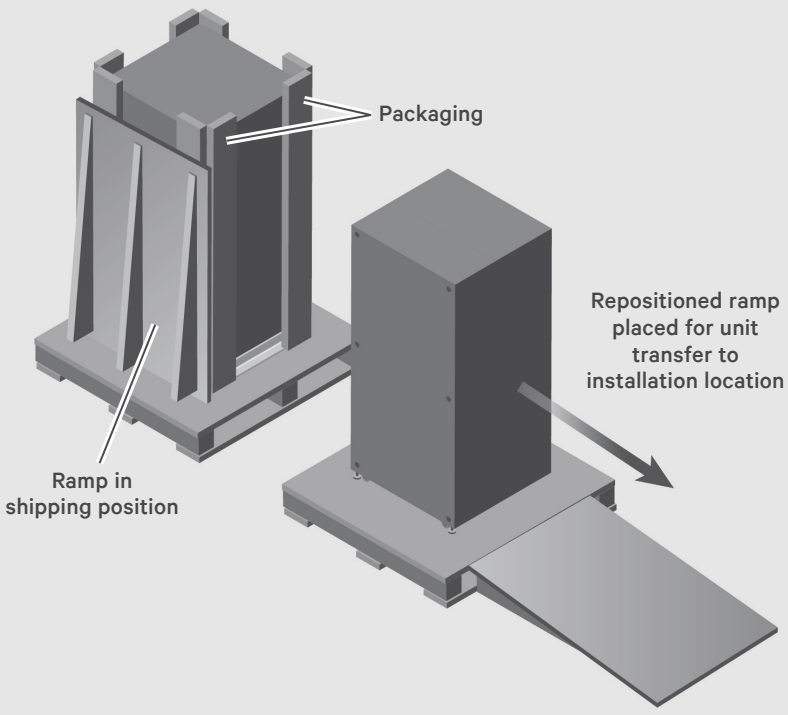
LIEBERT® EXS™ UPS 208/220-V 30 KVA
Quick Installation Guide

IMPORTANT: *Before installing, connecting to supply or operating your Liebert EXS UPS, please review the Safety and Regulatory Statements sheet. For detailed installation, operating, maintenance and troubleshooting information visit the EXS product page for the EXS Installer/User Guide available at www.Vertiv.com or use the QR code below.*

Removing Packaging and Moving the UPS



INSTALLATION

Inspecting the UPS

Inspect the UPS for any signs of obvious damage. 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 OH 43085
Attn. Traffic Department

Choosing a location

The UPS measures 23.6 x 33.5 x 63 in. (600 x 850 x 1600 mm). Install the UPS in a clean, well-ventilated environment with the ambient temperature range of 32°F to 104°F (0°C to 40°C).

For installation and maintenance, 3 ft (914 mm) clearance is required in the front and rear of the unit. For proper ventilation during normal operation, leave 8 in. (203 mm) clearance on the rear. No side clearance is required for installation or operation of the UPS.

Handling and unpacking the unit

The unit weighs up to 1,650 lb (748 kg), depending on the number of batteries included. The UPS ships on a pallet and is equipped with casters that permit two or more people to roll it off the pallet for installation. Use a forklift or pallet jack to move the palleted UPS as close as possible to the installation location before removing packing material or loosening shipping brackets.

1. Remove the protective packaging, shown in the illustration at the top-right.
2. Locate the accessories package on top of the UPS and set aside.
3. Use a 16-mm (5/8-in.) wrench or socket to un-bolt the shipping brackets from the pallet.
4. Un-bolt the shipping brackets from the front and rear of the UPS. Remove the front lower panel from the UPS to remove the front bracket.
5. Make sure the leveling feet are raised so they do not interfere when rolling the unit on the casters.
6. Roll the unit down the ramp to the installation location, see the illustration above, then lower the leveling feet to fix the UPS in the install location.

Table 1 Currents and Wire Size — UPS rectifier input

Unit Rating	Maximum Input Current (A)	Recommended OPD, Amp Trip	75°C THW Copper Wire (phase) Number of Cables per phase:1	75°C THW Copper Wire neutral) Number of Cables:1	75°C THW Copper Wire (ground) Number of Cables: 1
30 kVA/kW	105	150	2/0	2/0	6 AWG

Table 2 AC Currents and Wire Size — UPS bypass input* and output

Unit Rating	Maximum Input Current (A)	Recommended OPD, Amp Trip	75°C THW Copper Wire (phase) Number of Cables per phase:1	75°C THW Copper Wire (neutral) Number of Cables:1	75°C THW Copper Wire (ground) Number of Cables: 1
30 kVA/kW	83	125	1/0	1/0	6 AWG

**Bypass input for dual-input configurations only.*

Table 3 Recommended lug sizes for phase, neutral and ground conductors

	6 AWG (13.3 mm^2)	1/0 AWG (53.5 mm^2)	2/0 (67.4 mm^2)
Part Number	McMaster-Carr: 7113K366	Thomas & Betts: 54152NT	Thomas & Betts: 54157NT
	Thomas & Betts: RE6-14		
Recommended Torque	50 lb-in. / 4.2 lb-ft . / 5.6 Nm		

Table 3 Recommended lug sizes for external battery conductors

	6 AWG (13.3 mm^2)	1/0 AWG (53.5 mm^2)	2/0 (67.4 mm^2)
Part Number	Thomas & Betts: RE6-516	Thomas & Betts: 54153NT	Thomas & Betts: 54158NT
	Thomas & Betts: CTL6-516		
Recommended Torque	126 lb-in. / 10.5 lb-ft . / 14.2 Nm		

POWER WIRING AND CONDUIT

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, above, and are based upon an 86°F (30°C) ambient temperature.

Lock-out and tag before you begin

Ensure that the feeder breakers are open and locked, and tagged to prevent inadvertent operation by unauthorized personnel.

HARDWIRE INPUT/OUTPUT

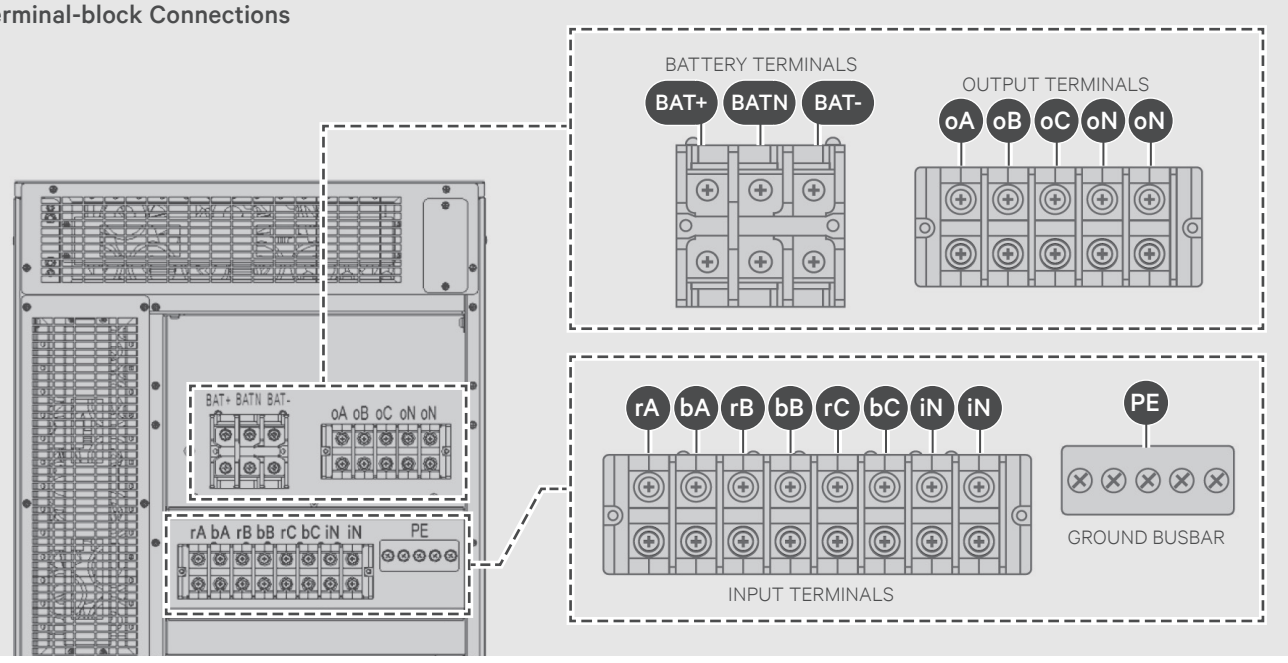
CONNECTIONS

Connecting a single-input configuration

1. On the rear panel of the UPS, remove the upper conduit-entry panel, punch holes for the conduit, connect the conduit to the panel, and re-install the conduit-entry panel.
2. Remove the lower cover plate to access the terminal blocks, shown in the "Terminal-block Connections" illustration on the next page.
3. Leave the factory-installed single-input jumpers on the input terminal blocks and make the following input connections from the upstream feeder panel to the input terminal:
   - Phase A to rA
   - Phase B to rB
   - Phase C to rC
   - Neutral to inN
   - Ground cable to PE
4. Make the following output connections from the UPS output terminal to the downstream distribution-panel main lug breaker:
   - oA to Phase A
   - oB to Phase B
   - oC to Phase C
   - oN to neutral bus
   - PE to ground bus
5. Torque phase conductor connections to 50 lb-in, and neutral and ground conductor connections to 126 lb-in.
6. Reinstall the terminal-block cover plate.

Connecting a dual-input configuration

Terminal-block Connections



1. On the rear panel of the UPS, remove the upper conduit-entry panel, punch holes for the conduit, connect the conduit to the panel, and re-install the conduit-entry panel.
2. Remove the lower cover plate to access the terminal blocks, shown in the "Terminal-block Connections" illustration above.
3. Remove the factory-installed single-input jumpers from the input terminal blocks.
4. Make the following connections from the upstream feeder panel to the main/rectifier input terminal block:
   - Phase A to rA
   - Phase B to rB
   - Phase C to rC
   - Neutral to iN
   - Ground cable PE
5. Make the following connections from the upstream feeder panel to the bypass-input terminal block:
   - Phase A to bA
   - Phase B to bB
   - Phase C to bC
   - Neutral to iN
   - Ground cable to PE
6. Make the following output connections from the UPS output terminal to the downstream distribution-panel main lug breaker:
   - oA to Phase A
   - oB to Phase B
   - oC to Phase C
   - oN to neutral bus
   - PE to ground bus
7. Torque phase conductor connections to 50 lb-in, and neutral and ground conductor connections to 126 lb-in.
8. Reinstall the terminal-block cover plate.

BATTERY CONNECTION

The batteries are shipped disconnected. Refer to the diagram on the back of the outer battery panel to make the connections.

REPO CONNECTION

If a remote emergency power-off connection is not required, leave the factory-installed jumper between Pins 2 and 4 on the REPO terminal block.

If using a REPO connection, refer to the detailed installation steps in the EXS Installer/User Guide available at www.VertivCo.com

POWERING THE UPS

NOTE: *Do not start the UPS until after the installation is finished, all UPS wiring is complete, and all access panels removed for installation are replaced and secured on the UPS.*

1. Close the upstream feeder breaker for the UPS rectifier and, for dual-input configuration, close the upstream feeder breaker for the UPS bypass.
2. Close all downstream breakers including distribution-panel main breaker and/or branch circuit breakers.
3. Referring to the illustration, *Front-panel Breakers*, at the right:

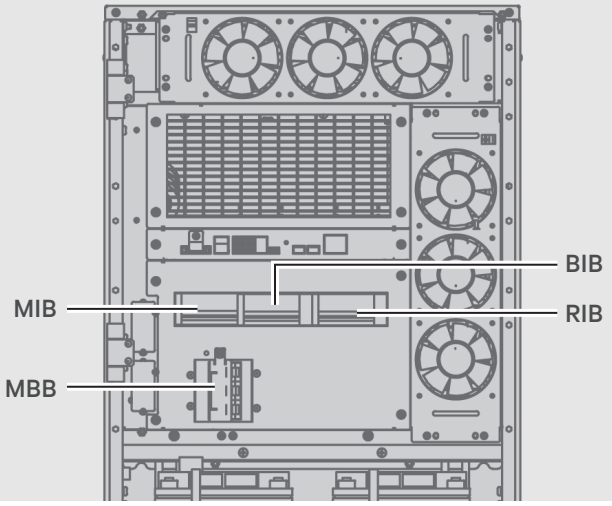
- Open the maintenance-bypass breaker (MBB) and secure the mechanical interlock near the breaker hand in the lower position.
- Close the rectifier-input breaker (RIB), bypass-input breaker (BIB), and maintenance-isolation breaker) MIB.

The UPS starts and performs boot-up system checks for 20 to 30 seconds.

4. 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.

NOTE: *During operation, the UPS may sound an alarm. You may press-and-hold the Esc button for 3 seconds to silence the audible alarm.*

Front-panel Breakers



Operation and Display Panel

To contact Vertiv Technical Support: visit www.Vertiv.com

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