



CENTERLINE® 2100 Motor Control Centers Installing a Vertical Grounding Strap in Series “E” to “J” Sections

Catalog Number 2100H-GS1

Application

This publication includes instructions for installing the vertical grounding strap in CENTERLINE® 2100 motor control center sections with series letters “E” through “J.” This kit is designed specifically for standard sections with six space factors of plug-in units. Shortening the grounding strap will be necessary for sections with factory-mounted equipment. Contact your local Low Voltage MCC Technical Support Office for instructions on how to shorten, install, and cable the vertical grounding strap in sections with factory-mounted equipment.

ATTENTION

Disconnect or interrupt all sources of power to the motor control center before proceeding. Serious injury or death can result from working on energized sections.

Recommended Tools

Screwdriver (to remove horizontal wireway covers)

Hammer or prybar

3/8” and 7/16” wrench or socket (hex-type suggested)

Torque wrench

Preparation

1. Verify parts list (refer to figures 1 and 2, pages 3 and 4).
2. Remove all doors, units and unit support pans from the section in which the vertical grounding strap will be mounted. For details on unit removal, refer to Publication 2100-IN014x-EN-P, *Installing Bulletin 2100/2400 Units with Vertical Operating Handles*.

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3. *If a horizontal ground bus is present:*

- a. Determine the horizontal ground bus location: top, bottom or both. Remove the corresponding horizontal wireway cover(s).

NOTE: For motor control centers with horizontal ground bus in the top and the bottom, decide which location is most convenient for connection to the vertical grounding strap.

- b. On the left side of the top or bottom horizontal wireway baffle (whichever corresponds to the horizontal ground bus), locate the circular knock-out. Use a hammer or a prybar (working from above the top baffle, or from below the bottom baffle) to remove the knock-out. Use pliers to twist off the knock-out if it remains attached to the horizontal wireway baffle.

If no horizontal ground bus is present:

- a. Decide whether the top or bottom of the section is most convenient for cabling the end of the vertical grounding strap to the structure, then remove that wireway cover and wireway baffle knock-out.

Installation Procedure

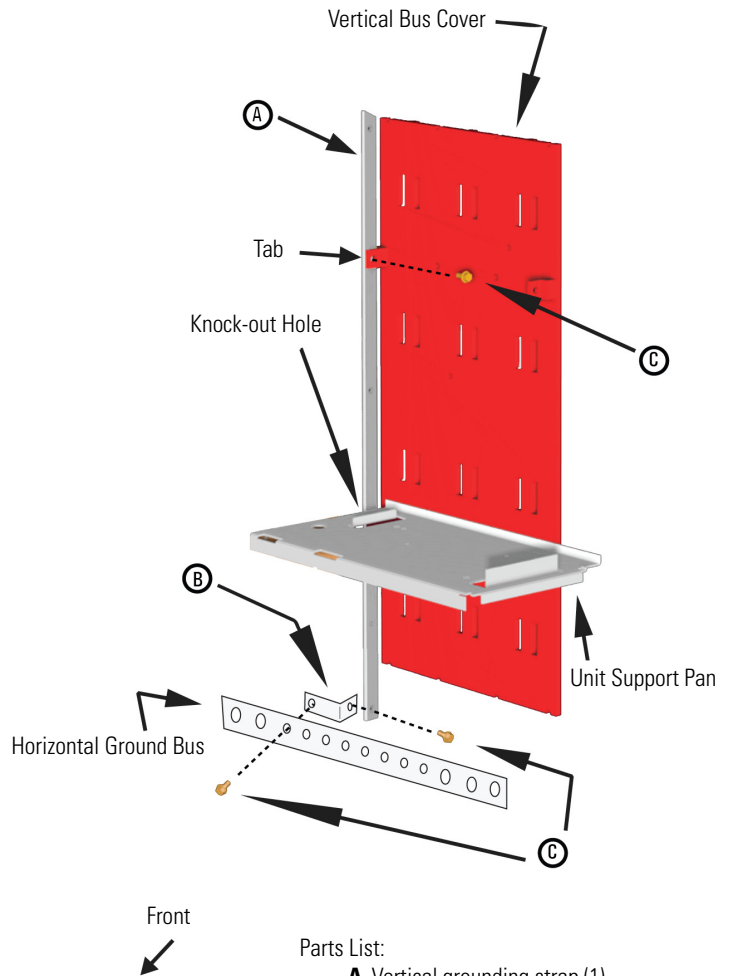
Refer to figures 1 and 2, pages 3 and 4, for part illustrations.

1. One end of the vertical grounding strap has a slotted hole (oblong hole). Insert that end through the hole created in the wireway baffle where the knock-out was removed.
2. Position the vertical grounding strap to the left side of the six tabs located on the left side of the red molded vertical bus cover. Align the holes in the vertical grounding strap with the holes in the tabs.
3. Use six 1/4-20 x 1/2" thread-forming screws to bolt the vertical grounding strap to the tabs. Insert screws from the right side of the tabs. Torque the screws to 50 lb-in (5.7 N-m).
4. *If a horizontal ground bus is present:* Connect the vertical grounding strap to the horizontal ground bus, using the L-shaped splice link (Figure 1, page 3). Use two 1/4-20 x 1/2" thread-forming screws to bolt the splice link in place. Torque the screws to 50 lb-in (5.6 N-m).

If no horizontal ground bus is present: Attach one end of the grounding cable to the vertical grounding strap, using the 1/4-20 x 1.0" screw, 1/4 flat washer, 1/4 lock washer, and 1/4-20 nut (assemble as shown in Figure 2, page 4). Insert a 1/4-20 x 1/2" thread-forming screw through the other end of the grounding cable and into either of the bottom holes in the front flange of the support ("C") channel. Torque to 65 lb-in (7.3 N-m).

5. Replace all unit support pans, units, doors and the horizontal wireway cover.

Figure 1 Installing a vertical grounding strap in a section with horizontal ground bus.

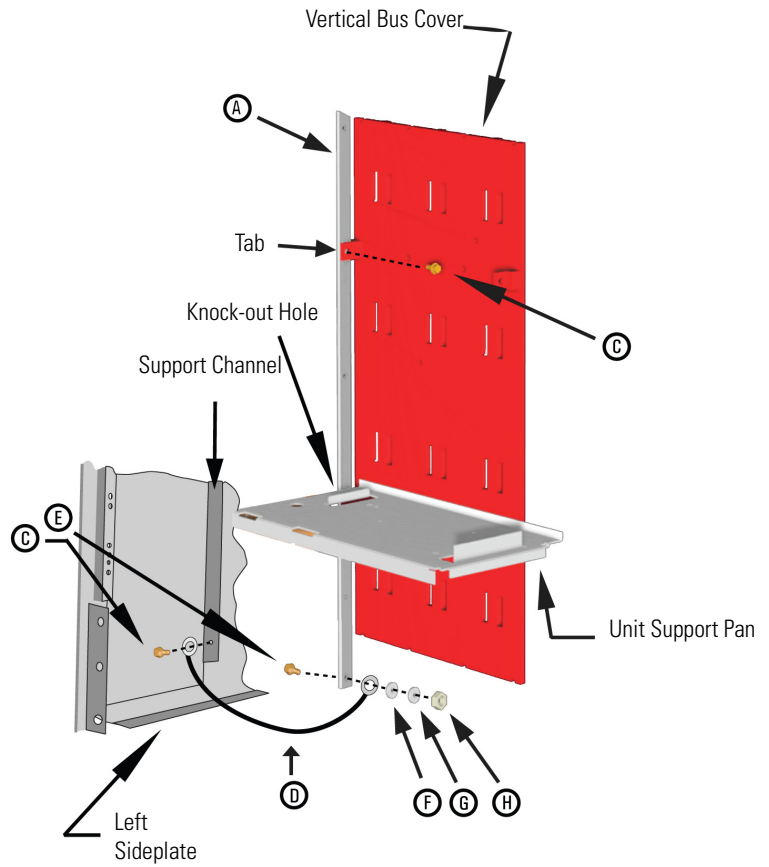


Parts List:

- A.** Vertical grounding strap (1)
- B.** Splice Link (1)
- C.** 1/4-20 x 1/2" thread-forming screw (8)

Note: Additional parts are included in this kit, but are not used when a horizontal ground bus is not present. Refer to Figure 2 for additional parts listing.

Figure 2 Installing a vertical grounding strap in a section with no horizontal ground bus



Parts List:

- A.** Vertical grounding strap (1)
- C.** 1/4-20 x 1/2" thread-forming screw (7)
- D.** Grounding cable (1)
- E.** 1/4-20 x 1" hex head screw (1)
- F.** 1/4" flat washer (1)
- G.** 1/4" lock washer (1)
- H.** 1/4-20 nut (1)

Note: Additional parts are included in this kit, but are not used if a horizontal ground bus is not present. Refer to Figure 1 for additional parts listing.

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