NetSure™ 802 Series NCU Retrofit Kit

Installation Manual

Kit Specification Number: 566157
For use in an "Older Style" 582140000 List 16 distribution only bay
For use in a 582140000 List 17, 18, 22 distribution only bay

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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 Vertiv™ NetSure™ 802 Series NCU Retrofit Kit Installation Instructions

1.1 Kit Description

These instructions provide a step-by-step procedure to field install this kit into an "Older Style" 582140000 List 16 Distribution Only Bay. See Figure 1.1 for an illustration of the "Older Style" Bay. Also for use in a 582140000 List 17, 18, 22 distribution only bay. Installation of this kit in other equipment should not be attempted. For a "Newer Style" 582140000 List 16 Distribution Only Bay (Figure 1.2), use kit P/N 566156.

This kit replaces the control shelf in an older style system with the kit supplied control shelf that is offered in the latest revision system. The latest revision system replaces the MCA (Meter, Control, Alarm Panel) and optional LMS monitoring system of the older style system with the NCU controller.

1.2 Kit Contents

Table 1.1 lists the items furnished as a part of this kit. Before installing the kit, check the items furnished against those listed to ensure that there are no shortages.

Table 1.1 Kit Contents

Qty.	P/N	Description
1	565931	Preassembled Distribution Only Bay Control Shelf including Ship Loose CAN Interface Circuit Card P/N 566014

1.3 Tools and Material Required

Table 1.2 lists the items required to install this kit.

Table 1.2 Tools and Material Required

Description
Phillips Head Screwdriver
Nut Driver Set

Figure 1.1 Older Style 582140000 List 16 Distribution Only Bay

Older Style 582140000 List 16 Bay
Use Kit P/N 566157
(for a newer style bay, use kit P/N 566156)

Control Shelf
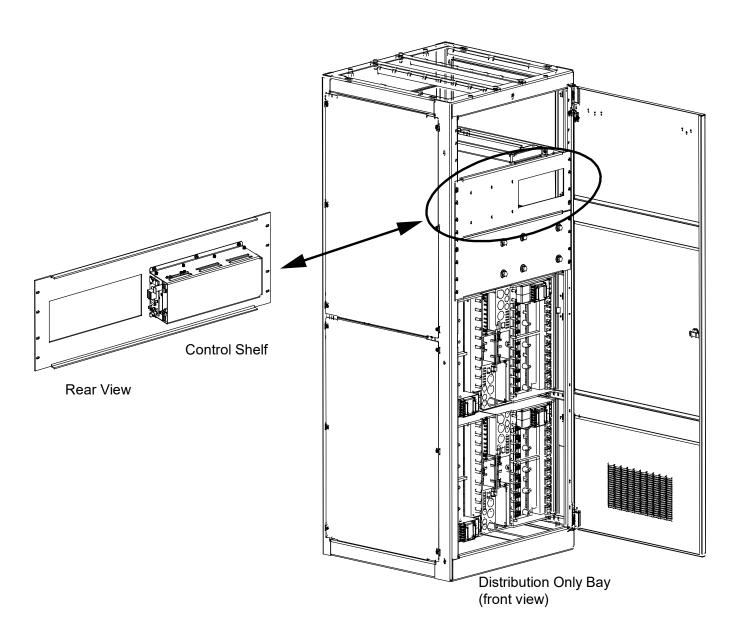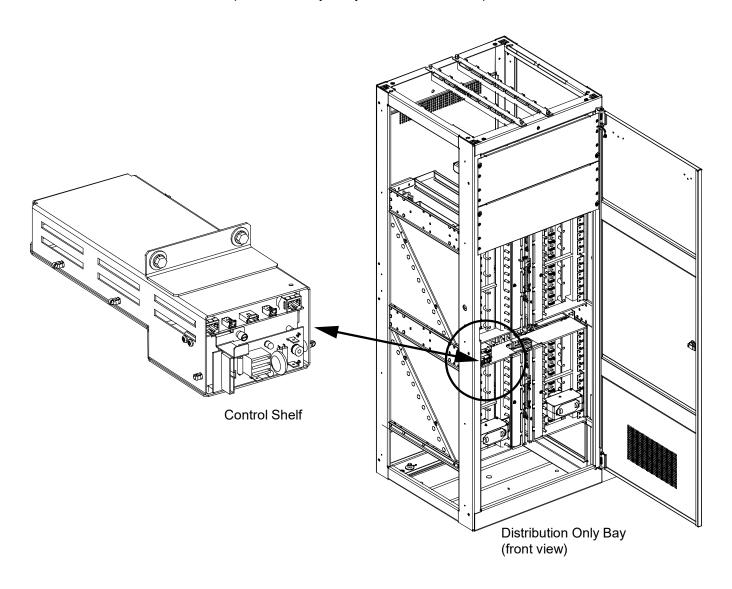
Rear View

Distribution Only Bay
(front view)

Figure 1.2 Newer Style 582140000 List 16 Distribution Only Bay

Newer Style 582140000 List 16 Bay
Use Kit P/N 566156
(for an older style bay, use kit P/N 566157)

Control Shelf

Distribution Only Bay
(front view)

1.4 Installation Procedure

THESE INSTRUCTIONS SHOULD BE READ THROUGH COMPLETELY BEFORE INSTALLING THE KIT.

The following is a step-by-step procedure to install the kit. The procedure has been written for ease of use and to minimize the possibility of contact with potentially hazardous energy. This procedure should be performed in the sequence given, and each step should be completely read and fully understood before performing that step. Observe all "Important Safety Instructions" starting on page v and also those presented in the following procedure. As each step of the procedure is completed, the box adjacent to the respective step should be checked. This will minimize the possibility of inadvertently skipping any steps. If the step is not required to be performed for your site, also check the box to indicate that it was read.

⚠️ **DANGER!** This kit can be installed with the system operating. Observe the "Important Safety Instructions" starting on page v and those listed in the power system manual.

⚠️ **CAUTION!** When performing any step in procedures that requires removal or installation of hardware, use caution to ensure no hardware is dropped and left inside the unit; otherwise service interruption or equipment damage may occur.

🔍 **NOTE!** *When performing any step in this procedure which requires removal of existing hardware, retain all hardware for use in subsequent steps, unless otherwise stated.*

Initial Procedure

[ ] 1.   Performing this procedure may activate external alarms. Do one of the following. If possible, disable these alarms. If these alarms cannot be easily disabled, notify the appropriate personnel to disregard any future alarms associated with this system while the procedure is being performed.

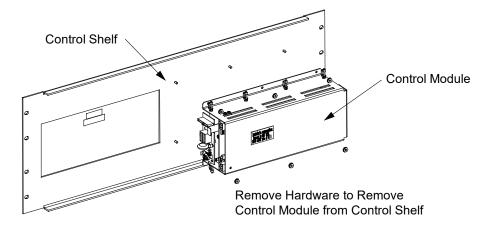[ ] 2.   Open the front door of the bay.

Removing the Existing Control Shelf (Leaving Control Module in Bay) Procedure

[ ] 1.   Remove the existing control module from the control shelf by removing the hardware securing it. See Figure 1.3. Save hardware for re-installation. Temporarily secure the control module ensuring it does not come in contact with any energized portion of the bay.
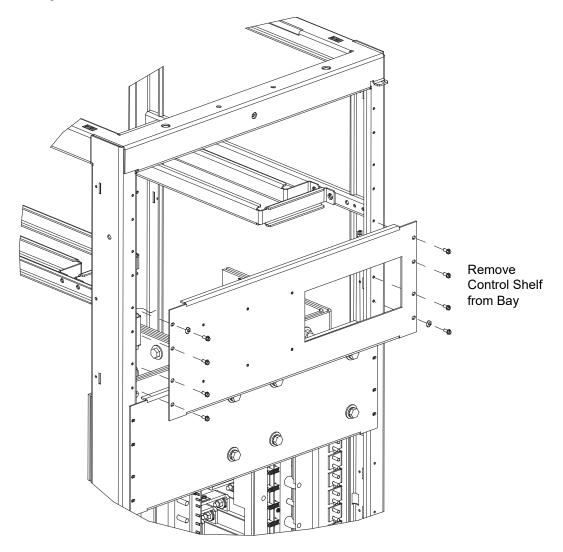
⚠️ **DANGER!** Battery is connected to the control module.

Figure 1.3 Temporarily Removing Control Module

[ ] 2.   Remove the control shelf. See Figure 1.4.

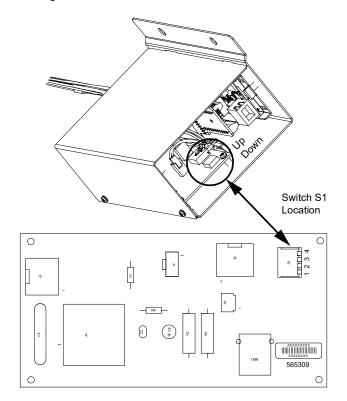**Figure 1.4 Removing Control Shelf**

Remove
Control Shelf
from Bay

Set the Bay Address Procedure

[ ] 1. Set the bay address. Each bay needs a unique address to communicate with the NCU.

    a) Dip Switch S1 is used to set the communications address for each bay. Refer to Table 1.3 for S1 settings. Refer to Figure 1.5 for S1 location.

    b) Set the addressing switches on each kit installed in the system to a unique address per Table 1.3.

Table 1.3 DIP Switch S1 (Bay Addressing)

| DIP Switch S1 | | | | | |
| Communication Address | | | Reserved | Description of Status |
1	2	3	4	
DOWN	DOWN	DOWN		Address 1# (Setting for 1st Bay in System)
UP	DOWN	DOWN		Address 2# (Setting for 2nd Bay in System)
DOWN	UP	DOWN		Address 3# (Setting for 3rd Bay in System)
UP	UP	DOWN	DOWN	Address 4# (Setting for 4th Bay in System)
DOWN	DOWN	UP		Address 5# (Setting for 5th Bay in System)
UP	DOWN	UP		Address 6# (Setting for 6th Bay in System)
DOWN	UP	UP		Address 7# (Setting for 7th Bay in System)
UP	UP	UP		Address 8# (Setting for 8th Bay in System)

Figure 1.5 DIP Switch S1 (Bay Addressing)

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Installing the Kit Furnished Control Shelf Procedure

[ ] 1.   Install the kit furnished control shelf in the same position as the control shelf just removed. See Figure 1.6.

Figure 1.6 Installing the Kit Furnished Control Shelf

Install Control Shelf into Bay

Torque to 32 in-lbs.

Re-Installing the Existing Control Module to the Kit Control Shelf Procedure

[ ] 1.   Re-install the existing control module to the kit control shelf using the hardware removed in a previous step. See Figure 1.7. Torque hardware to 11 in-lbs.

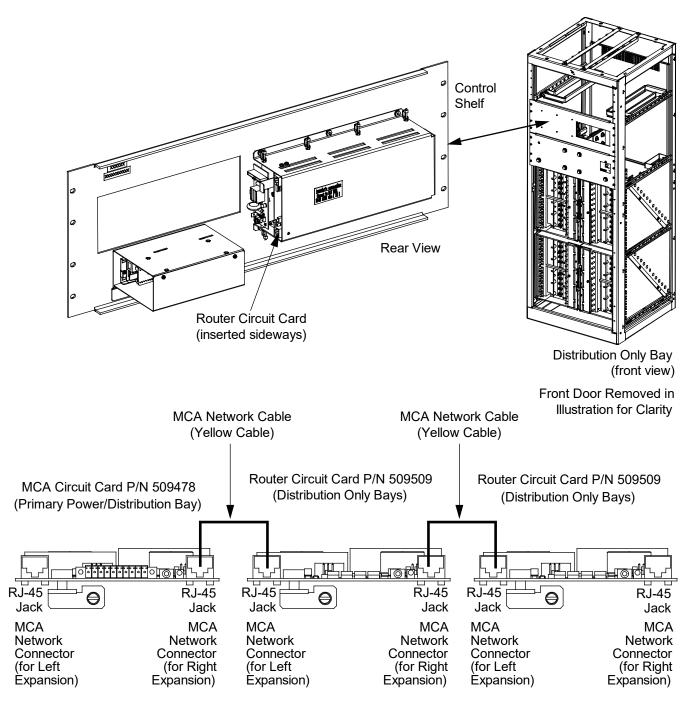⚠ **DANGER!** Battery is connected to the control module.

Figure 1.7 Installing Existing Control Module to Kit Control Shelf

Kit Control Shelf

Existing Control Module

Re-Install Hardware to Secure Existing Control Module to Kit Control Shelf

Replacing the Router Circuit Card in the Control Shelf with the Kit Supplied CAN Interface Circuit Card Procedure

[ ] 1. Disconnect the MCA network cable(s) from the control shelf. See Figure 1.8. These cables can be reused, depending on length.

Figure 1.8 Disconnect MCA Network Cable(s)

Control Shelf

Rear View

Router Circuit Card
(inserted sideways)

Distribution Only Bay
(front view)

Front Door Removed in
Illustration for Clarity

MCA Network Cable
(Yellow Cable)

MCA Network Cable
(Yellow Cable)

MCA Circuit Card P/N 509478
(Primary Power/Distribution Bay)

Router Circuit Card P/N 509509
(Distribution Only Bays)

Router Circuit Card P/N 509509
(Distribution Only Bays)

RJ-45 Jack

RJ-45 Jack

RJ-45 Jack

RJ-45 Jack

RJ-45 Jack

RJ-45 Jack

MCA Network Connector (for Left Expansion)

MCA Network Connector (for Right Expansion)

MCA Network Connector (for Left Expansion)

MCA Network Connector (for Right Expansion)

MCA Network Connector (for Left Expansion)

MCA Network Connector (for Right Expansion)

[ ] 2.   Replace the router circuit card in the bay with the kit supplied CAN interface circuit card P/N 566014 as follows (see Figure 1.9).
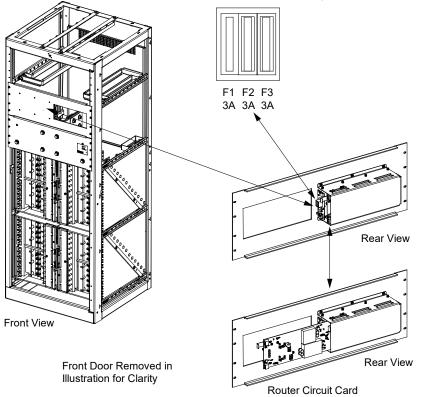
⚠️   **WARNING!** Damage to the CAN interface circuit card may result if the next step is not followed.

[ ] 3.   Connect an approved grounding strap to your wrist. Attach the other end to a suitable ground.

[ ] 4.   Remove the fuse which supplies input power to the router circuit card. Refer to Figure 1.9 for location.

[ ] 5.   Loosen the circuit card retaining screw.

[ ] 6.   Remove the router circuit card.

[ ] 7.   Slide the kit supplied CAN interface circuit card into the same mounting location, ensuring the rear edge connector is firmly seated.

[ ] 8.   Secure the circuit card by tightening the circuit card retaining screw.

[ ] 9.   Replace the fuse which supplies input power to the CAN interface circuit card. Refer to Figure 1.9 for location.

[ ] 10.   Remove the grounding wrist strap.

Figure 1.9 Distribution Only Bay Router Circuit Card Replacement and Fuse Location
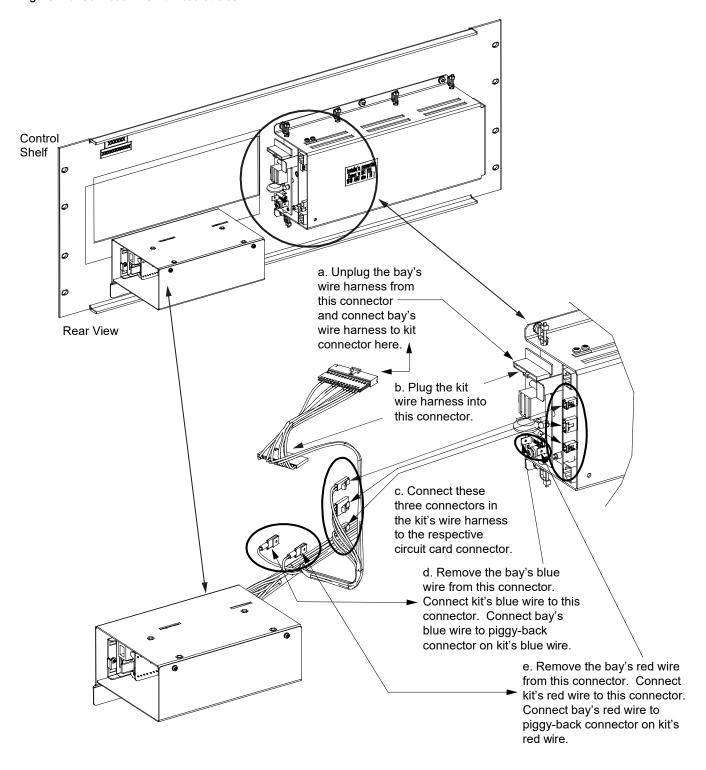

F1: Router / CAN Interface Circuit Card Input Power
F2: Distribution Bus Monitor Circuit Cards Input Power for Bus #1 and #2
F3: Distribution Bus Monitor Circuit Cards Input Power for Bus #3 and #4

F1   F2   F3
3A   3A   3A

Rear View

Front View

Front Door Removed in
Illustration for Clarity

Rear View

Router Circuit Card

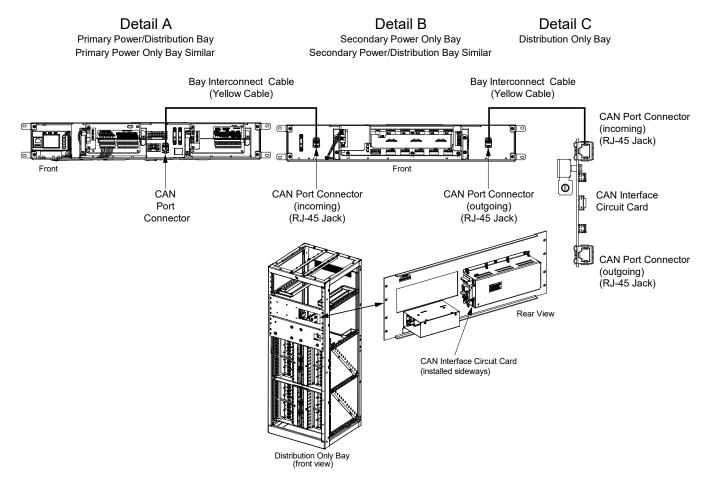## Connecting Bay's Wire Harness to Kit "Preassembled Distribution Only Bay Control Shelf" Procedure

[ ] 1.   Connect the bay's wire harness to the kit "Preassembled Distribution Only Bay Control Shelf". See Figure 1.10.

a)   Unplug the bay's wire harness from the fuse board and connect it to the kit's wire harness mating connector.

b)   Connect the kit's wire harness to the fuse board connector vacated above.

c)   Connect the three connectors in the kit's wire harness to the respective circuit card connector.

d)   Disconnect the bay's wire harness blue wire from the fuse board. Connect the kit's wire harness blue wire to the fuse board in the same position. Reconnect the bay's wire harness blue wire to the piggy-back connector located on the kit's wire harness blue wire.

e)   Disconnect the bay's wire harness red wire from the fuse board. Connect the kit's wire harness red wire to the fuse board in the same position. Reconnect the bay's wire harness red wire to the piggy-back connector located on the kit's wire harness red wire.

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Figure 1.10 Connect Wire Harness Cables

Control Shelf

Rear View

a. Unplug the bay's wire harness from this connector and connect bay's wire harness to kit connector here.

b. Plug the kit wire harness into this connector.

c. Connect these three connectors in the kit's wire harness to the respective circuit card connector.

d. Remove the bay's blue wire from this connector. Connect kit's blue wire to this connector. Connect bay's blue wire to piggy-back connector on kit's blue wire.

e. Remove the bay's red wire from this connector. Connect kit's red wire to this connector. Connect bay's red wire to piggy-back connector on kit's red wire.

[ ] 2.   Connect the network cable(s) to the kit control shelf. See Figure 1.11.

Figure 1.11 Connect Network Cable(s)

Detail A
Primary Power/Distribution Bay
Primary Power Only Bay Similar

Detail B
Secondary Power Only Bay
Secondary Power/Distribution Bay Similar

Detail C
Distribution Only Bay

Final Procedure

🔍 **NOTE!** *A controller reboot may be required to update controller distribution inventory.*

[ ] 1.   Dress and secure the kit's wire harness to the bay. Ensure the cables cannot be pinched when the door is closed.

[ ] 2.   Close the front door of the bay.

[ ] 3.   Ensure that there are no local or remote alarms active on the system.

[ ] 4.   Enable the external alarms, or notify appropriate personnel that this procedure is finished.

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