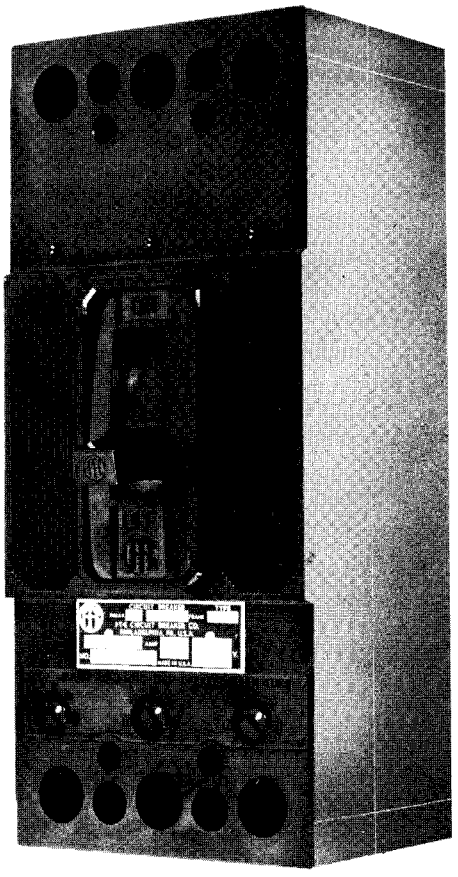
IB-2.2.7-4
ISSUE A

MOLDED-CASE CIRCUIT BREAKERS

INSTRUCTIONS

225-AMPERE
ET® FJ-FRAME CIRCUIT BREAKERS
2 & 3 POLE, 70-225 AMPERES



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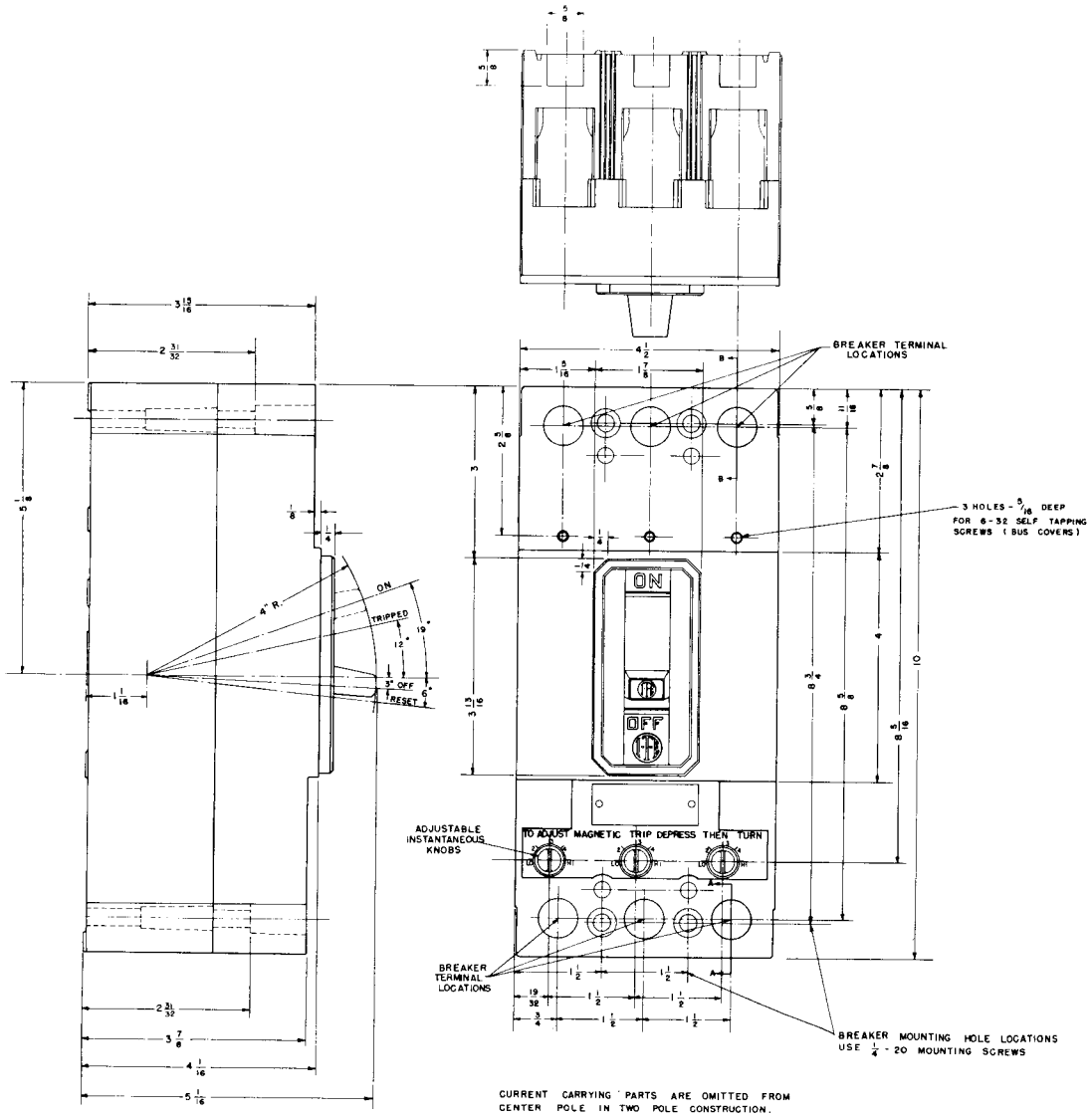
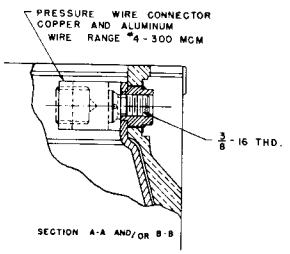
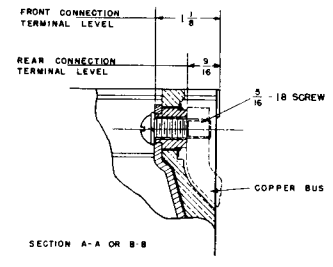
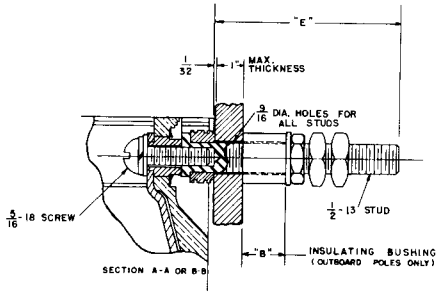








MAX AMP RATING	CAT NO.	"E"	"B"
225	RS-4754	3 3/4	
225	RS-4763	7 9/16	3 5/16

REAR CONNECTED TERMINAL

225-Ampere FJ-Frame Circuit Breaker Dimensional Drawings

COVER - PHOTO B34005-R

DWG. S-15349 SHT. 1 - REV. 3

INSTRUCTIONS FOR 225-AMPERE FJ-FRAME CIRCUIT BREAKERS 2 & 3 POLE, 70-225 AMPERES

GENERAL

FJ-frame circuit breakers, as shown on page 2, 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.

FJ-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
70-175	750	960	1300	1500	1600
200-225	960	1200	1550	1850	2000
225 ETI	960	1200	1550	1850	2000

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 FJ-frame circuit breakers. 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.

ETI circuit breakers (adjustable instantaneous magnetic trip only) can be furnished and are designed for use in welding circuits, motor circuits and combination starters where short circuit protection only is required. When used in combination starters, they serve in conjunction with motor protective relays to offer complete protection. The relays guard against motor overloads; the circuit breaker provides short circuit protection.

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 FJ-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	25,000	22,000
480 ac	20,000	18,000
600 ac	15,000	14,000
250 dc	10,000	

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.

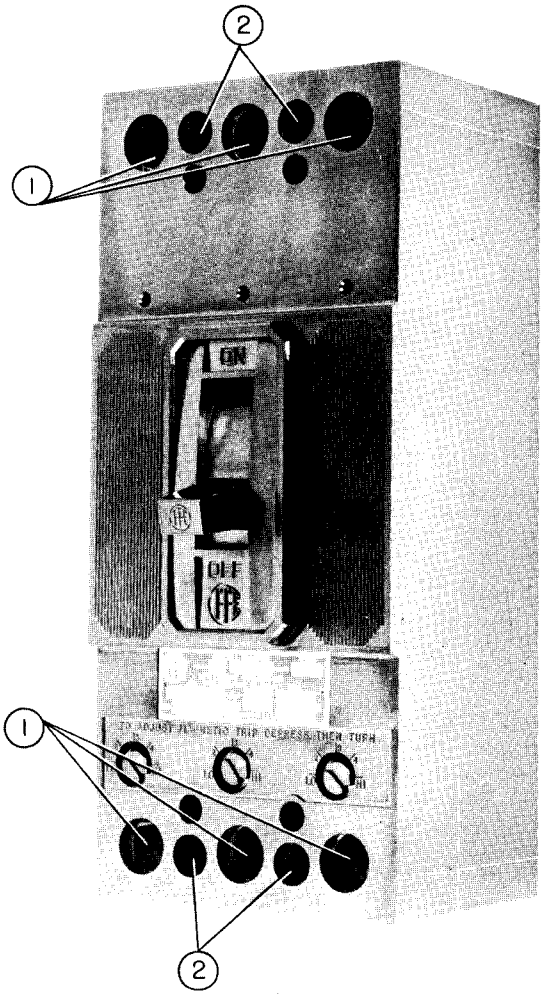


FIG. 1 - PHOTO B34005-RA

Fig. 1 — Front View of Circuit Breaker

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.

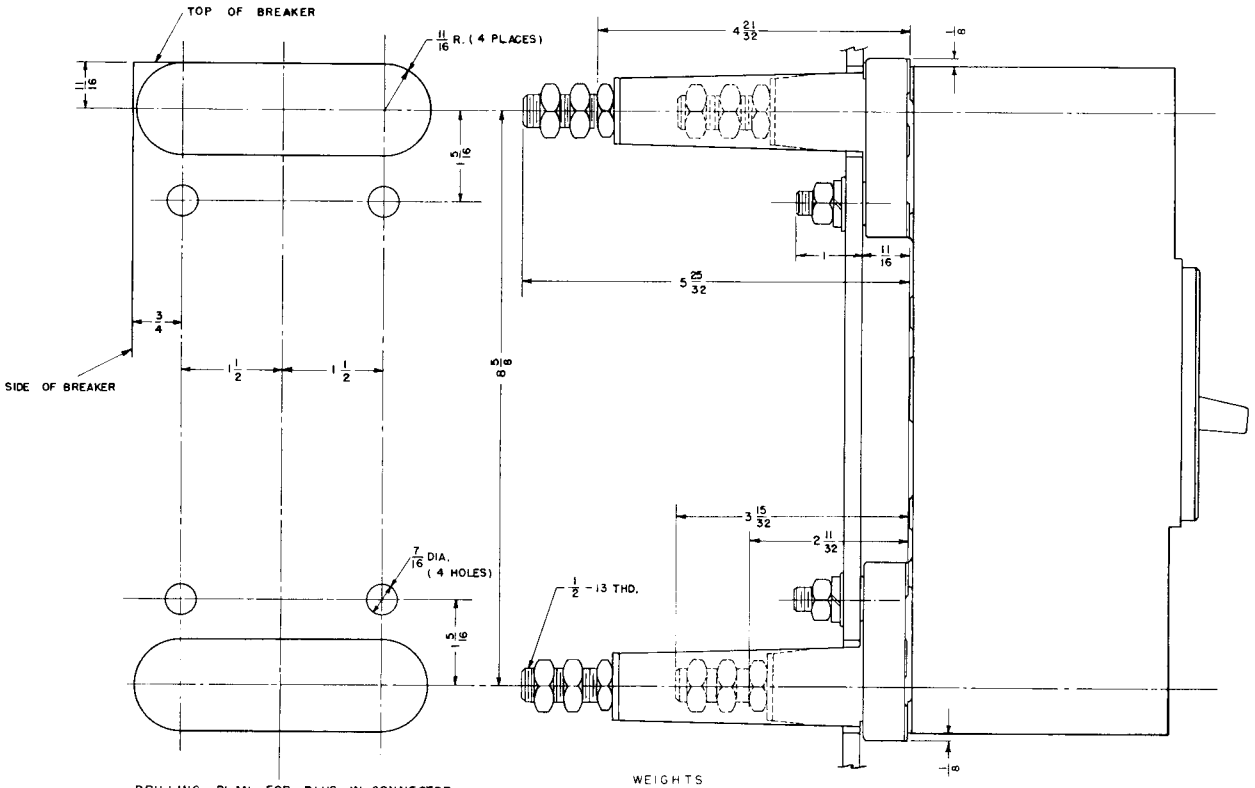
Remove "circuit breaker to mounting block" screws (location 2, Fig. 1) and pull circuit breaker forward or away from mounting surface.

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.



DRILLING PLAN FOR PLUG-IN CONNECTOR ASSEMBLIES

WEIGHTS

DESCRIPTION	WEIGHTS - LBS.
COMPLETE MOUNTING BLOCK ASSEMBLY 2 POLE	1 3/4 LBS.
COMPLETE MOUNTING BLOCK ASSEMBLY 3 POLE	2 LB.
LONG STUD ASSEMBLY	4 OZ.
SHORT STUD ASSEMBLY	2 OZ.

Plug-In Connector Assemblies & Drilling Plan Dimensional Drawings

DWG. S-15349 SHT. 2 - REV. 3

NOTES

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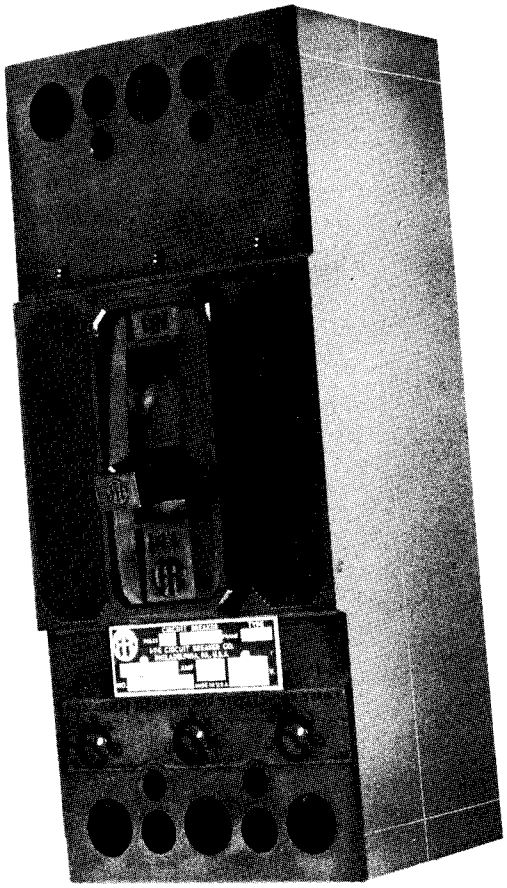

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