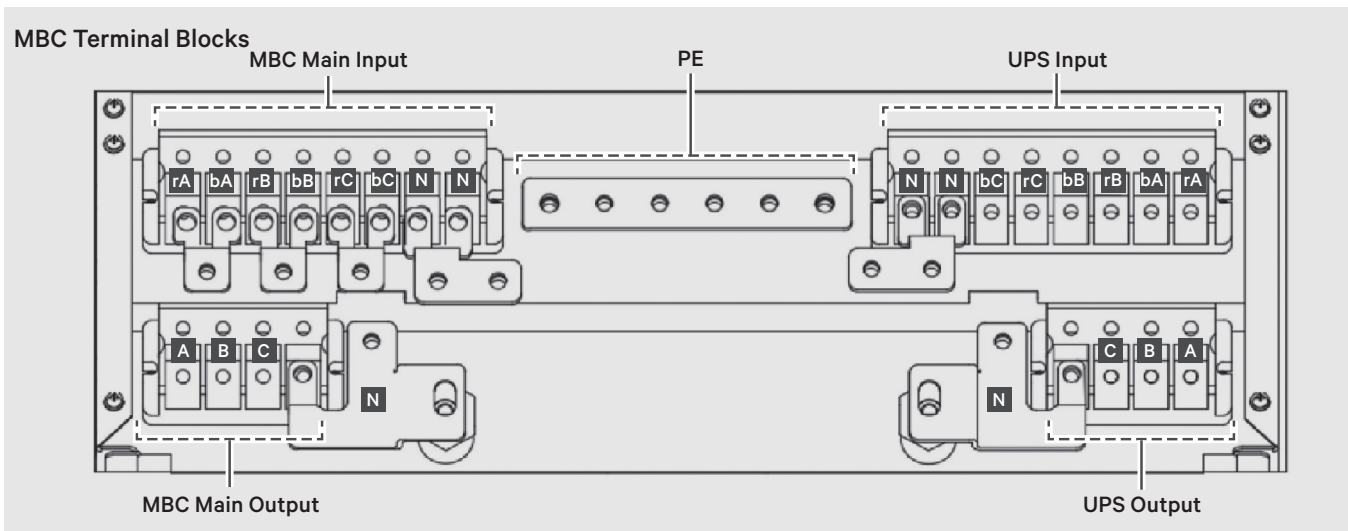
Unit Rating	Maximum Input Current (A)	Recommended OPD	75°C THW Copper Wire (phase) <small>*Number of Cable per phase:1</small>	75°C THW Copper Wire (neutral) <small>* Number of Cable:1</small>	75°C THW Copper Wire (Ground) <small>* Number of Cable:1</small>	Recommended Torque
8 KVA	24	30 A	8 AWG	8 AWG	10 AWG	30 lb-in
10 KVA	37	50 A	6AWG	6 AWG	10 AWG	30 lb-in

**Table 2 Liebert ITA2 MBC currents and cables — User and UPS bypass input and output**

Unit Rating	Maximum Input Current (A)	Recommended OPD	75°C THW Copper Wire (phase)	75°C THW Copper Wire (neutral)	75°C THW Copper Wire (Ground)	Recommended Torque
8 KVA	23	30 A	10 AWG	10 AWG	10 AWG	30 lb-in
10 KVA	28	40 A	8 AWG	8 AWG	10 AWG	30 lb-in

**Table 3 Recommended lug sizes**

	10 AWG (5.26 mm <sup>2</sup> )	8 AWG (8.36 mm <sup>2</sup> )	9 AWG (13.3 mm <sup>2</sup> )
Part Number	McMaster-Carr: 7113K462 Thomas & Betts: RC10-14 Tyco Electronics: 1577648-1	McMaster-Carr: 7113K444 Thomas & Betts: RDV717 Tyco Electronics: 132331-1	McMaster-Carr: 7113K366 Thomas & Betts: RE6-14 —



### Single-input Connection to the MBC

**NOTE:** Copper shorting busbars are factory-installed between rA and bA; rB and bB; rC and bC; and N

1. Leave the shorting busbars in place on the MBC main-input terminal block.
2. Referring to MBC Main Input terminal block in the *MBC Terminal Blocks* illustration above, connect input cables:
  - Phase A to busbar between rA and bA
  - Phase B to busbar between rB and bB
  - Phase C to busbar between rC and bC
  - Neutral to busbar on N and N.
  - Ground to the PE busbar

### Dual-Input Connection to the MBC

1. Remove the shorting busbars between Terminals rA – bA, rB – bB, and rC – bC.
2. For rectifier input, refer to MBC Main Input terminal block in the *MBC Terminal Blocks* illustration above, and connect input cables:
  - Phase A to rA.
  - Phase B to rB

- Phase C to rC
  - Neutral to N
  - Ground to the PE busbar
3. For bypass input, refer to MBC illustration, and connect bypass input cables:
    - Phase A to bA
    - Phase B to bB
    - Phase C to bC
    - Neutral to N
    - Ground to the PE busbar

### Connecting MBC Dedicated Output

The MBC may be hardwired to a dedicated output-distribution panel.

Referring to the MBC Main Output terminal block in the *MBC Terminal Blocks* illustration, connect output cables to MBC:

- Phase A to A
- Phase B to B
- Phase C to C
- Output neutral to N busbar
- Safety ground to the ground (PE) bus bar

### Connecting MBC-to-UPS cables

#### MBC to Single-input UPS

1. Leave the shorting busbars in place on the UPS input terminal

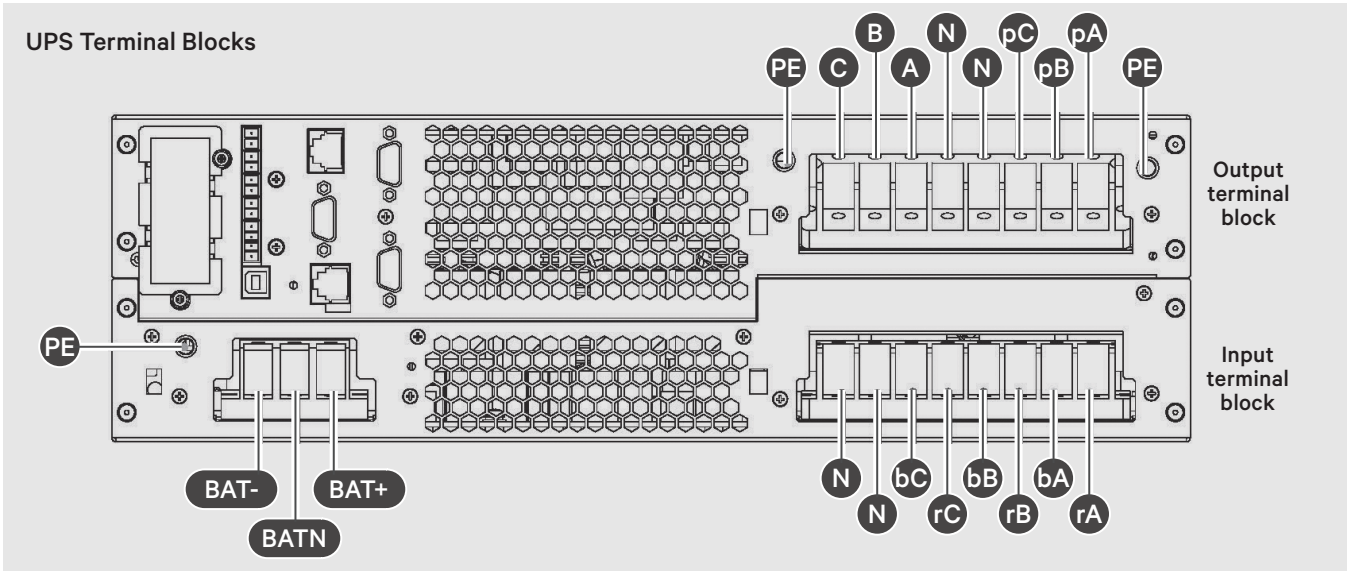
block.

2. Referring to the *MBC Terminal Blocks* illustration above, and the *UPS Terminal Blocks* illustration on the next page, connect cables from the MBC's "UPS Input terminal block" to the UPS: "Input terminal block:"

- rA to busbar between rA and bA
- rB to busbar between rB and bB
- rC to busbar between rC and bC
- N to N.
- Ground from PE busbar to PE ground stud (next to pA on UPS output)

### MBC to Dual-input UPS Rectifier

1. Remove the shorting busbars between Terminals rA – bA, rB – bB and rC – bC of the UPS input terminals.
2. Referring to the *MBC Terminal Blocks* illustration above, and the *UPS Terminal Blocks* illustration on the next page, connect cables from the MBC's "UPS Input terminal block" to the UPS: "Input terminal block:"
  - rA to rA
  - rB to rB
  - rC to rC



- N to N.
- Ground from PE busbar to PE ground stud (next to pA on UPS output)

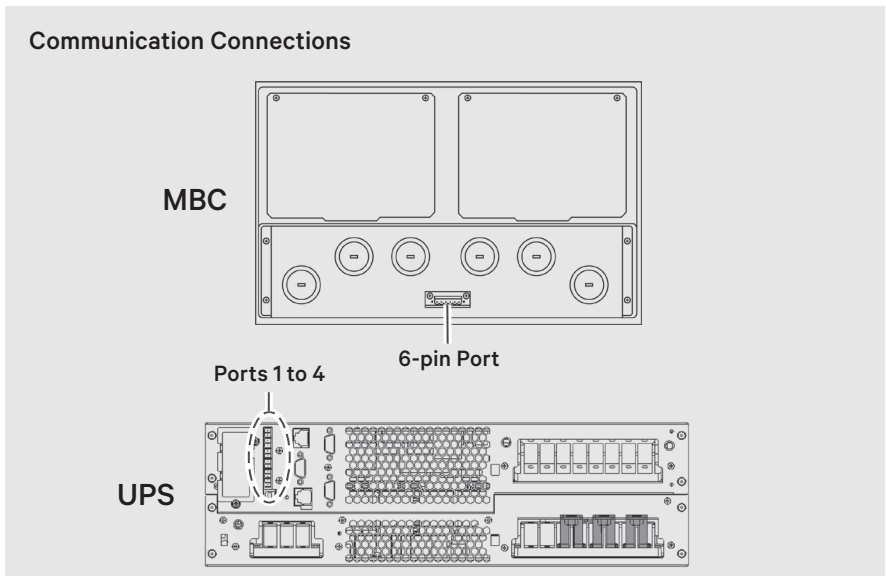
**MBCto Dual-input UPS Bypass**

1. Remove the shorting busbars between Terminals rA – bA, rB – bB and rC – bC of the UPS input terminals.
2. Referring to the *MBC Terminal Blocks* illustration on the previous page, and the *UPS Terminal Blocks* illustration above, connect cables from the MBC’s “UPS Input terminal block” to the UPS: “Input terminal block:”

- bA to bA
- bB to bB
- bC to bC
- Ground from PE busbar to PE ground stud (next to pA on UPS output)

**MBC to UPS Output**

**NOTE:** The UPS has two output terminal-block sections, “always-on” and “programmable/controllable.” The always-on connections are listed first, and the



*programmable connections are listed inside parentheses.*

Referring to UPS Output terminal block in the *MBC Terminal Blocks* illustration, on the previous page, and the *UPS Terminal Blocks* illustration above, connect cables from the MBC to UPS:

- A to A (pA)
- B to B (pB)
- C to C (pC)
- N to N (N)
- Ground from PE busbar to

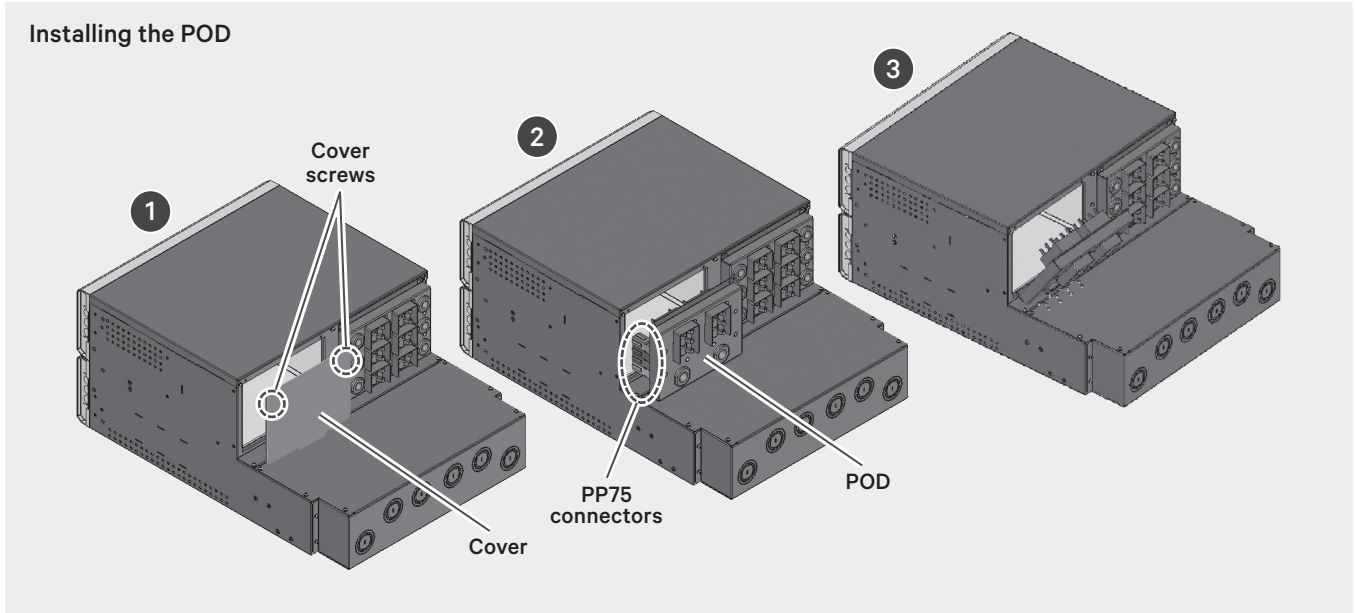
PE ground stud (next to C on UPS output)

**Connecting Communication Cables**

Referring to the *Communication Connections* illustration above, connect the 6-pin connector of the signal cable to the port on the MBC.

Connect the each of the 2-pin connectors to the appropriate dry-contact port on the UPS according to the connector/port labels.

### Installing the POD



### Installing a POD

Refer to *Installing the POD* illustration above.

#### 1. Remove the POD cover

- Remove the screws attaching the port cover panel and retain them for reassembly.
- Remove the POD port cover and set aside.

#### 2. Align the POD connectors

- Align the connectors on the POD with those inside the port, making sure that the colors match.
- Connect them and make sure that the connectors are fully seated.

#### 3. Insert the POD in the port

- Tilt the top away from the port and insert the lower edge into the slot.
- Press the top toward the MBC, and press the POD into place.
- Secure the POD with the screws removed from the port cover plate.

### UPS Operation and Display Panel



### Powering the MBC

1. If the two plastic bezels are attached, pull both ends with equal force to remove them.
2. On the front panel, verify that the maintenance-bypass breaker (MBB) is Off (open) and that the breaker interlock is secured in place.
3. In the external panel, close the feeder breakers to provide main input and, for a dual-input system, bypass input.
4. On the front of MBC, close the rectifier-input breaker (RIB), bypass-isolation breaker (BIB) and maintenance-isolation breaker (MIB).
5. If a POD is installed, verify that the distribution breakers on the POD are closed.
6. Power-on the UPS using the Operation and Display Panel by pressing the power button until the confirmation dialog appears. Use the Up/Down arrows to select "YES", then press Enter. The connected equipment is supplied protected power from the UPS.
7. Reinstall the bezels on the front of the MBC.

### To contact Vertiv Technical Support: visit [www.Vertiv.com](http://www.Vertiv.com)

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