AC Power
For *Business-Critical Continuity™*

Liebert® NXL™ Ship-Ahead Input/Output Cabinet

Installation Manual — 250-400kVA, 60Hz

EMERSON
Network Power

CONTACTING LIEBERT FOR SUPPORT

To contact Liebert Services for information or repair service in the United States, call 1-800-LIEBERT (1-800-543-2378). Liebert Services offers a complete range of start-up services, repair services, preventive maintenance plans and service contracts.

For repair or maintenance service outside the 48 contiguous United States, contact Liebert Services, if available in your area. For areas not covered by Emerson Network Power Liebert Services, the authorized distributor is responsible for providing qualified, factory-authorized service.

For LGS to assist you promptly, please have the following information available:

Part numbers: _____

Serial numbers:_____

Rating: _____

Date purchased: _____

Date installed:_____

Location:_____

Input voltage/frequency:_____

Output voltage/frequency: _____

Battery reserve time:_____

Product Warranty Registration

To register for warranty protection, visit the **Service and Support** section of our Web site at:

www.liebert.com

Click on **Product Registration** and fill out the form.

TABLE OF CONTENTS

FIGURES

TABLES

SAVE THESE INSTRUCTIONS

This manual contains important instructions that should be followed during installation of your Liebert NXL Input/Output Cabinet. Read this manual thoroughly, paying special attention to the sections that apply to your installation, before working with the UPS. Retain this manual for use by installing personnel.

WARNING

Risk of electrical shock. Can cause personal injury or death.

Check for voltage with both AC and DC voltmeters before working within the cabinet. Check for voltage with both AC and DC voltmeters before making contact.

Only properly trained and qualified personnel wearing appropriate safety headgear, gloves, shoes and glasses should be involved in installing the UPS or preparing the UPS for installation. When performing maintenance with any part of the equipment under power, service personnel and test equipment should be standing on rubber mats.

In case of fire involving electrical equipment, use only carbon dioxide fire extinguishers or those approved for use in fighting electrical fires.

Extreme caution is required when performing installation.

Special safety precautions are required for procedures involving handling, installation of the UPS system. Observe all safety precautions in this manual before handling or installing the cabinet. Observe all precautions in the Operation and Maintenance Manual, SL-25425, before as well as during performance of all maintenance procedures. Observe all DC safety precautions before working on or near the DC system.

WARNING

Risk of heavy unit falling over. Improper handling can cause equipment damage, injury or death.

Exercise extreme care when handling the cabinet to avoid equipment damage or injury to personnel.

Locate center of gravity symbols and determine unit weight before handling each cabinet. Test lift and balance the cabinets before transporting. Maintain minimum tilt from vertical at all times.

Slots at the base of the modules cabinets are intended for forklift use. Base slots will support the unit only if the forks are completely beneath the unit.

Read all of the following instructions before attempting to move, lift, remove packaging from or preparing unit for installation.

WARNING

Risk of electrical shock and fire. Can cause equipment damage, personal injury or death.

The area around the cabinet should be kept free of puddles of water, excess moisture and debris.

Only test equipment designed for troubleshooting should be used. This is particularly true for oscilloscopes. Always check with an AC and DC voltmeter to ensure safety before making contact or using tools. Even when the power is turned Off, dangerously high potential electric charges may exist at the DC connections.

All wiring must be installed by a properly trained and qualified electrician. All power and control wiring must comply with all applicable national, state and local codes.

One person should never work alone, even if all power is disconnected from the equipment. A second person should be standing by to assist and to summon help in case of an accident.

1.0 MECHANICAL INSTALLATION

1.1 Introduction

This following section describes the requirements that must be taken into account when planning the positioning and cabling of the Liebert NXL Input/Output Cabinet.

This chapter is a guide to general procedures and practices that should be observed by the installing personnel. The particular conditions of each site will determine the applicability of such procedures.

NOTICE

All equipment not referred to in this manual is shipped with details of its own mechanical and electrical installation.

NOTICE

Three-phase input supply required.

The standard Liebert NXL UPS is suitable for connection to three-phase, four-wire (+ Earth) TN-C, TN-S, IT-G, IT-IG or, three-phase, three-wire plus ground, IT-UG.

If using with IT Power system, a 4-pole disconnect device must be included as part of building installation.

1.2 Preliminary Checks

Before installing the cabinet, please carry out the following preliminary checks:

- Visually examine the cabinet for transit damage, both internally and externally. Report any damage to the shipper immediately.
- Verify that the correct equipment is being installed.
- Verify that the UPS room satisfies the environmental conditions stipulated in the equipment specification, paying particular attention to the ambient temperature and air exchange system.

1.3 Environmental Considerations

1.3.1 UPS Room

The cabinet intended for indoor installation and should be located in a cool, dry, clean-air environment.

When bottom entry is used, the conduit plate must be installed.

NOTE

The UPS is suitable for mounting on concrete or other non-combustible surface only.

1.4 Positioning

The Liebert NXL Input/Output Cabinet is structurally designed to withstand lifting from the base.

CAUTION

Risk of unit tipping over. Can cause equipment damage and personal injury.

Floor mount brackets must remain attached to the frame until the unit is being placed in its final, installed position. (The final installation will always require the unit to be bolted to another Liebert NXL product.) Failure to comply with these instructions could result in equipment damage and/or injury to personnel.

NOTE

The UPS must be placed a solid floor. There must be no openings in floor except those required for conduit landing areas. All provided floor skirts must be installed.

1.4.1 Moving the Cabinets

The Liebert NXL Input/Output Cabinet can be handled with a forklift or similar equipment.

When moving the unit by forklift, care must be taken to protect the panels. Do not exceed a 15-degree tilt with the forklift. Bottom structure will support the unit only if the forks are completely beneath the unit.

Handling the cabinet with straps is not authorized.

1.4.2 Clearances

Clearance around the front of the equipment should be sufficient to enable free passage of personnel with the doors fully open. Installation must leave a distance of 24" (610mm) between the top of the cabinet and any overhead obstacles to permit adequate circulation of air coming out of the unit.

Space **must** be reserved on the left side of the I/O cabinet. The UPS Rectifier/Inverter cabinet can be mounted only on the left side of the I/O cabinet.

1.4.3 Floor Installation/Anchoring

If the equipment is to be located on a raised floor, it should be mounted on a pedestal designed to accept the equipment point loading. Refer to the base view to design this pedestal.

2.0 ELECTRICAL INSTALLATION

This chapter provides guidelines for qualified installers who must have knowledge of local wiring practices pertaining to the equipment to be installed.

WARNING

Risk of electrical shock. Can cause injury or death.

Check for voltage with both AC and DC voltmeters before working within the cabinet.

Only properly trained and qualified personnel wearing appropriate safety headgear, gloves, shoes and glasses should be involved in installing the cabinet or preparing the cabinet for installation.

2.1 External Protective Devices

For safety, circuit breakers must be installed in the input AC supply and external battery system.

Given that every installation has its own characteristics, this section provides guidelines for qualified installation personnel with knowledge of operating practices, regulatory standards and the equipment to be installed.

External overcurrent protection must be provided. See **Tables 1** through **4** for overload capacity.

Dual Input

When wiring the cabinet with a separate rectifier and bypass input, each input must be protected separately.

Size the breakers according to the input currents shown in **Tables 1** and **2**.

2.2 Power Cables

The UPS will require both power and control cabling. All control cables, whether shielded or not, should be run separate from the power cables in metal conduits or metal ducts which are electrically bonded to the metalwork of the cabinets to which they are connected

The cable design must comply with the voltages and currents in **Tables 1** through **4**, follow local wiring practices and take into consideration the environmental conditions (temperature and physical support equipment and methods), room temperature and conditions of installation of the cable and system's overload capacity.

For cable entry terminal, refer to **Figure 1**.

WARNING

Risk of electrical shock. Can cause injury or death.

Before cabling the UPS, ensure that you are aware of the location and operation of the external isolators that connect the input/bypass supply to the power distribution panel.

Check that these supplies are electrically isolated, and post any necessary warning signs to prevent their inadvertent operation.

NOTICE

For dual input operation, ensure that any busbars between the bypass and the rectifier input are removed.

When sizing battery cables, a maximum volt drop of 2VDC is permissible at the current ratings given in **Table 4**.

The following are guidelines only and are superseded by local regulations and codes of practice where applicable:

- Take special care when determining the size of the neutral cable (grounded conductor), because current circulating on the neutral cable may be greater than nominal current in the case of non-linear loads. Refer to the values in **Tables 2** and **3**.
- The grounding conductor should be sized according to the fault rating, cable lengths, type of protection, etc. The grounding cable connecting the UPS to the main ground system must follow the most direct route possible.
- Consideration should be given to the use of smaller, paralleled cables for heavy currents, as this can ease installation considerably.

2.2.1 Power Cable Connection Procedure

Equipment Ground

The equipment ground busbar is located as shown in **Figure 1**. The grounding conductor must be connected to the ground busbar and bonded to each cabinet in the system.

All cabinets and cabling should be grounded in accordance with local regulations.

NOTICE

Proper grounding reduces problems in systems caused by electromagnetic interference.

WARNING

Risk of fire and electrical shock. Can cause equipment damage, personal injury or death.

Failure to follow adequate grounding procedures can result in electric shock hazard to personnel, or the risk of fire, should a ground fault occur.

All operations described in this section must be performed by properly trained and qualified electricians or technical personnel. If any difficulties are encountered, contact Liebert Services. See the back page of this manual for contact information.

The grounding and neutral bonding arrangement must be in accordance with local and national codes of practice.

Once the equipment has been positioned and secured, connect the power cables as described in the following procedure.

Refer to the appropriate cable connection drawing in **Figure 3 or 4**.

1. Verify that the equipment is isolated from its external power source. Check that these supplies are electrically isolated and post any necessary warning signs to prevent their inadvertent operation.
2. Open exterior and interior panels on the front of the I/O.
3. Connect the ground and any necessary main bonding jumper to the equipment ground busbar located in the I/O section.
   a. If the UPS is used in a four-wire system, the neutral ground jumper must be removed.
   b. The I/O is shipped as a single-input configuration. If the bypass and rectifier input are supplied by different sources, remove the linking bars between the bypass and rectifier terminal.
4. Make power connections and tighten the connections to the proper torque according to one of the two procedures below, depending on the type of installation:

NOTE

Ensure correct phase rotation.

- Top Cable Entry (see **Figure 3**)
- Bottom Cable Entry (see **Figure 4**)

Top Cable Entry

When making the power connections, the recommended order of pulling and installing cables is to start from the top connections to the bottom connections. The cables must be routed around the fault braces (see Detail in **Figure 3**). This is to prevent the cables from contacting other busbars. The recommended conduit layout is shown in **Figure 1**.

Bottom Cable Entry

When making the power connections, the recommended order of pulling and installing cables is to start from the bottom connections to the top connections. The cables must be routed around the fault braces (see Detail in **Figure 3**. This is to prevent the cables from contacting other busbars. The recommended conduit layout is shown in **Figure 1**.

NOTE

For a dual-input configuration, linking busbars between the bypass and the rectifier input must be removed.

WARNING

Risk of electrical shock. Can cause injury or death.

If the load equipment will not be ready to accept power on the arrival of the commissioning engineer, ensure that the system output cables are safely isolated at their termination.

WARNING

Risk of electrical shock. Can cause injury or death.

When connecting the cables between the battery extremities to the circuit breaker always connect the circuit breaker end of the cable first.

NOTE

If fault bracing brackets were removed during installation, they MUST be replaced.

5. Close and secure the interior and exterior doors.

2.3 Configuring Neutral and Ground Connections

Table 1 Current ratings—rectifier input

UPS Rating		Voltage, VAC			Nominal Current	Maximum Current	External 100% Breaker Trip, Amps	External 80% Breaker Trip, Amps
kVA	kW	Input	Bypass	Output				
250	225	480	480	480	311	389	400	500
300	270	480	480	480	373	466	500	600
400	360	480	480	480	495	618	700	800

Table 2 Current ratings—bypass input

UPS Rating		Voltage, VAC			Nominal Current	10 Minute Overload	External Breaker Trip, Amps
kVA	kW	Input	Bypass	Output			
250	225	480	480	480	301	376	400
300	270	480	480	480	361	451	500
400	360	480	480	480	481	601	700

Table 3 Current ratings—output

UPS Rating		Voltage, VAC			Nominal Current	10 Minute Overload	External Breaker Trip, Amps
kVA	kW	Input	Bypass	Output			
250	225	480	480	480	301	376	400
300	270	480	480	480	361	451	500
400	360	480	480	480	481	601	700

Table 4 Current ratings—battery

UPS Rating		Nominal VDC	Maximum Battery Current at EOD	External Breaker Trip, Amps
kVA	kW			
250	225	480	618	700
300	270	480	730	800
400	360	480	980	1000

Notes on Tables

1. Nominal input current (considered continuous) is based on full-rated output load. Maximum current includes nominal input current and maximum battery recharge current (considered noncontinuous). Continuous and noncontinuous current are defined in NEC 100. Maximum input current is controlled by the current limit setting which is adjustable. Values shown are for maximum setting of 125%. Standard factory setting is 125%.
2. Recommended bypass external overcurrent protection is based on 125% overload capacity for 10 minutes.
3. All recommended external overcurrent protections are based on 80% rated breakers.
4. Nominal battery voltage is shown at 2.0 volts / cell.

Table 5 Recommended conduit and cable sizes

Rectifier Input				
UPS Rating		**Voltage (VAC)**	**(# of conduits); size of conduits; # -size of phase cables per conduit; size of cable for ground per conduit**	
kVA	**kW**		**Copper Conductors**	**Aluminum Conductors**
250	225	480	(2) 2C 3-250kcmil, #3AWG	(2) 2C 3-350kcmil, #1AWG
250	225	575	(2) 1.5C 3-#4/0AWG, #3AWG	(2) 1.5C 3-250kcmil, #1AWG
250	225	600	(2) 1.5C 3-#4/0AWG, #3AWG	(2) 1.5C 3-250kcmil, #1AWG
300	270	480	(2) 2C 3-350kcmil, #2AWG	(2) 2.5C 3-500kcmil, #1/0AWG
300	270	575	(2) 2C 3-250kcmil, #3AWG	(2) 2.0C 3-350kcmil, #1AWG
300	270	600	(2) 1.5C 3-#4/0AWG, #3AWG	(2) 2.0C 3-300kcmil, #1AWG
400	360	480	(2) 2.5C, 3-500kcmil, #1/0AWG	(2) 2.5C 3-700kcmil, #3/0AWG
Bypass Input				
UPS Rating		**Voltage (VAC)**	**(# of conduits); size of conduits; # -size of phase cables per conduit; #-size of neutral cables per conduit; size of cable for ground per conduit**	
kVA	**kW**		**Copper Conductors**	**Aluminum Conductors**
250	225	480	(2) 2.5C 3-250kcmil, 2-#4/0AWG, #3AWG	(2) 2.5C 3-350kcmil, 2-#250kcmil, #1AWG
250	225	575	(2) 2C 3-#4/0AWG, 2-#2/0AWG, #4AWG	(2) 2.0C 3-250kcmil, 2-#4/0AWG, #2AWG
250	225	600	(2) 2C 3-#4/0AWG, 2-#2/0AWG, #4AWG	(2) 2.0C 3-250kcmil, 2-#4/0AWG, #2AWG
300	270	480	(2) 2.5C 3-350kcmil, 2-#4/0AWG, #3AWG	(2) 2.5C 3-500kcmil, 2-300kcmil, #1AWG
300	270	575	(2) 2.5C 3-250kcmil, 2-#4/0AWG, #3AWG	(2) 2.5C 3-350kcmil, 2-250kcmil, #1AWG
300	270	600	(2) 2C 3-#4/0AWG, 2-#4/0AWG, #4AWG	(2) 2.5C 3-300kcmil, 2-250kcmil, #2AWG
400	360	480	(3) 3.5C, 3-600kcmil, 2-500kcmil, #1/0AWG	(2) 3.5C 3-750kcmil, 2-500kcmil, #1/0AWG
Output				
UPS Rating		**Voltage (VAC)**	**(# of conduits); size of conduits; # -size of phase cables per conduit; #-size of neutral cables per conduit; size of cable for ground per conduit**	
kVA	**kW**		**Copper Conductors**	**Aluminum Conductors**
250	225	480	(2) 2.5C 2-250kcmil, 2-#4/0AWG, #3AWG	(2) 2.5C 3-350kcmil, 2-#250kcmil, #1AWG
250	225	575	(2) 2C 3-#4/0AWG, 2-#2/0AWG, #4AWG	(2) 2.0C 3-250kcmil, 2-#4/0AWG, #2AWG
250	225	600	(2) 2C 3-#4/0AWG, 2-#2/0AWG, #4AWG	(2) 2.0C 3-250kcmil, 2-#4/0AWG, #2AWG
300	270	480	(2) 2.5C 3-350kcmil, 2-#4/0AWG, #3AWG	(2) 2.5C 3-500kcmil, 2-300kcmil, #1AWG
300	270	575	(2) 2.5C 3-250kcmil, 2-#4/0AWG, #3AWG	(2) 2.5C 3-350kcmil, 2-250kcmil, #1AWG
300	270	600	(2) 2C 3-#4/0AWG, 2-#4/0AWG, #4AWG	(2) 2.5C 3-300kcmil, 2-250kcmil, #2AWG
400	360	480	(3) 3.5C, 3-600kcmil, 2-500kcmil, #1/0AWG	(2) 3.5C 3-750kcmil, 2-500kcmil, #1/0AWG
Battery				
UPS Rating			**(# of conduits); size of conduits; # -size of phase cables per conduit; size of cable for ground per conduit**	
kVA	**kW**		**Copper Conductors**	**Aluminum Conductors**
250	225		(2) 2C 2-600kcmil, #1/0AWG	(2) 2.5C 2-750kcmil, #3/0AWG
300	270		(2) 2.5C 2-750kcmil, #1/0AWG	(3) 2.0C 2-500kcmil, #3/0AWG
400	360		(3) 2C, 2-500kcmil, #2/0AWG	(3) 2.0C 2-600kcmil, #4/0AWG
Bonding				
UPS Rating			**Main Bonding Jumper/GroundingElectrode Conductor**	
kVA	**kW**		**Copper Conductors**	**Aluminum Conductors**
250	225		(1) #1/0AWG/ (1) #1/0AWG	(1) #1/0AWG/ (1) #1/0AWG
300	270		(1) #2/0AWG/ (1) #2/0AWG	(1) #2/0AWG/ (1) #2/0AWG
400	360		(1) #2/0AWG/ (1) #2/0AWG	(1) #2/0AWG/ (1) #2/0AWG

1. Recommended cable sizes are 167°F (75°C) (THW) wire at 86°F (30°C) ambient. Unless otherwise noted, use copper or aluminum conductors suitable for at least 75°C.
2. For continuous operations not at 86°F (30°C), recommend that the site planner choose the appropriate cable type based on the particular installation requirements.
3. Conduit size is based on FMC type conduit with two neutral conductors rated at 200% of phase.

Table 6 Recommended lug sizes

Cable Size	T&B Copper One Hole	T&B Copper Two Hole	T&B Aluminum One Hole	T&B Aluminum Two Hole
#8 AWG	54930BE	54850BE	60104-TB	—
#6 AWG	54905BE	256-30695-868	60109-TB	—
#4 AWG	54906BE	256-30695-733	60114-TB	—
#2-3 AWG	54942BE	54811BE	60120	—
#1 AWG	54947BE	54857BE	60126	—
#1/0 AWG	54950BE	256-30695-593	60132	—
#2/0 AWG	54951BE	54862BE	60138	60238
#3/0 AWG	54965BE	54864BE	60144	60244
#4/0 AWG	54970BE	54866BE	60150	60250
250kcmil	54913BE	54868BE	60156	60256
300kcmil	54914BE	54870BE	60162	60262
350kcmil	54915BE	54872BE	60165	60267
400kcmil	54916BE	54874BE	60168	60269
500kcmil	54918BE	54876BE	60171	60273
600kcmil	54920BE	54878BE	60176	60275
750kcmil	54922BE	54880BE	60178	60277

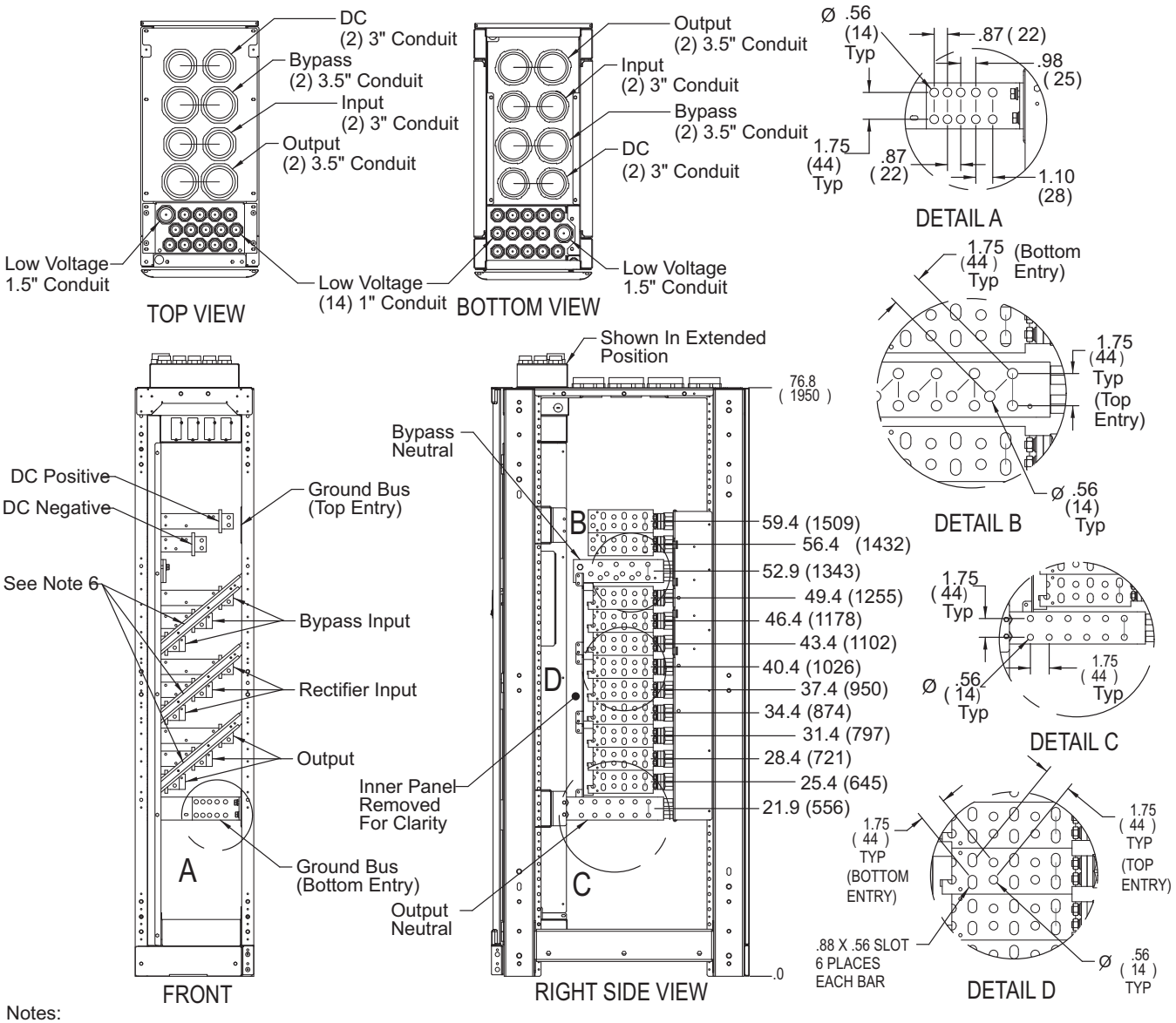
Table 7 Lug torque values

Grade 5 Steel - Unified Thread System Torque Units, lbf.*in.					
Fastener Finish Þ		Plain Steel		Zinc Plating	
Size	Threads/ Inch, T_{pi}	No Washer/ Flat Washer	Lock Washer	No Washer/ Flat Washer	Lock Washer
1/4	20	101	—	91	-
	28	116	—	104	-
5/16	18	209	224	188	203
	24	231	246	208	223
3/8	16	370	392	333	355
	24	420	442	378	400
7/16	14	593	—	534	—
	20	662	—	596	—
1/2	13	904	934	814	844
	20	1,020	1,050	918	948
9/16	12	1,305	—	1,175	—
	18	1,456	—	1,310	—

Class 8.8 Steel - Metric Thread System Torque Units, N*m					
Fastener Finish Þ		Plain Steel		Zinc Plating	
Size	Thread Pitch, T_p	No Washer/ Flat Washer	Lock Washer	No Washer/ Flat Washer	Lock Washer
M5	0.8	6.1	—	5.5	—
	0.5	6.9	—	6.2	—
M6	1	10	—	9	—
	0.75	11	—	10	—
M8	1.25	25	—	23	—
	1	27	—	24	—
M10	1.5	50	64	45	59
	1.25	53	67	47	61
M12	1.75	87	128	78	119
	1.25	95	136	86	127
M14	2	139	—	125	—
	1.5	151	—	136	—

3.0 INSTALLATION DRAWINGS

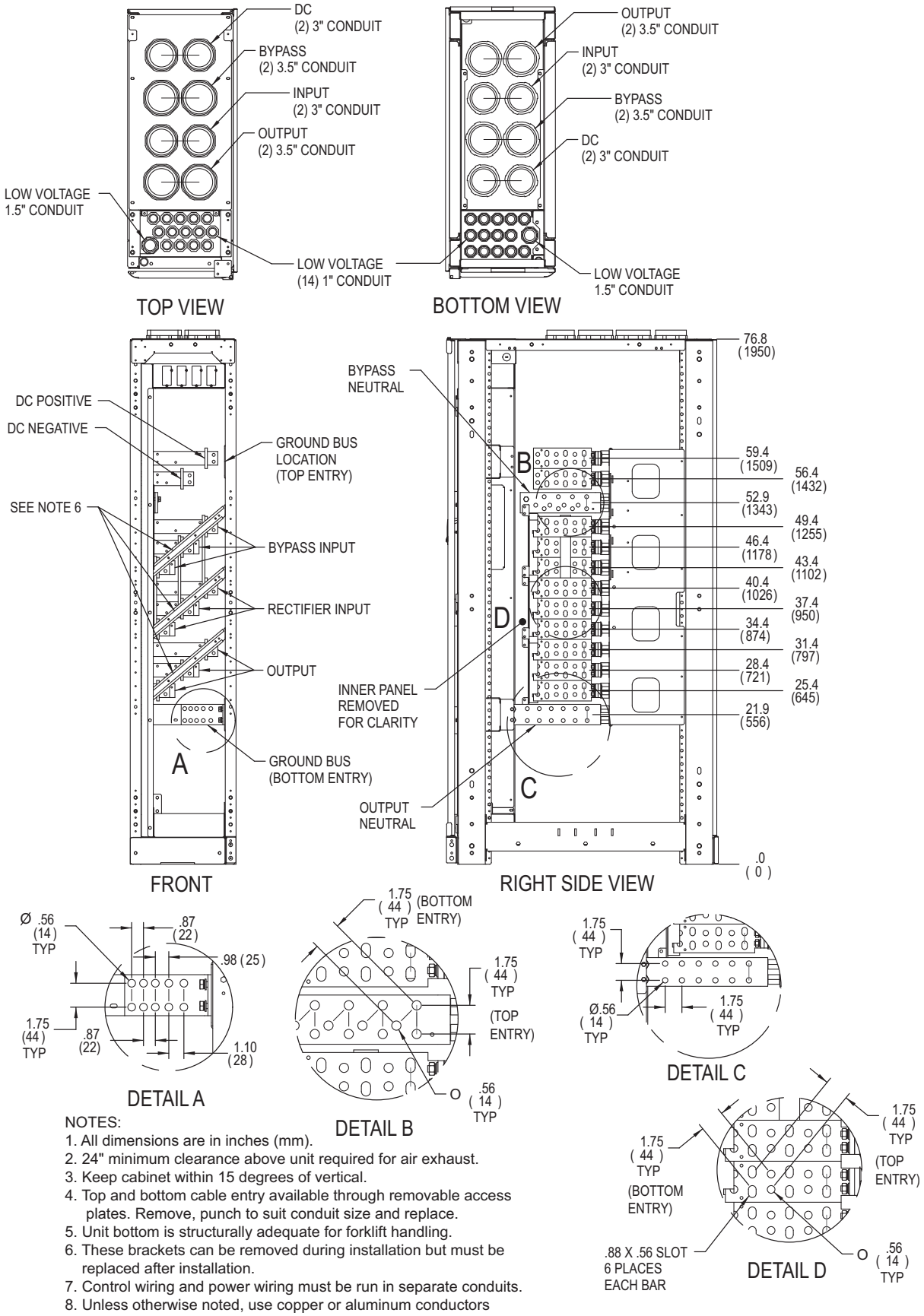
Figure 1 Input/output conduit detail drawing, 250-300kVA Liebert NXL UPS



Notes:

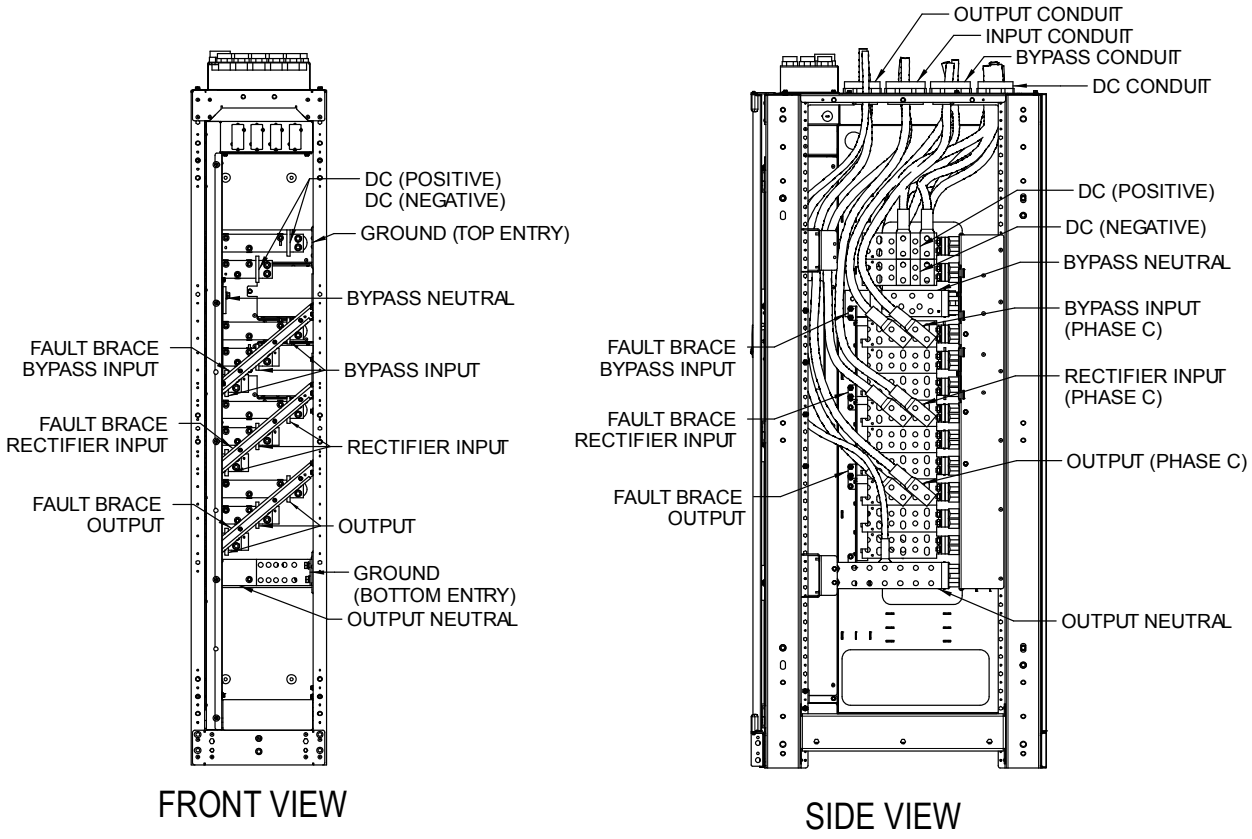
1. All dimensions are in inches (mm).
2. 24" minimum clearance above unit required for air exhaust.
3. Keep cabinet within 15 degrees of vertical.
4. Top and bottom cable entry available through removable access plates. Remove, punch to suit conduit size and replace.
5. Unit bottom is structurally adequate for forklift handling.
6. These brackets can be removed during installation but must be replaced after installation.
7. Control wiring and power wiring must be run in separate conduits.
8. Unless otherwise noted, use copper or aluminum conductors suitable for at least 75°C.
9. All wiring is to be in accordance with national and local electrical codes.

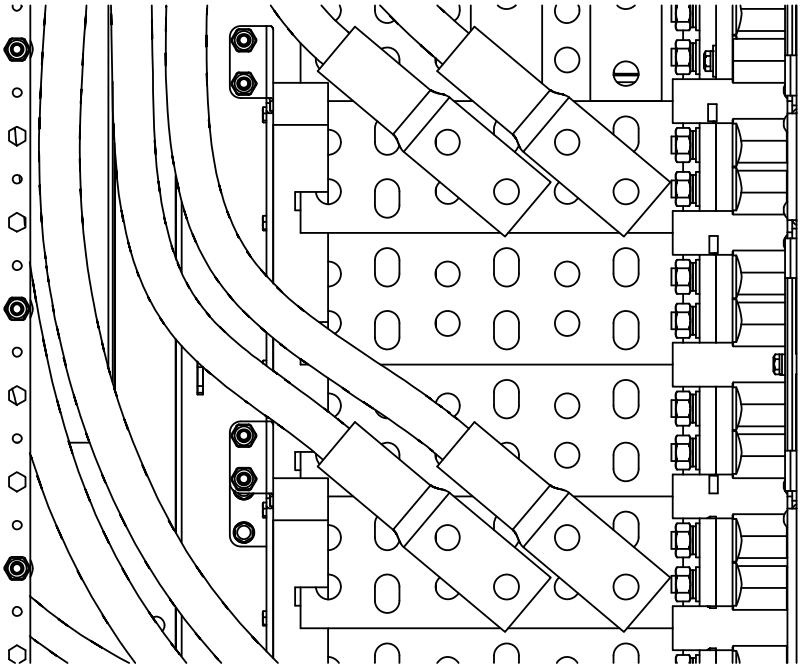
Figure 2 Input/output conduit detail drawing, 400kVA Liebert NXL UPS



NOTES:
1. All dimensions are in inches (mm).
2. 24" minimum clearance above unit required for air exhaust.
3. Keep cabinet within 15 degrees of vertical.
4. Top and bottom cable entry available through removable access plates. Remove, punch to suit conduit size and replace.
5. Unit bottom is structurally adequate for forklift handling.
6. These brackets can be removed during installation but must be replaced after installation.
7. Control wiring and power wiring must be run in separate conduits.
8. Unless otherwise noted, use copper or aluminum conductors suitable for at least 75°C.
9. All wiring is to be in accordance with national and local electrical codes.

Figure 3 Top cable entry routing and installation order

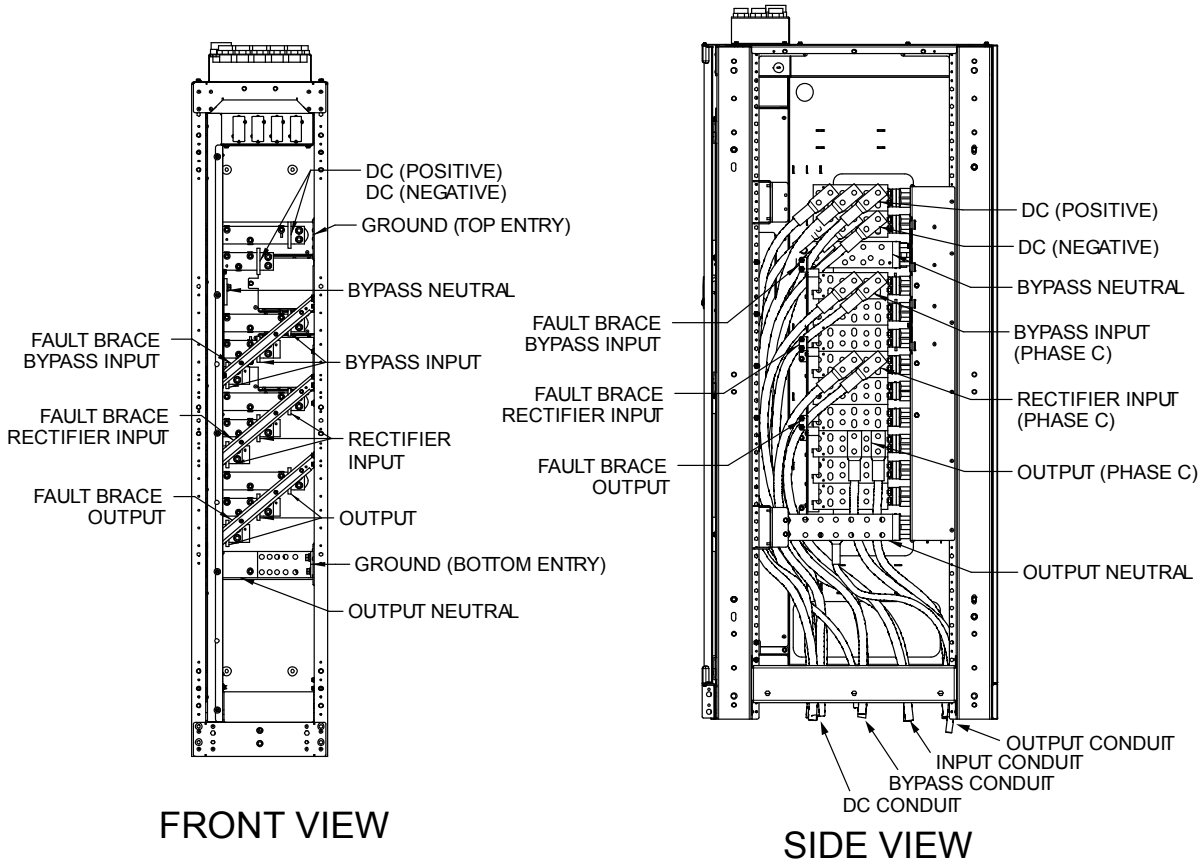


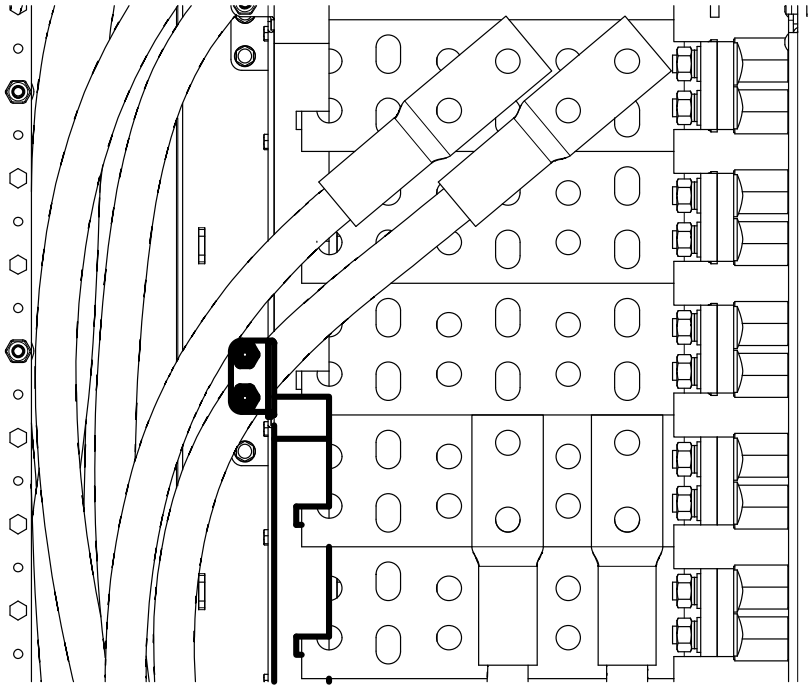


Recommended order of installation for cables:
1. DC Power
2. Bypass Neutral
3. Bypass Input Power (Phases A-B-C)
4. Rectifier Input Power (Phases A-B-C)
5. Output Power (Phases A-B-C)
6. Output Neutral
7. Ground

The cables must be routed around the fault braces. This is to prevent the cables from coming in contact with other busbars.

Figure 4 Bottom cable entry routing and installation order

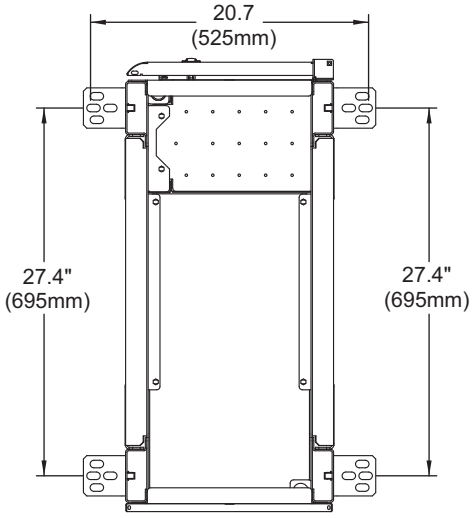




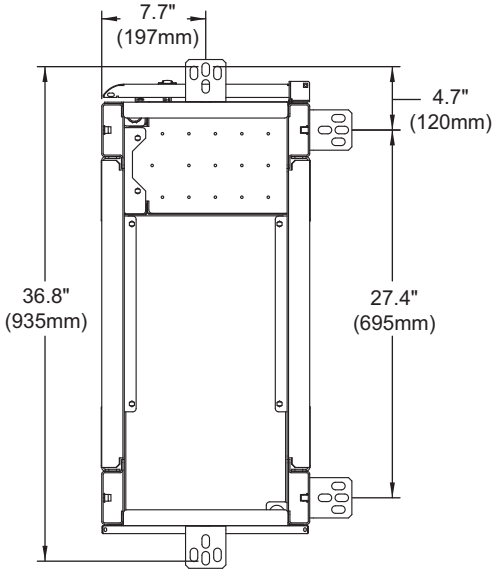
Recommended order of installation for cables:
1.) Output Neutral
2.) Output Power (Phases A-B-C)
3.) Rectifier Input Power (Phases A-B-C)
4.) Bypass Input Power (Phases A-B-C)
5.) Bypass Neutral
6.) DC Power
7.) Ground

The cables must be routed around the fault braces. This is to prevent the cables from coming in contact with other busbars.

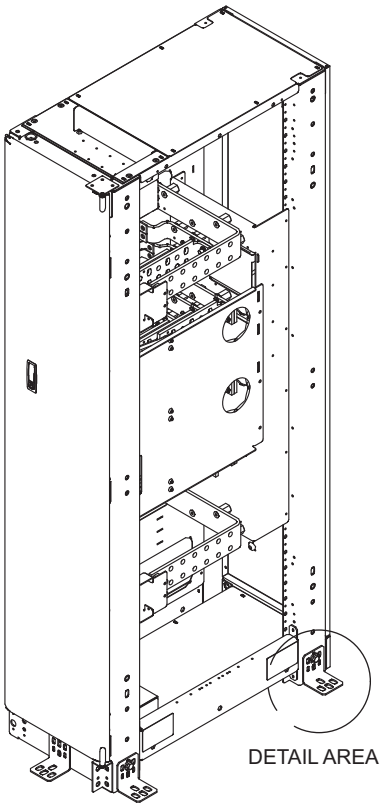
Figure 5 Floor mount brackets—standard and optional layout



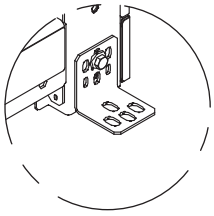
BOTTOM VIEW (Standard)



BOTTOM VIEW (Optional)



FLOOR MOUNTS



KEEP BRACKETS ATTACHED

WARNING

Brackets MUST remain attached to the frame until the unit is being placed in its final installed position. (The final installation will always require the unit to be bolted to another Liebert NXL product.) Failure to comply with these instructions could result in equipment damage and/or injury to personnel.

NOTES:

1. All dimensions are in inches (mm).
2. 24" minimum clearance above unit required.
3. Keep cabinet within 15 degrees of vertical.
4. Top and bottom cable entry available through removable access plates. Remove, punch to suit conduit size and replace.
5. Unit bottom is structurally adequate for forklift handling.
6. Control wiring and power wiring must be run in separate conduits.
7. Unless otherwise noted, use copper or aluminum conductors suitable for at least 75°C.
8. All wiring is to be in accordance with national and local electrical codes.
9. Optional bottom view can be used to bolt input / output cabinet to floor and allow the UPS to be positioned. This option requires the cabinet to be bolted to the floor.
10. Brackets can be removed after the ups has been bolted to the input / output cabinet.

Ensuring The High Availability Of Mission-Critical Data And Applications.

Emerson Network Power, a business of Emerson (NYSE:EMR), is the global leader in enabling *Business-Critical Continuity™* from grid to chip for telecommunication networks, data centers, health care and industrial facilities. Emerson Network Power provides innovative solutions and expertise in areas including AC and DC power and precision cooling systems, embedded computing and power, integrated racks and enclosures, power switching and controls, infrastructure management, and connectivity. All solutions are supported globally by local Emerson Network Power service technicians. Liebert AC power, precision cooling and monitoring products and services from Emerson Network Power deliver Efficiency Without Compromise™ by helping customers optimize their data center infrastructure to reduce costs and deliver high availability.

Technical Support / Service

Web Site
www.liebert.com

Monitoring
liebert.monitoring@emerson.com
800-222-5877
Outside North America: +00800 1155 4499

Single-Phase UPS & Server Cabinets
liebert.upstech@emerson.com
800-222-5877
Outside North America: +00800 1155 4499

Three-Phase UPS & Power Systems
800-543-2378
Outside North America: 614-841-6598

Environmental Systems
800-543-2778
Outside the United States: 614-888-0246

Locations

United States
1050 Dearborn Drive
P.O. Box 29186
Columbus, OH 43229

Europe
Via Leonardo Da Vinci 8
Zona Industriale Tognana
35028 Piove Di Sacco (PD) Italy
+39 049 9719 111
Fax: +39 049 5841 257

Asia
29/F, The Orient Square Building
F. Ortigas Jr. Road, Ortigas Center
Pasig City 1605
Philippines
+63 2 687 6615
Fax: +63 2 730 9572

SL-25440_REV3_09-13

Emerson Network Power.
The global leader in enabling *Business-Critical Continuity™*

EmersonNetworkPower.com

- **AC Power**
- Connectivity
- DC Power
- Embedded Computing
- Embedded Power
- Infrastructure Management & Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection