GE
Entellisys™ Low Voltage Switchgear

EntelliGuard™ Messenger iButton Replacement Guide

DEH-235

Warnings, Cautions, and Notes as used in this publication

Warnings

WARNING!   Warning notices are used in this publication to emphasize that hazardous voltages, currents, or other conditions that could cause personal injury exist in this equipment or may be associated with its use.

Warning notices are also used for situations in which inattention or lack of equipment knowledge could cause either personal injury or damage to equipment.

Cautions

CAUTION: Caution notices are used for situations in which equipment might be damaged if care is not taken.

Notes

NOTE: Notes call attention to information that is especially significant to understanding and operating the equipment.

This document is based on information available at the time of its publication. While efforts have been made to ensure accuracy, the information contained herein does not cover all details or variations in hardware and software, nor does it provide for every possible contingency in connection with installation, operation, and maintenance. Features may be described in here that are not present in all hardware and software systems. GE Consumer & Industrial assumes no obligation of notice to holders of this document with respect to changes subsequently made.

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How to contact us

Please have your Entellisys System Summary # and Sub # ready when calling. This information can be found on the Entellisys HMI on the **System Health** screen by clicking the **Job Info** button.

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WARNING!   Disconnecting an EntelliGuard Messenger removes overcurrent protection and centralized control from its associated circuit breaker. Other EntelliGuard Messengers and circuit breakers will continue to function normally as long as control power is maintained.

NOTE: A pre-programmed iButton is required for this operation.

Step 1:   Remove the 30-pin plug

1. Place the equipment into Reduced Let-Thru Mode by logging into the HMI under an account with Administrative privilege.

2. On the **MAIN MENU**, click **Reduced Let-Thru Mode**. On the **Reduced Let-Thru Mode** dialog box, select **enabled**, and then click **OK**.

3. Ensure the Personal Protective Equipment (PPE) is appropriate for opening and removing a circuit breaker from the gear.

4. Open the circuit breaker (located immediately under the Messenger) that you intend to replace. Check that the circuit breaker flag, the Messenger faceplate, and the HMI indicate the circuit breaker is open.

5. Rack the circuit breaker out to the disconnect position.

NOTE: Closing springs will discharge during the rack out procedure if the circuit breaker is charged; however, the circuit breaker will remain in the open position.

WARNING!   Verify the circuit breaker position indicator and HMI indicate that the circuit breaker is in the **disconnect** position.

6. Open the compartment door.

7. In compartments for electrically operated circuit breakers, remove the charge motor, close coil, and shunt trip fuses at the upper left side of the compartment.

8. In compartments for circuit breakers with a network interlock accessory, remove the set and reset fuses at the upper right side of the compartment.

9. Under the Messenger and to the right, locate one blue 30-pin plug and one configuration plug (see Figure 1).

Figure 1 Blue 30-pin plug

WARNING!   The 30-pin plug contains 120 Vac control power connections. Avoid physical contact with the connector pins.

10. Disconnect the 30-pin plug by first depressing the side tabs and then pulling the plug out of the Messenger.

11. Disconnect the configuration plug by first depressing the side tabs and then pulling the plug out of the Messenger.

12. Disconnect the configuration plug from its wire by removing the screw.

Step 2:   Replace the iButton

NOTE: DO NOT attempt to replace the iButton while the configuration plug is connected to the switchgear.

1. Hold the configuration plug at its base using your thumb and index finger. Using a small blade-slot screwdriver, slide the iButton device out of the configuration plug.

2. Insert the new iButton device into the configuration plug.

3. Press in on the iButton device to ensure proper installation.

NOTE: A properly installed iButton seats firmly in the plastic housing and resists removal.

Step 3: Reinstall the 30-pin plug with the new iButton

1. Ensure the PPE is appropriate for opening and removing a circuit breaker from the gear.

2. Open the door of the circuit breaker compartment below the Messenger.

3. Install the configuration plug at the right side of the Messenger by inserting the plug housing into the socket until the side tabs click into place.

4. Check for proper installation by tugging gently on the plug housing.

5. Reconnect the configuration plug to its wire by replacing the screw.

6. Install the 30-pin plug into the corresponding socket at the right of the Messenger. The side tabs should lock the plug into place and resist removal.

7. Check for proper installation by tugging gently on the 30-pin plug.

8. Check to ensure the Messenger power and communication indicators illuminate.

9. In compartments for circuit breakers with a network interlock device, install the 10A set and reset fuses in the fuse holders at the upper right of the compartment.

10. In compartments for electrically operated circuit breakers, install the 20A charge motor, 15A close coil, and 10A shunt trip fuses into the fuse holders at the upper left of the compartment.

11. Check the wire bundles at the sides of the Messenger. The wire bundles should not obstruct the circuit breaker as it enters or exits the compartment. Any extra wire length may be gently pushed into the openings in the compartment side sheets.

12. Close compartment door.

13. Verify the following by checking the HMI System Health and Breaker Status screens:

    a. The Messenger is communicating.

    b. The iButton is recognized.

    c. The settings are correct for the replaced unit.

14. Verify that the circuit breaker is discharged and in the open position.

15. Rack the circuit breaker into the **Test** position. Verify that the circuit breaker position indicator and the HMI indicate that the circuit breaker in question is in the **Test** position.

16. Charge the circuit breaker.

17. On the **MAIN MENU**, click **One-Line**.

18. Double-click the circuit breaker in question on the system **One-Line** to bring up the Breaker Status screen.

19. Click **Control**.

    a. If the circuit breaker is non-electric (indicating a manual charge) a dialog box with a TRIP button will appear. Click **TRIP** and confirm by clicking **OK**. The circuit breaker should trip open. Skip to step 23.

    b. If the circuit breaker is an electric charge, a dialog box with two options will appear: TRIP and OPEN. Click **TRIP** and confirm by clicking **OK**. Verify that the circuit breaker has tripped open on the Breaker Status screen.

20. Click **Control** again, click **CLOSE**, and then confirm by clicking **OK**. Verify that the circuit breaker has closed on the Breaker Status screen.

21. Click **Control** again, click **OPEN**, and then confirm by clicking **OK**. Verify that the circuit breaker is open on the Breaker Status screen.

22. Rack the circuit breaker into the **connected** position. Verify the Breaker Status screen indicates that the circuit breaker racking position is **in** and the Secondary Disconnect Position is **connected**.

23. Take the equipment out of Reduced Let-Thru Mode by logging into the HMI under an account with Administrative privilege.

    a. On the **MAIN MENU**, click **Reduced Let-Thru Mode**.

    b. On the **Reduced Let-Thru Mode** dialog box, click the **enabled** checkbox to clear it.

    c. Click **OK**.