



XT5 Service Barrier Installation Instruction Guide

Suitable for the Lug Range: 2/0 AWG-500MCM

Introduction

This Installation Guide should be used when installing service entrance barrier kit for XT5 Breaker having cable range capacity 2/0 AWG-500MCM.

These barriers are required when the breaker is used as a single service entrance main device inside a lighting panel in compliance with UL67/2018, Clause 6.4. Barrier installation is required on the line side of the main device prior to energizing in forward or reverse feed applications, ensuring isolation from live parts on the line side when the main breaker is turned off.

If a lug barrier is removed from a circuit breaker for maintenance while the incoming line is shut off, it must be reinstalled prior to reenergizing in order to maintain isolation.

Contents per Installation Kit

XT5P3SB1 – XT5-3P Lug Service Barrier Kit

Description	Qty.
XT5 Finger Safe Barrier	3
Barrier Plug	3
Barrier Flap	3

Installation

A service entrance panelboard with XT5 as a main circuit breaker will require three lug barriers. Use one of each part per pole.

Figure 1 depicts the Lug Barrier included in the kit.

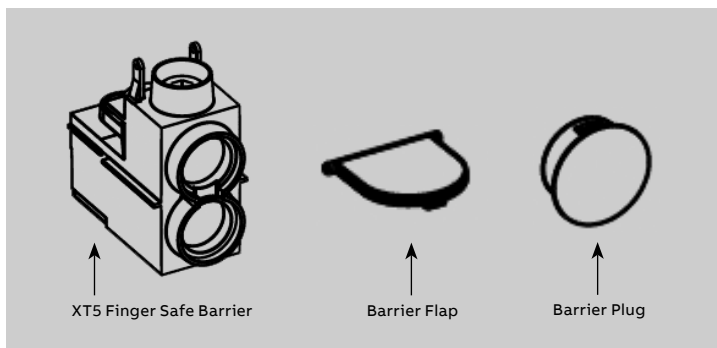


Figure 1: XT5 Kit Components



NOTICE: These instructions do not purport to cover all details or variations in equipment or to provide for every possible contingency to be met in connection with the installation, operation or maintenance. Should further information be desired, or should particular problems arise which are not covered sufficiently for the purposes, the matter should be referred to ABB. These instructions are intended for use by qualified and trained personnel only.

Hazard Classifications

The following important highlighted information appears throughout this document to warn of potential hazards or to call attention to information that clarifies a procedure.

Carefully read all instructions and become familiar with the devices before trying to install, operate, service or maintain this equipment.



DANGER: Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING: Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



CAUTION: Indicates that if the hazard is not avoided could result in minor or moderate injury.



NOTICE: Is used to notify of practices not related to personal injury.



DANGER: Electrical arc flash hazard. Personal protection equipment required. Turn off power to the equipment before working inside.

Kit Installation Steps

To install Finger Safe Barrier follow steps provided under this installation procedure.

This Finger Safe Barrier must be installed prior to the wire connection to the circuit breaker.

- Item A Terminal Cover Screw
- Item B Terminal Cover
- Item C Lug Top Screw (M10 Socket Head, ●)
- Item D Lug
- Item E Finger Safe Barrier
- Item F Wire Plug
- Item G Lug assembled with Finger Safe Barrier

- Step 1: Remove Item A and Item B
- Step 2: Un-tight Item C
- Step 3: Remove Item D
- Step 4: Assemble Item E on Item D
- Step 5: Assemble Item C and F to form sub assembly Item G
- Step 6: Assemble Item G
- Step 7: Tighten Item C by torque value 319 lb-in as shown in Figure 8
- Step 8: Assemble Item B using Item A with two fingers tight

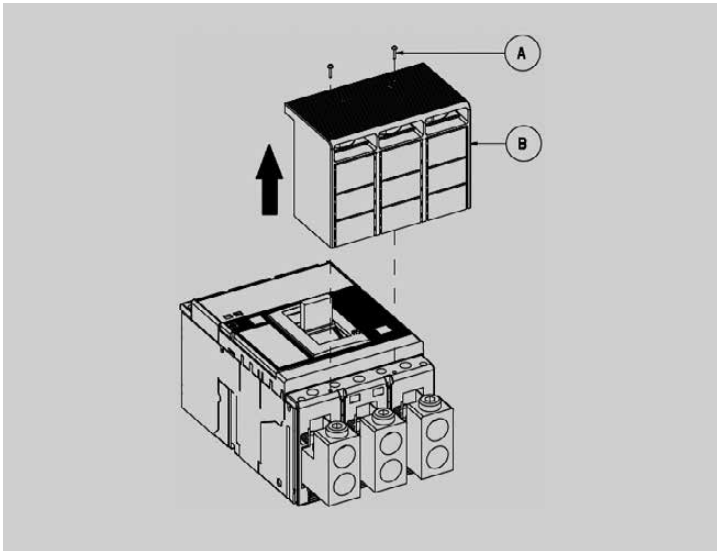


Figure 2: Remove the Item A and B from Circuit Breaker

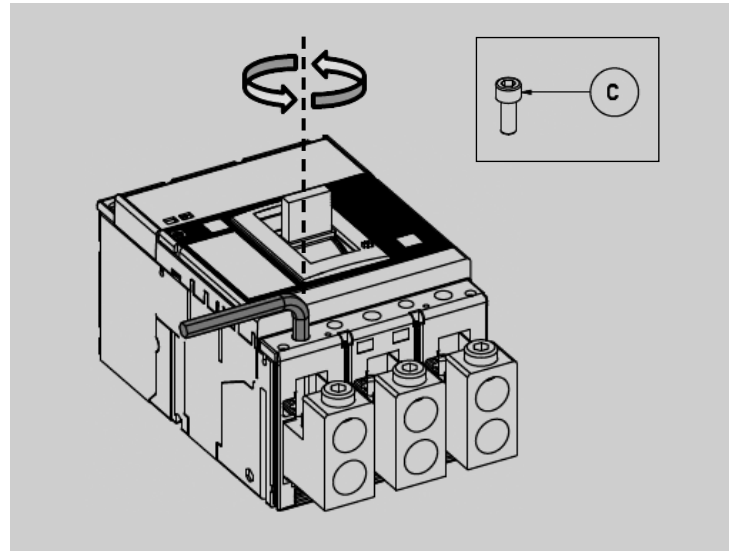


Figure 3: Remove the Item C on Lug Item D

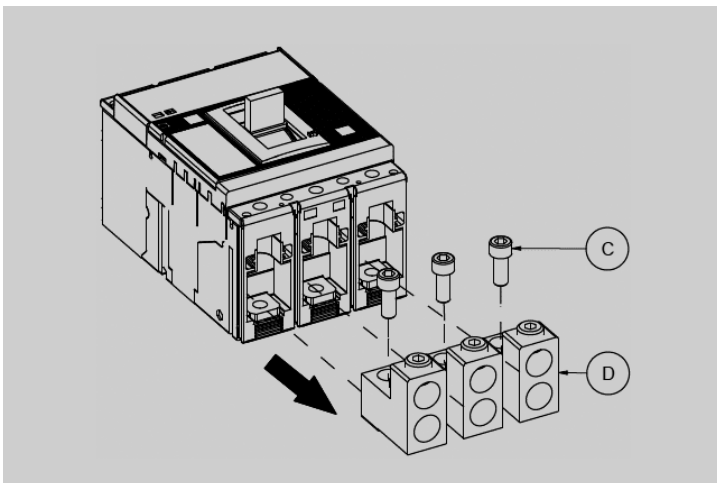


Figure 4: Remove the Item D from Terminal Slot

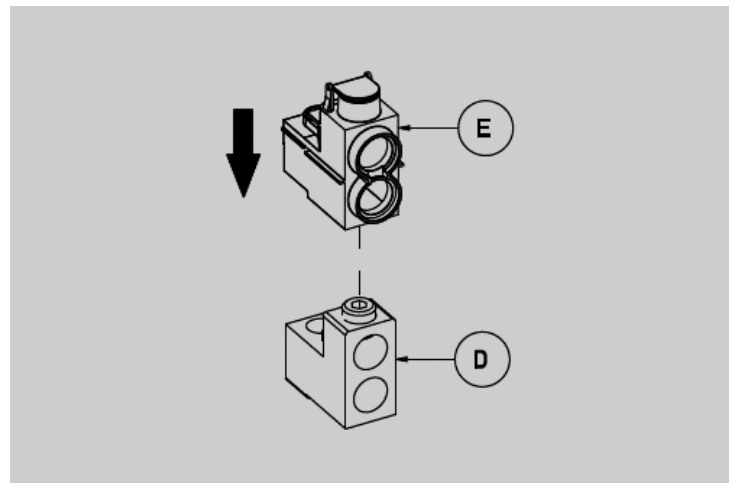


Figure 5: Assemble the Item E on Item D

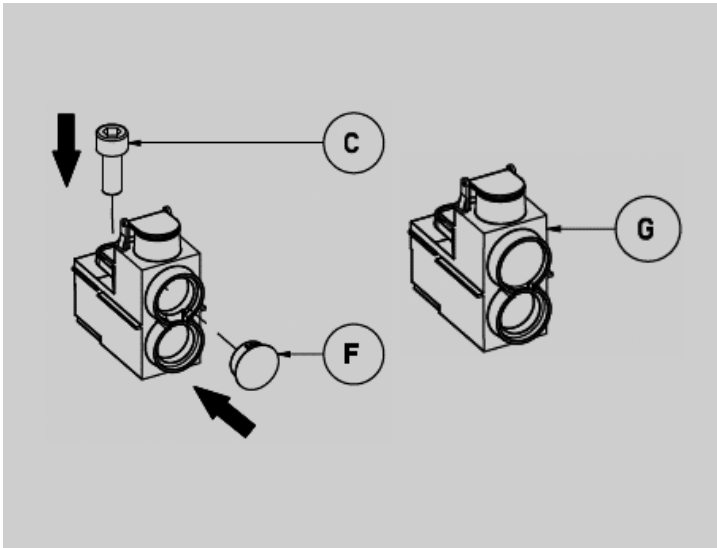


Figure 6: Assemble the Item C and F

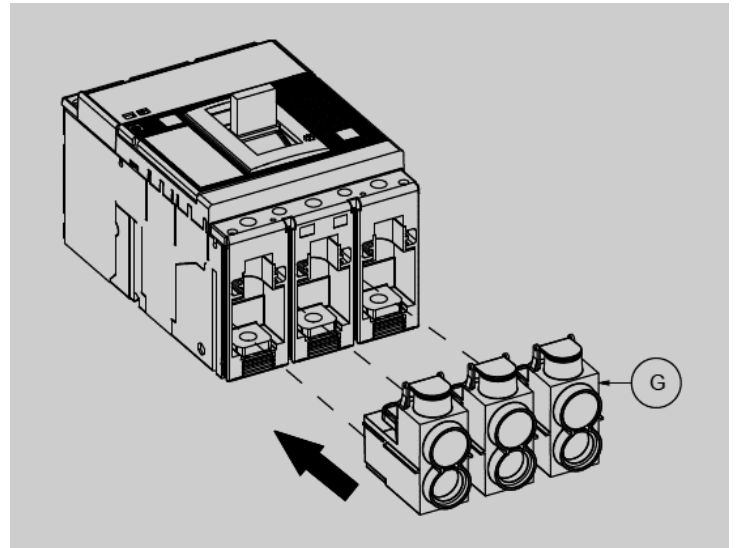


Figure 7: Assemble the Item G on Terminal Slot

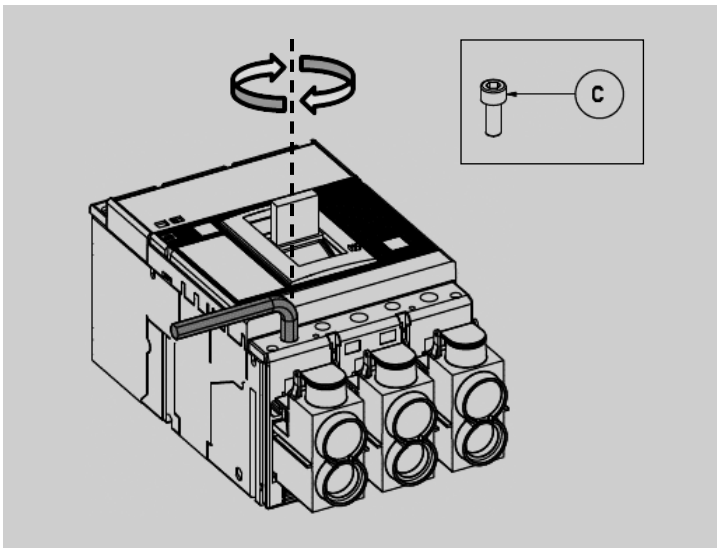


Figure 8: Assemble the Item C

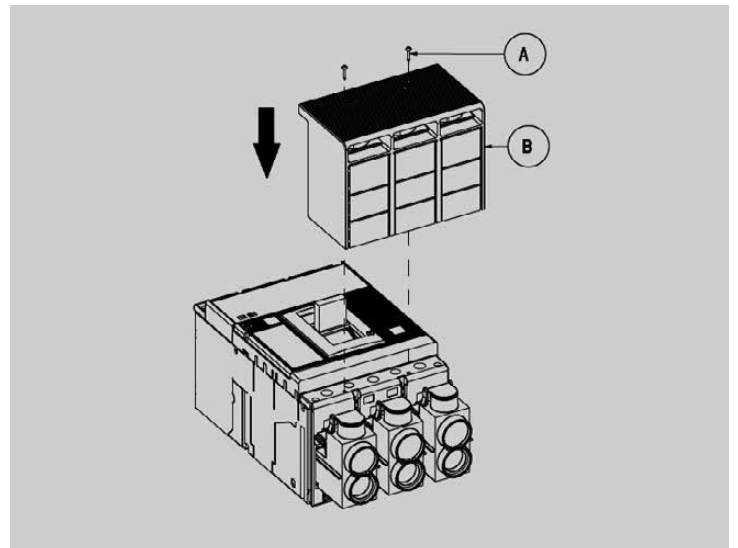


Figure 9: Assemble the Item A and B

WARNING: Lug service barriers must be correctly installed on the line side of a main device in ABB Lighting Panels.

WARNING: Installing size wire other than the specified sizes for each circuit breaker frame will negate the barrier's ability to protect personnel from exposed live components.

Cable Installation

The wires must be stripped to the correct length to maintain isolation. After stripping the wires to the required length, the wires can be installed as shown in Figure 12. The lug barrier must be correctly installed to maintain electrical isolation from accidental contact. Torque the wires according to the torque specification on the breaker.

After installing the cable, remove necessary knock outs from the Terminal Cover as shown in Figure 11.

Table 1: Shows the allowable wire sizes for the barrier.

Lug	Range	Strip Length
400 A	2/0 AWG to 500MCM Cu-Al	1.18"
600 A	2/0 AWG to 500MCM Cu-Al	1.97"

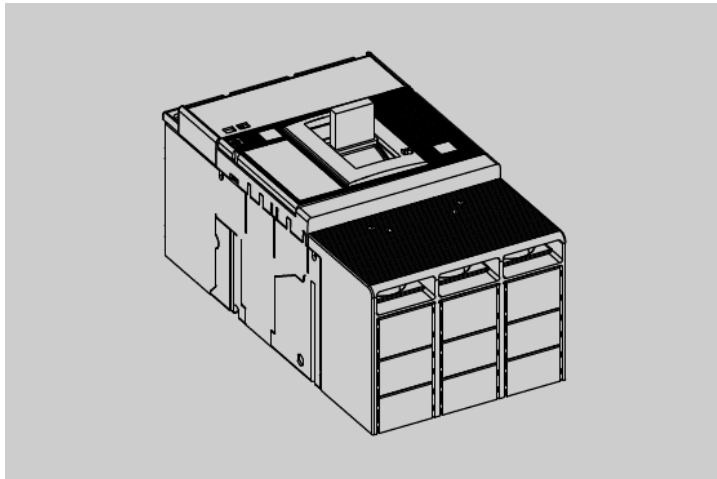


Figure 10: After Assembly of Item A to G

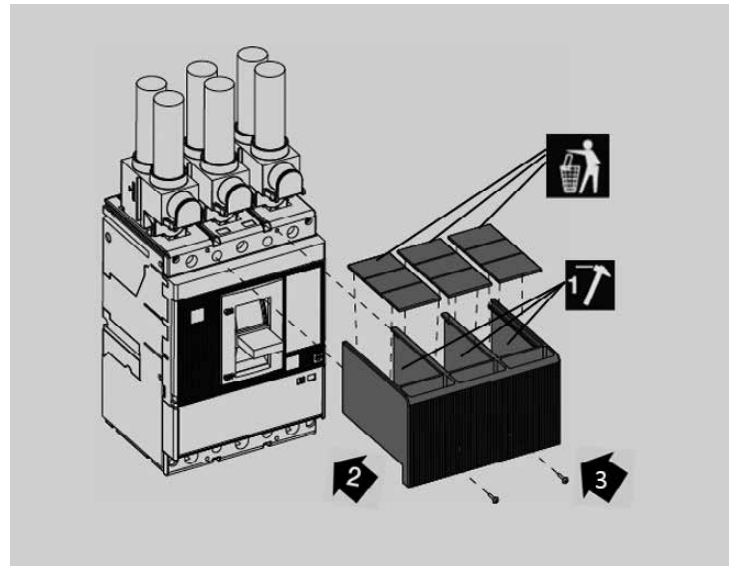


Figure 11: Removing knock outs on terminal cover after wiring installation

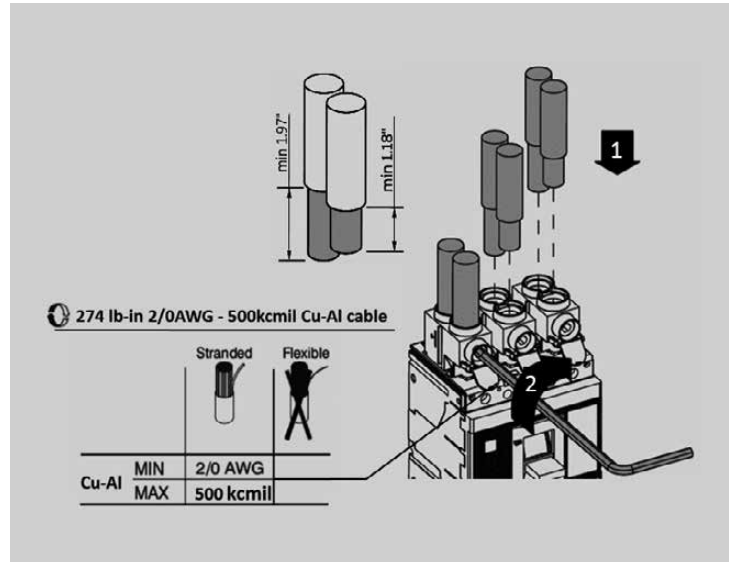


Figure 12: Maximum Wire Strip Length