



TQD Lug Service Barrier 100-125A Reducer Installation Kit

Introduction

This document details the installation of the Service Barrier Reducer Kit for the TQD 2P and 3P circuit breakers. These reducers are required when the TQD breaker is 100-125A (using wire range: 3 AWG to 1/0 AWG Cu/Al wire) and used as a single service entrance main device inside GE load centers, MSLC, and lighting panels.

Panel boards may be provided with reducers (when required) factory installed. Reducer installation is required on the line side of the main device prior to energizing in forward or reverse feed applications. These barriers are required in order to ensure isolation from live parts on the line side when the main breaker is turned off.

If a reducer 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

TQDSBR - TQD Lug Service Barrier 100-125A Reducer kit

Description	Qty.
TQD Wire Reducer	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 the General Electric Company. These instructions are intended for use by qualified 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.

Installation

A service entrance panel board with TQD as a main circuit breaker will require three reducers (when required). Use one reducer part per pole.

No tools are required for the installation of reducers. For the removal of reducer see Figure 5. Reducers must be installed and removed before the wire installation is complete.

Figure 1 depicts the Reducer included in the kit.

Wire Reducer (x3)

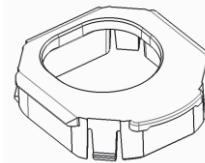


Figure 1: TQD Wire Reducer

Installation Steps

Align the reducer with the line side lug with Lug Barrier of the circuit breaker as shown in Figure 2. (Note: If Lug Barrier is not available already, order kit TQDSB. Install lug barrier on the load side for reverse feed application)

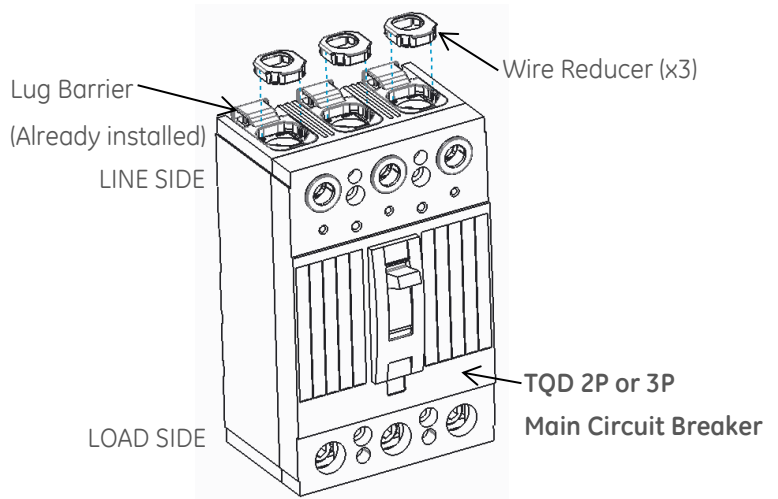


Figure 2: Reducer Installation

NOTICE: Reducer is required for: 3 AWG to 1/0 AWG Cu/Al wire

Install the reducer into the lug barrier opening (when required). Install the reducers by holding on the top of reducer and pushing it down inside the hole in lug barrier until it is fully seated. Ensure the lug barrier, reducer, and plug are fully installed and in position as shown in Fig. 3.

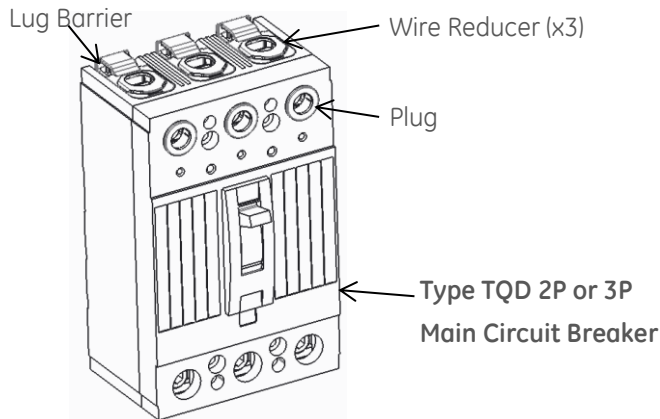


Figure 3: Fully Assembled Wire Reducer

The wires must be stripped to the correct length to maintain isolation. Strip the wire to a maximum of 0.85 inches.

After stripping the wires to the required length, the wires can be installed as shown in Figure 4. The reducer must be correctly installed to maintain electrical isolation from accidental contact. Torque the wires according to the torque specification on the breaker.

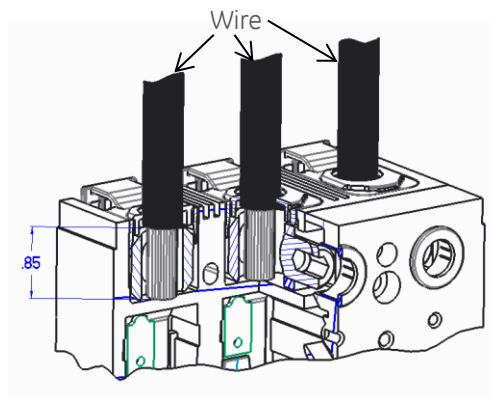


Figure 4: Maximum Wire Strip Length

To remove the wire reducer from breakers, use screw driver as shown in Figure 5.

⚠ WARNING: Lug service barriers must be correctly installed on the line side of a main device in GE 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.

Table 1 shows the allowable wire sizes for the lug barrier with reducer.

Location	Conductors
Lug Hole with reducer	3 AWG to 1/0 AWG Cu/Al

Table 1: Reducer Wire Range

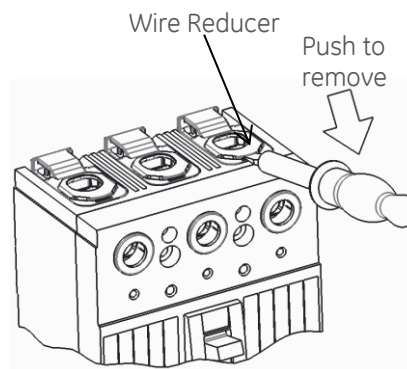


Figure 5: Reducer Removal

Imagination at work

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