



ELECTRICALLY OPERATED POWER-BREAK
600 and 1600 Ampere Frame

- A Breaker Condition Indicator
"OFF" Green; "ON" Red; "CHARGED" Yellow
- B Breaker "ON" Button
Push to turn breaker "ON"
- C Breaker "OFF" Button
Push to turn breaker "OFF"
- D Manual Charge Handle
- E Lockable Manual Charge Engagement Button
- F Drive Unit Terminal Board (See Figure 2)
- G Removable protective cover over programmer unit.

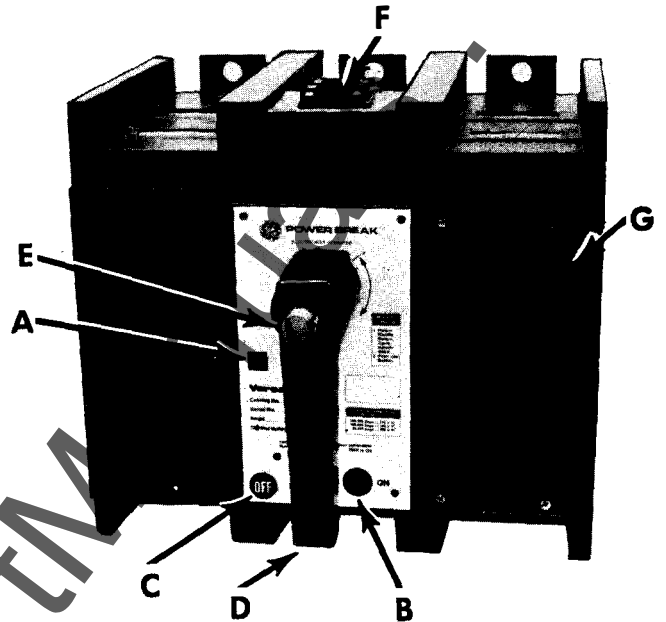


Figure 1

GENERAL DESCRIPTION AND APPLICATION INFORMATION

The electrically operated version of the 600-1600A. frame power breaker consists of a modified manual breaker with a motor operated drive unit providing the handle rotating function. A solenoid operated

mechanical system provides contact closing on demand. Electrical and mechanical interlocks are included to provide the following functions only under the conditions listed in Table 1.

TABLE 1

Breaker Contact Position	Permissible Operating Function
OPEN (Breaker Tripped)	Mechanism may be charged
OPEN (Breaker "Charged")	Breaker contacts may be closed
CLOSED	Breaker contacts may be opened

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 General Electric Company.

Since this device is a modified manual breaker, the mechanism cannot be charged with breaker contacts closed. Further, tripping the breaker from the charged condition should be avoided, if possible.

Remote opening of the breaker is normally accomplished with a shunt trip device installed in the breaker. Optionally, an undervoltage release device may be used.

DUTY CYCLE

The drive unit will be adversely affected by heat build-up due to rapid cycling. Operation should be limited to not more than ten operations in a one-hour period to allow sufficient cooling. Rate may be as fast as one operation every 10 seconds if desired as long as the total rate does not exceed the above.

OPERATING INSTRUCTIONS

1. With Circuit Breaker "OFF" (Tripped)

- a) Mechanism may be electrically charged by connecting Terminal 3 to Terminal 4 (Figure 2).
- b) Mechanism may be manually charged by pushing in the lockable manual charge engagement button (Figure 1) until it is flush with the handle surface, then rotating handle 120° counterclockwise to CHARGE, followed by 120° clockwise rotation to release the engagement system. Handle will not turn breaker ON.

NOTE: If button does not depress fully, slight rotation of the handle to align the internal coupling may be required.

2. With Mechanism Charged

- a) Breaker contacts may be remotely closed by connecting Terminal 5 to Terminal 6 (Figure 2).

- b) Breaker contacts may be closed manually by pushing the "ON" button (Figure 1) on the breaker escutcheon.

NOTE: If unit has a manual closing interlock (Cat. No. TPMCE1) installed, breaker will not close without control power.

3. With Circuit Breaker Closed

- a) Breaker contacts may be opened remotely by energizing shunt trip device or de-energizing undervoltage release device.
- b) Breaker contacts may be opened manually by pushing the "OFF" button (Figure 1).

OPTIONAL FEATURES

Automatic Closing

By permanently connecting Terminal 5 to Terminal 6 (Figure #2), the breaker contacts will close as soon as charging is completed.

Interlocks

The motor operator contains an anti-pump feature which shuts off control power if the OFF button is held depressed. Thus, electrical operation is prevented if a "Kirk" lock or padlock accessory is used and either is in the breaker locked OPEN condition. Also, if the breaker is equipped with a drawout interlock (TPDO-1), electrical operation is permitted only if the drawout carriage is in the engaged or TEST position.

Automatic Charging

By permanently connecting Terminal 3 to Terminal 4 (Figure #2), the mechanism will charge as soon as the breaker contacts open.

CAUTION: The bell alarm lockout and undervoltage release device both function by holding the breaker latch open. So, to prevent continuous cycling, when wired for automatic charging, the following is required:

a) For Bell Alarm Lockout - Interconnect bell alarm switch to motor operator terminal board as shown in Figure 2.

WIRING CONNECTIONS

NOTE: DC Units will not function unless polarity is as shown.

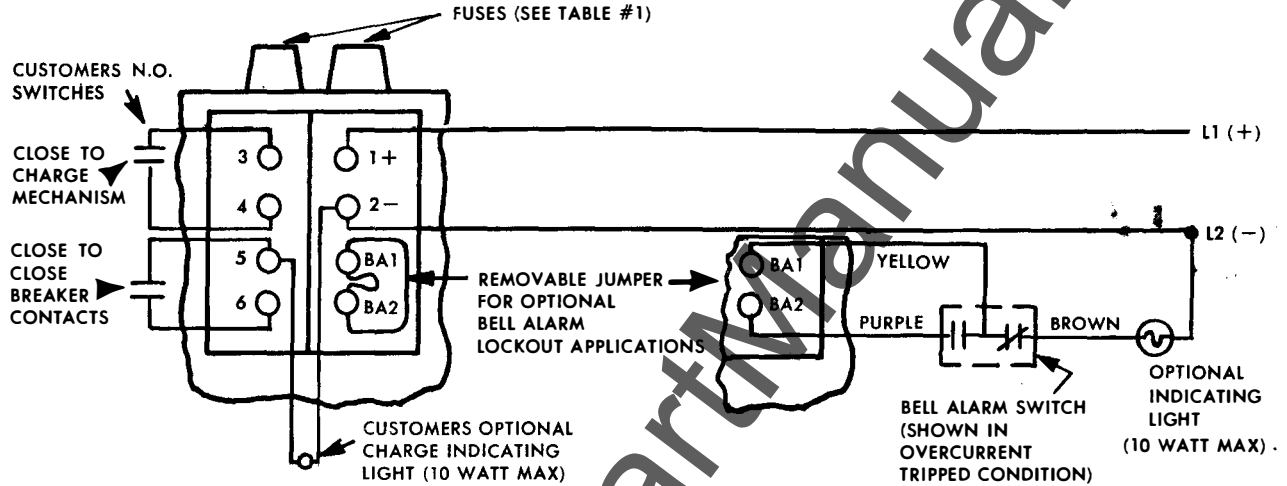


Figure 2

CAUTION: Control Module Circuitry contains solid state devices so dielectric tests must be made only from individual terminals to ground.

The control module requires 85% of rated voltage to operate device.

TABLE 2

Cat. No. Suffix	Nominal Voltage ^③	Current Max. ^①		Fuses ②	Transient Protection	Function Time ^①		
		Charging	Closing			Charge	Close	Open
E1	120VAC	1 Amp	3 Amp	2A/125V	20 Joule	10 Sec. Max.	5Hz Max.	3 Hz Max.
E3	125VDC	1 Amp	3 Amp	2A/125V	10 Joule			

NOTES:

- ① Values shown at rated voltage held within 5%. Inrush approx. 5 x value shown.
- Use slow blow fuses.
- + 15% permitted.



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