Instruction Leaflet for Undervoltage Release (UVR) for
EG/JG/LG Circuit Breakers and Motor Circuit Protectors

1.0 UNDervoltage Release Kit

The Undervoltage Release (UVR) monitors a voltage (typically a line voltage) and trips the circuit breaker when the voltage at the wire leads falls to between 70 and 35 percent of the solenoid coil rating. The UVR consists of a continuous rated solenoid with a plunger and tripping lever. The UVR is reset when normal voltage is restored and the circuit breaker handle is moved to the reset (OFF) position.

2.0 General Information

The Undervoltage Release (UVR) monitors a voltage (typically a line voltage) and trips the circuit breaker when the voltage at the wire leads falls to between 70 and 35 percent of the solenoid coil rating. The UVR consists of a continuous rated solenoid with a plunger and tripping lever. The UVR is reset when normal voltage is restored and the circuit breaker handle is moved to the reset (OFF) position.

Figure 1-1 UVR kit

Figure 2-1 UVR connection diagram

Table 2-1 UVR application and electrical operating rating data

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Application Ratings</th>
<th>Electrical Operating Ratings</th>
<th>One Minute Dielectric Withstand Voltage, U_i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage, U_s</td>
<td>Frequency</td>
<td>Supply Voltage, U_s</td>
<td>Dropout Voltage</td>
</tr>
<tr>
<td>UVR012APK</td>
<td>12</td>
<td>50-60 Hz</td>
<td>12</td>
</tr>
<tr>
<td>UVR012DPK</td>
<td>12</td>
<td>DC</td>
<td>12</td>
</tr>
<tr>
<td>UVR024APK</td>
<td>24</td>
<td>50-60 Hz</td>
<td>24</td>
</tr>
<tr>
<td>UVR024DPK</td>
<td>24</td>
<td>DC</td>
<td>24</td>
</tr>
<tr>
<td>UVR048APK</td>
<td>48-60</td>
<td>50-60 Hz</td>
<td>48-60</td>
</tr>
<tr>
<td>UVR048DPK</td>
<td>48-60</td>
<td>DC</td>
<td>48-60</td>
</tr>
<tr>
<td>UVR120APK</td>
<td>110-127</td>
<td>50-60 Hz</td>
<td>110-127</td>
</tr>
<tr>
<td>UVR120DPK</td>
<td>110-125</td>
<td>DC</td>
<td>110-125</td>
</tr>
<tr>
<td>UVR240APK</td>
<td>208-240</td>
<td>50-60 Hz</td>
<td>208-240</td>
</tr>
<tr>
<td>UVR250DPK</td>
<td>220-250</td>
<td>DC</td>
<td>220-250</td>
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<tr>
<td>UVR480APK</td>
<td>380-500</td>
<td>50-60 Hz</td>
<td>380-500</td>
</tr>
<tr>
<td>UVR600APK</td>
<td>525-600</td>
<td>50-60 Hz</td>
<td>525-600</td>
</tr>
</tbody>
</table>
**WARNING**

DO NOT ATTEMPT TO INSTALL OR PERFORM MAINTENANCE ON EQUIPMENT WHILE IT IS ENERGIZED. DEATH OR SEVERE PERSONAL INJURY CAN RESULT FROM CONTACT WITH ENERGIZED EQUIPMENT. ALWAYS VERIFY THAT NO VOLTAGE IS PRESENT BEFORE PROCEEDING. ALWAYS FOLLOW SAFETY PROCEDURES. CUTLER-HAMMER IS NOT LIABLE FOR THE MISAPPLICATION OR MISINSTALLATION OF ITS PRODUCTS.

1. Remove the breaker cover and sleeve.
2. Remove hex nut and install UVR (left pole only).

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**EG Frame**

1. Remove the breaker cover and sleeve.
2. Install UVR (left pole only).

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**JG Frame**

1. Remove the breaker cover and sleeve.
2. Install UVR (left pole only).

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**LG Frame**

1. Remove the breaker cover and sleeve.
2. Install LG Actuator and UVR (left pole).
3 Wire routing options.

NOTE: Break off side tab on cover if routing wires through side opening.

4 Re-install breaker cover.

0.45 - 0.56 Nm
(7-8 in-lb)

3 Route wires.

4 Re-install breaker cover.

0.79 - 0.90 Nm
(7-8 in-lb)

3 Route wires.

4 Re-install breaker cover.

0.45 - 0.56 Nm
(4-5 in-lb)

3 Route wires.

4 Re-install breaker cover.

0.90 - 1.13 Nm
(8-10 in-lb)
4.0 TESTING

Refer to figure 4-1.

**Step 1:** With no voltage applied to UVR, ensure that the breaker handle cannot be set to the **Closed (ON)** position.

**Step 2:** Set Breaker to **Reset** position. **After taking all necessary precautions**, apply rated voltage to UVR, and ensure that breaker handle can be set to the **Closed (ON)** position.

**Step 3:** Disconnect voltage from UVR and ensure that breaker handle moves to the **TRIP** position.

5.0 REMOVAL

Removal is the reverse of the installation procedure. Remove the UVR by pulling straight up on pull tab (see Figure 5-1). Be sure to reinstall the sleeve removed in Section 3.0, step 1.