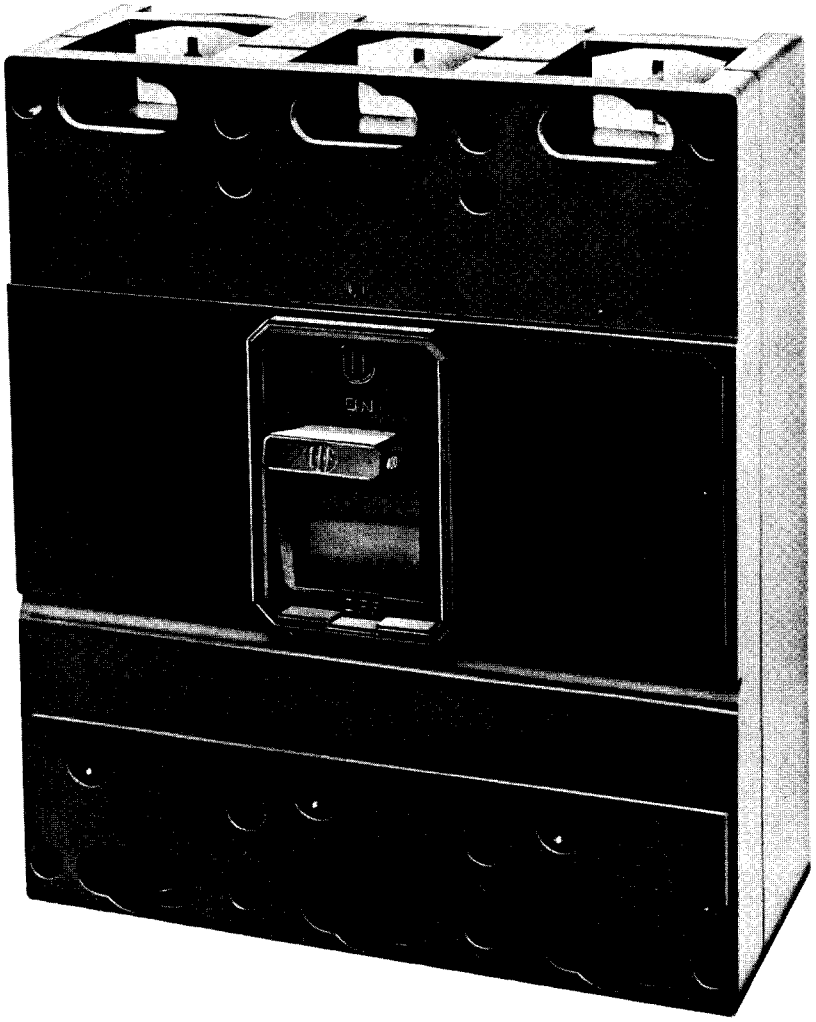
IB-2.2.7-5
ISSUE A

MOLDED-CASE CIRCUIT BREAKERS

INSTRUCTIONS

400-AMPERE
JJ-FRAME CIRCUIT BREAKERS
2 & 3 POLE, 250-400 AMPERES



I-T-E CIRCUIT BREAKER COMPANY

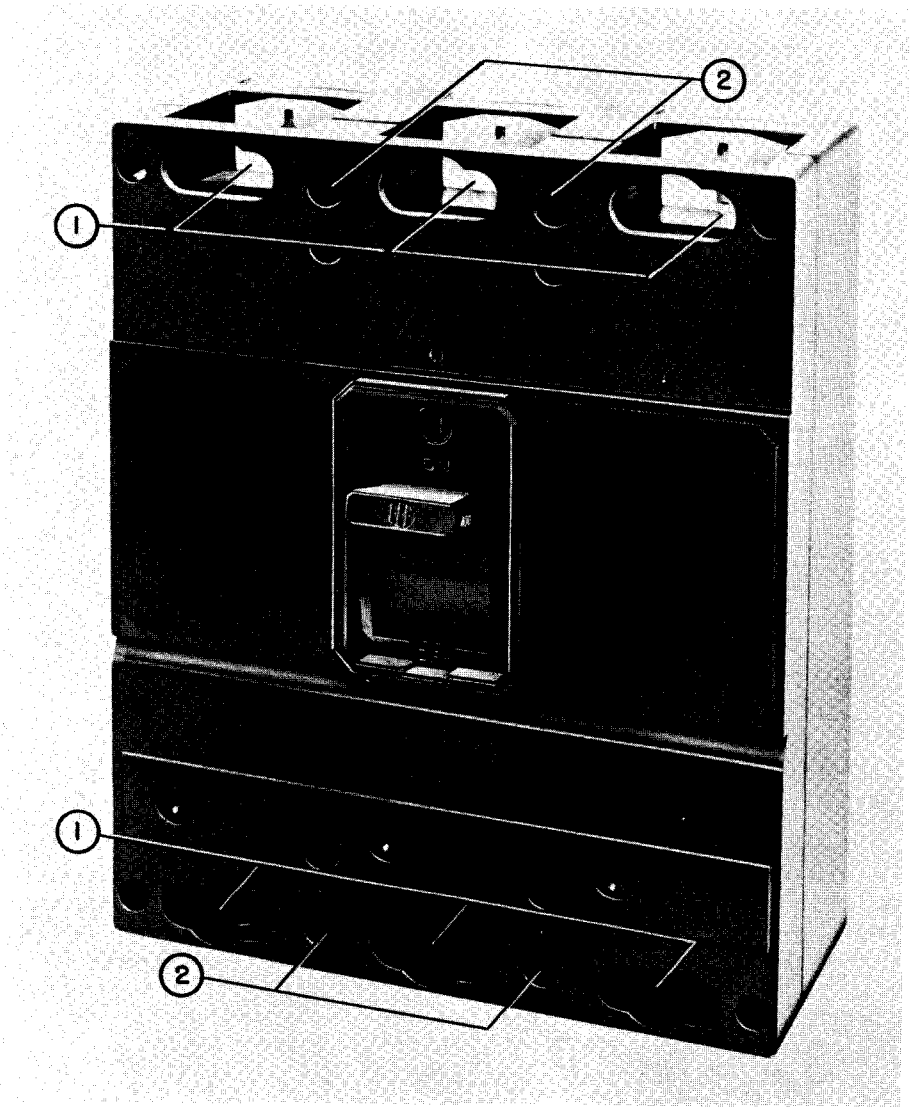


Fig. 1 — Front View of Circuit Breaker

INSTRUCTIONS FOR 400-AMPERE JJ-FRAME CIRCUIT BREAKERS 2 & 3 POLE, 250-400 AMPERES

GENERAL

JJ-frame circuit breakers, as shown in Figure 1, are for use in individual enclosures, in switchboards, and in power and distribution panelboards.

NOTE: 2 and 3 pole breakers are the same physical size; in the 2 pole breakers the current carrying parts are omitted from the center pole.

JJ-frame circuit breakers provide complete overload and short circuit protection by use of a time delay thermal trip element and an instantaneous magnetic trip device. 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
250-300	1050	1350	1650	1950	2250
350-400	1900	2300	2700	3100	3500

The overcenter toggle mechanism is trip free of the operating handle. The circuit breaker, therefore, cannot be held closed by means of the handle should a tripping condition exist. The handle will assume an intermediate position between "ON" and "OFF" after automatic operation, thus giving a clear indication of tripping.

The circuit breakers operate on a common trip principle so that an overcurrent or short circuit on any pole will simultaneously open all poles.

Circuit breakers are carefully calibrated at the factory, at controlled temperatures for a 40C (104F) ambient. The cover of the circuit breaker is sealed to prevent access to the trip elements. Alteration of the calibration of these elements should not be attempted. Removal of the circuit breaker cover voids the Underwriters' Laboratories, Inc. listing for that particular breaker.

Pressure wire connectors, suitable for use with aluminum or copper wire, are furnished with all JJ-frame circuit breakers, but must be specified as to size required. Rear connection studs or plug-in connector assemblies are also available (2 and 3 pole). The latter type of arrangement permits the removal of the circuit breaker from its leads without physically coming in contact with either the line or load terminals.

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 JJ-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 UL and NEMA Test Procedures		
Volts	Amperes	
	Asymmetrical	Symmetrical
240 ac	50,000	42,000
480 ac	35,000	30,000
600 ac	25,000	22,000
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.

WARNING FOR CIRCUIT BREAKER REMOVAL

THE CIRCUIT BREAKER SHOULD BE IN THE "OFF" POSITION AND, IF PRACTICABLE, THE SWITCHBOARD DE-ENERGIZED BEFORE INSPECTING, INSTALLING, OR REMOVING THE CIRCUIT BREAKER. 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.

Remove the "breaker to rear connection stud" screws (location 1, Fig. 1) and pull circuit breaker forward or away from mounting surface.

TO REMOVE A FRONT-CONNECTED CIRCUIT BREAKER FROM ITS MOUNTING

See WARNING FOR CIRCUIT BREAKER REMOVAL.

Loosen cable anchor screws (location 1, Fig. 1). Bend cables clear of terminals. Remove circuit breaker mounting bolts (location 2, Fig. 1) and pull circuit breaker forward or away from mounting surface.

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

See WARNING FOR CIRCUIT BREAKER REMOVAL.

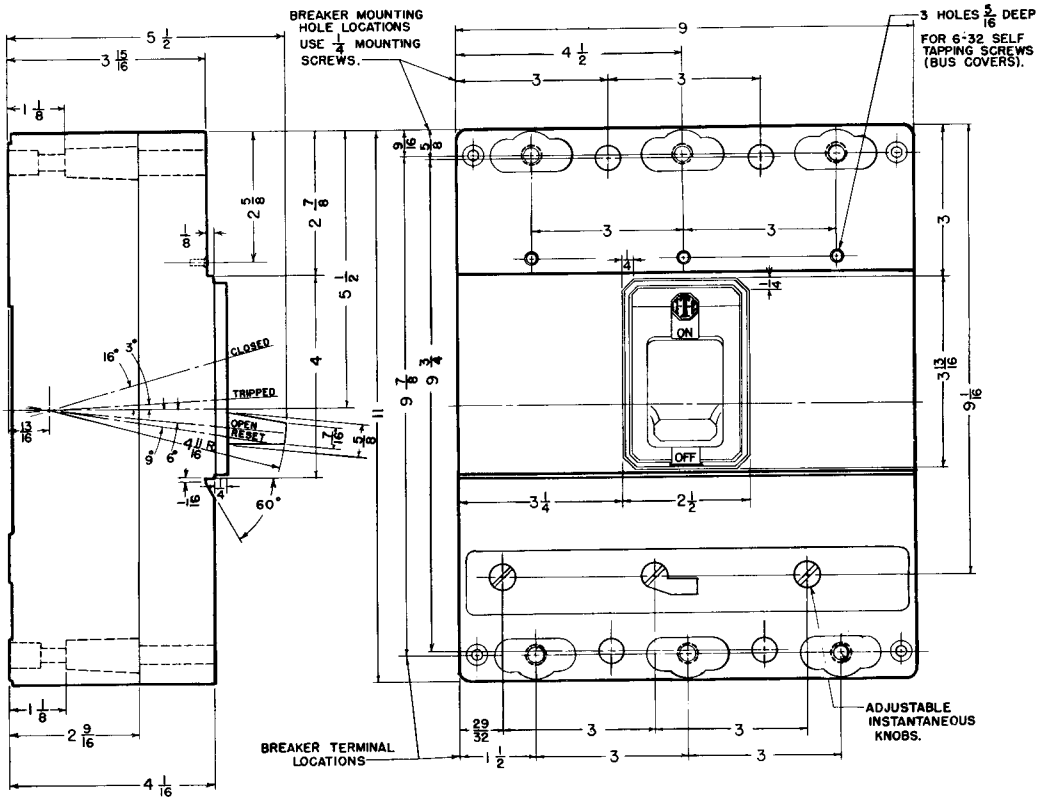
Remove "circuit breaker to mounting block" screws (location 2, Fig. 1) and pull circuit breaker forward or away from mounting surface.

INSPECTION AND MAINTENANCE

See WARNING FOR CIRCUIT BREAKER REMOVAL.

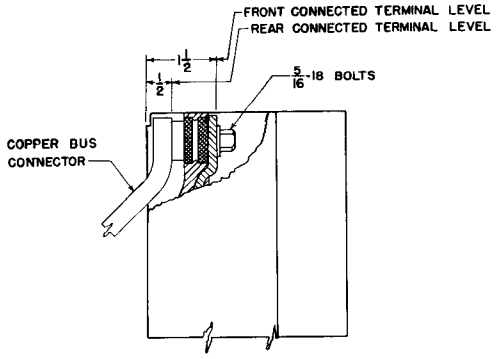
Should the circuit breaker appear to be overheating, inspect for any loose or otherwise defective terminal connections.

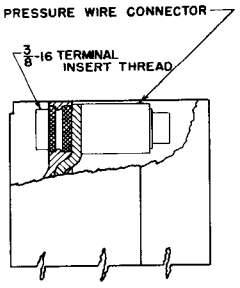
When a circuit breaker is not operated for long periods of time, a high resistance film may form on the contact surfaces which will also result in overheating. This high resistance film may be minimized, and in most cases removed, by opening and closing the circuit breaker several times under load.

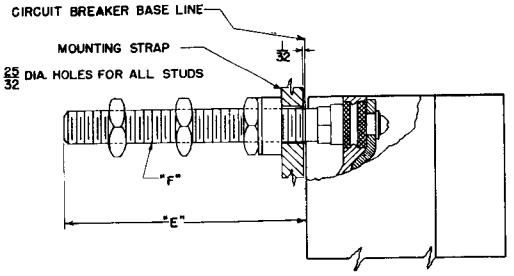


CURRENT CARRYING PARTS ARE OMITTED FROM CENTER POLE IN TWO POLE CONSTRUCTION.

SHIPPING WEIGHT	2 POLE	3 POLE
FRAME	15 1/2	17
TRIP UNIT	2 1/2	3 1/2
COMPLETE BREAKER	18	20 1/2







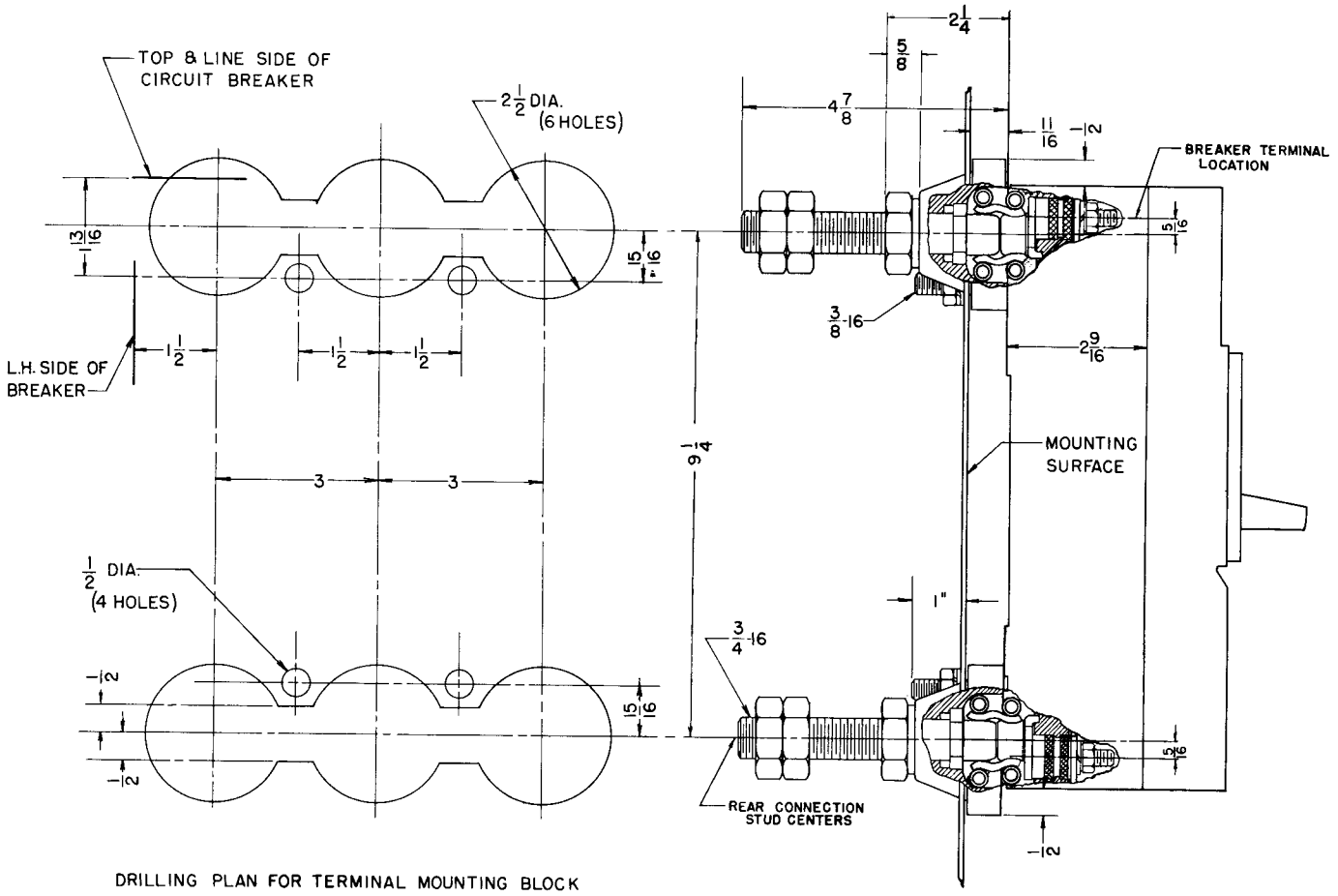
FRONT CONNECTED TERMINAL

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

REAR CONNECTED TERMINAL

AMPERE RATING	LENGTH B.O.B. "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 JJ-Frame Circuit Breaker Dimensional Drawings



Plug-In Connector Assemblies & Drilling Plan Dimensional Drawings

NOTES

New 9-67

Printed in U.S.A.