



NetSure™ 211 Series -48 VDC Battery Cabinet

Installation and User Manual

Specification Number: 554631

Model Number: 211BC

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Technical Support Site

If you encounter any installation or operational issues with your product, check the pertinent section of this manual to see if the issue can be resolved by following outlined procedures.

Visit <https://www.vertiv.com/en-us/support/> for additional assistance.

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Admonishments Used in this Document



DANGER! Warns of a hazard the reader **will** be exposed to that will **likely** result in death or serious injury if not avoided. (ANSI, OSHA)



WARNING! Warns of a potential hazard the reader **may** be exposed to that **could** result in death or serious injury if not avoided. This admonition is not used for situations that pose a risk only to equipment, software, data, or service. (ANSI)



CAUTION! Warns of a potential hazard the reader **may** be exposed to that **could** result in minor or moderate injury if not avoided. (ANSI, OSHA) This admonition is not used for situations that pose a risk only to equipment, data, or service, even if such use appears to be permitted in some of the applicable standards. (OSHA)



ALERT! Alerts the reader to an action that **must be avoided** in order to protect equipment, software, data, or service. (ISO)



ALERT! Alerts the reader to an action that **must be performed** in order to prevent equipment damage, software corruption, data loss, or service interruption. (ISO)



FIRE SAFETY! Informs the reader of fire safety information, reminders, precautions, or policies, or of the locations of fire-fighting and fire-safety equipment. (ISO)



SAFETY! Informs the reader of general safety information, reminders, precautions, or policies not related to a particular source of hazard or to fire safety. (ISO, ANSI, OSHA)

Important Safety Instructions

Safety Admonishments Definitions

Definitions of the safety admonishments used in this document are listed under “Admonishments Used in this Document” on page iv.

Safety and Regulatory Statements

Refer to Section 4154 (provided with your customer documentation) for Safety and Regulatory Statements.

Déclarations de Sécurité et de Réglementation

Reportez-vous à la Section 4154 (fourni avec les documents de votre client) pour les déclarations de sécurité et de réglementation.

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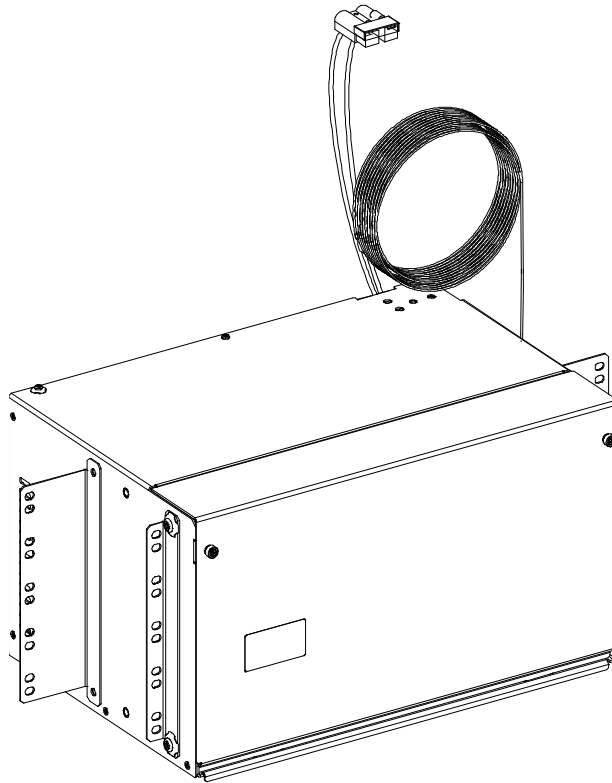
1 Introduction

1.1 Description

The Vertiv™ NetSure™ 211 Series -48 VDC battery cabinet can be mounted in a 19" or 23" relay rack or mounted to a wall. The battery cabinet contains one (1) 40 A battery disconnect circuit breaker and provides alarm leads attached to the common contacts of the breaker.

Battery cabinets may be daisy chained as shown in Figure 2.5 to increase the reserve time. However, a maximum system current of 30 amps should be maintained regardless of the number of interconnected cabinets.

Figure 1.1 Vertiv™ NetSure™ 211 Series -48 VDC Battery Cabinet



1.2 Batteries

The battery cabinet is designed to hold the batteries listed in Table 1.1.

Table 1.1 Batteries

Battery Manufacturer	Manufacturer P/N	Vertiv P/N	Weight (lbs.) per Battery
GNB	M12V40F	241173815	39.0

1.3 Specifications

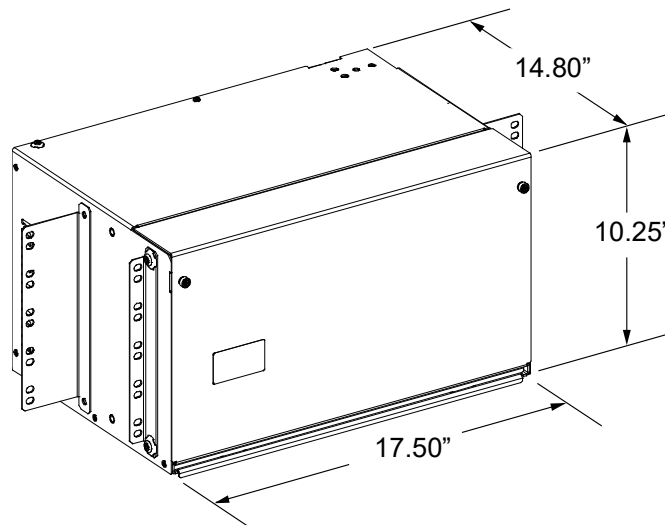
Environmental Ratings

- Operating Ambient Temperature Range: -40 °C to +65 °C.
- Storage Ambient Temperature Range: -40 °C to +85 °C.
- Humidity: This unit is capable of operating in an ambient relative humidity range of 0% to 95%, non-condensing.
- Altitude: The maximum operating ambient temperature should be derated by 10 °C at an elevation of 10,000 feet above sea level. For elevations between 3,000 feet and 10,000 feet, derate the maximum operating ambient temperature linearly.

Overall Dimensions

Battery cabinet dimensions are illustrated in Figure 1.2.

Figure 1.2 Battery Cabinet Dimensions



2 Installation

2.1 Important Safety Instructions



DANGER! Adhere to the “Important Safety Instructions” starting on page v.

2.2 General Requirements

The installer should be familiar with the installation requirements and techniques to be used in securing the battery cabinet to a relay rack or wall.

2.3 Mounting the Battery Cabinet

The battery cabinet is designed to mount on a wall or a standard 19” or 23” wide relay rack.

2.3.1 Relay Rack Method

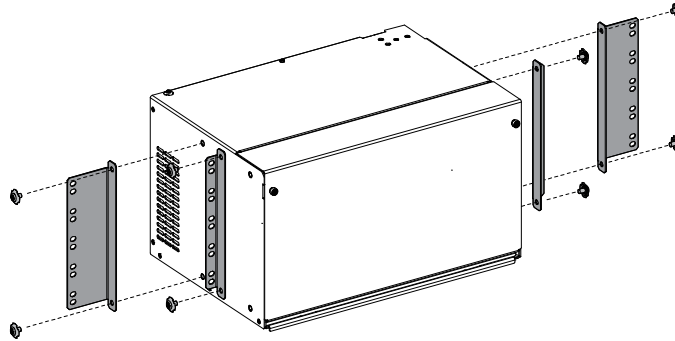
Procedure

1. Refer to Figure 2.1 and install the 19" or 23" relay rack mounting angles to the battery cabinet. Mounting hardware is provided with the battery cabinet. Torque these connections to 46 in-lbs.



NOTE! There are three mounting locations for the mounting angles providing different projections in front of the relay rack.

Figure 2.1 Installing Mounting Angles on the Battery Cabinet



2. Install battery retention strap through openings in rear of cabinet. Orient the buckle per Figure 2.9.
3. Secure the battery cabinet to the relay rack with the provided 12-24 x 1/2" hex head thread-forming screws (ten per side) (P/N 218710500) and #12 ground washers (five per side) (P/N 215640600). Torque these connections to 35.0 in-lbs.

2.3.2 Wall Method

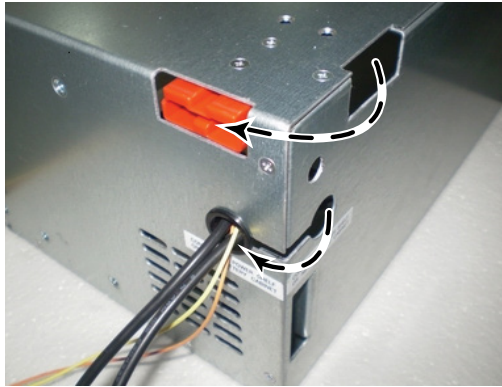


WARNING! Ensure the technique and hardware used in securing the battery cabinet can support the total weight of the battery cabinet and the four (4) batteries. Refer to "Batteries" on page 1 for a battery weight reference table. If being mounted to a stud wall, the cabinet **must** be fastened to the studs. Failure to mount the cabinet correctly may result in serious personal injury or equipment damage.

Procedure

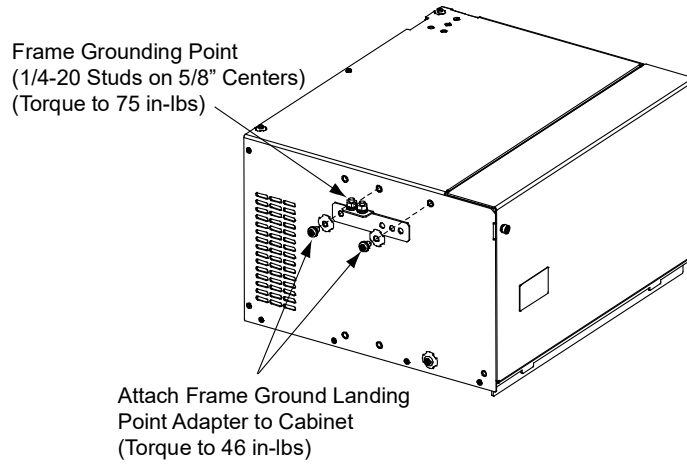
1. Ensure that connector, wires and bushing located at the back are moved to the side, as shown in Figure 2.2, before mounting the cabinet.
2. Install battery retention strap through openings in rear of cabinet. Orient the buckle per Figure 2.9.

Figure 2.2 Connectors and Wires Moved to the Side



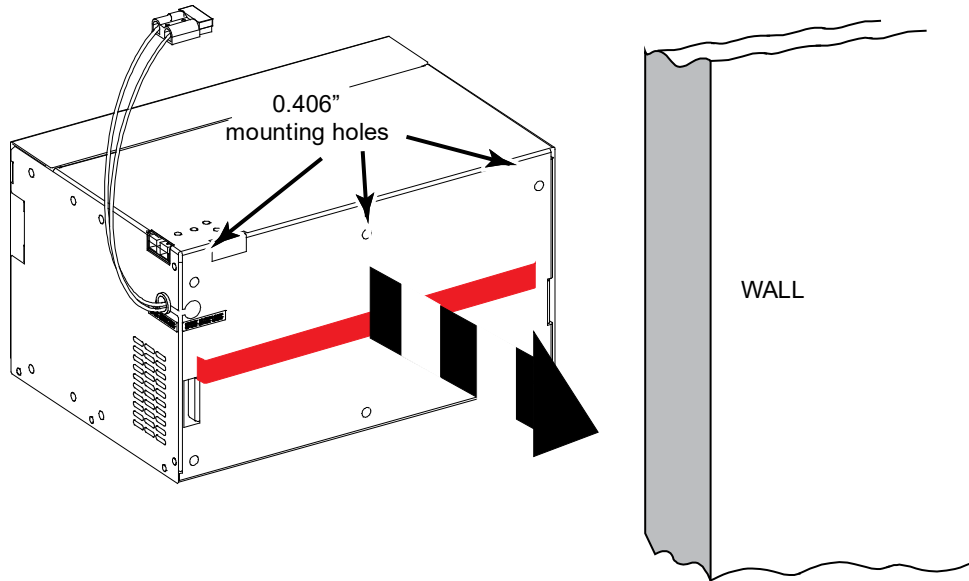
3. Install the frame ground landing point adapter P/N 556872 to the left or right side of the battery cabinet, as shown in Figure 2.3.

Figure 2.3 Installing P/N 556872 Frame Ground Landing Point Adapter



4. Mount the battery cabinet to a wall through the six 0.406" diameter holes on the back of the cabinet, as shown in Figure 2.4. If mounting to a stud wall, secure the battery cabinet to the studs.
5. Ensure the technique and hardware used in securing the cabinet can support the total weight of the cabinet and the batteries. Refer to "Batteries" on page 1 for a battery weight reference table.

Figure 2.4 Mounting the Battery Cabinet to a Wall



2.4 Connecting Battery Cabinet(s) to the Associated Power System

Battery Leads

Cables with connectors are provided on the associated power system and the battery cabinet to allow simple interconnections between a battery cabinet and the associated power system and between battery cabinets. The battery cabinet is designed to be daisy-chained together with additional battery cabinets. There is no limit to the number of battery cabinets that can be connected together. However, a maximum system current of 30 A should be maintained regardless of the number of interconnected battery cabinets.

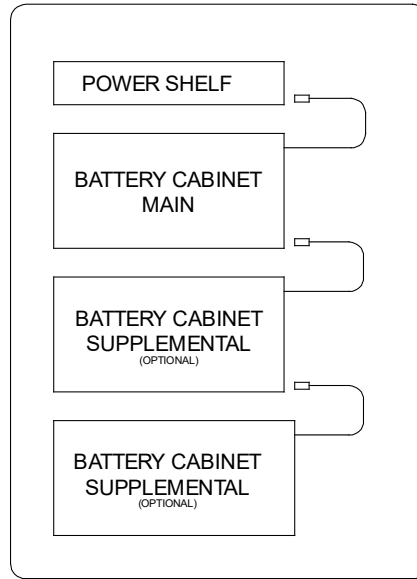
Procedure



NOTE! Refer to Figure 2.5 as this procedure is performed.

1. Connect the power system's battery cable terminated in an Anderson connector to the first battery cabinet's battery cable terminated in a mating Anderson connector.
2. Connect the second battery cabinet's battery cable terminated in an Anderson connector to the fixed mating Anderson connector located on the first battery cabinet.
3. Repeat the above step if there are additional battery cabinets.

Figure 2.5 Connecting Multiple Battery Cabinets



Battery Disconnect Circuit Breaker Alarm Leads

Procedure

1. Furnished with the battery cabinet are battery disconnect circuit breaker alarm lead assemblies. Refer to the power system installation manual to use these alarm leads to connect the battery cabinet battery disconnect circuit breaker alarm into the power system alarm circuits.



NOTE! Supplied with the battery cabinet is a yellow alarm lead assembly P/N 545696 and an orange alarm lead assembly P/N 565513. P/N 545696 is always used. P/N 565513 is used only with power systems containing a 1M831ANA Mini Controller (may be discarded if battery cabinet is used with other systems).

2.5 Installing GNB M12V40F Batteries

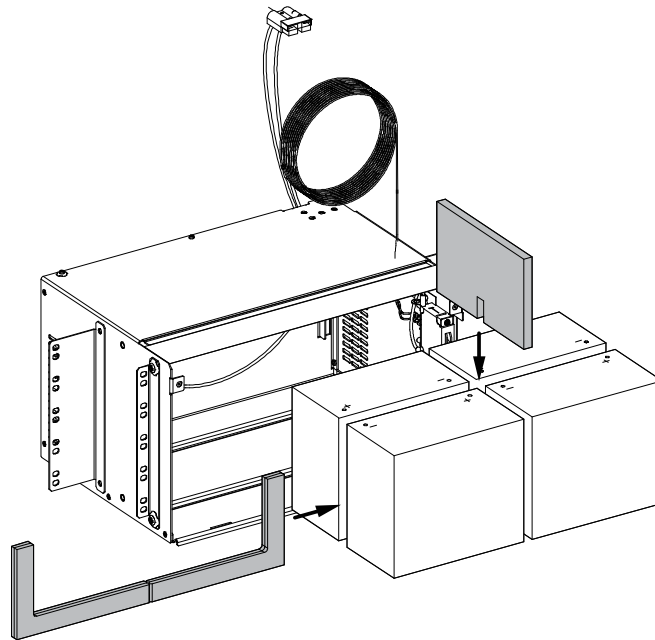
Procedure

1. Unscrew the front cover panel from the battery cabinet.
2. Place the spacers in between the batteries. Refer to Figure 2.6.



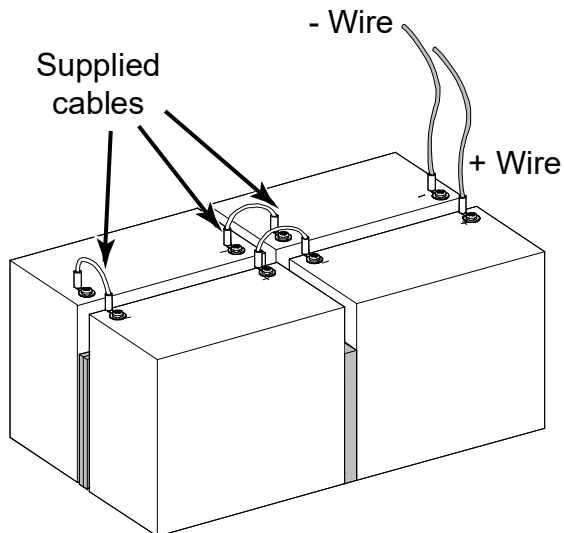
NOTE! Place the two supplied spacers (P/N 545511) side by side, and follow with the other spacer (P/N 545538) on top.

Figure 2.6 Placing GNB M12V40F Batteries



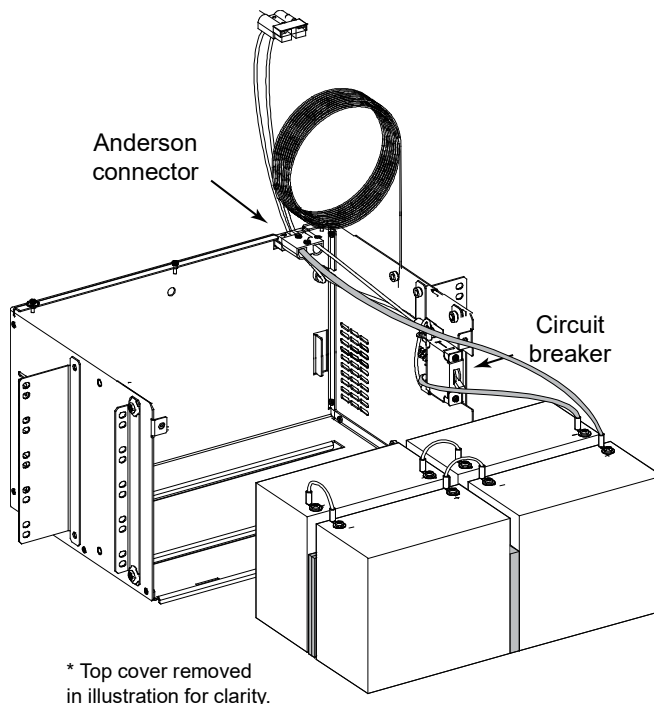
3. Connect all four GNB batteries using supplied wires (Part Number 545529) crimped with 12-10 AWG ring lug on each end, as shown in Figure 2.7.

Figure 2.7 Connecting GNB M12V40F Batteries



- 4. Attach the cabinet wires to + and - terminals. Refer to Figure 2.8.

Figure 2.8 Connecting GNB M12V40F Batteries to (+) and (-) Terminals



- 5. Refer to "Securing the Batteries Using the Strap" on page 9 for instructions on securing the batteries using the buckle strap that is bundled along with the cabinet.

2.6 Securing the Batteries Using the Strap

Procedure

1. Pull strap such that enough length is provided to secure the batteries.
2. Hold the buckle such that the strap can slip into inner slot of the buckle. See Figure 2.9 for reference.

Figure 2.9 Slipping the Strap into the Buckle



3. Then loop the strap into the outer slot of the buckle. Refer to Figure 2.10.

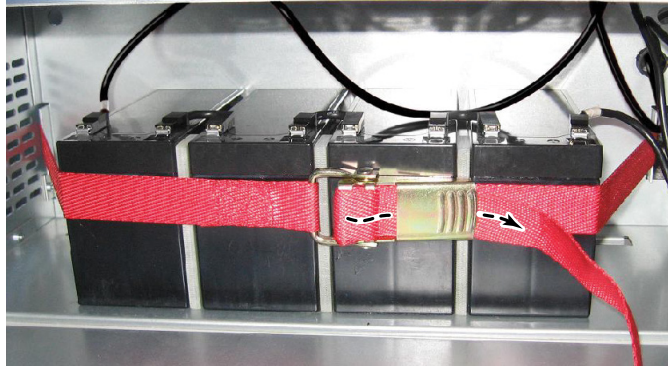
Figure 2.10 Looping the Strap into the Buckle



4. Pull again the strap to tighten.
5. Rotate buckle cover to closed position to apply and lock in tension. See Figure 2.11.
6. There should be a gap of 1/4" to 1/2" between the strap and the batteries when the buckle assembly is pulled with light finger pressure. This will ensure the proper tension is applied to the strap.

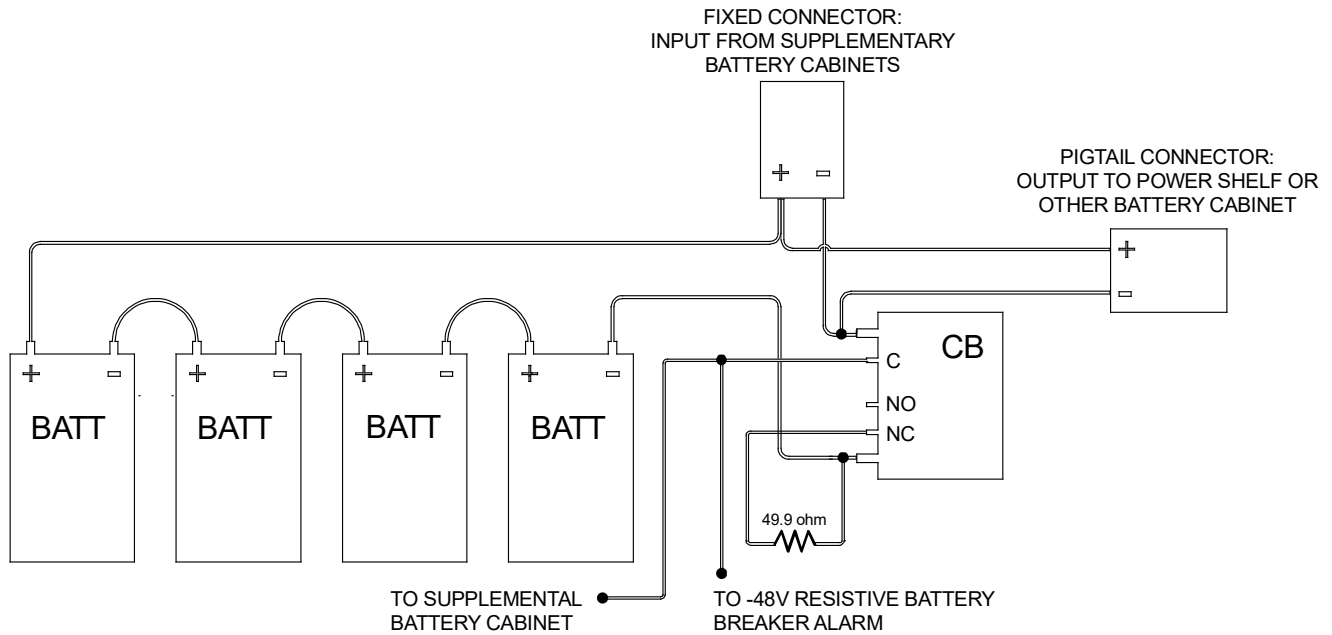
7. To release buckle, pull outward on free strap end.

Figure 2.11 Securing the Batteries in the Cabinet



2.7 Typical Internal Wiring Layout

Figure 2.12 Typical Internal Wiring Layout



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