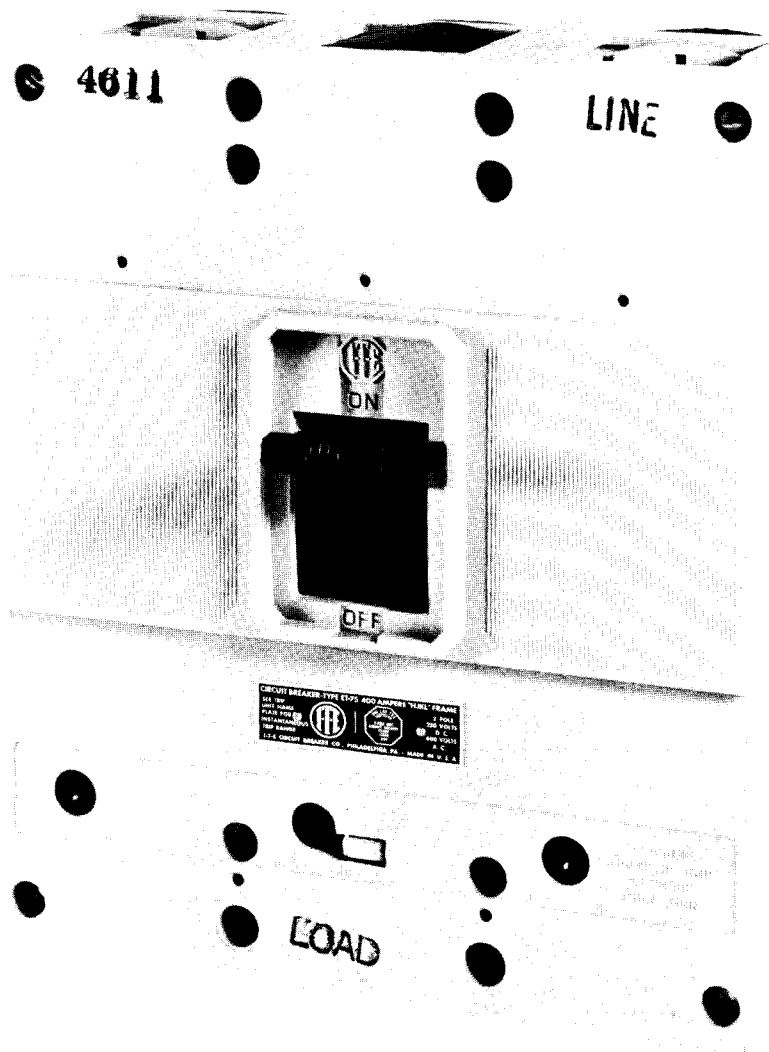


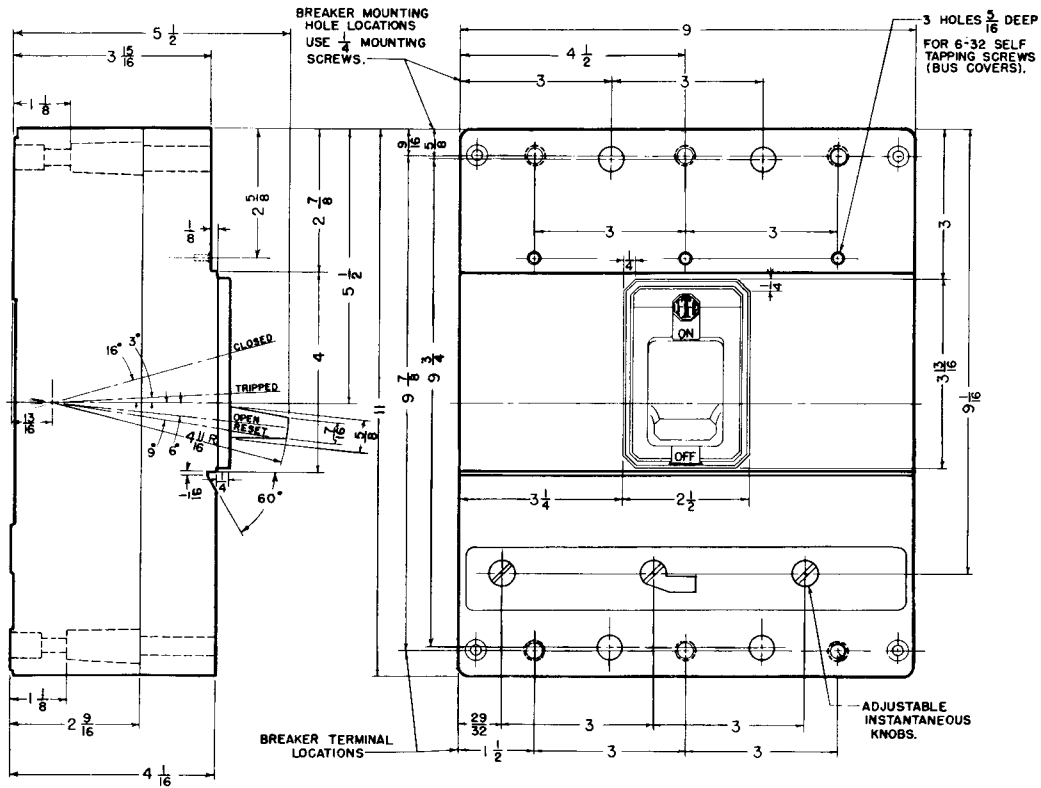
MOLDED-CASE CIRCUIT BREAKERS

INSTRUCTIONS

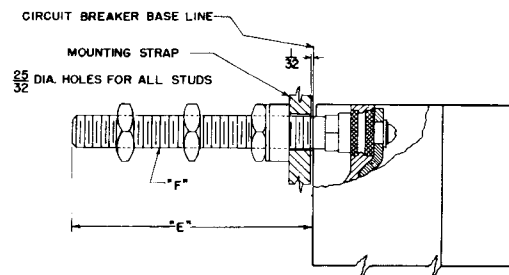
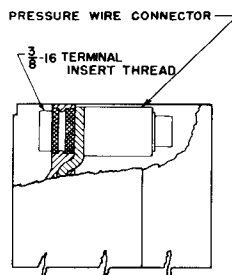
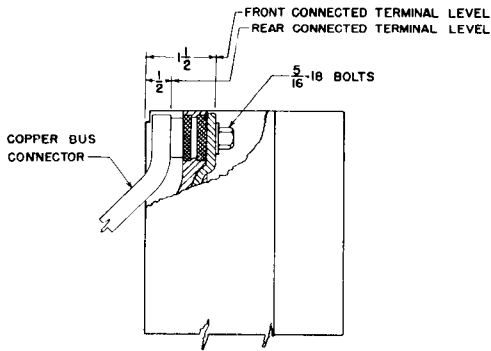
**400-AMPERE
ET[®]-H HJ-FRAME CIRCUIT BREAKERS
3 POLE, 125-400 AMPERES**



ITE Imperial Corporation



SHIPPING WEIGHT	3 POLE
FRAME	17
TRIP UNIT	3 1/2
COMPLETE BREAKER	20 1/2



FRONT CONNECTED TERMINAL

AMPERE RATING	CABLE RANGE	CATALOG NO
125-225	CU - #4 TO 300 MCM AL - #2 TO 300 MCM	TA1-J300
250-300	CU - 250 TO 500 MCM AL - 350 TO 500 MCM	TA1-J500
350-400	CU - (2) 3/0 TO 250 MCM AL - (2) 4/0 TO 250 MCM	TA2-J250

REAR CONNECTED TERMINAL

AMPERE RATING	LENGTH BOB "E"	CATALOG NO.	"F"
400	3 1/4	RS5770	3/4-16
400	5 1/2	RS5771	3/4-16
400	8	RS5772	3/4-16
400	10 1/2	RS5773	3/4-16

400-Ampere HJ-Frame Circuit Breakers
Dimensional Drawings



INSTRUCTIONS FOR 400-AMPERE HJ-FRAME CIRCUIT BREAKERS 3 POLE, 125-400 AMPERES

GENERAL

HJ-frame circuit breakers are for use in power panelboards, distribution switchboards, secondary unit substations and all types of individual enclosures where the available fault currents are of a heavy magnitude.

Complete HJ-frame circuit breakers, as listed, can be furnished with pressure wire connectors suitable for use with aluminum or copper wire for front connection or with rear connecting studs for switchboard applications. The circuit breakers can also be furnished with plug-in connector assemblies. The plug-in arrangement permits removal of the circuit breaker from its leads without physically coming in contact with the line or load terminals.

Nominal instantaneous trip values are externally adjustable with five (5) trip points as shown below:

Breaker Ampere Rating	Nominal Instantaneous Values				
	LO	2	3	4	HI
125-175	750	960	1175	1400	1600
200-225	960	1200	1450	1800	2000
250-300	1050	1350	1650	1950	2250
350-400	1900	2300	2700	3100	3500

HJ-frame circuit breakers combine instantaneous-magnetic short circuit protection with thermal time-delay overload protection. They have a quick-make, quick-break, trip-free mechanism design, coupled with common trip operation to assure all poles of the breaker opening simultaneously and automatically in the event of a fault or overload on any pole. These breakers cannot be held closed under abnormal conditions. A three position handle visually indicates if breaker is "ON", "OFF", or has "tripped" on automatic operation.

The circuit breaker frames are constructed of a high-impact glass alkyd resin material designed to withstand stresses of operation at 75,000 amperes. The use of this material eliminates the need for any special fungus proofing. Consideration should be given, when applying these breakers, to provide adequate bus support and mechanical bracing.

Trip units are carefully calibrated and adjusted at the factory in a temperature controlled room. Trip unit

covers are sealed in place and any alteration of the calibration of the unit should not be attempted. Removing the trip unit cover will void the Underwriters' Laboratories, Inc. listing for that particular unit. All trip units in this frame size are interchangeable regardless of capacity.

Underwriters' Laboratory listing applies only to the 225 to 400 ampere ac breakers.

Special features such as shunt trip, auxiliary and alarm switches and undervoltage trip devices are available and are mounted internally. Information concerning these special devices is available upon request.

INTERRUPTING RATINGS

The interrupting ratings of the HJ-frame circuit breakers are based on circuits adjusted to the rated short circuit current (at specified voltage) before the insertion of the circuit breaker.

Based on NEMA Test Procedures		
Volts	Amperes	
	Asymmetrical	Symmetrical
240 ac	75,000	65,000
480 ac	40,000	35,000
600 ac	30,000	25,000
250 dc	20,000	

CIRCUIT BREAKER OPERATION

With the mechanism latched and the contacts open, the operating handle will be in the "OFF" position. Moving the handle to the "ON" position closes the contacts and establishes a circuit through the breaker. Under overload or short circuit conditions sufficient to trip or open the breaker automatically, the operating handle moves to a position between "ON" and "OFF" as previously described. To relatch the circuit breaker after automatic operation, move the operating handle to the extreme "OFF" position. The circuit breaker is now ready for reclosing.

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation, or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes the matter should be referred to the I-T-E Imperial Corporation.

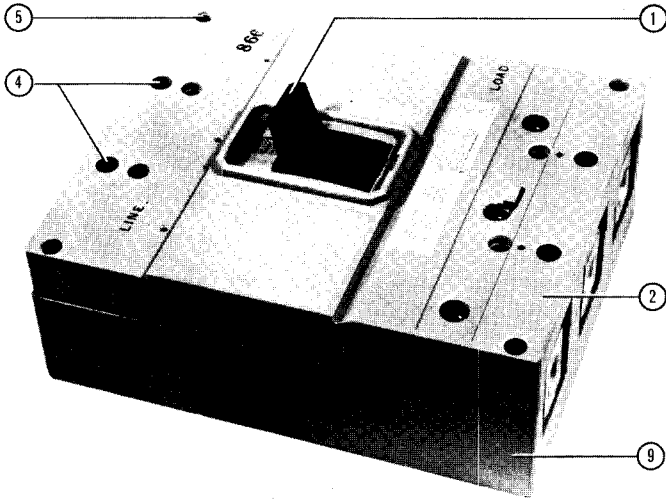


Fig. 1 — Front View of Circuit Breaker

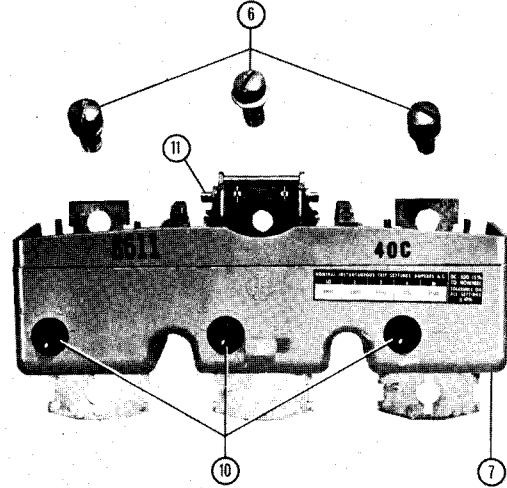


Fig. 2 — 3-Pole Trip Unit

1. OPERATING HANDLE
2. BREAKER COVER
3. TERMINAL LUG SCREWS
4. BREAKER MOUNTING SCREWS
5. COVER SCREWS
6. TRIP UNIT ANCHOR SCREWS AND LOCKWASHERS
7. TRIP UNIT
8. SLOTS IN MECHANISM HOUSING
9. CIRCUIT BREAKER BASE
10. ADJUSTABLE INSTANTANEOUS TRIP BUTTONS
11. LATCH PIN
12. ARC CONDUCTOR WIRES

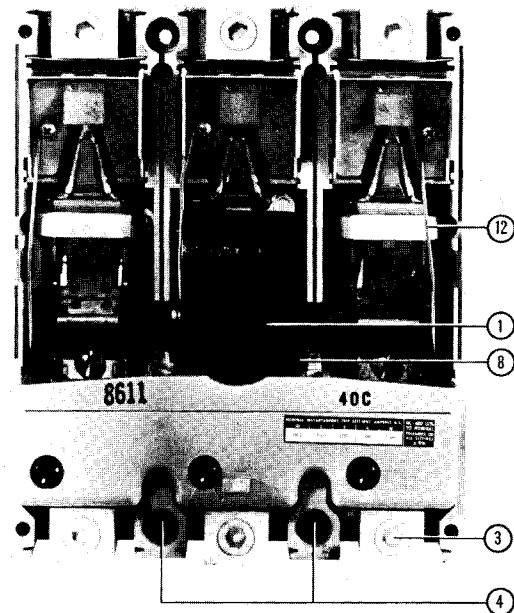


Fig. 3 — Front View of Circuit Breaker Cover Removed

FIG. 1 - PHOTO 48949-A
FIG. 2 - PHOTO 48947-A

FIG. 3 - PHOTO 48951-A



WARNING FOR CIRCUIT BREAKER REMOVAL

THE CIRCUIT BREAKER SHOULD BE IN THE "OFF" POSITION AND, IF PRACTICABLE, THE SWITCHBOARD DE-ENERGIZED BEFORE INSPECTING, CHANGING, INSTALLING OR REMOVING THE CIRCUIT BREAKER OR TRIP UNITS. IF THE BUS CANNOT BE DE-ENERGIZED, USE INSULATED HANDLE TOOLS, RUBBER GLOVES AND A RUBBER FLOORMAT.

TO REMOVE A REAR-CONNECTED CIRCUIT BREAKER FROM ITS MOUNTING

See WARNING FOR CIRCUIT BREAKER REMOVAL.

1. Remove four cover screws (5, Fig. 1) and breaker cover (2, Fig. 1).
2. Remove rear connection stud terminal screws, lockwashers and flatwashers.
3. Pull circuit breaker forward or away from the rear connection studs.

TO REMOVE A FRONT-CONNECTED CIRCUIT BREAKER FROM ITS MOUNTING

See WARNING FOR CIRCUIT BREAKER REMOVAL.

1. Remove four cover screws (5, Fig. 1) and breaker cover (2, Fig. 1).
2. Loosen terminal lug screws (3, Fig. 3) and pull cable out of lugs. Bend cables clear of the circuit breaker.
3. Remove four breaker mounting screws (4, Figs. 1 and 3); breaker is now free of its mounting.

TO REMOVE A CIRCUIT BREAKER EQUIPPED WITH PLUG-IN CONNECTOR ASSEMBLIES FROM ITS MOUNTING

See WARNING FOR CIRCUIT BREAKER REMOVAL.

1. Loosen four breaker mounting screws (4, Fig. 1) and pull circuit breaker forward or away from the mounting surface.

ADDING A TRIP UNIT TO A BREAKER FRAME

See WARNING FOR CIRCUIT BREAKER REMOVAL.

1. Remove four cover screws (5, Fig. 1) and breaker cover (2, Fig. 1).
2. Remove trip unit anchor screws and lockwashers (6, Fig. 2) from the mechanism terminals. Bend the arc conductor wires (12, Fig. 3) clear of the terminals.
3. Lower trip unit (7, Fig. 2) carefully into base. Make sure latch pin (11, Fig. 2) on the trip unit latch assembly engages slots (8, Fig. 3) in the mechanism housing. This operation can be facilitated by holding the operating handle (1, Figs.

- 1 and 3) away from the trip unit being installed.
4. Engage but do not tighten trip unit anchor screw (6, Fig. 2), under trip unit latch, to the circuit breaker base (9, Fig. 1). Reposition arc conductor wires (12, Fig. 3) over trip unit terminals (outside poles).
5. Secure outside poles using anchor screws and lockwashers (6, Fig. 2).
6. Tighten securely trip unit anchor screw under trip unit latch.
7. Replace circuit breaker cover (2, Fig. 1), secure in position with cover screws (5, Fig. 1).
8. Move operating handle (1, Figs. 1 and 3) to extreme "OFF" (reset) position. Circuit breaker is now ready for service.

TRIP UNIT REPLACEMENT

See WARNING FOR CIRCUIT BREAKER REMOVAL.

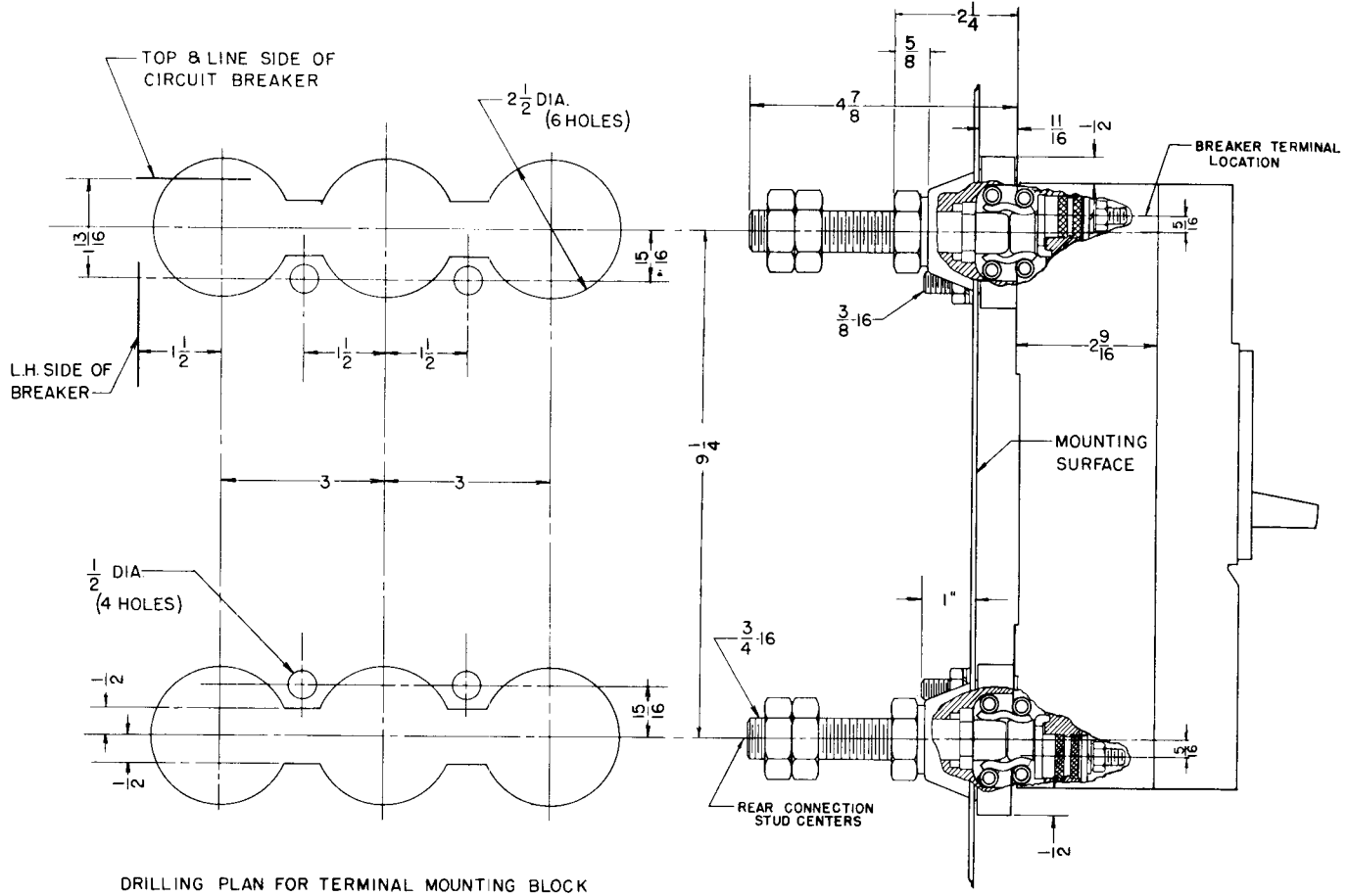
1. Remove four cover screws (5, Fig. 1) and breaker cover (2, Fig. 1).
2. Remove load end rear connection stud terminal screws, lockwashers and flatwashers if breaker is rear connected; terminal lug screws (3, Fig. 3) and solderless lugs if breaker is front connected; or tulip clip assembly terminal locknuts if plug-in assembly type connections are used.
3. Remove trip unit anchor screws (6, Fig. 2) on all but the mechanism pole terminals. Bend arc conductor wires (12, Fig. 3) clear of the terminals.
4. Release anchor screw (6, Fig. 2) on the mechanism pole while lifting the trip unit out of the breaker base. This screw is loosely retained in the latch assembly of the trip unit and will remain with the unit when it is removed.
5. Install new trip unit and reassemble following steps 3 to 8 inclusive under "ADDING A TRIP UNIT". Be sure that the particular terminal connecting arrangement, as mentioned in step 2 above, is in position and secured before replacing breaker cover.

INSPECTION AND MAINTENANCE

See WARNING FOR CIRCUIT BREAKER REMOVAL.

Should the circuit breaker appear to be overheating, inspect for any loose or otherwise defective terminal connections.

When a circuit breaker is not operated for long periods of time, a high resistance film may form on the contact surfaces which will also result in overheating. This high resistance film may be minimized, and in most cases removed, by opening and closing the circuit breaker several times under load.



Plug-In Connector Assemblies and Drilling Plan
Dimensional Drawings



NOTES



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