Spectra Series™ Power Panelboards

Bolt-On Circuit Breaker Kits

Application

These instructions apply to bolt-on circuit breaker kits with catalog numbers AMCB6EY and AMCB4EY.

For use with circuit breaker type TEY.

For use with circuit breaker cover kit AFP3EYD.

Installation

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. Equipment is to be installed and maintained by properly trained and qualified personnel only.

In the following instructions, numbers in brackets in the text and figures refer to the items in Table 1.

1. **Confirm the contents of the kit.** These kits are used to install TEY circuit breakers into Spectra APNB bolt-on–style interiors. The parts included in these kits are listed in Table 1.

Item	Description	Qty. in AMCB4EY	Qty. in AMCB6EY
1	A pole strap assembly	1	1
2	Carriage bolt, 1/4-20 x 1 1/2" Carriage bolt, 1/4-20 x 1" *	2	3
3	Conical spring washer, 1/4"	2	3
4	Nut, 1/4-20	2	3
5	B pole strap assembly	1	1
6	C pole strap assembly	1	1
7	Lower mounting bracket	2	2
8	Thread-forming screw	4	4
9	Upper mounting bracket	2	2
10	Screw with lockwasher, #8-32 x 1/4"	4	4
11	B-phase isolator	1	1
12	Antiturn clips	2	3

* For use with a vertical bus rated at 600 A or less.

Table 1. Parts included in kits AMCB4EY and AMCB6EY.

2. **Locate the side of the interior with a 2.75-inch reference distance.** The circuit breaker straps are mounted on the side of the panel interior bus at which the distance from the nearest vertical bus face to the inner face of the bus-support rail is 2.75 inches, as indicated in Figure 2.

3. **Install the circuit breaker straps.** For three-phase applications (kit AMCB6EY), install the straps beginning with the pole farthest from the 2.75-inch dimension, as shown in Figures 1 and 2. Slide an antiturn clip [12] over the square shank of a carriage bolt [2], then insert the bolt assembly into the A phase bus, with the head opposite the 2.75-inch dimension. Position the square hole of the A pole strap [1] onto the bolt, with the pin of the antiturn bracket inserted into the small hole in the strap. Secure with a conical spring washer [3] and nut [4], leaving the connection finger tight. Repeat the process for the B pole strap [5] and C pole strap [6].

   For single-phase panels, dc applications, and phase-balancing purposes (kit AMCB4EY), Table 2 lists the possible configurations. Align the appropriate strap assemblies [1, 5, 6] with the corresponding holes in the vertical bus, as shown in Figures 1 and 2. Fasten each strap assembly loosely to the vertical bus with a carriage bolt [2], conical washer [3], and nut [4], as described for the three-phase kit. When installing any of the two-pole strap configurations in Table 2, be sure to install the straps in standard phase-rotation order. When installing a two-pole and a three-pole breaker in a double-branch assembly, arrange the straps in the typical three-pole configuration, as shown in Figure 2.

Application	A Phase	B Phase	C Phase
Single pole	X		
		X	
			X
Two pole	X	X	
	X*		X*
		X	X

* Use for single-phase panels and dc applications.

Table 2. Possible pole configurations with kit AMCB4EY.

4. **Install the lower circuit breaker mounting brackets and cover supports.** Attach the lower breaker mounting brackets [7] to the panel side rails with the thread-forming screws [8], as shown in Figure 1. Tighten the screws to 35 in-lb. Slide the cover supports (included in the breaker cover kit), with the mounting tabs oriented inward, onto each bracket until they snap into place, as shown in Figure 1. Use the uppermost slot on the cover support body. Cover supports can be easily removed by inserting a screwdriver blade into the slot on the underside of the mounting bracket assembly and gently prying downward while pushing the support off.

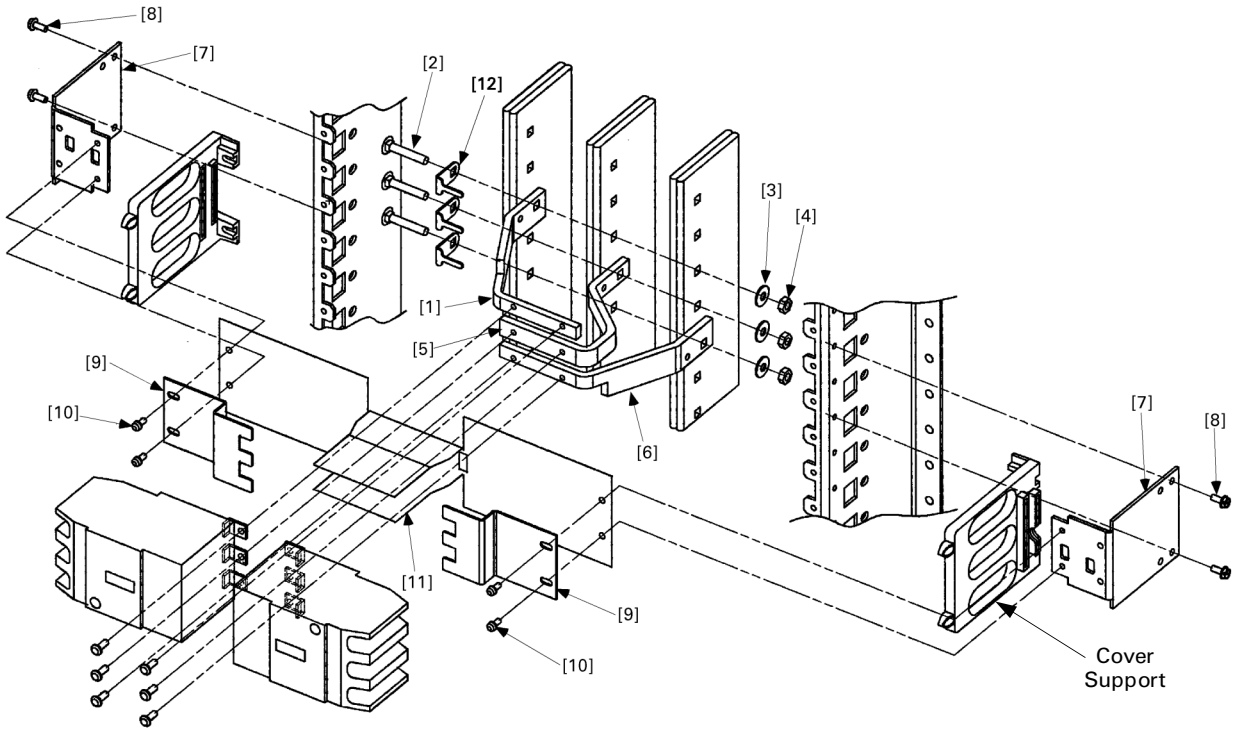

Figure 1. Mounting TEY circuit breakers into Spectra APNB bolt-on interiors.

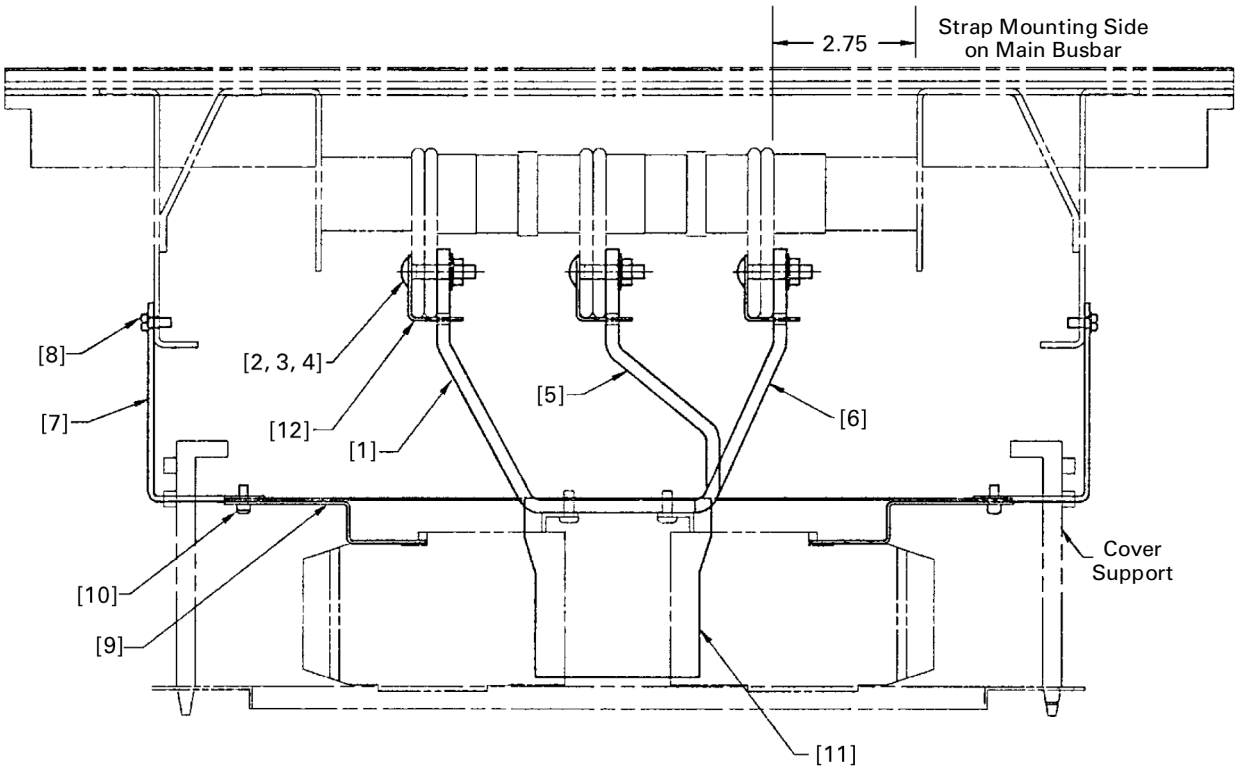

Figure 2. Mounting TEY circuit breakers into Spectra APNB bolt-on interiors, assembly end view.

5. **Install the isolator and upper mounting brackets.** Align the free ends of the B-phase isolator [11] with the corresponding #8 threaded holes on the top face of the lower mounting brackets, as shown in Figure 3. Place the upper mounting brackets [9] on top of the isolator ends and align them with the holes, as shown in Figure 1. Secure the resulting assembly with the #8-32 screws with lockwashers [10], leaving the screws fingertight. Slide the brackets to their outermost positions.
6. **Install the circuit breakers.** Position the breakers so that the line- or ON-side terminals rest on the straps. Fold the isolator flaps upward and insert them into the opposing grooves in the breaker housing between the phases, as shown in Figure 4. Secure the captive screws in the breaker terminals to the corresponding threaded holes in the straps and tighten to 35 in-lb. (The straps may require minor adjustments to obtain proper hole alignment.) For each breaker, slide the upper breaker mounting bracket until the steel flange on the underside of the breaker housing is fully engaged with the toothed section of the bracket, then tighten the bracket mounting screws to 18 in-lb.
7. **Tighten the bolted connections.** Tighten the strap connections at the vertical bus to 65 in-lb. It may be necessary to remove adjacent circuit breaker modules to obtain access to the bolted connections at the vertical bus.

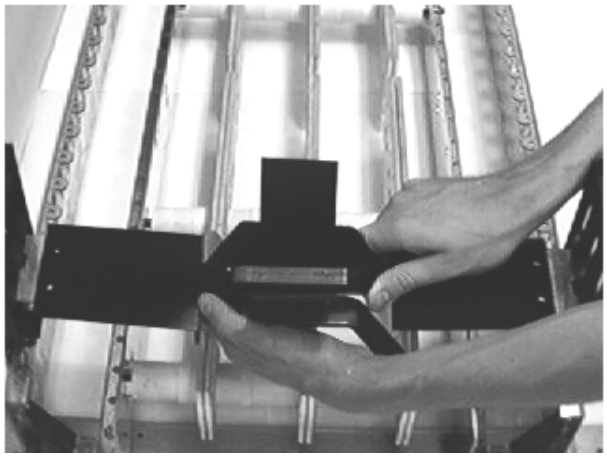

Figure 3. Installing the B-phase isolator.

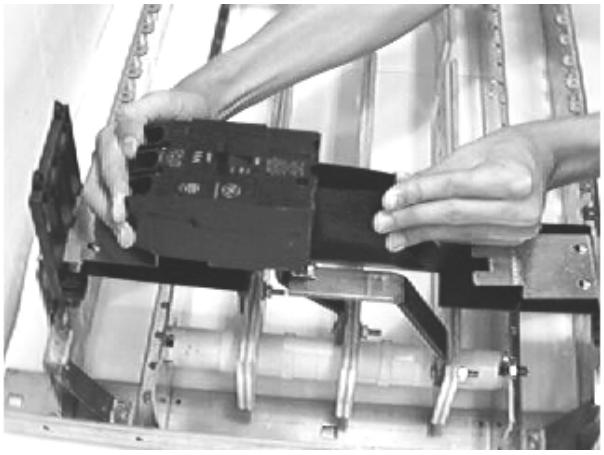

Figure 4. Installing the breaker with the B-phase isolator.

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.

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