H and J-Frame Circuit Breakers and Motor Circuit Protectors Instruction Leaflet for Shunt Trip

1.0 SHUNT TRIP KIT

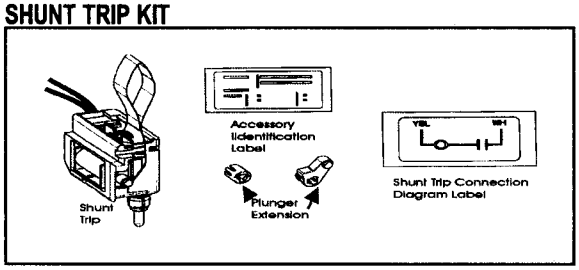

Figure 1-1 Shunt Trip kit

2.0 GENERAL INFORMATION

The Shunt Trip allows a circuit breaker to be tripped remotely by applying a voltage to the wire leads. The unit consists of an intermittent solenoid with a tripping plunger and a cutoff switch, and is mounted so that when the solenoid is energized, the trip lever presses against the trip bar and trips the circuit breaker. As the breaker trips, the molded crossbar moves away from the cutoff switch, disconnecting power to the solenoid and preventing coil burnout.

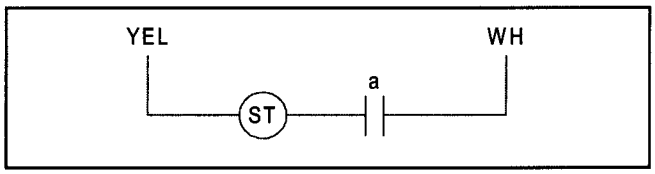

Figure 2-1 Shunt Trip connection diagram

- Maximum operations per minute: 5
- Maximum operating voltage: 110% of maximum voltage range rating

Table 2-1 Shunt Trip application and electrical operating rating data

Catalog Number	Application Ratings		Electrical Operating Ratings (Nominal Values)						
	Voltage, U_e	Frequency	Supply Voltage, U_s	Min. Operating Voltage	I_p @ 0.017s (A)	I_p @ 0.25s (A)	I_{rms} @ 0.033s (A)	VA	One Minute Dielectric Withstand Voltage, U_i
140U-H-SNJ	12-60	50-60 Hz	12	9	1.2		0.85	10	1120
			24		2.4		1.7	41	
			48		4.1		2.9	139	
			60		5.0		3.5	210	
	12-60	DC	12	9		2.4		29	
			24			5.0		120	
			48			9.9		475	
			60			12.0		720	
140U-H-SND (Suitable for use in ground fault protection applications)	110-240	50-60 Hz	110	60	1.1		0.75	83	1500
			120		1.1		0.77	92	
			127		1.3		0.92	117	
			208		1.8		1.3	270	
			220		1.9		1.4	308	
			240		2.1		1.5	360	
	110-125	DC	110	82		0.9		99	
			120			1.0		120	
			125			1.0		121	
140U-H-SNB	380-600	50-60 Hz	380	285	1.6		1.1	418	2200
			415		1.8		1.3	540	
			440		1.9		1.3	572	
			480		1.9		1.3	624	
			525		2.2		1.6	840	
			550		2.3		1.6	880	
			600		2.5		1.8	1080	

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.

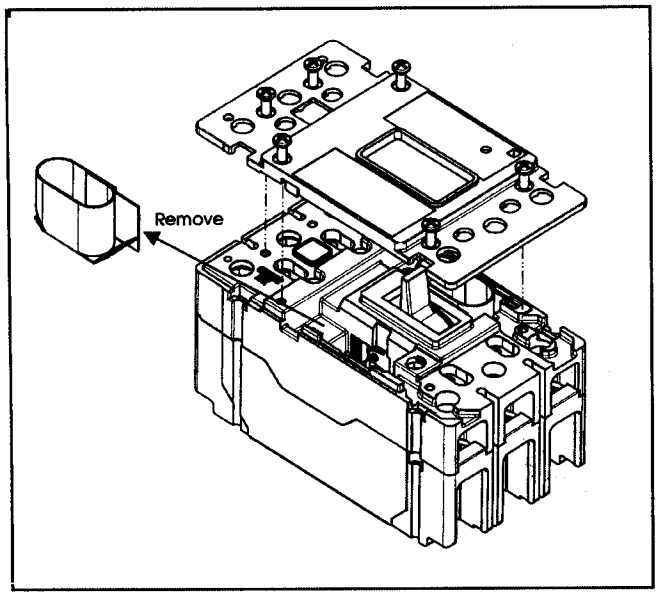

Figure 3-1 H-Frame cover removal

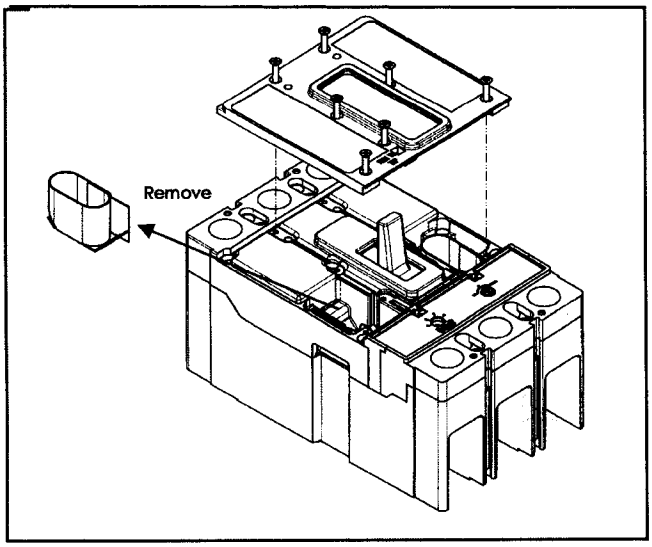

Figure 3-2 J-Frame cover removal

❷ Install Shunt Trip (left pole only).

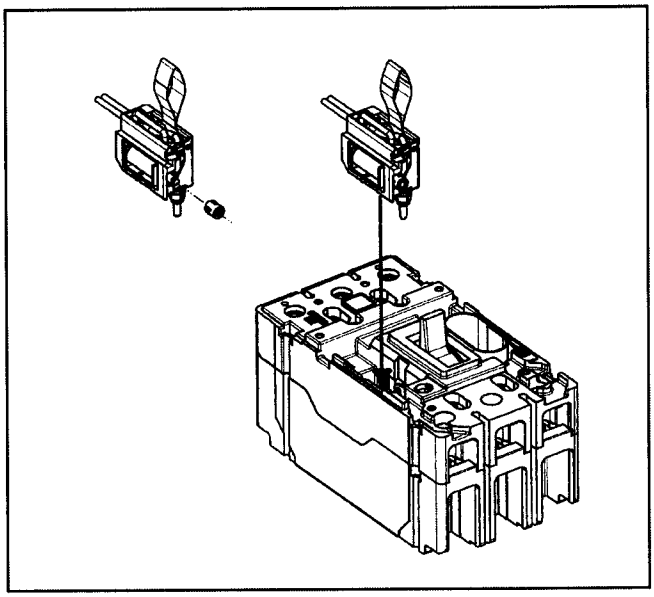

Figure 3-3 Shunt Trip installation in H-Frame

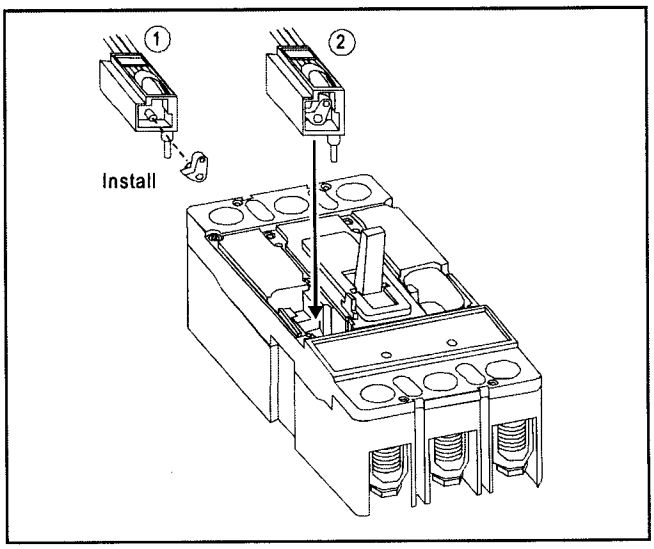

Figure 3-4 Shunt Trip installation in J-Frame

● Route wires.

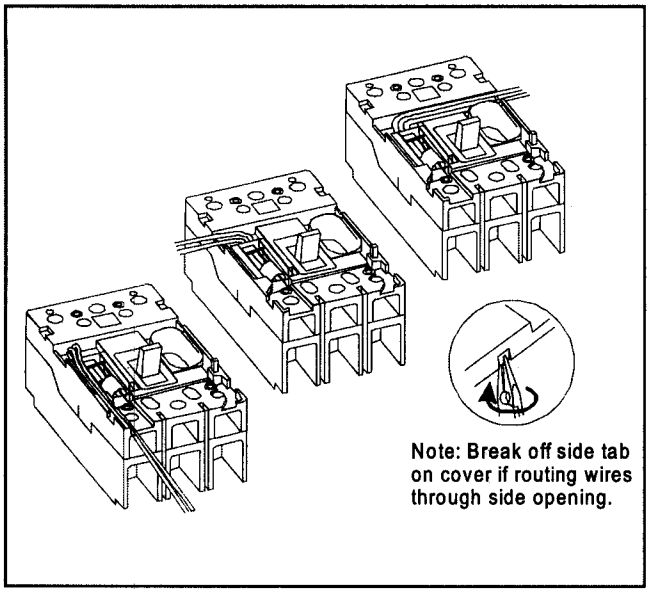

Figure 3-5 Wire routing options in H-Frame

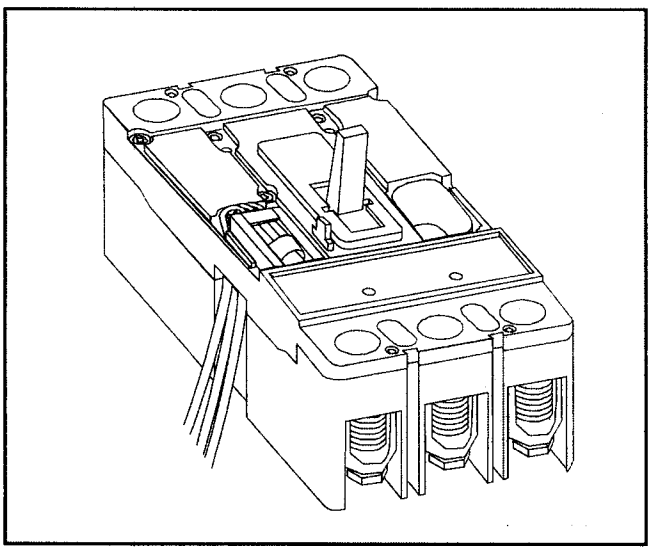

Figure 3-6 Wire routing in J-Frame

● Reinstall breaker cover.

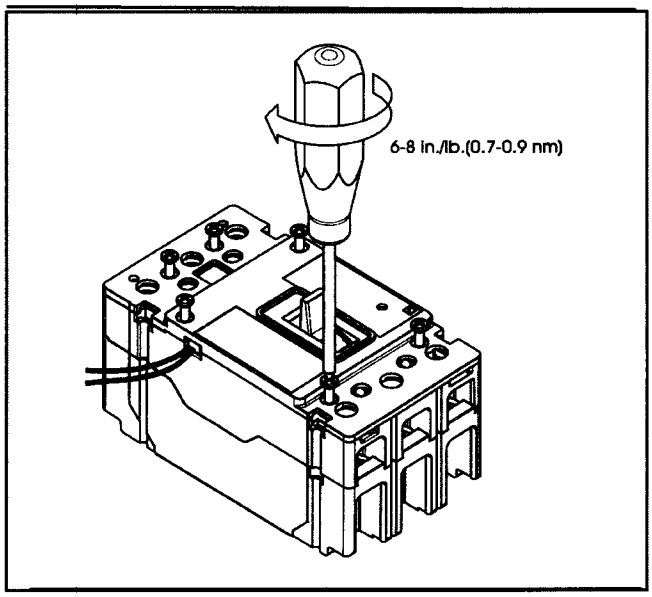

Figure 3-7 H-Frame cover installation

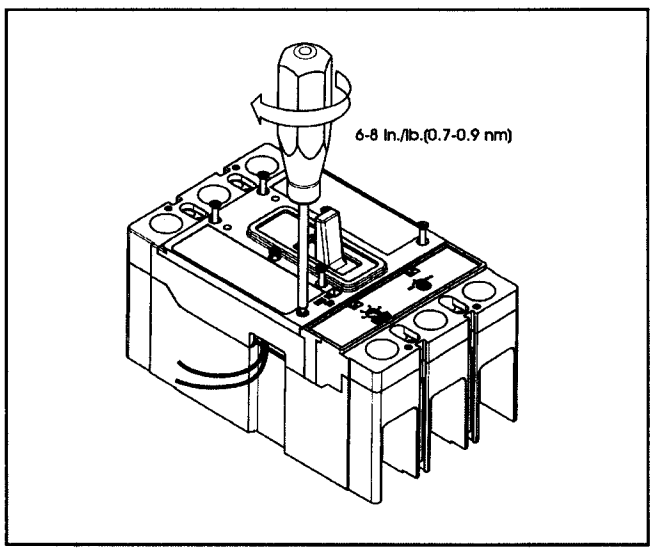

Figure 3-8 J-Frame cover installation

● Apply labels.

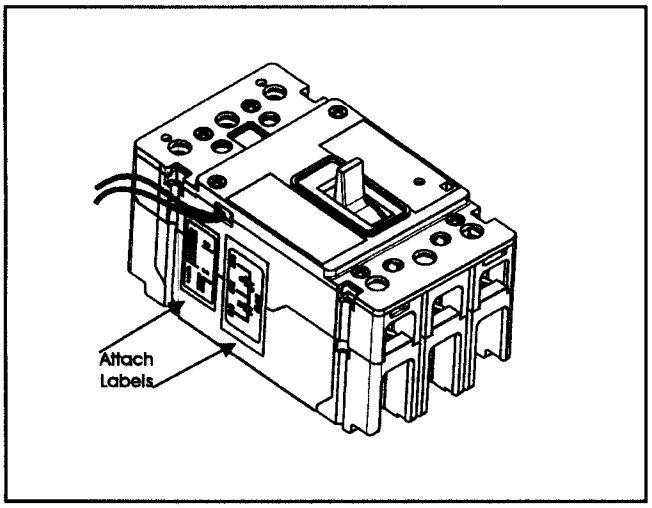

Figure 3-9 Accessory Identification and Circuit Diagram label application

4.0 TESTING

Refer to figure 4-1.

Step 1: With no voltage applied to Shunt Trip, ensure that breaker handle can be set to the **Closed (ON)** position.

Step 2: Where practical and after taking all necessary precautions, apply rated voltage to Shunt Trip and ensure that breaker handle moves to the **TRIP** position.

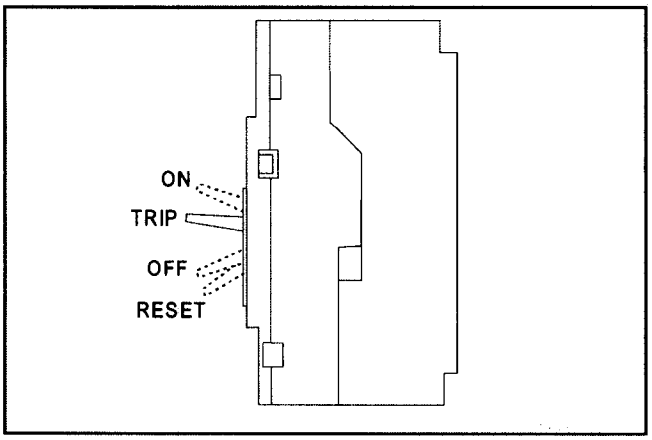

Figure 4-1 Circuit Breaker/Motor Circuit Protector handle Open (OFF), Closed (ON), and TRIP positions

5.0 REMOVAL

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

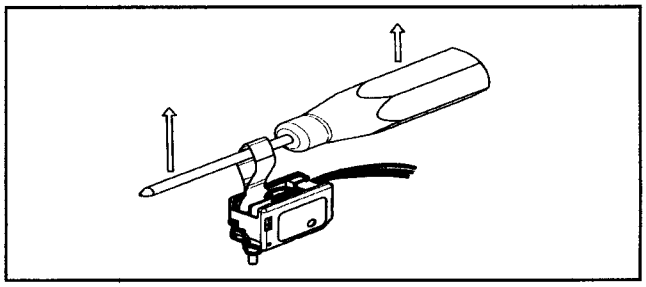

Figure 5-1 Shunt Trip removal