



## Spectra Series™ Power Panelboards

### Circuit Breakers and Modules



**WARNING:** Danger of electrical shock or injury. Turn OFF power ahead of the panelboard or switchboard before working inside the equipment or removing any component. Do not remove circuit protective devices or any other component until the power is turned OFF.

### General

These instructions apply to the following catalog numbers:

- Circuit breaker modules AMC3KM and AMC2KM
- Circuit breaker frames TKM, THKM, TK4V, TKL4V, SKHA, SKLA, and SKPA

### Installation

- 1. Phase balancing for two-pole devices in three-phase systems.** To balance the panelboard load, remove the screws on the appropriate bus clip, reposition the bus clip as shown in Figure 1, then install and tighten the screws to 27–32 in-lb.

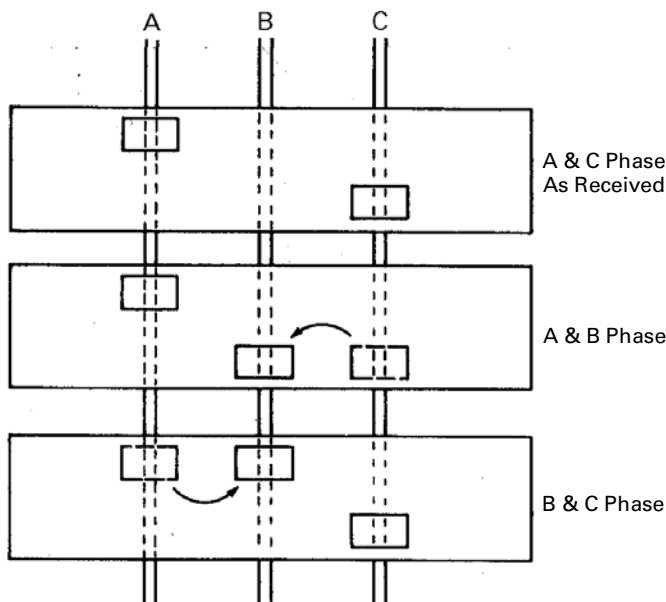


Figure 1. Repositioning the bus clip to balance the load.

- 2. Prepare the breaker module.** Loosen the latch lock screws and fully retract the rail latches. Line up the guide fingers on both ends of the module with the notches in the panelboard interior rails, as shown in Figure 2.

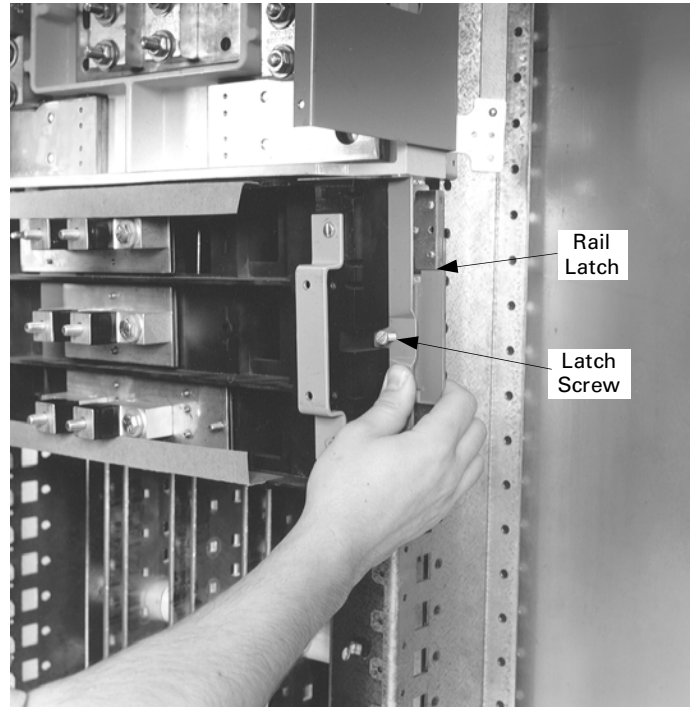


Figure 2. Preparing the circuit breaker module for installation.

- 3. Install the module.** Latch one side of the circuit breaker module. Release the rail latch. Pivot the module onto the bus bars and engage the second latch. Release the rail latch. Tighten the rail latch screws to 25 in-lb as shown in Figure 3. Allow no space between units except as noted for type SKPA circuit breakers in the Caution below.



**CAUTION:** When a type SKPA circuit breaker is to be mounted on a module adjacent to an ADS switch, leave a 1X (1<sup>3</sup>/<sub>8</sub>" ) space between the units. Use an APP1W panel filler plate to close the opening.



Figure 3. Installing the circuit breaker module.

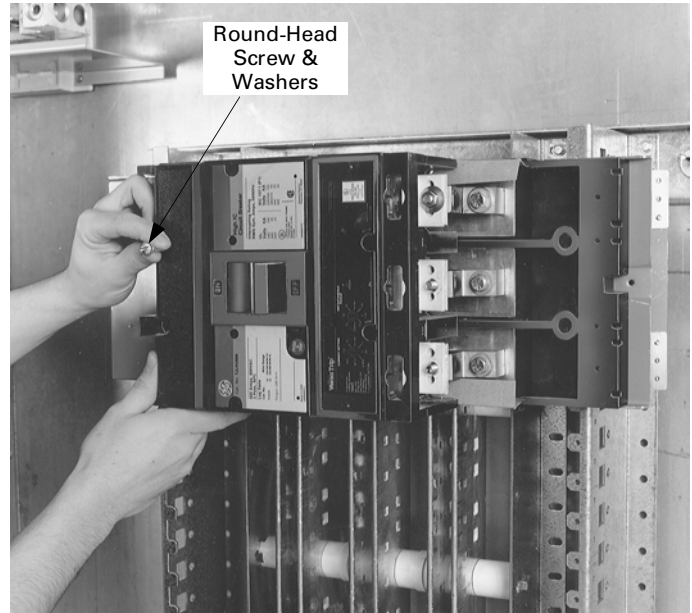


Figure 4. Attaching the circuit breaker to the module.

**4. Install the circuit breaker on the module.**

- a. **TKM and THKM circuit breakers used as main devices (lugs only on the ON side of the breaker).** Place the OFF side of the circuit breaker over the stud posts, as shown in Figure 4. Fasten the breaker to the module with the round-head screws, small lock washers, and flat washers provided. Place the contact blocks on the stud posts. Place spacer sleeves onto the contact blocks and secure each with a hex nut, small flat washer, and large lock washer. Secure the straps to the contact blocks with hex-head bolts, large flat washers, and large lock washers, as shown in Figure 5. Tighten the screws to 35–50 in-lb and the nuts and bolts to 200–250 in-lb.

Secure the barrier to the module base in front of these connections with #10 self-tapping screws, as shown in Figure 8. Tighten the screws to 25 in-lb.

- b. **TKL4V and TK4V circuit breakers used as main devices (lugs only on the ON side of the breaker).** Place the OFF side of the circuit breaker over the stud posts, as shown in Figure 4. Fasten the breaker to the module with the round-head screws, small lock washers, and flat washers provided. Place the contact blocks on the stud posts and secure with hex nuts, small flat washers, and large lock washers. Secure the straps to the contact blocks with hex-head bolts, large flat washers, and large lock washers, as shown in Figure 6. Tighten the screws to 35–50 in-lb and the nuts and bolts to 200–250 in-lb.

Secure the barrier to the module base in front of these connections with #10 self-tapping screws, as shown in Figure 8. Tighten the screws to 25 in-lb.

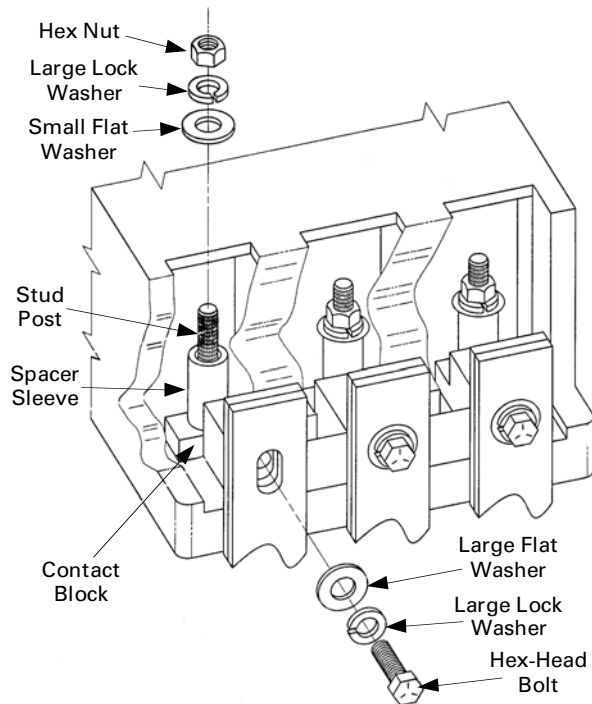


Figure 5. Securing the contact block to the studs and straps.

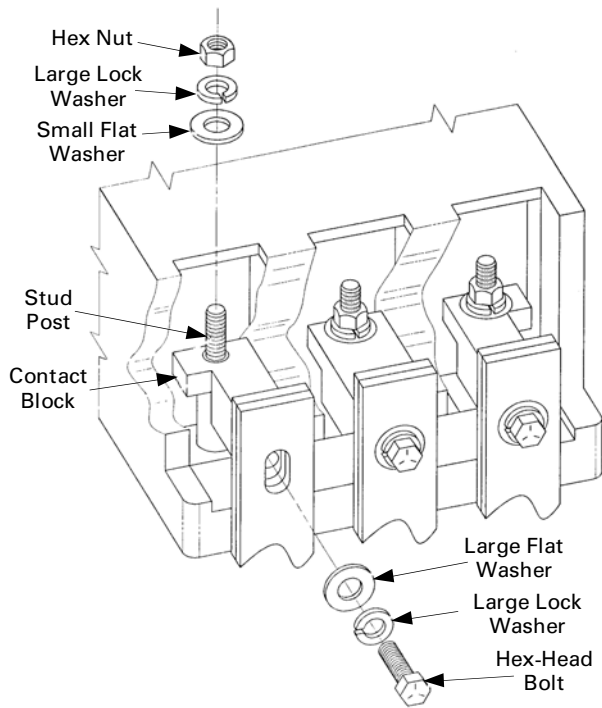


Figure 6. Securing the contact block to the studs and straps.

- c. **SKHA, SKLA, and SKPA circuit breakers used as main devices (lugs only on the ON side of the breaker).** Place the contact blocks [8] on the OFF side of the circuit breaker terminal pads and then place the OFF side of the breaker over the stud posts, as shown in Figure 4. Fasten the breaker to the module with the round-head screws, small lock washers, and flat washers provided. Secure the contact blocks with hex nuts, small flat washers, and large lock washers. Secure the straps to the contact blocks with hex-head bolts, large flat washers, and large lock washers, as shown in Figure 6. Tighten the screws to 35–50 in-lb and the nuts and bolts to 200–250 in-lb.

Secure the barrier to the module base in front of these connections with #10 thread-cutting screws, as shown in Figure 8. Tighten the screws to 25 in-lb.

- d. **All circuit breaker types except SKPA used as branch devices (lugs only on the OFF side of the breaker).** Place the ON side of the circuit breaker over the stud posts. Fasten the breaker to the module with the round-head screws, small lock washers, and flat washers provided, as shown in Figure 4. Place the contact blocks on the stud posts. Place spacer sleeves onto the contact block and secure each with a hex nut, small flat washer, and large lock washer. Secure the straps to the contact blocks with hex-head bolts, large flat washers, and large lock washers, as shown in Figure 5. Tighten the screws to 35–50 in-lb and the nuts and bolts to 200–250 in-lb.
- e. **SKPA circuit breakers (only) used as branch devices (lugs only on the OFF side of the breaker).** Place the ON side of the circuit breaker over the stud posts. Fasten the breaker to the module with the round-head screws, small lock washers, and flat washers provided, as shown in Figure 4. Remove the knockouts from the bottom lug cover, place the lug

cover over the straps, as shown in Figure 7, and fasten according to the circuit breaker instruction GEH-5592. Place the contact blocks on the stud posts. Place spacer sleeves onto the contact blocks and secure each with a hex nut, small flat washer, and large lock washer. Secure the straps to the contact blocks with hex-head bolts, large flat washers, and large lock washers, as shown in Figure 7. Tighten the screws to 35–50 in-lb and the nuts and bolts to 200–250 in-lb.

Install the large top cover according to the circuit breaker instruction GEH-5592.

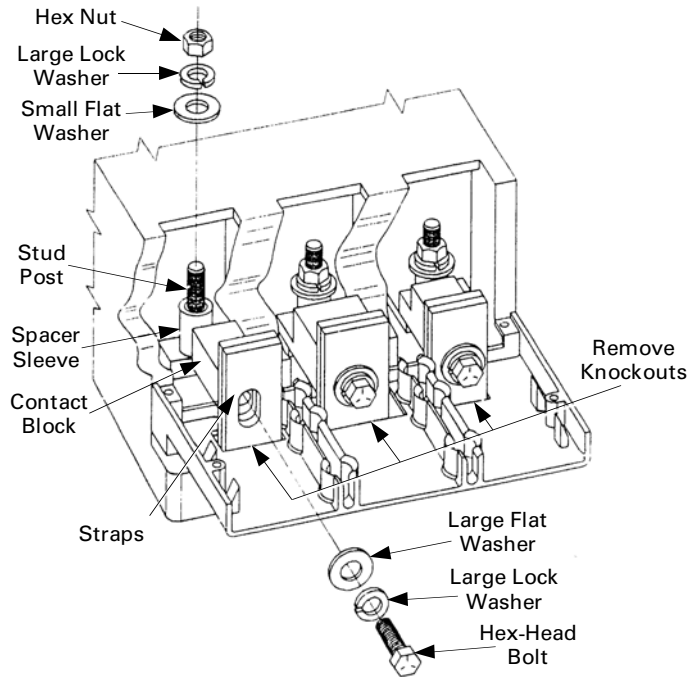


Figure 7. Securing the contact block to the studs and straps for an SKPA breaker used as a branch device.

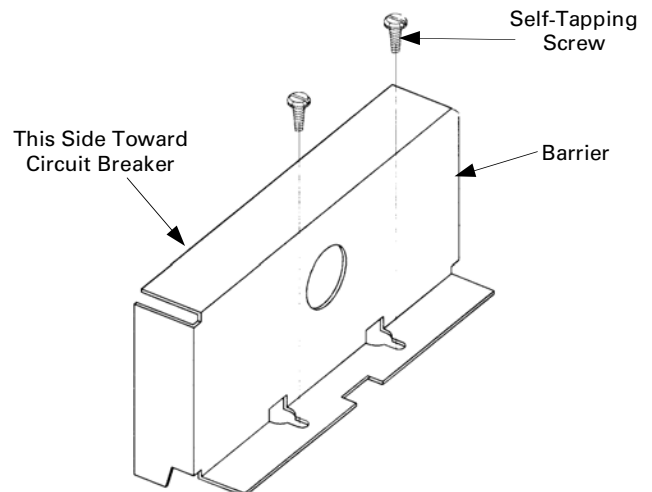


Figure 8. Attaching the barrier to the module base.

- 5. Wire the circuits.** Refer to the label on the circuit breaker for the proper tightening torque.
- 6. Filler plate kits.** Install filler plate kit AFP6SKS for AMCSKM and AMC2KM modules.

## ***Attention – Procedure for Aluminum Terminations***

1. Strip the insulation, being careful to not nick the wire.
2. Clean the wire strands with a wire brush.
3. Thoroughly coat the stripped conductor with a suitable antioxidant compound, such as ALNOX or PENETROX A13.
4. Insert the conductor and tighten the connector screw to the torque indicated on the rating label.

These instructions do not cover all details or variations in equipment nor do they provide for every possible contingency that may be met in connection with installation, operation, or maintenance. Should further information be desired or should particular problems arise that are not covered sufficiently for the purchaser's purposes, the matter should be referred to the GE Company.



***GE Industrial Systems***