

Sub-Feed Circuit Breaker and Adapter Kit Installation onto an NQ Panelboard



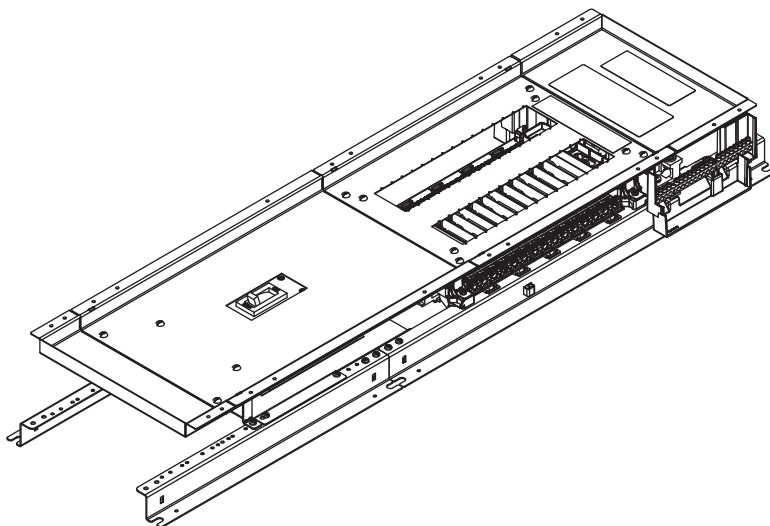
Instalación de un interruptor automático de subalimentación y accesorio de adaptador en un tablero de alumbrado NQ

Installation d'un disjoncteur de sous-alimentation et d'un kit adaptateur dans un panneau de distribution NQ

Instruction Bulletin
Boletín de instrucciones
Directives d'utilisation

80043-730-01

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Conservar para uso futuro.
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Instruction Bulletin

Sub-Feed Circuit Breaker and Adapter Kit Installation onto an NQ Panelboard

Class 1640

Retain for future use.

Introduction

This bulletin contains instructions for installing Square D® brand Q-, H-, and J-frame sub-feed circuit breakers (225 A maximum) and adapter kits onto a Square D brand NQ panelboard manufactured by Schneider Electric.

Safety Precautions

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.

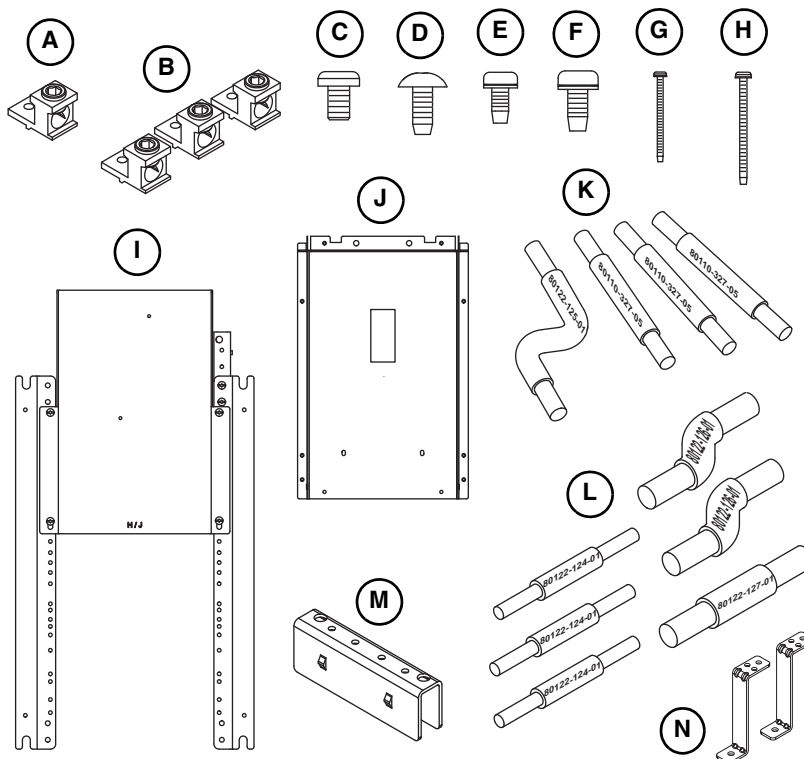
Failure to follow these instructions will result in death or serious injury.

Kit Contents

Q-Frame (NQSFB2Q) or H- and J-Frame (NQSFB2HJ) Sub-Feed Breakers

- A. Neutral lug (1)
- B. Load lugs (3)
- C. 10-32 x 5/16-inch tapping screws (8)
- D. 10-32 x 7/16-inch tapping screws (4)
- E. 1/4-20 x 9/16-inch tapping screw (1)
- F. 1/4-20 x 7/8-inch tapping screws (3)
- G. **NQSFB2Q kit only**—8-32 x 2 1/4-inch tapping screws (2)
- H. 8-32 x 3 1/4-inch tapping screws (2)
- I. Sub-feed circuit breaker mounting pan assembly (1)
- J. Sub-feed circuit breaker deadfront cover (1)
- K. **NQSFB2Q kit only**—Main lug wires (4)
- L. **NQSFB2HJ kit only**—Main lug wires (6)
- M. Rail splice (1)
- N. Deadfront support brackets (2)

NOTE: Screws enlarged to show detail.



Tools Needed

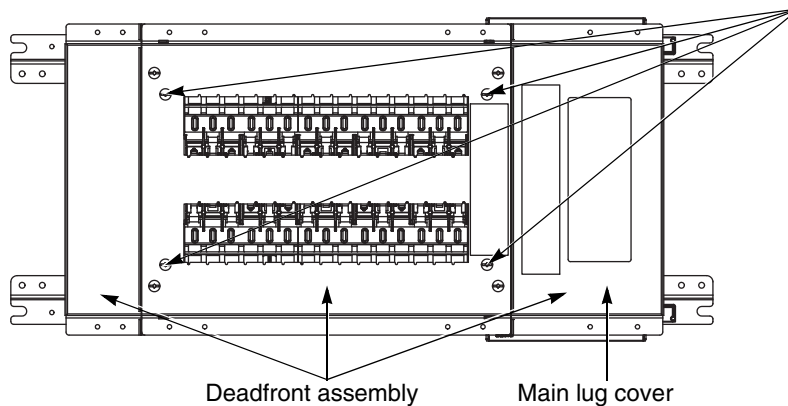


- #2 Square-head Robertson driver
- Torque wrench with 3/8-inch Allen driver
- Torque wrench with 5/32-inch Allen driver



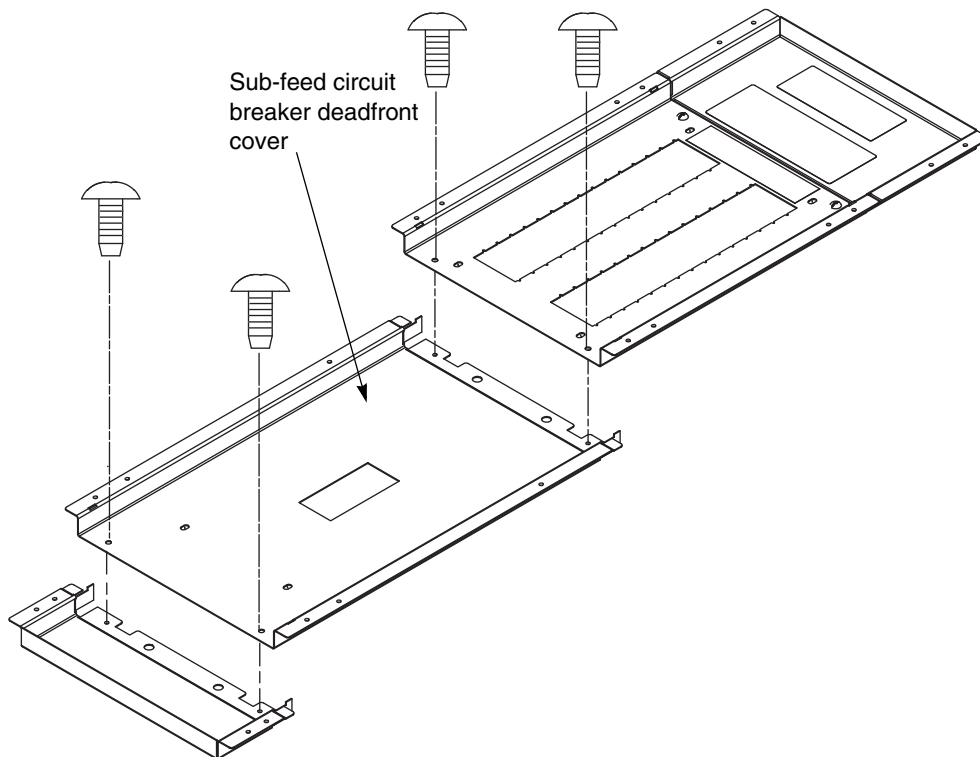
Turn off all power supplying this equipment before working inside the panelboard; follow all lockout/tagout procedures.

Installing the Sub-Feed Circuit Breaker Adapter Kit



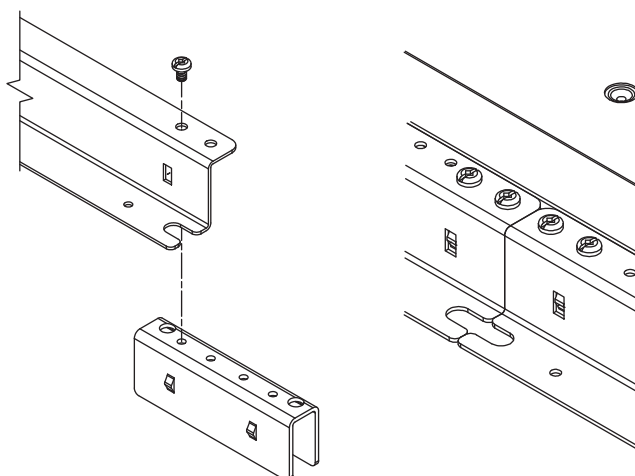
- 1 Remove the deadfront assembly. Retain the four screws for reuse. Separate the cover extension opposite the mains end. Retain all of the screws and the cover extension.

- 2 Attach the sub-feed circuit breaker deadfront cover to the panelboard deadfront section using the two 10-32 x 7/16-inch tapping screws included in the kit.



- 3 Attach the cover extension from step 1 to the sub-feed circuit breaker deadfront cover using two 10-32 x 7/16-inch screws from step 1.

- 4** Install the rail splice underneath the right rail of the panelboard (opposite the mains end) with one 10-32 x 5/16-inch tapping screw included in the kit. Tighten the screw slightly.



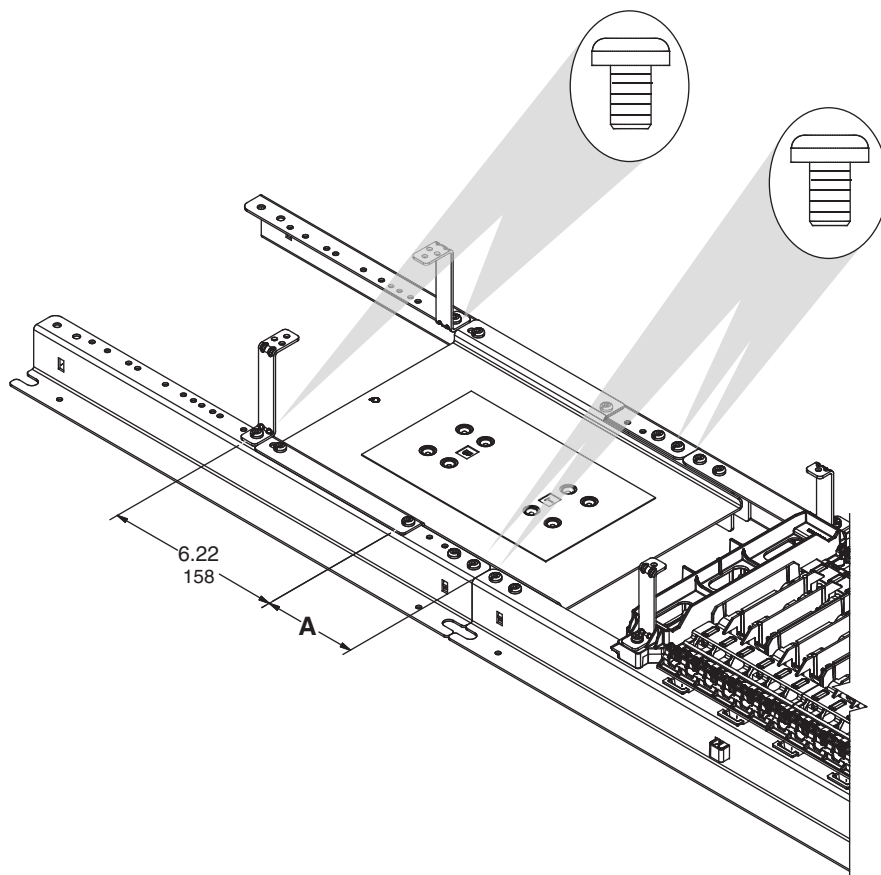
- 5** Place the mounting pan assembly (which includes two rail extensions and one rail splice) onto the panelboard and slide it until the end rail extension mates with the existing rail. Ensure that the splice alignment nubs match with the slots of the rails and attach it using five 10-32 x 5/16-inch tapping screws included in the kit. Tighten all the screws, including the screw from step 4.

NOTE: The mounting pan assembly is pre-assembled in the 42-circuit position, which is 1.76 in. (44.70 mm) for Dimension A in the graphic below. For positions other than 42 circuit, see the graphic and Table 1 below.

Table 1: Mounting Pan Position on Extension Rails

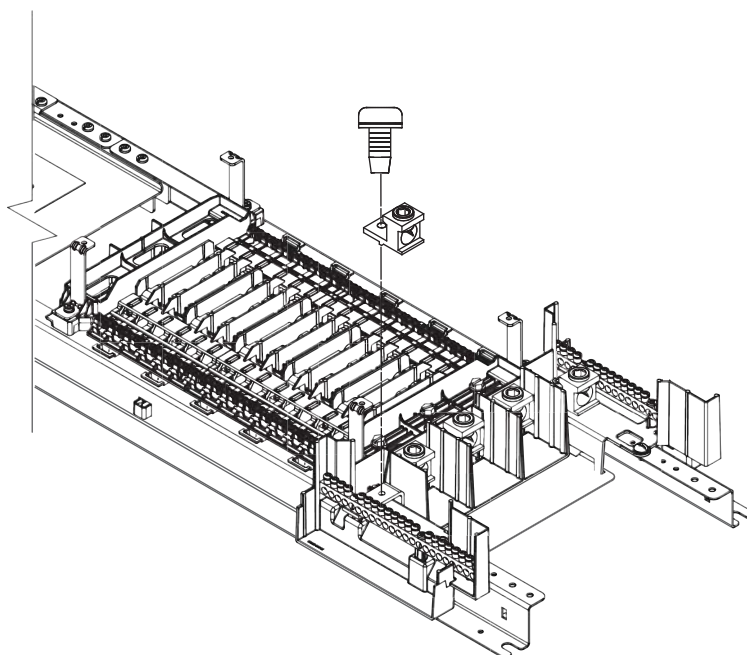
Circuits	Dimension A
30	3.26 inches (83 mm)
54	6.26 inches (159 mm)
72	7.01 inches (178 mm)
84	5.51 inches (140 mm)

- 6** Attach the two deadfront support brackets (with the top of the brackets pointing to each other) using two 10-32 x 5/16-inch tapping screws included in the kit.



NOTE: For step 7 and step 8, do not overtighten the screws.

- 7** Install the neutral lug included in the kit onto the neutral bar using one 1/4-20 x 9/16-inch screw included in the kit. Tighten to 25–30 lb-in (2.8–3.4).



Connecting the Sub-Feed Circuit Breaker to Panelboard Bus Structure

- 8 Using the 1/4-20 x 7/8-inch screws included in the kit, install the load lugs included in the kit onto the ends of the panel bus bars opposite the mains end (in the center holes). Tighten to 25–30 lb-in (2.8–3.4).

NOTE: Example shown is for bottom-feed applications.

- 9 Insert the wires loosely into the circuit breaker lugs according to the sub-feed breaker frame as shown in Table 2 and the graphics on page 6.

NOTE: For **bottom-feed applications**, mount the main circuit breaker on the holes marked with “B” on the mounting pan. For **top-feed applications**, mount the main circuit breaker on the holes marked with “T” on the mounting pan. The circuit breaker should be installed so that the “ON” end will always be positioned toward the top of the panelboard.

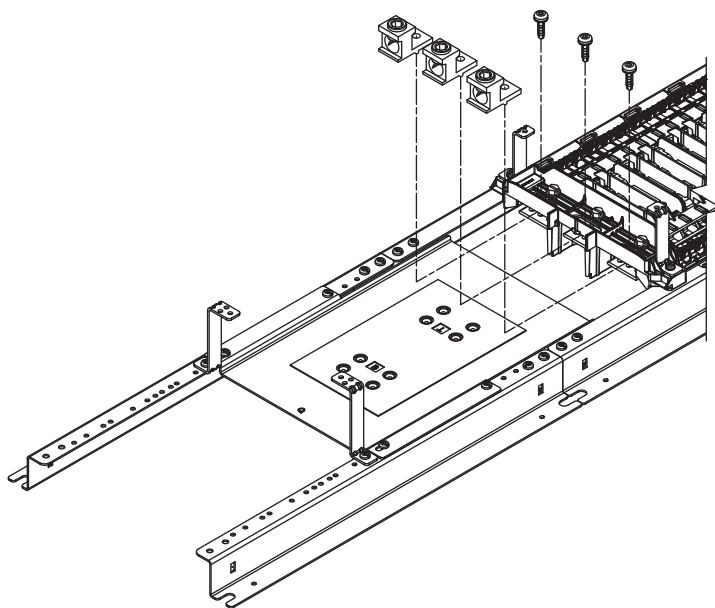


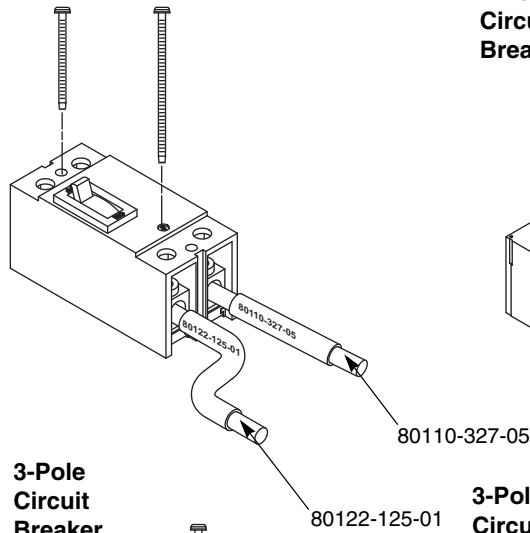
Table 2: Lug Wires

Breaker Frame ¹	Phase	Wire Size	Wire
Q	Single	4/0	1 formed wire (80122-125-01) and 1 straight wire (80110-327-05)
	Three	4/0	3 straight wires (80110-327-05)
J	Single	4/0	2 formed wires (80122-126-01)
	Three	4/0	2 formed wires (80122-126-01) and 1 straight wire (80122-127-01)
H	Single	1/0	2 straight wires (80122-124-01)
	Three	1/0	3 straight wires (80122-124-01)

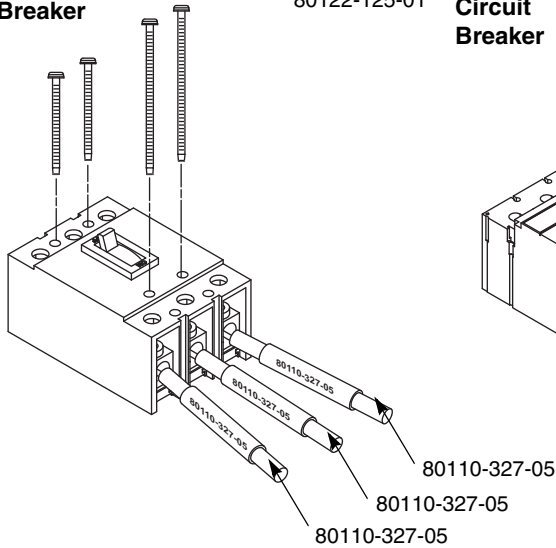
¹ Appears as the first letter of the catalog number.

Q-Frame Breakers

2-Pole Circuit Breaker

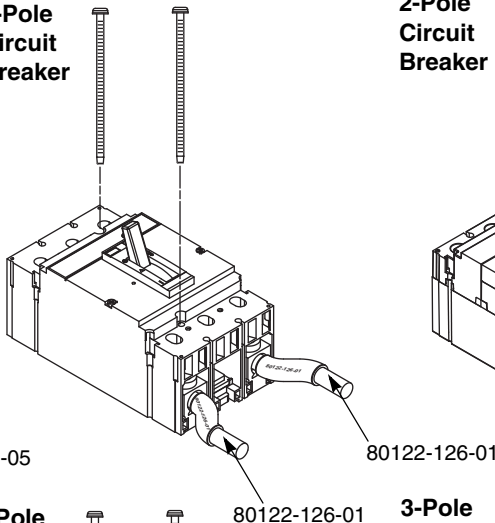


3-Pole Circuit Breaker

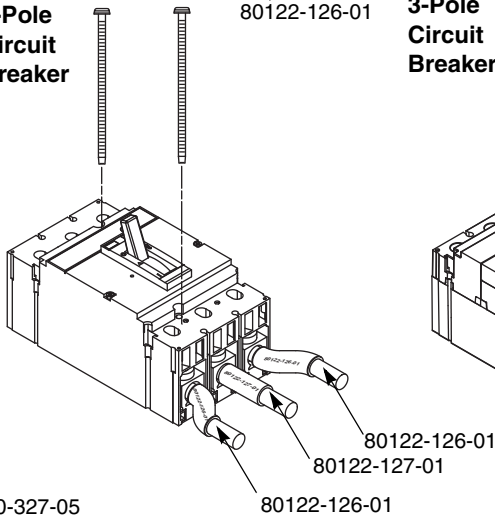


J-Frame Breakers

2-Pole Circuit Breaker

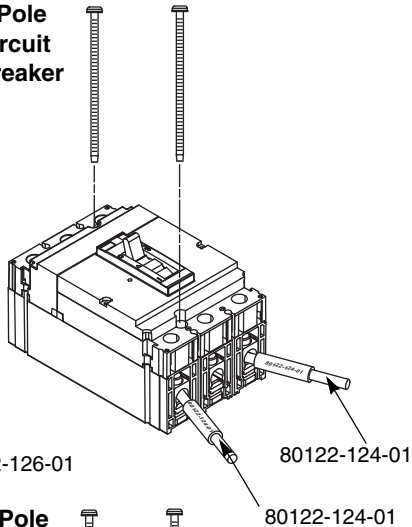


3-Pole Circuit Breaker

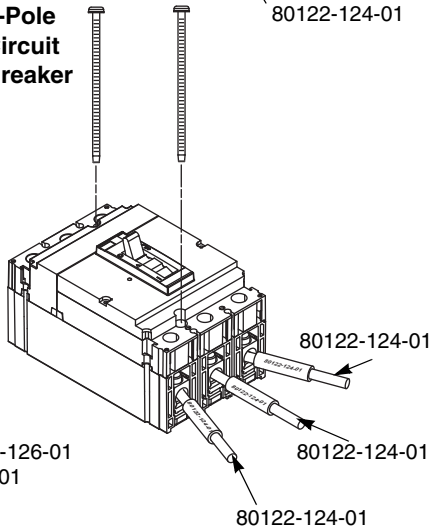


H-Frame Breakers

2-Pole Circuit Breaker



3-Pole Circuit Breaker



10 Discard the unused wires.

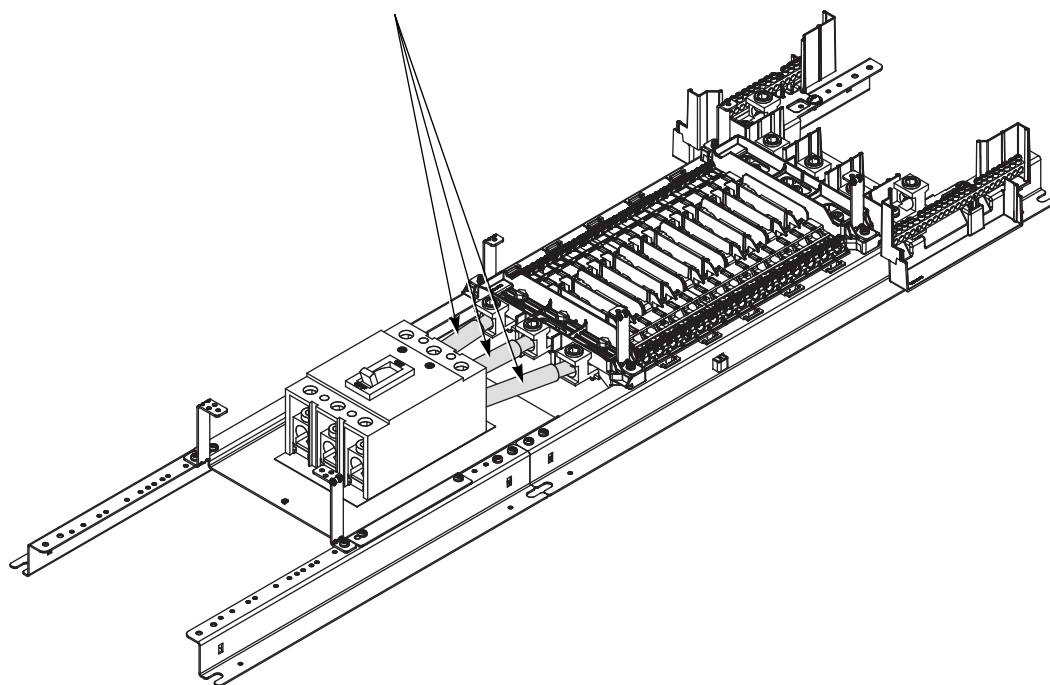
11 NOTE: Discard the screws supplied with the breaker.

Install the circuit breaker on the mounting pan using the screws included in the kit as follows:

- Q-frame: 8-32 x 3 1/4-inch and 8-32 x 2 1/4-inch tapping screws
- H- or J-frame: 8-32 x 3 1/4-inch tapping screws

Discard the hardware supplied with the breaker.

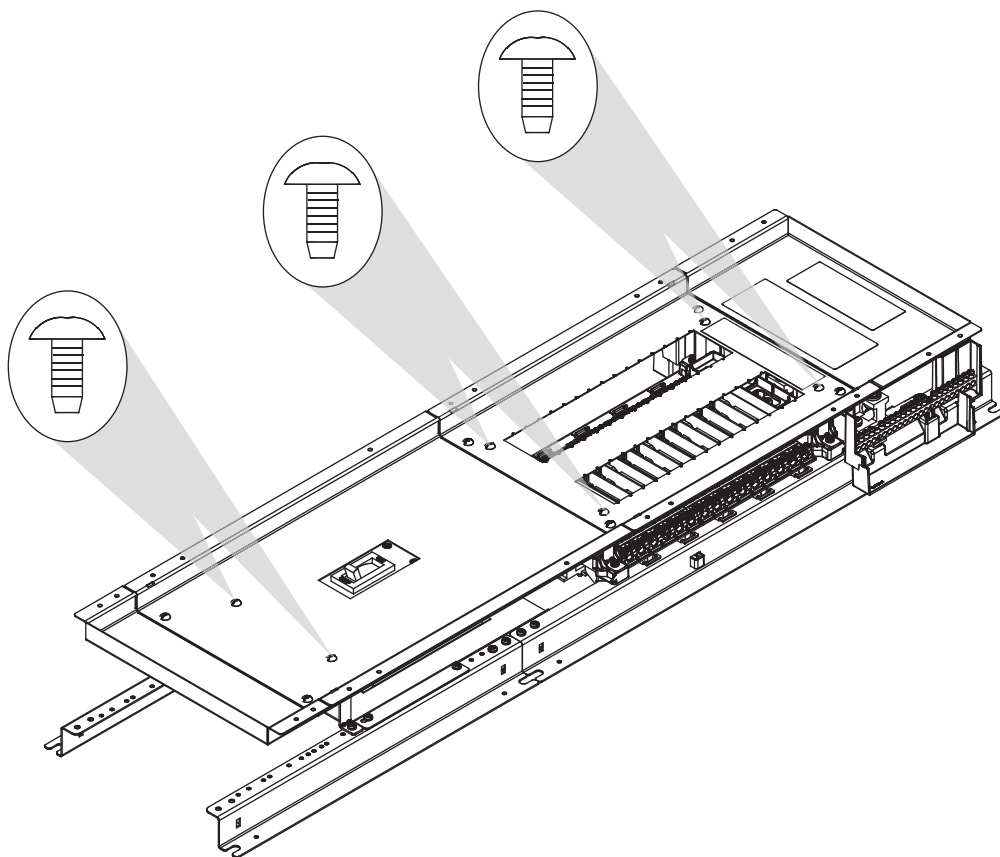
12 Verify that the wire connectors are properly inserted into the lugs on the panelboard and the circuit breaker lugs.



13 Tighten the panel lug wire binding screws to 275 lb-in (31 N•m).

14 Refer to the circuit breaker label for the appropriate lug torque value.

- 15** Remount the deadfront assembly using the screws retained from step 1 and two additional 10-32 x 7/16-inch screws included in the kit.



For technical support on the installation of this kit, contact the Square D/Schneider Electric Customer Information Center at 1-888-SquareD (1-888-778-2733).

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