



THQB Service Barrier Installation Kit

Introduction

This document details the installation of the Service Barrier Kit for the THQL/THQB/THQC circuit breakers. These barriers are required when the breaker is used as a single service entrance main device inside ABB load centers, MSLC, and lighting panels.

Panel boards may be provided with service barriers factory installed. Barrier installation is required on the line side of the main device prior to energizing. These barriers are required to ensure 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 to maintain isolation.

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.

Contents per Installation

THQBSB - THQB Service Barrier Kit

| Description | Qty. |
|------------------|------|
| THQL Lug Barrier | 3 |



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 personnel only.



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

Installation

A service entrance panel with a reverse fed THQL/THQB as a main circuit breaker will require three lug barriers (one per lug).

No tools are required for the installation of lug barriers. For the removal of lug barriers pull up on the tab. Lug barriers can be installed and removed before or after the wire installation is complete.

Figure 1 depicts the Lug Barrier included in the kit.



Figure 1: Lug Barrier (x3)



NOTICE: For THQL type breakers a Main Circuit Breaker Retainer must be installed prior to the installation of the lug barrier. Refer to the Main Circuit Breaker Retainer installation guide for further information.

Steps

Align the lug barrier with the line side lug of the circuit breaker as shown in Figure 2.

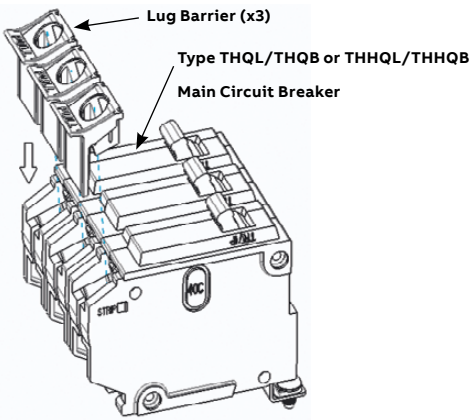


Figure 2: Lug Barrier Installation

Install the barrier by holding on the tab and pushing the barrier down inside the lug opening until it fully seated into place. Ensure the lug barrier is fully installed and in position as shown in Figure 3.

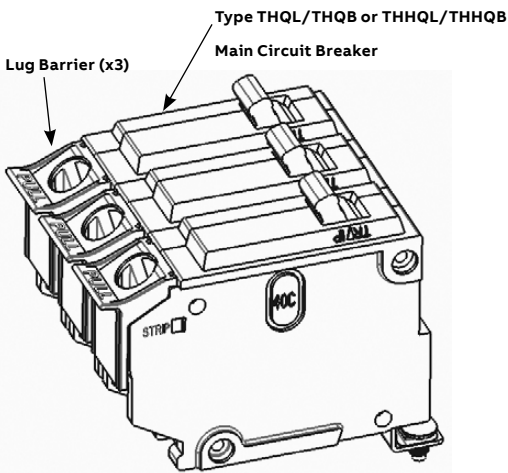


Figure 3: Fully Assembled Lug Barrier

Table 1 shows the allowable wire sizes for hole on the lug.

| Location | Conductors |
|----------|-------------------------|
| Lug Hole | 10 AWG to 2/0 AWG Cu/Al |

Table 1: Service Barrier Wire Range

The wires must be stripped to the correct length to maintain isolation. Strip the wire to a maximum of 0.595 in.

After stripping wires to the required length, the wires can be installed as shown in Figure 4. The lug barrier must be re-installed to maintain electrical isolation from accidental contact. Torque wires to lug specification on the breaker.

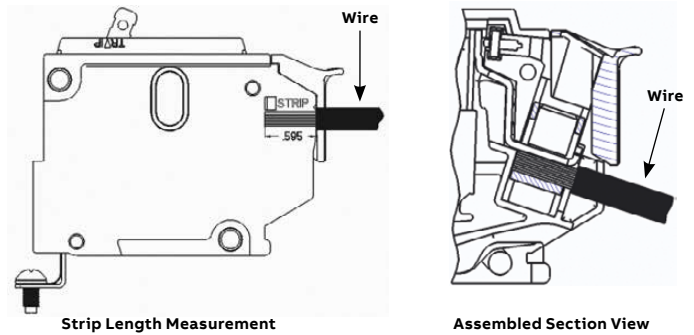


Figure 4: Maximum Wire Strip Length

THQP breakers and some THQL (1p and 2p up to 60 Amps) are finger safe and do not require a service barrier. See Figure 5.

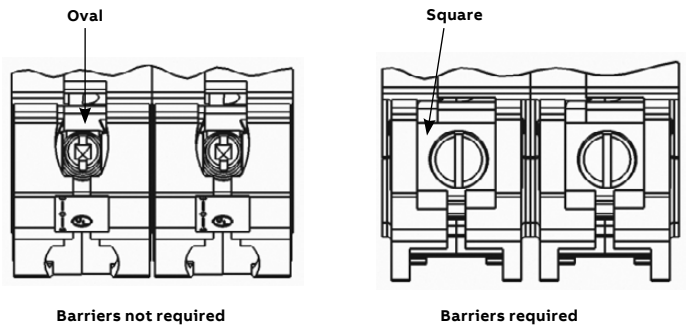


Figure 5: Breakers Where Service Barriers Are Required.



WARNING: Lug service barriers must be correctly installed on the line side of a main device in ABB load centers, MSLC, and lighting panels to ensure isolation from live parts.



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