NOTICE

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

- **DANGER**
  - Indicates an imminently hazardous situation which, if not avoided, **will result in** death or serious injury.

- **WARNING**
  - Indicates a potentially hazardous situation which, if not avoided, **can result in** death or serious injury.

- **CAUTION**
  - Indicates a potentially hazardous situation which, if not avoided, **can result in** minor or moderate injury.

- **CAUTION**, used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, **can result in** property damage.

**NOTE:** Provides additional information to clarify or simplify a procedure.

**PLEASE NOTE:**

Electrical equipment should be installed, operated, serviced and maintained by qualified electrical personnel. This document is not intended as an instruction manual for untrained persons.

**FCC NOTICE:**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
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The Universal Test Set is designed to perform operational tests and diagnoses of Square D electronic trip circuit breakers, circuit breaker components and tripping functions. It does not check the primary current sensing capabilities of a circuit breaker.

Check the following table to find the appropriate test set/test module for the circuit breaker.

Table 1: Test Set/Test Module

<table>
<thead>
<tr>
<th>Circuit Breaker</th>
<th>Circuit Breaker Series Number</th>
<th>Test Set</th>
<th>Test Module¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>LE/LX</td>
<td>1B</td>
<td>CBTU1 or UTS3</td>
<td>CBTMB</td>
</tr>
<tr>
<td></td>
<td>1 and 2</td>
<td>CBT78</td>
<td>Not Available - Primary Injection Testing Only</td>
</tr>
<tr>
<td>ME</td>
<td>1</td>
<td>CBTU1 or UTS3</td>
<td>CBTM3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>CBTU1 or UTS3</td>
<td>CBTM4 or CBTM4A</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>CBTU1 or UTS3</td>
<td>CBTM4A</td>
</tr>
<tr>
<td></td>
<td>4 and 5</td>
<td>CBTU1 or UTS3</td>
<td>CBTMB</td>
</tr>
<tr>
<td></td>
<td>5A</td>
<td>CBTU1 or UTS3</td>
<td>CBTMB</td>
</tr>
<tr>
<td></td>
<td>5B</td>
<td>CBTU1 or UTS3</td>
<td>CBTMB</td>
</tr>
<tr>
<td>MX</td>
<td>4 and 5</td>
<td>CBTU1 or UTS3</td>
<td>CBTM4 or CBTM4A</td>
</tr>
<tr>
<td></td>
<td>5B</td>
<td>CBTU1 or UTS3</td>
<td>CBTMB</td>
</tr>
<tr>
<td>NE</td>
<td>1</td>
<td>CBTU1 or UTS3</td>
<td>CBTM3</td>
</tr>
<tr>
<td></td>
<td>2 and 3</td>
<td>CBTU1 or UTS3</td>
<td>CBTM4 or CBTM4A</td>
</tr>
<tr>
<td></td>
<td>3A</td>
<td>CBTU1 or UTS3</td>
<td>CBTM4A</td>
</tr>
<tr>
<td></td>
<td>3B</td>
<td>CBTU1 or UTS3</td>
<td>CBTMB</td>
</tr>
<tr>
<td>NX</td>
<td>2 and 3</td>
<td>CBTU1 or UTS3</td>
<td>CBTM4 or CBTM4A</td>
</tr>
<tr>
<td></td>
<td>3B</td>
<td>CBTU1 or UTS3</td>
<td>CBTMB</td>
</tr>
<tr>
<td>PE</td>
<td>1, 2, and 3</td>
<td>CBT78</td>
<td>Not Available - Primary Injection Testing Only</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>CBTU1 or UTS3</td>
<td>CBTM3</td>
</tr>
<tr>
<td></td>
<td>5 and 6</td>
<td>CBTU1 or UTS3</td>
<td>CBTM4 or CBTM4A</td>
</tr>
<tr>
<td></td>
<td>6A</td>
<td>CBTU1 or UTS3</td>
<td>CBTM4A</td>
</tr>
<tr>
<td></td>
<td>6B</td>
<td>CBTU1 or UTS3</td>
<td>CBTMB</td>
</tr>
<tr>
<td>PX</td>
<td>5 and 6</td>
<td>CBTU1 or UTS3</td>
<td>CBTM4 or CBTM4A</td>
</tr>
<tr>
<td></td>
<td>6B</td>
<td>CBTU1 or UTS3</td>
<td>CBTMB</td>
</tr>
<tr>
<td>SE</td>
<td>1</td>
<td>CBTSE1</td>
<td>Not Available - Primary Injection Testing Only</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>CBTU1 or UTS3</td>
<td>CBTM1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>CBTU1 or UTS3</td>
<td>CBTM4 or CBTM4A</td>
</tr>
<tr>
<td></td>
<td>3A</td>
<td>CBTU1 or UTS3</td>
<td>CBTM4A</td>
</tr>
<tr>
<td></td>
<td>3B</td>
<td>CBTU1 or UTS3</td>
<td>CBTMB</td>
</tr>
</tbody>
</table>

¹ A kit including the umbilical cord and rating plug adapter is available for each test module. The umbilical cord and rating plug adapter connect the test set to the circuit breaker being tested. A power cord (Part No. 48005-115-01) and an umbilical cord (Part No. 48155-055-50) are also available as replacement parts.
The following terms are used in diagnosing circuit breaker functions:

**LONG-TIME PICKUP.** The current at which the long-time delay timer starts.

**LONG-TIME AMPERE RATING.** The current carrying capacity or “handle rating” of the circuit breaker.

**LONG-TIME DELAY.** The time period that the long-time delay timer runs before initiating a trip signal, i.e., the length of time the circuit breaker will carry a sustained low-level overload before initiating a trip signal.

**SHORT-TIME PICKUP.** The current at which the short-time delay timer starts, i.e., the current at which the short-time function recognizes an overcurrent.

**SHORT-TIME DELAY.** The time period short-time delay timer runs before initiating trip signal, i.e., the short-time delay allows the circuit breaker to carry or withstand low-level or high-level short-circuit currents (up to the published withstand ratings) with intentional delay before tripping. There are two choices of short-time delay characteristics available:

1. **I²t IN.** A delay characteristic which results in an inverse-time delay that most closely parallels time-current characteristics of fuses.
2. **I²t OUT.** A delay characteristic which results in a constant delay that coordinates best with thermal-magnetic and electronic trip circuit breakers.

**GROUND-FAULT PICKUP.** The ground-fault current level at which ground-fault delay timer starts, i.e., the function which allows the user to set the level of ground-fault current at which the trip system begins timing.

**GROUND-FAULT DELAY.** The time period the ground-fault delay timer runs before initiating trip signal, i.e., the function which determines the time the circuit breaker will wait before initiating a trip signal. There are two choices of ground-fault delay characteristics available:

1. **I²t IN.** A delay characteristic which results in an inverse-time delay that coordinates best with zero sequence ground-fault relays used in conjunction with thermal-magnetic circuit breakers and fusible switches.
2. **I²t OUT.** A delay characteristic which results in a constant delay characteristic that coordinates best with electronic trip circuit breakers with the ground-fault option.

**GROUND-FAULT ALARM PICKUP.** The ground-fault current level at which the trip unit initiates a signal to indicate a ground-fault condition. The circuit breaker will not trip.

**TEST TYPES**

The Universal Test Set provides three test options for each type of circuit breaker tested. These test types are: Automatic Test Mode, Individual-function Test Mode, and Manual Test Mode. The information which follows explains the requirements for and the results obtained by each test.

**NOTE:** A small straight-blade screwdriver is required for testing circuit breakers.

**Automatic Test Mode**

**TEST REQUIREMENTS:** Circuit breaker, rating plug and trip unit information.

**TEST RESULTS:** Tests long-time, short-time, instantaneous and ground-fault functions simultaneously without pauses or prompts; displays the amount of time delay before initiating the trip signal. Specifies which function failed on a pass/fail basis.
Individual-function Test Mode

TEST REQUIREMENTS: Circuit breaker, rating plug and trip unit information. Selection of the specific function(s) to be tested. The Individual-function test mode is accessed from the automatic test mode.

TEST RESULTS: Displays and diagnoses functions one at a time; tests each trip unit switch function as well as the operation of the indicators. Tests calibration and tolerance to predetermined values.

TEST REQUIREMENTS: Circuit breaker, rating plug and trip unit information. A phase or ground-fault current value must be manually entered.

TEST RESULTS: Monitors and displays the trip time of the selected current applied to the trip unit.

Some testing procedures require the zone interlocks or any self-restraint jumper wires to be disconnected. If the circuit breaker is wired for zone interlocking or is self-restrained by jumper wires, do the following:

Refer to table 2 and disconnect wires or jumpers from terminals 6 and 8 of the terminal block. Reconnect the wires when testing is complete.

Table 2: Terminal Numbering

<table>
<thead>
<tr>
<th>Number</th>
<th>Terminal Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>ST Restraint OUT</td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>GF Restraint OUT</td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

SE Circuit Breakers

Refer to table 3 and disconnect wires or jumpers from terminals 21 and 24 of the terminal block. Reconnect the wires when testing is complete.

Table 3: Terminal Numbering

<table>
<thead>
<tr>
<th>Number</th>
<th>Terminal Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Ground-fault Zone Interlock</td>
</tr>
<tr>
<td>22</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Short-time Zone Interlock</td>
</tr>
<tr>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>
If circuit breaker is connected to a POWERLOGIC® system, disconnect POWERLOGIC system before testing. If POWERLOGIC system is not disconnected, Universal Test Set will show “TEST FAILED” message.

Disconnect POWERLOGIC system by doing the following steps:

1. Mark connector (A) in figure 1 at CIM3F communications adapter (B) in figure 1 for circuit breaker before being tested.
2. Disconnect connector (A) from CIM3F communications adapter (B).
3. Reconnect connector (A) when testing is complete.

**Figure 1: Communication Adapter**
Section 2—Self-Test

**CAUTION**

HAZARD OF EQUIPMENT DAMAGE

DO NOT touch connector pins (Fig. 2) when handling test modules. Touching pins can produce an electrostatic discharge resulting in damage to module or trip unit. Failure to follow this instruction can result in equipment damage.

---

Figure 2: Connector pins

1. Place universal test set (fig. 3) on a flat surface. Open case until cover locks into the open position.
2. Make sure test set power is off (O) by checking position of power switch (A, Fig. 3) on keyboard (F).
3. Plug one end of test set power cord into power cord receptacle (B); plug other end into a grounded power source.
4. Insert Self-test Module (D) into module receptacle (E) in upper right corner of test set. Make sure module label is facing keyboard (F). Never use receptacle for storing modules when test set is not in use; use only module holders (C) for storage.
5. Turn power switch (A) to on (I). The red light on self-test module will glow and an identifying message will appear on the display.
6. The module will run automatically for a short period of time to insure basic operations of test set are working correctly.
7. If tests were successful, test set can now be used for testing circuit breakers.

**NOTE:** If an error message occurs or module light fails to come on, turn power to off (O) and carefully re-seat module in receptacle.

---

**CAUTION**

HAZARD OF EQUIPMENT DAMAGE

Test results will be inaccurate if any self-test is unsuccessful. Do not use test set to test circuit breakers if any self-test, including those which follow, is unsuccessful. Failure to follow this instruction can result in equipment damage.

---

Figure 3: Universal Test Set
8. The test set will now prompt for optional manual testing of functions. These tests must be done on a periodic basis. To test functions, see steps 9 and 10. If manual tests are not being done, go to step 11.

9. Press keys slowly and firmly. Press SET UP key when it is flashing to return test set to the beginning of the following self-test sequence:

a. “TEST SYSTEM KEYBOARD?-YES/NO” checks keyboard to make sure it is accepting input correctly. If keyboard is not being tested, press NO key. To test operation of keyboard, press YES key. The display will then step through the test. If display indicates “SYSTEM KEYBOARD FAILED,” see step 10A.

b. “TEST SYSTEM KEY LIGHTS?-YES/NO” checks the systems key backlights for proper operation. If backlights are not being tested, press NO key. To check operation of backlights, which are located behind the eight system keys (A) in Figure 4, press YES key. The display will step through the test with lights flashing in sequence down the rows. If display indicates “SYSTEM LIGHTS TEST FAILED,” see step 10A.

c. “TEST SYSTEM L.C.D. DISPLAY?-YES/NO” checks for proper operation of LCD (liquid crystal display) characters. If LCD is not being tested, press NO key. To test LCD, press YES key. Display will then step through the test. If display indicates “SYSTEM L.C.D DISPLAY TEST FAILED,” see step 10A.

10. Test set will now display test results:

a. If test sequence was not successful, display will so indicate. Press SET UP key to return test to beginning of test sequence and run tests again. If test sequence is again unsuccessful, note message and contact Square D for assistance (1-888-778-2733).

b. If test sequence was successful, Universal Test Set can now be used to test circuit breaker trip systems.

11. Turn test set power switch (B) in Figure 4 to OFF.

12. Remove self-test module and store it in module holder.

13. If no additional testing is planned, unplug test set, store power cord in storage area, and close test set case.

---

**CAUTION**

HAZARD OF EQUIPMENT DAMAGE

Test results will be inaccurate if any self-test is unsuccessful. Do not use test set to test circuit breakers if any self-test was unsuccessful. Failure to follow this instruction can result in equipment damage.
Section 3—Test Circuit Breaker

When testing only SE Series 2 circuit breakers using a CBTM1 module, test set conducts ground-fault delay test using dc current. As a result, delay times are 20% shorter than circuit breaker would provide in actual operation as shown on trip curves.

A small straight-blade screwdriver is necessary for testing circuit breakers.

NOTE: The test sequence can be stopped at any time by turning test power OFF.

1. Disconnect all loads by (1) placing circuit breaker in OPEN position or (2) disconnecting all loads downstream from circuit breaker under test.

NOTE: During test there must be no current flowing through circuit breaker. Any current flowing through circuit breaker will terminate test and could result in damage to test set. If circuit breaker is in OPEN position, trip solenoid test cannot be done. If downstream loads are disconnected, circuit breaker can be in either OPEN or CLOSED position. If circuit breaker is in CLOSED position, it will trip during functional tests depending upon position of TRIP/NO TRIP switch. If switch is placed in NO TRIP position, test set will not signal circuit breaker to trip during functional tests. If switch is placed in TRIP position, circuit breaker will trip during functional tests.

2. If circuit breaker is connected to POWERLOGIC® system, disconnect POWERLOGIC system according to instructions on page 7.

3. Place test set on a flat surface no more than five feet from circuit breaker to be tested. Open case fully to lock cover into the open position (fig.5).

Figure 5: Universal Test Set

4. Make sure test set power is OFF by checking position of power switch (A) on keyboard.

5. Plug test set power cord into test set power cord receptacle (B). Plug other end into a grounded power source.

6. Test the test set by doing the self-test in Section 2. If self-test is unsuccessful contact Square D for assistance (1-888-778-2733) and do not use test set to test circuit breaker. If self-test was successful, proceed with step 7.

Figure 6: Connector Pins

7. See table on page 4. Select appropriate circuit breaker test module (C, fig. 5) and insert into module receptacle (D).
8. Insert test set end of umbilical cord into slot on top of module as shown by label on module. The umbilical cord is inserted with cable toward rear of module as shown in figure 7.

![Figure 7: Umbilical Cord](image)

9. Circuit breakers with screw retained trip unit cover: Use a small screwdriver to loosen trip unit cover screws (A) and remove clear plastic trip unit cover.

Circuit breakers with snap-on trip unit cover: Insert a small screwdriver under tab of clear plastic trip unit cover and snap out the cover.

10. Circuit breakers with screw retained trip unit cover: To remove any accumulated electrostatic charge, touch trip unit metal panel. Hold rating plug (B), if equipped, firmly and SLOWLY remove it from circuit breaker.

Circuit breakers with snap-on trip unit cover: If equipped with a trip indicator/ammeter (C), use a small screwdriver to carefully pry up one end and then the other, a small amount at a time, to remove the trip indicator/ammeter (C). On circuit breakers without trip indicator/ammeter, remove the black plastic cover. Remove rating plug (D) or black plastic cover.

**Figure 8: Screw Retained and Snap-On Unit Covers**

**TRIP UNITS WITH RATING PLUGS ONLY:**

11. LIGHTLY touch rating plug connector board to metal grounding surface (A, Fig. 9) next to power cord receptacle of test set to discharge any accumulated electrostatic charge.

![Figure 9: Trip Units with Rating Plugs](image)
12. SLOWLY insert rating plug into connector on tip of module as shown by label.

*NOTE:* The rating plug must be oriented as shown in figure 10 or 11.

![Figure 10: Rating Plug Insertion](image1)

![Figure 11: Rating Plug Insertion](image2)

**ALL TRIP UNITS:**

13. Carefully insert adapter end of umbilical cord into rating plug adapter or M-N-P-S Adapter (fig. 12) being careful not to bend adapter pins. Note orientation of connector. (Adapters are stored in the power and umbilical cord storage area).

![Figure 12: Rating Plug Adapter and M-N-P-S Adapter](image3)

- ME Series 3, NE Series 1, PE Series 4 and SE Series 2
- ME Series 4, 5 and 5 A
- MX Series 4 and 5
- NE Series 2, 3, and 3A
- NX series 2 and 3
- PE Series 5, 6, and 6A
- PX Series 5 and 6
- SE Series 3 and 3A
14. Grasp adapter firmly and touch adapter connector board lightly against metal grounding surface (A, fig. 9) next to power cord receptacle.

15. Immediately install adapter SLOWLY into trip unit. Note orientation of umbilical cord and adapter (A, fig. 13).

16. Turn test set power switch on (I). The test set will perform a self-test. After self-test, module identifier will be displayed.

17. Refer to test procedure for the test module being used and begin testing. The test set will request information on frame size and trip unit function. After all information has been entered and verified, test set will ask for “TEST TYPE.” See section 1 for test type. Enter test type and continue with test.

NOTE: If “TEST FAILED” message appears in the display window, check to see if circuit breaker is connected to a POWERLOGIC system. If circuit breaker is connected to POWERLOGIC system, disconnect POWERLOGIC system according to instructions on page 7 and press A to repeat test. If “TEST FAILED” appears again, call Square D (1-888-778-2733).

18. After test has been completed, turn test set power switch to off (O).

19. Slowly remove adapter from trip unit by holding adapter housing firmly and removing it from trip unit.

20. Remove adapter from umbilical cord and store in storage space.

21. Remove umbilical cord from module. Store umbilical cord in storage space.

22. Hold rating plug housing, if equipped, firmly and slowly remove it from the module. Lightly touch rating plug connector to metal grounding surface next to power cord receptacle.

23. Slowly insert rating plug and trip indicator/ammeter or black plastic covers into slots in circuit breaker.

24. Replace clear trip unit cover and secure trip unit cover screws, if equipped.

25. Remove test module and install in module holder. Do not touch connector pins. Disconnect test set, store power cord, and close cover.
**Section 4—MICROLOGIC Series B CBTMB Test Module**

**TEST SETUP**

---

**MICROLOGIC SERIES B MODULE** ver 1.0

**IS BREAKER A FULL-FUNCTION BREAKER?**

- **NO**
  - Go to Page 16 for Standard-function Setup
- **YES**
  - Go to Page 15 for Full-function Setup

---

**BREAKER IS NOT MICROLOGIC SERIES B**

---

**ATTENTION**

**ERROR: CURRENT DRIVER OVER VOLTAGE**

---

**TESTING CANNOT PROCEED - SEE INSTRUCTIONS**

---

Turn test set power OFF (O). Remove and reseat test module. Check connections of umbilical cord, rating plug and rating plug adapter. Turn test set power ON (I) to restart test. If "TESTING CANNOT PROCEED" message appears again, call Square D (1-888-778-2733.)
TEST SETUP FOR FULL-FUNCTION CIRCUIT BREAKERS

The rating plug was found to be defective. Turn test set power OFF (O) and then back ON (I) to restart test. If "TESTING CANNOT PROCEED" message appears again, replace rating plug.

From Page 14

TESTING RATING PLUG

RATING PLUG TEST FAILED

RATING PLUG TEST PASSED

TESTING CANNOT PROCEED - SEE INSTRUCTIONS

Please enter frame size ...0

Clear Enter 0-9 keys

Is short-time installed? - Yes/No

Yes No

Is ground-fault installed? - Yes/No

Yes No

Is ground-fault an alarm? - Yes/No

Yes No

Is xE xxxx A LSG ARPxxxxx installed?

Yes No

Le Me Ne Pe Se

Le Me Ne Pe Se

Lsg Lg Li Lsa Lia options displayed

Please recheck breaker configuration

Or rating plug connection

Turn power to OFF (O) and then back ON (I) to restart test.

Go to page 17

*****MAIN TEST MENU*****
TEST SETUP FOR STANDARD-FUNCTION CIRCUIT BREAKERS

From Page 14

TESTING RATING PLUG

RATING PLUG TEST FAILED

RATING PLUG TEST PASSED

TESTING CANNOT PROCEED - SEE INSTRUCTIONS

The rating plug was found to be defective. Turn test set power OFF (O) and then back ON (I) to restart test. If “TESTING CANNOT PROCEED” message appears again, replace rating plug.

PLEASE ENTER FRAME SIZE...0

CLEAR ENTER 0-9 KEYS

IS GROUND-FAULT INSTALLED? - YES/NO

YES NO

TESTING LX BREAKER? - YES/NO

YES NO

TESTING MX BREAKER? - YES/NO

YES NO

TESTING NX BREAKER? - YES/NO

YES NO

TESTING PX BREAKER? - YES/NO

YES NO

PLEASE RECHECK BREAKER CONFIGURATION

OR RATING PLUG CONNECTION

Turn power to OFF (O) and then back ON (I) to restart test.

---

The rating plug was found to be defective. Turn test set power OFF (O) and then back ON (I) to restart test. If “TESTING CANNOT PROCEED” message appears again, replace rating plug.

PLEASE ENTER FRAME SIZE...0

CLEAR ENTER 0-9 KEYS

IS GROUND-FAULT INSTALLED? - YES/NO

YES NO

TESTING LX BREAKER? - YES/NO

YES NO

TESTING MX BREAKER? - YES/NO

YES NO

TESTING NX BREAKER? - YES/NO

YES NO

TESTING PX BREAKER? - YES/NO

YES NO

PLEASE RECHECK BREAKER CONFIGURATION

OR RATING PLUG CONNECTION

Turn power to OFF (O) and then back ON (I) to restart test.
MAIN TEST MENU

*****MAIN TEST MENU*****

TESTING BREAKER AUTOMATICALLY? - YES/NO

NO  YES

TEST INDIVIDUAL FUNCTIONS? YES/NO

NO  YES

PERFORM MANUAL TESTING? - YES/NO

NO  YES

Description of Key Functions

YES  VERIFIES DATA ENTERED/SHOWN
NO   NEGATIVE RESPONSE TO DATA SHOWN
A    ENTERED AFTER TRIP UNIT FUNCTION SWITCH IS SET
B    NOT USED
CLEAR DELETES ENTRY
SET UP NOT USED
ENTER SIGNIFIES END OF ENTRY
NEXT NOT USED
MANUAL NOT USED
TEST TYPE RETURNS UNIT TO MAIN TEST MENU

NOTE: An option is valid any time its key is flashing.

NOTE: Test sequence can be stopped at any time by turning the test set power to OFF (O).
AUTOMATIC TEST MENU FOR ALL CIRCUIT BREAKERS WITHOUT GROUND-FAULT ALARM

- SET LONG-TIME PICKUP TO 1.00 xP
- SET LONG-TIME DELAY TO MINIMUM
- SET SHORT-TIME PICKUP TO 4 xP
- SET SHORT-TIME DELAY TO I²t IN .20sec
- SET INSTANT. PICK UP TO 5 xP
- SET GROUND-FAULT PICKUP TO .35 xS
  OR
  SET GROUND-FAULT PICKUP TO 880AMPS
- SET GROUND-FAULT DELAY TO I²t OUT .20sec

LONG-TIME PICKUP = n.nn xP  nnnnAMPS
LONG-TIME DELAY = nn.nnnsec
SHORT-TIME PICKUP = nn.nnxP  nnnnnAMPS
SHORT-TIME DELAY = nn.nnnsec
INSTANT. PICKUP = nn.nnxP  nnnnnnAMPS
GROUND-FAULT PICKUP = n.nnxS  nnnnAMPS
GROUND-FAULT DELAY = nn.nnnsec
ALL TESTED FUNCTIONS PASSED!
AUTOMATIC TEST MENU FOR CIRCUIT BREAKERS WITH GROUND-FAULT ALARM

1. Set long-time pickup to 1.00 xP
   - A

2. Set long-time delay to minimum
   - A

3. Set short-time pickup to 4 xP
   - A

4. Set short-time delay to I^2t in .20sec
   - A

5. Set instant. pick up to 5 xP
   - A

6. Set ground-fault alarm to .35 xS
   - OR
   - Set ground-fault alarm to 880AMPS

ALL TESTED FUNCTIONS PASSED!
INDIVIDUAL TEST MENU FOR ALL
FULL-FUNCTION CIRCUIT BREAKERS
WITHOUT GROUND-FAULT ALARM

TEST LONG-TIME PICKUP?  
YES → LONG-TIME PICKUP = nn.nn xP nnnnAMPS
NO

TEST LONG-TIME DELAY?  
YES → SET SHORT-TIME PICKUP TO 4 xP
NO  
→ SET INSTANT. PICKUP TO 5 xP

TEST SHORT-TIME PICKUP?  
YES → SET INSTANT. PICKUP TO MAXIMUM
NO  
→ SHORT-TIME PICKUP = nn.nn xP nnnnAMPS

TEST SHORT-TIME DELAY?  
YES → SET LONG-TIME DELAY TO MAXIMUM
NO  
→ SET SHORT-TIME PICKUP TO 4 xP
→ SET INSTANT. PICKUP TO 5 xP
→ SHORT-TIME DELAY = nn.nn msec

TEST UNREST. SHORT-TIME DELAY?  
YES → SET LONG-TIME DELAY TO MAXIMUM
NO  
→ SET SHORT-TIME PICKUP TO 4 xP
→ SET INSTANT. PICKUP TO 5 xP
→ PLEASE DISCONNECT ZONE INTERLOCKS
See page 6 for instructions
→ SHORT-TIME DELAY = nn.nn msec

(Continued on next page)
INDIVIDUAL TEST MENU FOR
ALL FULL-FUNCTION CIRCUIT
BREAKERS WITHOUT GROUND-
FAULT ALARMS

TEST INSTANT. PICKUP?
YES → SET SHORT-TIME PICKUP TO MAXIMUM
NO → SET SHORT-Delay TO I^2t IN .50 sec

TEST GROUND-FAULT PICKUP?
YES → GROUND-FAULT PICKUP = nn.nnxS nnnnAMPS
NO → GROUND-FAULT DELAY = nn.nnnsec

TEST GROUND-FAULT DELAY?
YES → GROUND-FAULT DELAY = nn.nnnsec
NO → PLEASE DISCONNECT ZONE INTERLOCKS

TEST UNRESTRI. GROUND-FAULT DELAY?
YES → PLEASE CLOSE THE BREAKER
NO → GROUND-FAULT DELAY = nn.nnnsec

TEST TRIP SOLENOID?
YES → DID THE BREAKER TRIP?
NO → TRIP SOLENOID TEST PASSED!

TEST TRIP UNIT MEMORY?
YES → SET LONG-TIME DELAY TO MINIMUM
NO → SET SHORT-TIME DELAY TO 4 xP

NOTE: TEST TYPE
Can be entered to exit back to MAIN TEST MENU.

MEMORY TEST PASSED!
GROUND-FAULT MEMORY TEST FAILED!
SHORT-TIME MEMORY TEST FAILED!
LONG-TIME MEMORY TEST FAILED!

GROUND-FAULT MEMORY TEST FAILED!
SHORT-TIME MEMORY TEST FAILED!
LONG-TIME MEMORY TEST FAILED!

TRIP SOLENOID TEST FAILED!
INDIVIDUAL TEST MENU FOR FULL-FUNCTION CIRCUIT BREAKERS WITH GROUND-FAULT ALARM

(test flow diagram)

(Continued on next page)
INDIVIDUAL TEST MENU FOR FULL-FUNCTION CIRCUIT BREAKERS WITH GROUND-FAULT ALARM  (Continued)

TEST INSTANT. PICKUP?  
YES  SET SHORT-TIME PICKUP TO MAXIMUM

NO  SET SHORT-TIME DELAY TO $I^2t$ IN .50 sec

INSTANT. PICKUP = n.nn$P$ nnnnAMPS

TEST GROUND-FAULT ALARM?  
YES  GROUND-FAULT ALARM = n.nn$S$

NO

TEST TRIP SOLENOID?  
YES  PLEASE CLOSE THE BREAKER

NO  DID THE BREAKER TRIP?

YES  TRIP SOLENOID TEST PASSED!

NO  TRIP SOLENOID TEST FAILED

TEST TRIP UNIT MEMORY?  
YES  SET LONG-TIME DELAY TO MINIMUM

NO  SET SHORT-TIME PICKUP TO 4$xP$

TRIP SOLENOID TEST FAILED!

SHORT-TIME MEMORY TEST FAILED!

MEMORY TEST PASSED!

LONG-TIME MEMORY TEST FAILED!

NOTE:

TEST TYPE

Can be entered to exit back to MAIN TEST MENU.
INDIVIDUAL TEST MENU FOR
ALL STANDARD-FUNCTION
CIRCUIT BREAKERS

TEST LONG-TIME PICKUP?
  YES → LONG-TIME PICKUP = nn.nn xP nnnn AMPS
  NO

TEST LONG-TIME DELAY?
  YES → SET SHORT-TIME PICKUP TO 4 xP
  NO

TEST SHORT-TIME PICKUP?
  YES → SET INSTANT. PICKUP TO 5 xP
  NO

TEST SHORT-TIME DELAY?
  YES → SET LONG-TIME DELAY TO MAXIMUM
  NO

TEST INSTANT. PICKUP?
  YES → SET SHORT-TIME PICKUP TO MAXIMUM
  NO

(Continued on next page)
INDIVIDUAL TEST MENU FOR ALL STANDARD-FUNCTION CIRCUIT BREAKERS —Continued

TEST GROUND-FAULT PICKUP? YES

NO

TEST GROUND-FAULT DELAY? YES

NO

TEST TRIP SOLENOID? YES

NO

TEST TRIP UNIT MEMORY? YES

NO

NOTE:

Can be entered to exit back to MAIN TEST MENU.

GROUND-FAULT PICKUP = n.nnS nnnnAMPS

GROUND-FAULT DELAY = nn.nnnsec

PLEASE CLOSE THE BREAKER

DID THE BREAKER TRIP?

TRIP SOLENOID TEST PASSED!

TRIP SOLENOID TEST FAILED

SET LONG-TIME DELAY TO MINIMUM

SET SHORT-TIME PICKUP TO 4 xP

SET SHORT-TIME DELAY TO t5/2 IN .20 sec

SET INSTANT. PICKUP TO 5 xP

SET GND. FAULT DELAY TO t5/2 OUT .20 sec

MEMORY TEST PASSED!

GROUND-FAULT MEMORY TEST FAILED!
SHORT-TIME MEMORY TEST FAILED!
LONG-TIME MEMORY TEST FAILED!
MANUAL TEST MENU FOR ALL FULL-FUNCTION CIRCUIT BREAKERS WITHOUT GROUND-FAULT ALARM

- **TEST PHASE CURRENT? - YES/NO**
  - YES
  - **TEST PHASE A CURRENT? - YES/NO**
    - NO
    - **TEST PHASE B CURRENT? - YES/NO**
      - NO
      - **TEST PHASE C CURRENT? - YES/NO**
        - NO
        - **TEST GROUND-FAULT CURRENT? - YES/NO**
          - YES
          - **RESTRAIN THE TRIP UNIT? - YES/NO**
            - NO
            - YES
            - **PLEASE DISCONNECT ZONE INTERLOCK**
              - See page 6 for instructions
              - A
              - **ENTER TEST CURRENT xx.xx xP or xS rms**
                - CLEAR
                - 0-9 KEYS
                - ENTER
                - .01 - 12.00 xP ALLOWED ENTRIES
                - .01 - 7.00 xS ALLOWED ENTRIES
            - A
              - **TESTING**
                - A
                  - **TRIP TIME = nn.nnn sec**
                    - A
                      - **RETURN TO MAIN TEST MENU**
                        - NO
                        - YES
                      - **EXIT TO MAIN TEST MENU?**
                        - NO
                        - YES

**NOTE:**

Can be entered during testing to interrupt the test.
MANUAL TEST MENU FOR FULL-FUNCTION CIRCUIT BREAKERS WITH GROUND-FAULT ALARM

TEST PHASE CURRENT? - YES/NO

YES

TEST PHASE A CURRENT? - YES/NO

NO

YES

TEST PHASE B CURRENT? - YES/NO

NO

YES

TEST PHASE C CURRENT? - YES/NO

NO

YES

RESTRAIN THE TRIP UNIT? - YES/NO

NO

YES

PLEASE DISCONNECT ZONE INTERLOCK

A

ENTER TEST CURRENT xx.xx xP or xS rms

CLEAR 0-9 KEYS ENTER

.01 - 12.00 xP ALLOWED ENTRIES

.01 - 7.00 xS ALLOWED ENTRIES

EXIT TO MAIN TEST MENU?

NO

YES

RETURN TO MAIN TEST MENU

A

TESTING

TRIP TIME = nn.nnn sec

NOTE: TEST TYPE

Can be entered during testing to interrupt the test.
MANUAL TEST MENU FOR ALL
STANDARD-FUNCTION CIRCUIT
BREAKERS

TEST PHASE CURRENT? - YES/NO

YES

TEST PHASE A CURRENT? - YES/NO

NO

TEST PHASE B CURRENT? - YES/NO

NO

TEST PHASE C CURRENT? - YES/NO

NO

TEST GROUND-FAULT CURRENT? - YES/NO

NO

ENTER TEST CURRENT xx.xx xP or xS rms

CLEAR

0-9 KEYS

ENTER

.TRIP TIME = nn.nnn sec

EXIT TO MAIN TEST MENU?

NO

TEST TYPE

A

RETURN TO MAIN TEST MENU

NOTE:

Can be entered during testing to interrupt the test.
Section 5—M-N-P-S
CBTM4A Test Module

TEST SETUP FOR FULL-FUNCTION
CIRCUIT BREAKERS

***UNIVERSAL TEST SET*** ver 2.0

****M-N-P-S TEST MODULE**** ver 2.0

PLEASE DISCONNECT ZONE INTERLOCKS

See page 6 for instructions

Yes

Press YES key when completed

TESTING RATING PLUG

RATING PLUG TEST FAILED

TESTING CANNOT PROCEED - SEE INSTRUCTIONS

The rating plug was found to be defective. Turn test set power OFF (O) and then back ON (I) to restart test. If "TESTING CANNOT PROCEED" message appears again, replace rating plug.

PLEASE ENTER FRAME SIZE...

CLEAR

ENTER

0-9 KEYS

IS SHORT-TIME INSTALLED? - YES/NO

YES

NO

IS GROUND-FAULT INSTALLED? - YES/NO

YES

NO

IS xE xxxx A LSG RPxxxxxxx INSTALLED?

YES

NO

ME ENTERED
NE FRAMESIZE
PE IS DISPLAYED
SE IS DISPLAYED
LSG
LS
LIG
RATING PLUG LABEL
LI OPTIONS DISPLAYED

Go to page 31

*****MAIN TEST MENU*****

****ATTENTION****

ERROR: CURRENT DRIVER OVER VOLTAGE

TESTING CANNOT PROCEED - SEE INSTRUCTIONS

Turn test set power OFF (O). Remove and reseat test module. Check connections of umbilical cord, rating plug and rating plug adapter. Turn test set power ON (I) to restart test. If "TESTING CANNOT PROCEED" message appears again, call Square D (1-888-778-2733).

TESTING ME BREAKER? - YES/NO

YES

NO

TESTING NE BREAKER? - YES/NO

YES

NO

TESTING PE BREAKER? - YES/NO

YES

NO

TESTING SE BREAKER? - YES/NO

YES

NO

PLEASE RECHECK BREAKER CONFIGURATION OR RATING PLUG CONNECTION

Turn power to OFF (O) and then back to ON (I) to restart test.
TEST SETUP FOR STANDARD-FUNCTION CIRCUIT BREAKERS

***UNIVERSAL TEST SET*** ver 2.0

****M-N-P-S TEST MODULE**** ver 2.0

****ATTENTION****
ERROR: CURRENT DRIVER OVER VOLTAGE
TESTING CANNOT PROCEED - SEE INSTRUCTIONS
Turn test set power OFF (O). Remove and reseat test module. Check connections of umbilical cord and adapter. Turn test set power ON (I) to restart test. If "TESTING CANNOT PROCEED" message appears again, call Square D (1-888-778-2733).

PLEASE ENTER FRAME SIZE ...0
CLEAR ENTER 0-9 KEYS

IS GROUND-FAULT INSTALLED? - YES/NO
YES NO

IS xX xxxx G INSTALLED?
YES NO

MX NX PX IS DISPLAYED
ENTERED FRAME SIZE IS DISPLAYED

G IS DISPLAYED IF GROUND-FAULT OPTION

TESTING MX BREAKER? - YES/NO
YES NO

TESTING NX BREAKER? - YES/NO
YES NO

TESTING PX BREAKER? - YES/NO
YES NO

PLEASE RECHECK BREAKER CONFIGURATION

Go to page 31

******MAIN TEST MENU******
MAIN TEST MENU

*****MAIN TEST MENU*****

TESTING BREAKER AUTOMATICALLY? -YES/NO

NO  YES

TEST INDIVIDUAL FUNCTIONS? YES/NO

NO  YES

PERFORM MANUAL TESTING? - YES/NO

NO  YES

Description of Key Functions

YES  VERIFIES DATA ENTERED/SHOWN
NO   NEGATIVE RESPONSE TO DATA SHOWN
A    ENTERED AFTER TRI UNIT FUNCTION SWITCH IS SET
B    NOT USED
CLEAR  DELETES ENTRY
SET UP  NOT USED
ENTER  SIGNIFIES END OF ENTRY
NEXT  NOT USED
MANUAL  NOT USED
TEST TYPE  RETURNS UNIT TO MAIN TEST MENU

NOTE: An option is valid any time its key is flashing.
NOTE: Test sequence can be stopped at any time by turning the test set power to OFF.
AUTOMATIC TEST MENU FOR FULL-FUNCTION CIRCUIT BREAKERS

- Set long-time pickup to 1.00 xP
- Set long-time delay to minimum
- Set short-time pickup to 4 xP
- Set short-time delay to \( I^2t \) in .20 sec
- Set instant pickup to 5 xP
- Set ground-fault pickup to .35 xS or set ground-fault pickup to 880 amps
- Set ground-fault delay to \( I^2t \) out .20 sec

\[
\begin{align*}
\text{LONG-TIME PICKUP} &= n.nn \, xP \quad nnnnAMPS \\
\text{LONG-TIME DELAY} &= nn.nnnnsec \\
\text{SHORT-TIME PICKUP} &= nn.nnxP \quad nnnnnAMPS \\
\text{SHORT-TIME DELAY} &= nn.nnnnsec \\
\text{INSTANT PICKUP} &= nn.nnxP \quad nnnnnnnAMPS \\
\text{GROUND-FAULT PICKUP} &= n.nnxS \quad nnnnAMPS \\
\text{GROUND-FAULT DELAY} &= nn.nnnnsec \\
\text{ALL TESTED FUNCTIONS PASSED!}
\end{align*}
\]
AUTOMATIC TEST MENU FOR
STANDARD-FUNCTION CIRCUIT
BREAKERS

AMPERE RATING PICKUP = n.nnxR  nnnnAMPS
OVERLOAD DELAY = nn.nnms
SHORT CIRCUIT PICKUP =nn.nnnxR  nnnnAMPS
SHORT CIRCUIT DELAY = nn.nnms
GROUND-FAULT PICKUP =n.nnxS          nnnnAMPS
GROUND-FAULT DELAY = nn.nnms
ALL TESTED FUNCTIONS PASSED!
INDIVIDUAL TEST MENU FOR FULL-FUNCTION CIRCUIT BREAKERS

- Test Long-Time Pickup?  
  - Yes: Long-Time Pickup = nn.nn xP nnnnn AMPS  
  - No

- Test Long-Time Delay?  
  - Yes: Set Short-Time Pickup to 4 xP  
    - No: Set Instant. Pickup to 5 xP  
    - Short-Time Delay = nn.nn nsec  
      - No: Set Instant. Pickup to Maximum  
      - Short-Time Pickup = nn.nn xP nnnnn AMPS

- Test Short-Time Pickup?  
  - Yes: Set Long-Time Delay to Maximum  
  - No

- Test Short-Time Delay?  
  - Yes: Set Long-Time Delay to Maximum  
  - No: Set Short-Time Pickup to 4 xP  
    - Set Instant. Pickup to 5 xP  
    - Short-Time Delay = nn.nn nsec

- Test Unrestr. Short-Time Delay?  
  - Yes: Set Long-Time Delay to Maximum  
  - No: Set Short-Time Pickup to 4 xP  
    - Set Instant. Pickup to 5 xP  
    - Short-Time Delay = nn.nn nsec

(Continued on next page)
INDIVIDUAL TEST MENU FOR FULL-
FUNCTION CIRCUIT BREAKERS—

TEST INSTANT. PICKUP? [NO/YES] [YES] [NO]

SET SHORT-TIME PICKUP TO MAXIMUM A
SET SHORT-TIME DELAY TO I²t IN .50 sec A
INSTANT. PICKUP = nn.nn x P nnnn AMPS
GROUND-FAULT PICKUP = n.nn x S nnnn AMPS

TEST GROUND-FAULT DELAY? [NO/YES] [YES] [NO]
GROUND-FAULT DELAY = nn.nnn sec
TEST UNRESTRICTED GROUND-FAULT DELAY?

TEST TRIP SOLENOID? [NO/YES] [YES] [NO]
PLEASE CLOSE THE BREAKER A
DID THE BREAKER TRIP?

TRIP SOLENOID TEST PASSED!
TRIP SOLENOID TEST FAILED

SET LONG-TIME DELAY TO MINIMUM
SET SHORT-TIME PICKUP TO 4 x P

TEST TRIP UNIT MEMORY?

TEST INSTANT. PICKUP?

NOTE:
Can be entered to exit back to MAIN TEST MENU.
INDIVIDUAL TEST MENU FOR
STANDARD-FUNCTION CIRCUIT
BREAKERS

TEST AMPERE RATING PICKUP?

YES → AMPERE RATING PICKUP = nn.nn x R  nnnnAMPS

NO

TEST OVERLOAD DELAY?

YES → SET AMPERE RATING TO MINIMUM

A

NO

TEST SHORT CIRCUIT PICKUP?

YES → SET AMPERE RATING TO MINIMUM

A

NO

TEST SHORT CIRCUIT DELAY?

YES → SET AMPERE RATING TO MINIMUM

A

NO

TEST GROUND-FAULT PICKUP?

YES → GROUND-FAULT PICKUP = nn.nn x S  nnnnAMPS

NO

TEST GROUND-FAULT DELAY?

YES → GROUND-FAULT DELAY = nn.nn msec

NO

TEST TRIP SOLENOID?

YES → PLEASE CLOSE THE BREAKER

NO

TEST TRIP UNIT MEMORY?

YES → SET AMPERE RATING TO MINIMUM

A

NO

NOTE: TEST TYPE
Can be entered to exit back to the MAIN TEST MENU.
MANUAL TEST MENU FOR FULL-FUNCTION CIRCUIT BREAKERS

TEST PHASE CURRENT? - YES/NO

- YES → TEST PHASE A CURRENT? - YES/NO
  - YES → TEST PHASE B CURRENT? - YES/NO
  - NO → TEST PHASE C CURRENT? - YES/NO
- NO → TEST GROUND-FAULT CURRENT? - YES/NO

- YES → RESTRAIN THE TRIP UNIT? - YES/NO
  - YES → ENTER TEST CURRENT xx.xx xP or xS rms
  - NO → TEST PHASE CURRENT? YES/NO
  - NO → EXIT TO MAIN TEST MENU?
- NO → RETURN TO MAIN TEST MENU

NOTE: If "ERROR: EXCEEDED CURRENT DRIVER LIMIT" or "TEST INTERRUPTED TO AVOID OVERHEATING!" message appears, the test current entered cannot be tested on more than one phase at a time. Repeat testing phase current by answering Yes to one "TEST PHASE CURRENT? YES/NO" question at a time.

Enter test current: xx.xx xP or xS rms

CLEAR 0-9 KEYS ENTER

.01 - 12.00 xP ALLOWED ENTRIES
.01 - 7.00 xS ALLOWED ENTRIES

TRIP TIME = nn.nnn sec

RETURN TO MAIN TEST MENU

NOTE: Can be entered during testing to interrupt the test.
MANUAL TEST MENU FOR
STANDARD-FUNCTION CIRCUIT
BREAKERS

![Flowchart Diagram]

TEST PHASE CURRENT? - YES/NO

- YES
  - ENTER TEST CURRENT xx.xx xR rms
    - CLEAR
    - 0-9 KEYS
    - ENTER
    - .01 - 7.00 ALLOWED ENTRIES

- NO

TEST GROUND-FAULT CURRENT? - YES/NO

- YES
  - ENTER TEST CURRENT xx.xx xS rms
    - CLEAR
    - 0-9 KEYS
    - ENTER
    - .01 - 7.00 ALLOWED ENTRIES

- NO

EXIT TO MAIN TEST MENU?

- NO
  - RETURN TO MAIN TEST MENU

- YES
  - TESTING
  - TRIP TIME = nn.nnnsec

NOTE:

Can be entered during testing to
interrupt the test.
Section 6—SE CBTM1 Test Module

TEST SETUP

Turn test set power switch to OFF (O). Replace rating plug and repeat Test Setup.

SEE THE NEXT PAGE FOR THE AUTOMATIC TEST MENU
AUTOMATIC TEST MENU

To start test, press type

Yes
No

Set long-time amperage rating to 0.5xP
Press (A) after switch is set

Set long-time delay time to position 1
Press (A) after switch is set

Set short-time pickup level to 2xP
Press (A) after switch is set

Set short-time delay time to 1-out
Press (A) after switch is set

Set instant pickup level to 2xP
Press (A) after switch is set

Set ground-fault pickup level to L.C. min
Press (A) after switch is set

Set ground-fault delay time to 1
Press (A) after switch is set

Long-time pickup = nnnxP nnnnAMPs
Long-time delay at 6xP = nnnnsec
Short-time pickup = nnnxP nnnnAMPs
Short-time delay at 6xP = 0.nnnnsec
Instant pickup = nnnxP nnnnAMPs
Ground-fault pickup = 0.nnxS nnnnAMPs
Wait memory discharge 45sec nnnsec
Ground-fault delay at 1s = 0.nnnnsec

Note: To return to TEST SELECTION mode, press TEST TYPE

Note: An option is valid any time its key is flashing.

Note: Test sequence can be stopped at any time by turning the test set power off.

Note: Reset trip indicators after testing is completed.
INDIVIDUAL-FUNCTION TEST MENU

NOTE: To return to TEST SELECTION mode, press \[ TEST \] TYPE.  
NOTE: An option is valid any time its key is flashing.

NOTE: Test sequence can be stopped at any time by turning the test set power to OFF.

NOTE: If "TEST FAILED" appears on display, press \[ A \] to repeat test. If "TEST FAILED" appears again, consult with Square D (1-888-778-2733).
INDIVIDUAL-FUNCTION TEST MENU

TEST MAY TAKE 20 SEC- CONTINUE? - YES/NO

NO

YES

RESET OVERLOAD TRIP INDICATOR (A)

OVERLOAD TRIP INDICATOR OUT? - YES/NO

YES

OVERLOAD TRIP INDICATOR PASSED

NO

OVERLOAD TRIP INDICATOR FAILED

TEST SHORT CIRCUIT INDICATOR? - YES/NO

YES

RESET SHORT CIRCUIT INDICATOR (A)

SHORT CIRCUIT INDICATOR OUT? - YES/NO

YES

SHORT CIRCUIT INDICATOR PASSED

NO

SHORT CIRCUIT INDICATOR FAILED

TEST GROUND-FAULT INDICATOR? - YES/NO

YES

RESET GROUND-FAULT TRIP INDICATOR (A)

GROUND-FAULT INDICATOR OUT? - YES/NO

YES

GROUND-FAULT INDICATOR TEST PASSED

NO

GROUND-FAULT INDICATOR FAILED

NEXT
INDIVIDUAL-FUNCTION TEST MENU

--Continued

NOTE: To return to TEST SELECTION mode, press TEST TYPE.

NOTE: An option is valid any time its key is flashing.

NOTE: Test sequence can be stopped at any time by turning the test set power to OFF.

NOTE: Reset trip indicators after testing is completed.

NOTE: If "TEST FAILED" appears on display, press A to repeat test. If "TEST FAILED" appears again, consult with Square D (1-888-778-2733).
MANUAL TEST MENU

Manual Test can be entered any time the MANUAL key is flashing.

- **PHASE** = Phase current which would be seen at each phase when current is in balance.
- **GND-FAULT** = Ground-fault current flowing to ground.

**NOTE:** If current value entered is below the pickup values, the circuit breaker will not trip. The timer will continue to count. To stop the timing function, press MANUAL.

**NOTE:** An option is valid any time the key is flashing.

**NOTE:** Reset trip indicators after testing is complete.

**NOTE:** To return to TEST SELECTION mode, press TEST TYPE.

**NOTE:** Test sequence can be stopped at any time by turning the test set power to OFF.
Section 7—ME-NE-PE
CBTM3 Test Module

TEST SETUP

***UNIVERSAL TEST SET*** ver 2.0

***ME/NE/PE TEST MODULE*** ver 2.2

ENTER FRAME SIZE - ME/NE/PE .0 AMP FRAME

CLEAR

ENTER

0-9 KEYS

VALUE OF TRIP UNIT
RATING PLUG WILL BE DISPLAYED

ME or NE or PE xxxx AMP RATING PLUG? - YES/NO

NO

RATING PLUG NOT INSTALLED OR FAILED!

TESTING CANNOT PROCEED - SEE INSTRUCTIONS

Turn test set power switch to OFF.
Replace rating plug and repeat Test Setup.

YES

INPUT FRAME RATING
ALLOWED ENTRIES:

ME/NE

PE

225 AMPS

1200 AMPS

400 AMPS

1600 AMPS

800 AMPS

2000 AMPS

1200 AMPS

1250 AMPS

IS SHORT-TIME OPTION INSTALLED? - YES/NO

YES

IS SHORT-TIME DELAY ADJUSTABLE? - YES/NO

YES

IS INSTANT. OPTION INSTALLED? - YES/NO

YES

IS GND-FAULT OPTION INSTALLED? - YES/NO

SEE THE NEXT PAGE FOR THE AUTOMATIC TEST MENU

NO

NO

NO
AUTOMATIC TEST MENU

PERFORM TEST SETUP ON PREVIOUS PAGE BEFORE DOING AUTOMATIC TEST.

TO START TEST - Press TEST TYPE

RETURN FROM INDIVIDUAL TEST SEQUENCE

TEST BREAKER AUTOMATICALLY? - YES/NO

YES

NO

SET LONG-TIME AMPERE RATING TO .9xP
PRESS (A) AFTER SWITCH IS SET

A

SET LONG-TIME DELAY TIME TO POSITION 2
PRESS (A) AFTER SWITCH IS SET

A

SET SHORT-TIME PICKUP LEVEL TO 5xP
PRESS (A) AFTER SWITCH IS SET

A

SET SHORT-TIME DELAY TIME TO 4 - IN
PRESS (A) AFTER SWITCH IS SET

A

SET INSTANT. PICKUP LEVEL TO 7xP
PRESS (A) AFTER SWITCH IS SET

A

SET GROUND-FAULT PICKUP LEVEL TO .4xS
PRESS (A) AFTER SWITCH IS SET

A

SET GROUND-FAULT DELAY TIME TO 4 - IN
PRESS (A) AFTER SWITCH IS SET

A

LONG-TIME PICKUP = nnnxP   nnnmAmps
LONG-TIME DELAY AT 4xP = nnnmsec
SHORT-TIME PICKUP = nnnxP   nnnmAmps
SHORT-TIME DELAY AT 6xP = 0.msec
INSTANT. PICKUP = nnnxP   nnnmAmps
GROUND-FAULT PICKUP = .nnxS   nnnmAmps
GROUND-FAULT DELAY AT 1xS = 0.msec

**********ATTENTION**********

*****ALL TESTED FUNCTIONS PASSED*****

TO START TEST SELECTION - Press TEST TYPE

NOTE: To return to TEST SELECTION mode, press TEST TYPE

NOTE: An option is valid any time its key is flashing.

NOTE: Test sequence can be stopped at any time by turning the test set power to OFF.

NOTE: Reset trip indicators after testing is completed.
INDIVIDUAL-FUNCTION TEST MENU

TEST LONG-TIME PICKUP? - YES/NO

YES

LONG-TIME PICKUP = nnnnP nnnnAMPS

A

NEXT

NO

TEST LONG-TIME DELAY? - YES/NO

YES

SET SHORT-TIME PICKUP LEVEL TO 5xP
PRESS (A) AFTER SWITCH IS SET

A

NEXT

NO

TEST SHORT-TIME PICKUP? - YES/NO

YES

SET INSTANT. PICKUP LEVEL TO 7xP
PRESS (A) AFTER SWITCH IS SET

A

NEXT

NO

TEST SHORT-TIME DELAY? - YES/NO

YES

SET SHORT-TIME PICKUP LEVEL TO 5xP
PRESS (A) AFTER SWITCH IS SET

A

NEXT

NO

SET INSTANT. PICKUP LEVEL TO MAXIMUM
PRESS (A) AFTER SWITCH IS SET

A

NEXT

NOTE: To return to TEST SELECTION mode, press TEST TYPE.

NOTE: An option is valid any time its key is flashing.

NOTE: Test sequence can be stopped at any time by turning the test set power to OFF.

NOTE: If "TEST FAILED" appears on display, press A to repeat test. If "TEST FAILED" appears again, consult with Square D (1-888-778-2733).
INDIVIDUAL-FUNCTION TEST MENU

—Continued

TEST INSTANT. PICKUP? - YES/NO

YES

SET SHORT-TIME DELAY TO 4 - IN PRESS (A) AFTER SWITCH IS SET

NO

INSTANT. PICKUP = .nnnP .nnmAmps

TEST GROUND-FAULT PICKUP? - YES/NO

YES

GROUND-FAULT PICKUP = .nnxS .nnmAmps

NO

TEST GROUND-FAULT DELAY? - YES/NO

YES

GROUND-FAULT DELAY AT 1xS = 0.nnnsec

NO

TEST LONG-TIME INDICATOR? - YES/NO

YES

IS LONG-TIME INDICATOR FLASHING? - YES/NO

NO

LONG-TIME PICKUP INDICATOR TEST PASSED

NEXT

TEST GROUND-FAULT INDICATOR? - YES/NO

YES

RESET GROUND-FAULT TRIP INDICATOR - (A)

NO

GROUND-FAULT INDICATOR OUT? - YES/NO

YES

GROUND-FAULT TRIP INDICATOR TEST PASSED

NEXT

NO

GROUND-FAULT TRIP INDICATOR TEST FAILED

(Continued on next page)
INDIVIDUAL-FUNCTION TEST MENU

—Continued

TEST TRIP SOLENOID? - YES/NO

NO

YES

CLOSE BREAKER - THEN PRESS A

A

A

DID CIRCUIT BREAKER TRIP? - YES/NO

YES

TRIP SOLENOID TEST PASSED

NO

TRIP SOLENOID TEST FAILED

NEXT

TEST LONG-TIME MEMORY? - YES/NO

NO

YES

SET LONG-TIME DELAY TIME TO POSITION 2
PRESS (A) AFTER SWITCH IS SET

A

A

SET SHORT-TIME PICKUP LEVEL TO 5xP
PRESS (A) AFTER SWITCH IS SET

A

A

SET INSTANT. PICKUP LEVEL TO 7xP
PRESS (A) AFTER SWITCH IS SET

A

A

THIS TEST TAKES 3 MIN. CONTINUE? - YES/NO

NO

YES

LONG-TIME 30 sec MEMORY-FAULT TEST nnsec
LONG-TIME 30 sec MEMORY-Wait PHASE nnsec
LONG-TIME 30 sec MEMORY-FAULT TEST nnsec
LONG-TIME MEMORY = n.nnsec PASSED

LONG-TIME 5 min MEMORY-FAULT TEST nnsec
LONG-TIME 5 min MEMORY-Wait PHASE n.nn
LONG-TIME 5 min MEMORY-FAULT TEST nnsec
LONG-TIME 5 min MEMORY = n.nnsec PASSED

NEXT

(Continued on next page)
INDIVIDUAL-FUNCTION TEST MENU

—Continued

TEST SHORT-TIME MEMORY? -YES/NO

YES

SET SHORT-TIME PICKUP LEVEL TO 5xP
PRESS (A) AFTER SWITCH IS SET

NO

NO

A

SET SHORT-TIME DELAY TIME TO 4 - IN
PRESS (A) AFTER SWITCH IS SET

A

YES

A

SHORT-TIME DELAY AT 6xP = n.nnnsec
SHORT-TIME MEMORY = n.nnnsec PASSED

A

A

A

A

SET INSTANT. PICKUP LEVEL TO 7xP
PRESS (A) AFTER SWITCH IS SET

NEXT

NEXT

TEST GROUND-FAULT MEMORY? -YES/NO

YES

SET GROUND-FAULT DELAY TIME TO 4 - IN
PRESS (A) AFTER SWITCH IS SET

NO

NO

GROUND-FAULT MEMORY = n.nnnsec PASSED

SEE AUTOMATIC TEST ON PAGE 46

NOTE: To return to TEST SELECTION mode, press TEST TYPE.

NOTE: An option is valid any time its key is flashing.

NOTE: Test sequence can be stopped at any time by turning the test set power to OFF.

NOTE: Reset trip indicators after testing is completed.

NOTE: If "TEST FAILED" appears on display, press A to repeat test. If "TEST FAILED" appears again, consult with Square D (1-888-778-2733).
MANUAL TEST MENU

Manual Test can be entered any time the MANUAL key is flashing.

NOTE: An option is valid any time the key is flashing.

MANUAL TEST CURRENT: PHASE = A       GND-FAULT = B

TEST WITH RESTRAINT SIGNAL: ON = YES OFF = NO

ENTER TEST LEVEL = .00 xP -Press ENTER

KEYS 0 - 9

ALLOWED ENTRIES: .01 TO 15.00

ENTER

TEST LEVEL = .nnxP? -YES/NO

NO

YES

TRIP TIME = n.msec AT n.nnxP

A

MANUAL

TEST WITH RESTRAINT SIGNAL: ON = YES OFF = NO

ENTER TEST LEVEL = .00 xS -Press ENTER

KEYS 0 - 9

ALLOWED ENTRIES: .01 TO 15.00

ENTER

TEST LEVEL = .nnxS? -YES/NO

YES

NO

TRIP TIME = n.msec AT n.nnxS

A

MANUAL

PHASE = Phase current which would be seen at each phase when current is in balance.
GND-FAULT = Ground-fault current flowing to ground.

NOTE: If current value entered is below the pickup values, the circuit breaker will not trip. The timer will continue to count. To stop the timing function, press MANUAL.

NOTE: To return to TEST SELECTION mode, press TEST TYPE

NOTE: Test sequence can be stopped at any time by turning the test set power to OFF.
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