

## Installation Instructions

|  |  |  |  |
|--|--|--|--|
|  | <b>⚠ DANGER</b>  | <b>⚠ PELIGRO</b>   | <b>⚠ DANGER</b>  |
|  | <p><b>Hazardous Voltage.</b><br/>Will cause death or serious injury.</p> <p>Turn off and lock out all power supplying this device before working on this device.<br/>Replace all covers before power supplying this device is turned on.</p> | <p><b>Tensión Peligrosa.</b><br/>Puede causar la muerte o lesiones graves.</p> <p>Desenergice totalmente antes de instalar o darle servicio. Reemplace todas las barreras y cubiertas antes de energizar el interruptor.</p> | <p><b>Tension Dangereuse.</b><br/>Danger de morbu risquede blessures graves.</p> <p>Couper l'alimentation de l'appareil erer avant de travailler. Remplacez toutes les couvertures avant que l'approvisionnement de pouvoir soit alimenté.</p> |

These instructions outline the recommended installation procedure.

FOR USE WITH: NGG, BQD, BQD6, CQD & CQD6 CIRCUIT BREAKERS.

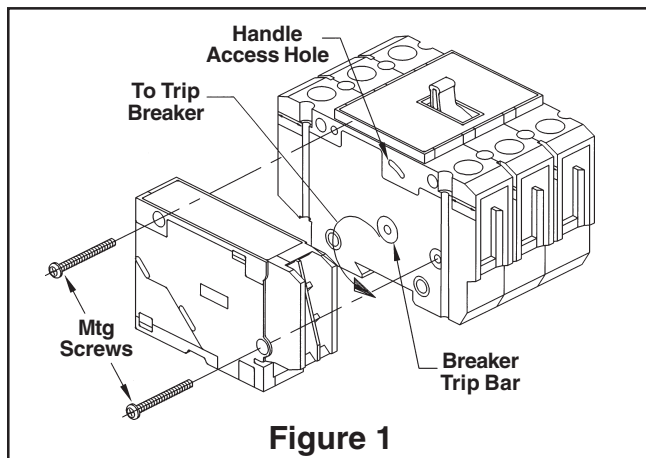
- NOTE:
1. Never attempt to mount these accessory devices on an installed circuit breaker.
  2. Never attempt to add more than one accessory device to any one circuit breaker.

### 1. Circuit Breaker Preparation

- A. If already installed, the circuit breaker must be removed from the panel to install the accessory module. Turn off and lock out all power before removing circuit breaker from the panel.
- B. The circuit breaker must be in the "TRIP" position before installing the accessory module.
- C. If the circuit breaker is not in the "TRIP" position, use a #1 Phillips Head screwdriver to rotate the breaker trip bar counter-clockwise from the left side as indicated in Figure 1.
- D. No other preparation is required.

### 2. Accessory Mounting Instructions

- NOTE: Addition of the accessory module adds 1 inch to the width of the circuit breaker.
- A. Align the accessory module with the circuit breaker as shown in Figure 1. Engage the accessory switch lever (if present) to the "handle access hole" and the accessory trip bar (if present) to the "breaker trip bar" hole by moving the breaker handle toward the "OFF" position. Align the two projections on the accessory module and position the accessory module next to the circuit breaker.
  - B. Secure the accessory module to the circuit breaker with the two #6-20 x 1 3/8 in. long thread cutting screws provided captive in the accessory module.
  - C. Torque the mounting screws to 7 lb-in.





**Figure 1**

### 3. Wiring Information

- A. Attach the field wiring to the appropriate terminals as outlined in Table 1. The terminal numbers are found in the molded base next to each terminal.
- B. The tin-plated terminals with Binding Head screws will accept No. 14 to No. 22 AWG wire (Cu only) or 5/16 in. max. insulated crimp type connectors. Strip wire insulation 3/8 in. max.
- C. Torque the terminal screws to 8 lb-in.

**TABLE 1 - TERMINAL FUNCTION**

| Cat. No.                 | 1   | 2         | 3         | 4   | 5       | 6   |
|--------------------------|-----|-----------|-----------|-----|---------|-----|
| BQDST### or CQDST###     | N/A | Trip Coil | Trip Coil | N/A | N/A     | N/A |
| BQDA1 or CQDA1           | A1  | Coil (C)  | B1        | N/A | N/A     | N/A |
| BQDA2 or CQDA2           | A1  | Com (C)   | B1        | A2  | Com (C) | B2  |
| BQDBA or CQDBA           | A   | Com (C)   | B         | N/A | N/A     | N/A |
| BQDUV### or CQDUV###     | N/A | UV Coil   | UV Coil   | N/A | N/A     | N/A |
| BQDST24AAS or CQDST24AAS | N/A | Trip Coil | Trip Coil | A1  | Com (C) | B1  |

|  |   |  |   |
|--|---|--|---|
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## 4. Mechanical / Electrical Testing

NOTE: This shunt trip accessory is equipped with an internal clearing switch.

1. SHUNT TRIP (BQDST###, CQDST###, BQDST24AAS, CQDST24AAS)
  - A. Connect a buzzer or light indicator across Terminals 2 and 3.
  - B. Turn circuit breaker to the "ON" position.
  - C. The buzzer or light indicator should indicate "continuity".
  - D. If a minimum of 55% of the rated voltage is applied across Terminals 2 and 3, the breaker will trip.
  - E. With the breaker "TRIPPED", make sure that the coil circuit has opened.

2. AUXILIARY SWITCH(ES) BQDA1(BQDA2) CQDA1(CQDA2)
 

NOTE: This device is equipped with an "A" and a "B" contact (common polarity). The "A" contact is across Terminals 1 and 2 (4 and 5 in the BQDA2 & CQDA2) and is open when the circuit breaker contacts are open. The "B" contact is across Terminals 2 and 3 (5 and 6 in the BQDA2 and CQDA2) and is closed when the breaker contacts are open.

- A. Connect a buzzer or light indicator to Terminals 1 and 2 (Terminals 4 and 5 in the BQDA2 & CQDA2).
- B. When the circuit breaker is in the "ON" position, the device will indicate "continuity".
- C. When the circuit breaker is moved to the "OFF" or "TRIP" position, the device should indicate no "continuity".

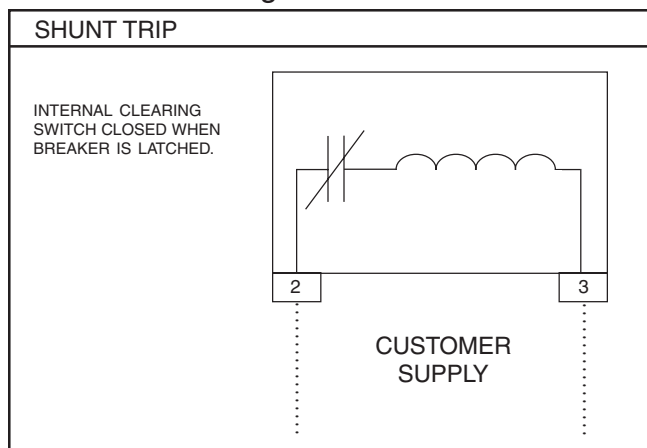
3. ALARM SWITCH (BQDBA or CQDBA)
  - A. Connect a buzzer or light indicator to Terminals 2 and 3.
  - B. When the circuit breaker is in the "ON" or "OFF" position, the device will show "continuity".
  - C. When the circuit breaker is in the "TRIPPED" position, the device will show no "continuity".

## 5. Electrical Data

TABLE 2 - SHUNT TRIP COIL DATA

| Catalog No.             | Coil Voltage | Inrush Current at Rated Voltage (AMPS RMS) |
|-------------------------|--------------|--|
| <b>A.C.</b>             |              |  |
| BQDST24AAS / CQDST24AAS | 24           | 2.8  |
| BQDST120 / CQDST120     | 120          | .90  |
| BQDST240 / CQDST240     | 240          | .50  |
| BQDST277 / CQDST277     | 277          | .55  |
| BQDST480 / CQDST480     | 480          | .45  |
| BQDST600 / CQDST600     | 600          | .50  |
| <b>D.C.</b>             |              |  |
| BQDST12 / CQDST12       | 12           | 1.20                                       |
| BQDST24 / CQDST24       | 24           | .80  |
| BQDST48 / CQDST48       | 48           | .80  |
| BQDST125 / CQDST125     | 125          | .35  |

## 1. Connection Diagram



## AUXILIARY & ALARM SWITCH KITS

| CAT. NO.              | NO. of Switches | Ampere Rating                              |
|-----------------------|-----------------|--|
| <b>BQDA1 or CQDA1</b> | <b>1</b>        | <b>15 A. @ 250 VAC<br/>.5 A. @ 125 VDC</b> |
| <b>BQDA2 or CQDA2</b> | <b>2</b>        | <b>15 A. @ 250 VAC<br/>.5 A. @ 125 VDC</b> |
| <b>BQDBA or CQDBA</b> | <b>1</b>        | <b>15 A. @ 250 VAC<br/>.5 A. @ 125 VDC</b> |