

INSTALLATION INSTRUCTIONS

Retrofit of Spectra K-frame with ABB Tmax XT7 breaker Single Mount (Bolt-On kits)

WARNING

Danger of electrical shock or injury. Turn OFF power ahead of the panel board 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.

General




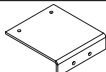



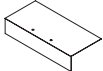
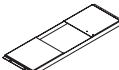

These instructions are applicable to retrofit of Spectra K-frame with ABB Tmax XT7 breaker.

Table 1 lists the parts included in the bolt-on circuit breaker kits for single branch configurations.

Installation

Numbers in brackets in the following instructions and figures refer to the item numbers in table below.

Retrofit Kit

Item	Part	Description	Qty.
1		1/4 - 20 x 1.50" carriage bolt	6
2		1/4 - Belleville Washer	6
3		1/4 - 20 Nut	6
4		Breaker mounting bracket	1
5		Thread-forming screw #10-32	6
6		Flange Nut - Thread size 3/8-16	6
7		Socket Head Screw # 10-32 UNF x 4 IN	2
8		L-Shaped Barrier	1
9		Filler plate	1
10		Busbar Link assembly - C phase	1







Item	Part	Description	Qty.
11		Busbar Link assembly - B phase	1
12		Busbar Link assembly - A phase	1
13		Kit-Foldable Handle, XT7 (for panel application)	1
14		Terminal Cover, XT7 (HTC)	1
15		Spacer mounting bracket right side cable entry	1

Table 1. Retrofit kit

Required Tools

Below listed tools are required for installation

Item	Part	Description
1		Torque wrench

STEP 1

Prepare the breaker, install required lugs and identify the required mounting and termination accessories from circuit breaker kit. Refer to breaker instruction document for more information.

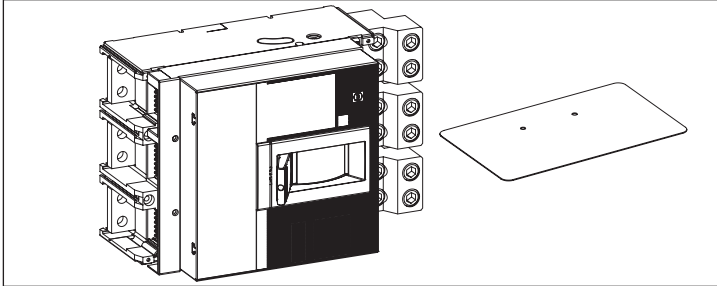


Figure 1. Prepare the breaker

STEP 3

Find the side of the panel interior at which the dimension from the face of nearest vertical bus to the inner face of the bus support rail is 2.75 inches, as illustrated in figure 3a and 3b.

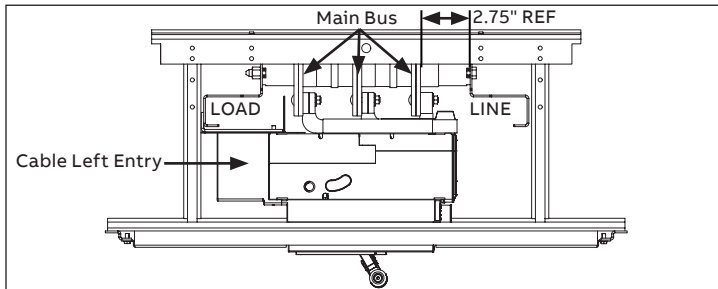


Figure 3a. Single branch, ABB XT7; Left side cable entry Assembly end view

STEP 4

Install the strap assemblies [10,11,12] with the corresponding holes in the vertical bus, as shown in figure 4. Fasten each strap assembly loosely to the vertical bus with two carriage bolts [1], Belleville washers [2] and nuts [3].

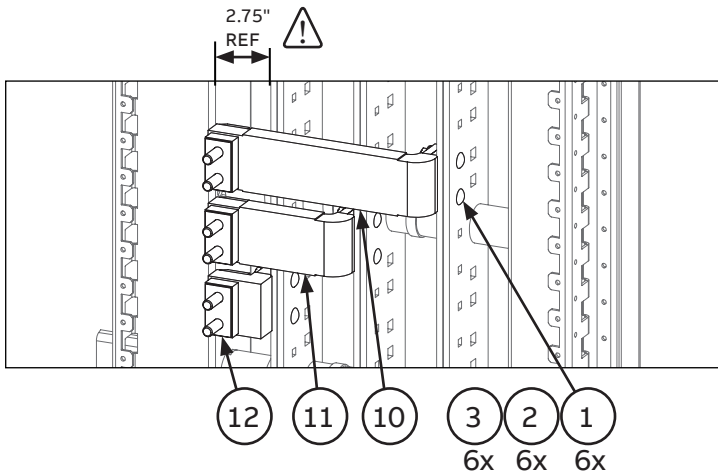


Figure 4. Installation of link assy. A, B & C phase

STEP 2

Remove flat cap and install foldable handle assembly (13) and tighten the screw.

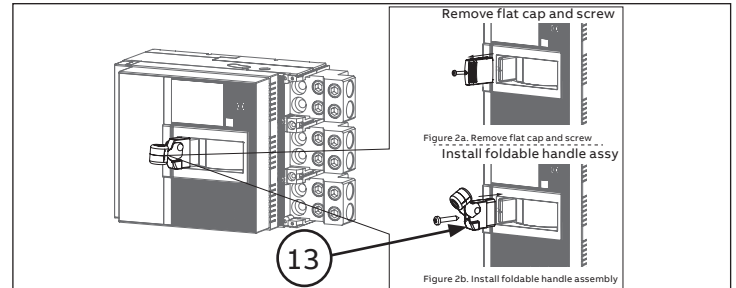


Figure 2. Install foldable handle assembly

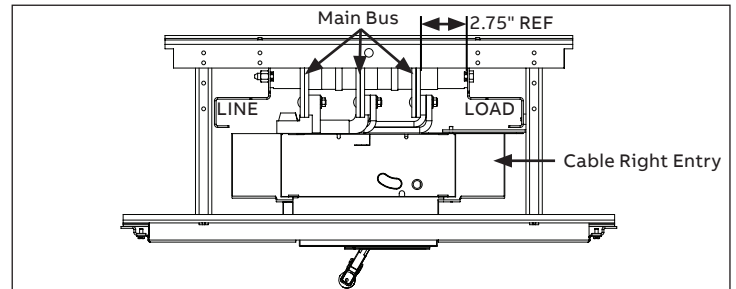


Figure 3b. Single branch, ABB XT7; Right side cable entry Assembly end view

STEP 5

Install the breaker mounting bracket [4] to the panel side rail with thread forming screws [5], torque the screws to 35 lb-in. Refer figure 5a.

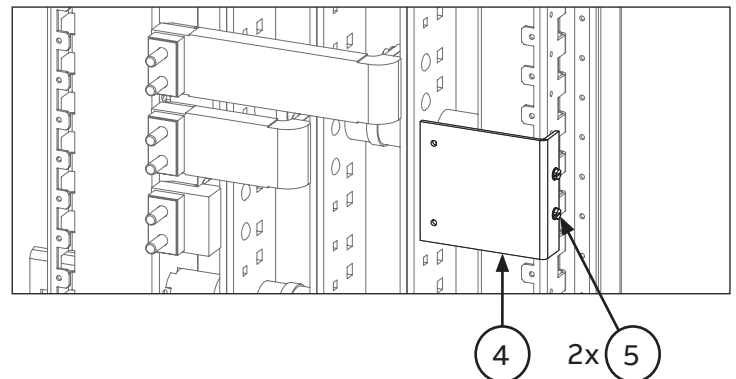


Figure 5a. Installation of mounting bracket, Left side cable entry

STEP 5 Continued

For right side cable entry add spacer (15) with mounting bracket as shown in figure 5b.

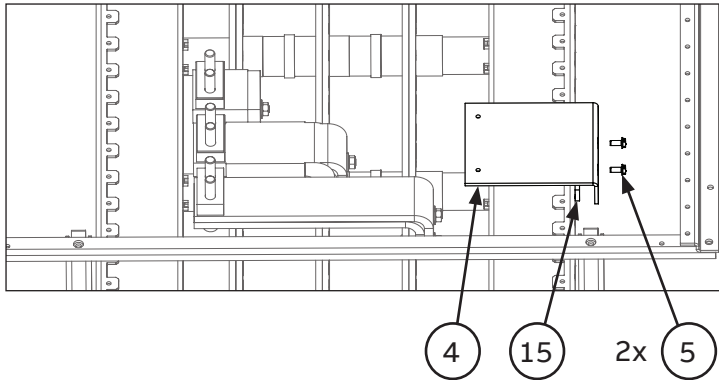


Figure 5b. Installation of mounting bracket Right side cable entry

STEP 7

Install breaker with L-shaped barrier assembly [from STEP 6]. Refer figure 7a. Tighten Socket head screw [7] and flange nut [6], torque the screw [7] to 22 lb-in. Torque the flange Nut [6] to 160 lb-in. Refer figure 7b and 7c.

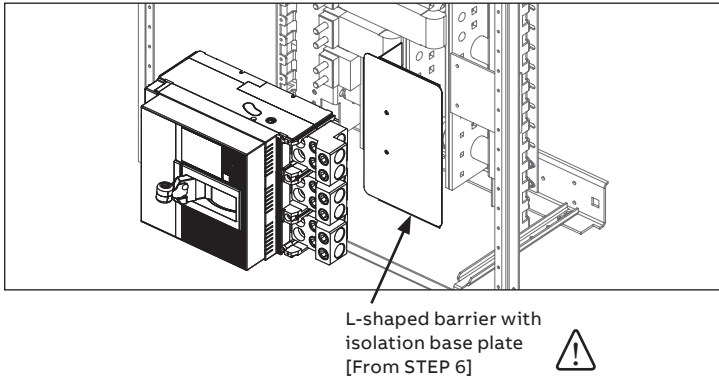


Figure 7a. Installation of breaker and L shaped barrier assembly

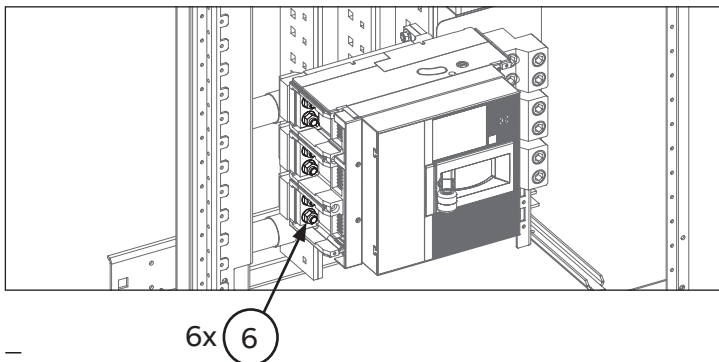
STEP 7 Continued

Figure 7c. Flange nut

STEP 6

Prepare L-shaped barrier assembly. Fold L shaped barrier (8) as shown in figure 6 and fix the breaker isolation base plate (supplied with breaker kit) to the adhesive surface of L shape barrier (8) as shown in figure 6.

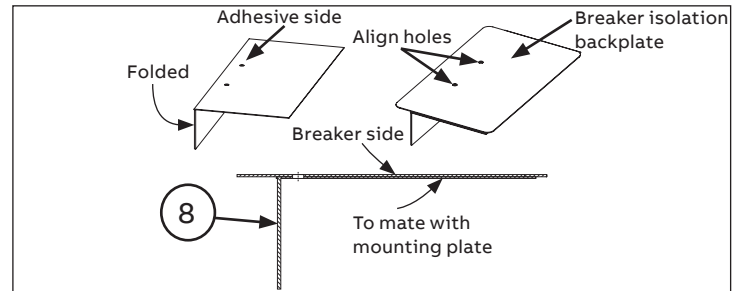


Figure 6. Prepare L-shaped barrier assembly

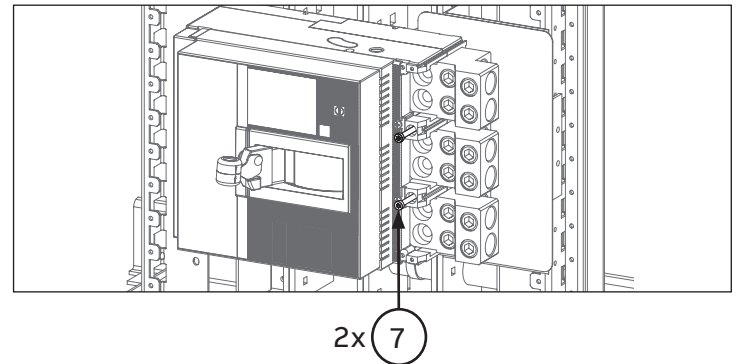
STEP 7 Continued

Figure 7b. Socket head screw

STEP 8

Tighten all the three bolted strap connections (carriage bolt assembly) at the vertical bus to 65 lb-in. It may be necessary to remove adjacent circuit breaker modules to allow access to the bolted connections at the vertical bus.

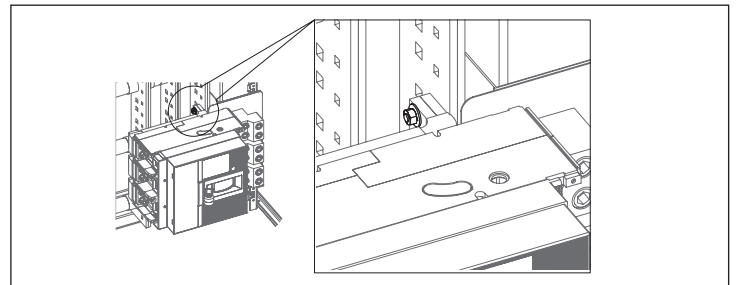


Figure 8. Tighten the bolted strap connections

STEP 9

Install terminal cover (14) in the load side and secure with 2x supplied screws as shown in figure 9.

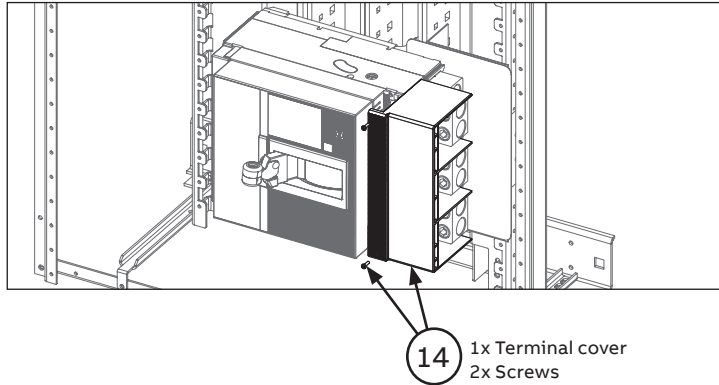


Figure 9. Install terminal cover

STEP 10

Install the filler plate [9] to panel with thread forming screw [5], torque the screw to 35 lb-in. Refer figure 10.

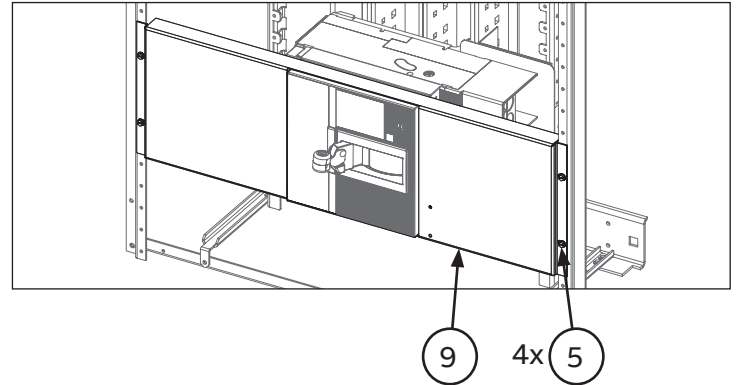


Figure 10. Install filler plate

STEP 11: Optional - Kirk lock mounting kit assembly

Pre-assemble Kirk lock mounting kit assembly as shown in figure 11a.

Note: Kirk-lock is not included in the kit. Re-use Kirk lock from panel.

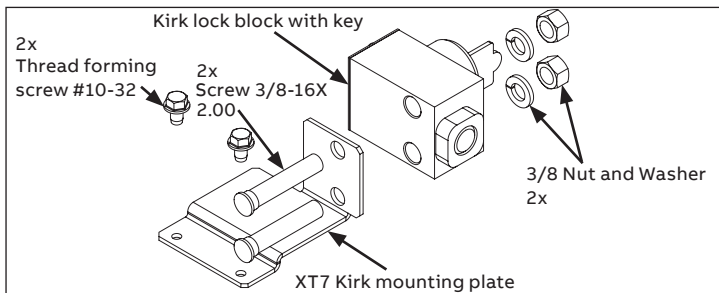


Figure 11a. Kirk lock mounting kit assembly

STEP 11 Continued

Install the kirk lock to the mounting plate 3/8 screw (2x), washer (2x) and nut (2x) as shown in figure 11b. The assembled kirk lock set to the installed on the panel XT7 filler plate with Thread forming screw (2x) as shown in orientation in figure 11b.

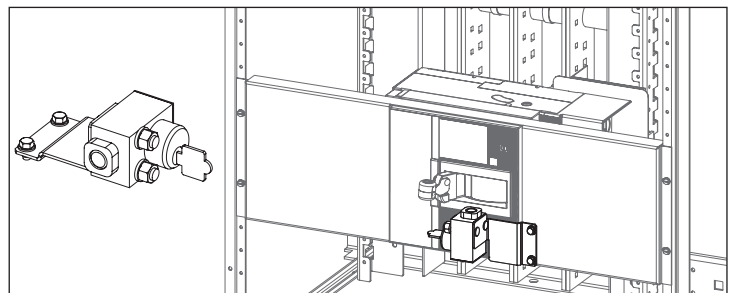


Figure 11b. Install the kirk lock

Disclaimer : 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 ABB Company.

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