H-Frame and J-Frame Circuit Breakers and Motor Circuit Protectors Instruction Leaflet for Undervoltage Release (UVR)

1.0 UNDERVOLTAGE RELEASE KIT

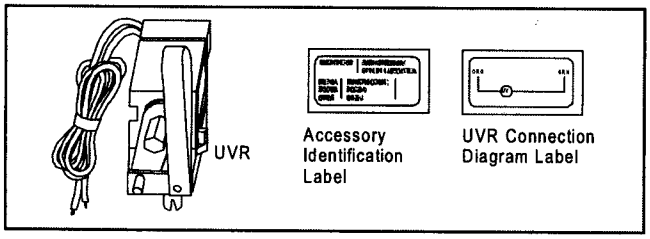

Figure 1-1 UVR kit

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.

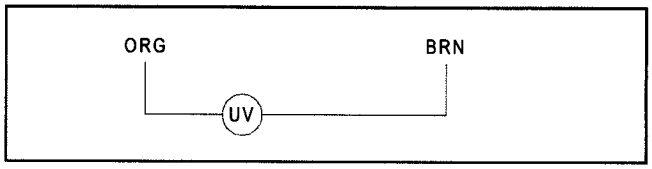

Figure 2-1 UVR connection diagram

Table 2-1 UVR application and electrical operating rating data

Catalog Number	Application Ratings		Electrical Operating Ratings					One Minute Dielectric Withstand Voltage, U_i
				Dropout Voltage		Pickup Voltage Max.		
	Voltage, U_e	Frequency	Supply Voltage, U_s	Min.	Max.		VA	
140U-H-U*	12	50-60 Hz	12	4.2	8.4	10.2	0.95	1024
		DC	12	4.2	8.4	10.2	0.88	1024
140U-H-UJ	24	50-60 Hz	24	8.4	16.8	20.4	0.72	1048
		DC	24	8.4	16.8	20.4	0.70	1048
140U-H-U*	48-60	50-60 Hz	48 60	21.0	33.6	40.8	1.15 1.78	1120
140U-H-U*	48-60	DC	48 60	21.0	33.6	40.8	1.12 1.76	1120
140U-H-UD	110-127	50-60 Hz	110 120 127	44.5	77.0	93.5	0.96 1.13 1.25	1254
140U-H-U*	110-125	DC	110 120 125	43.8	77.0	93.5	0.94 1.12 1.21	1250
140U-H-UA	208-240	50-60 Hz	208 220 240	85.0	146	177	1.28 1.42 1.68	1480
140U-H-U*	220-250	DC	220 250	87.5	154	187	1.45 1.86	1500
140U-H-UB	380-500	50-60 Hz	380 415 440 480 500	175	266	323	2.2 2.7 3.0 3.6 3.9	2000
140U-H-UC	525-600	50-60 Hz	525 550 600	210	367	446	3.4 3.7 4.3	2200

3.0 INSTALLATION

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. ALLEN-BRADLEY IS NOT LIABLE FOR THE MISAPPLICATION OR MISINSTALLATION OF ITS PRODUCTS.

❶ Remove the breaker cover and sleeve.

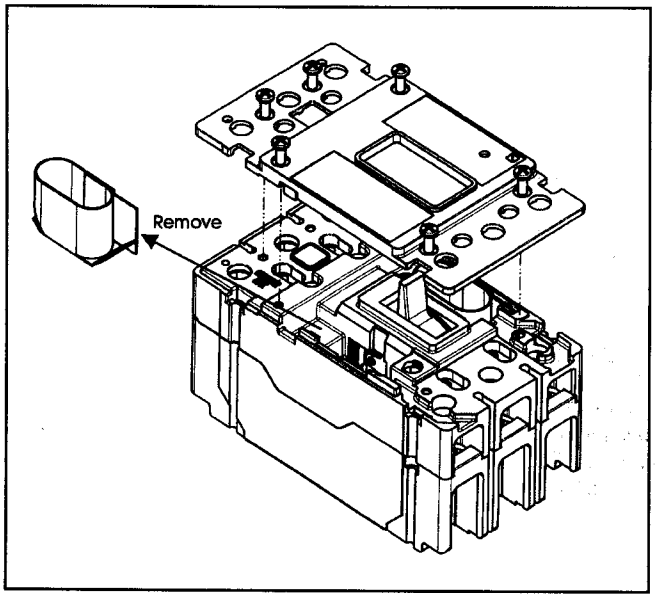

Figure 3-1 H-Frame cover removal

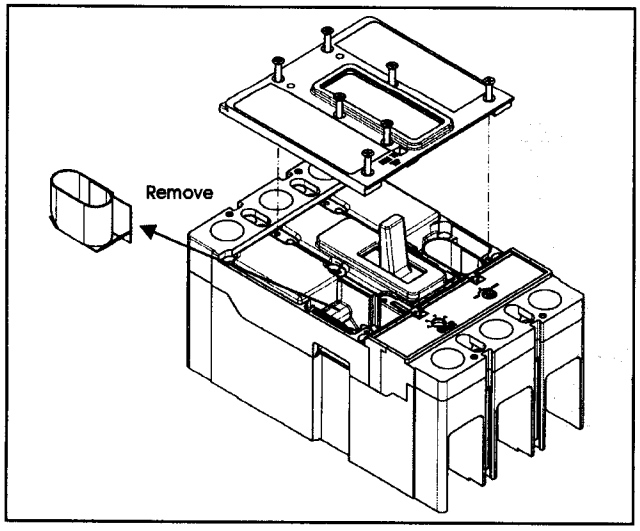

Figure 3-2 J-Frame cover removal

❷ Install UVR (left pole only).

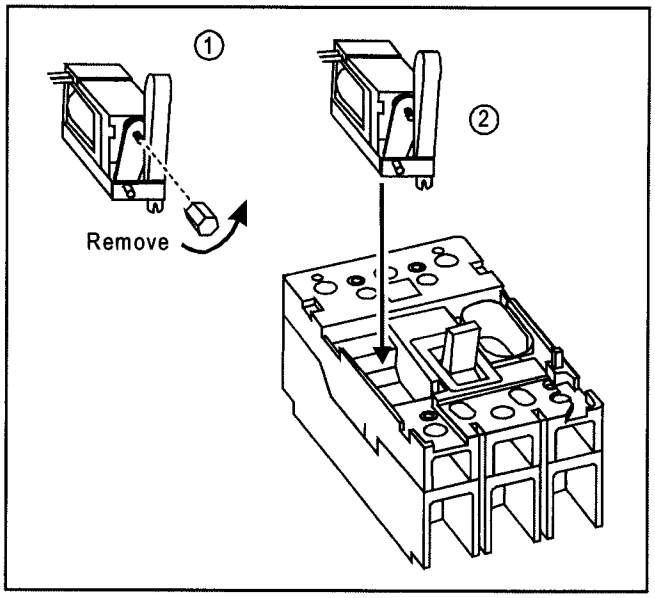

Figure 3-3 UVR installation in H-Frame

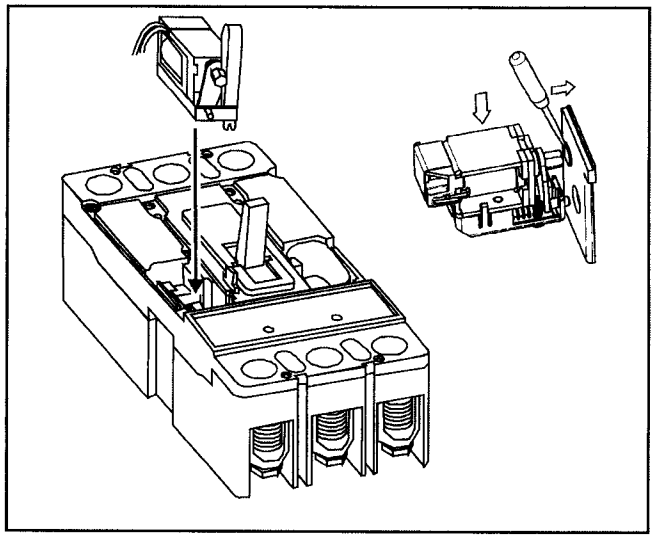

Figure 3-4 UVR installation in J-Frame

● Route wires.

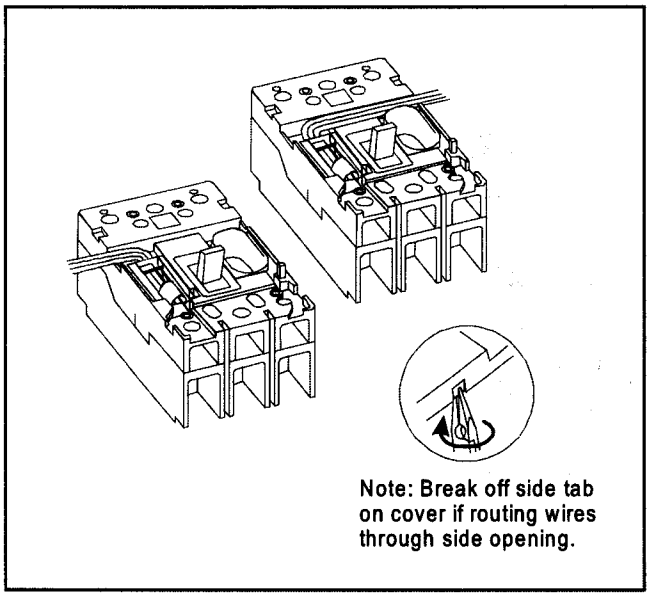

Figure 3-5 Wire routing options in H-Frame

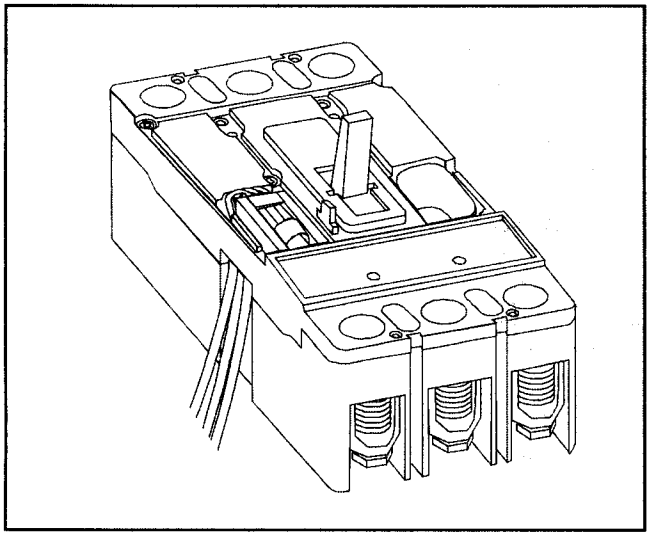

Figure 3-6 Wire routing in J-Frame

● Reinstall breaker cover.

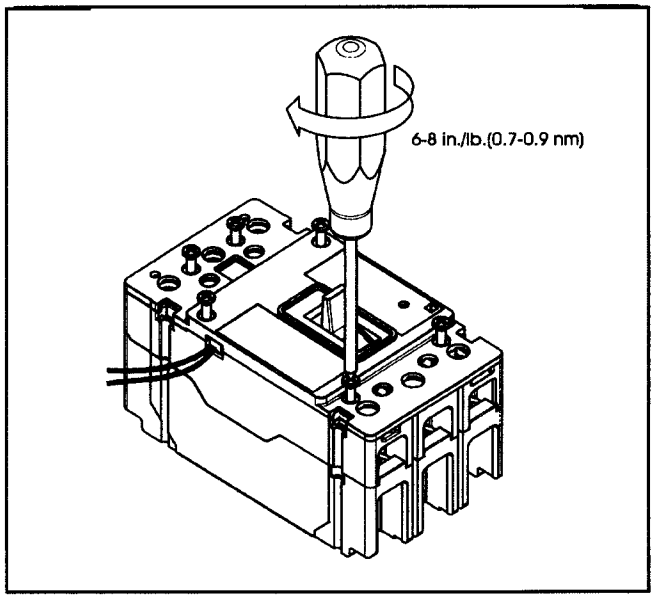

Figure 3-7 H-Frame cover installation

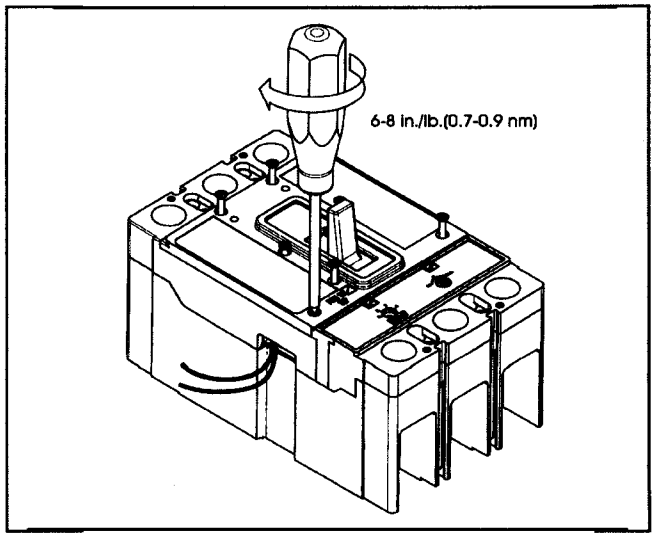

Figure 3-8 J-Frame cover installation

● Apply labels.

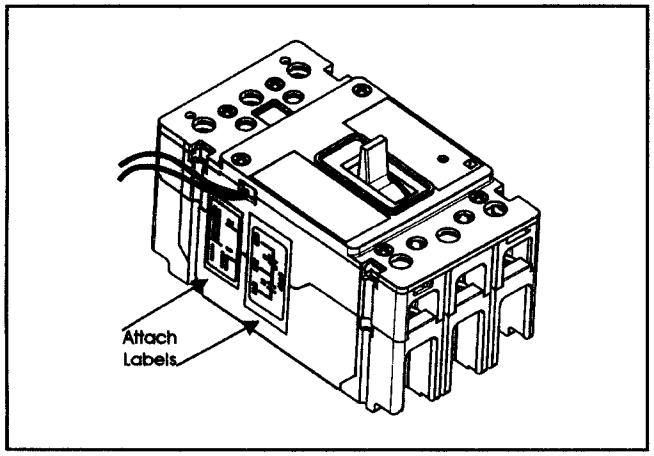

Figure 3-9 Accessory Identification Label and Circuit Diagram Label application

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: Where practical and 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.

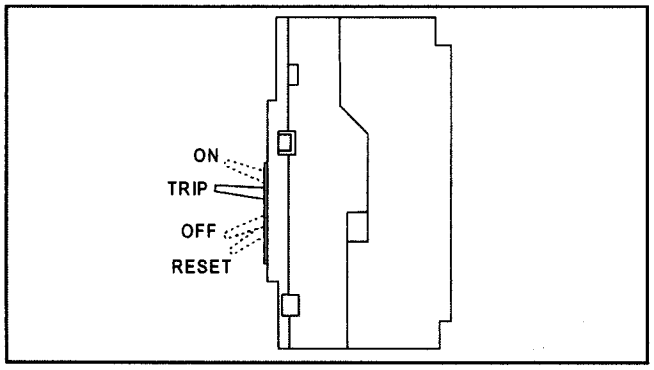

Figure 4-1 Circuit Breaker/Motor Circuit Protector handle Open (OFF), Closed (ON), and TRIP positions

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.

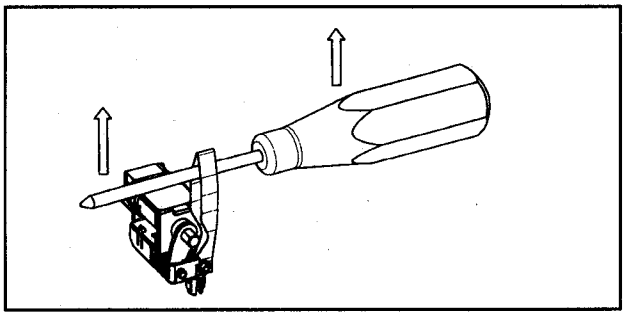

Figure 5-1 UVR removal