

E*FH, E*EB & E*CS CONTROL REPLACEMENT

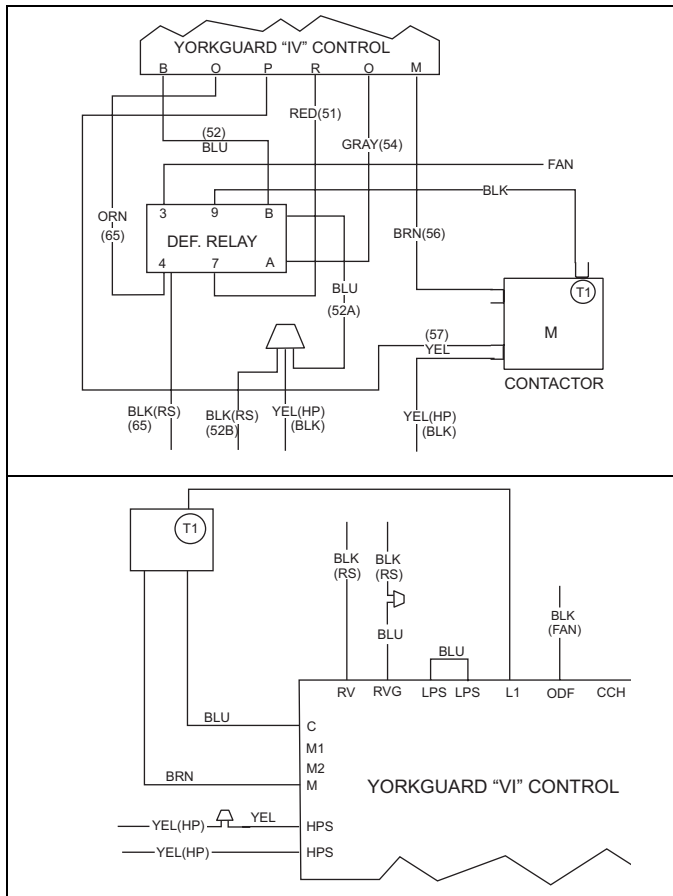


FIGURE 2: Wiring Connections for E*FH and E*EB

OUTDOOR UNIT MODIFICATIONS

1. Disconnect all high and 24V voltage power to the unit and the control circuit.
2. Mark and disconnect all thermostat, sensor and low voltage control connections from the YorkGuard IV control.
3. Remove the two #10 screws holding the control and remove the control.
4. Using the two #10 screws removed in step 3, secure the mounting plate supplied in the kit in the same location as the control that was removed.
5. Using the 4 screws supplied in the kit, secure the YorkGuard VI control and mounting plate to the previously installed mounting plate. The control should be oriented with the thermostat connections to the left side.
6. Remove the screws mounting the defrost relay and replace the screws in the two empty holes to seal the control box.

NOTE: Move the relay to the side but do not disconnect.

7. Re-wire per Figure 2 for E*FH and E*EB.

NOTE: All E*EB wires are number coded versus color coded. All E*EB wires are noted in [].

- a. Remove wire nut holding Yellow (HP) [BLK], Black (RS) [52B] and Blue wire. Terminate the black (RS) [52] wire with an insulated 1/4" terminal and plug into RVG terminal on control.
 - b. Remove the Black (RS) [65A] wire from the defrost relay and plug into the control at RV terminal on control.
 - c. Remove the two fan leads (Black) from the defrost relay and plug into the L1 & ODF terminals on the new control for the condenser fan. Power supply should be connected to L1.
 - d. Remove the following wires from the defrost relay and dispose of the wires: (As shown in Figure 3)
 1. Blue [52] @ B
 2. Orange [65] @ 4
 3. Red [51] @ 7
 4. Gray [54] @ A
 - e. Remove Yellow [57] wire from contactor and strip end with plug (previously connected to the control.) Wire nut to Yellow (HP) [BLK] wire from (a) above. Plug into control at HPS.
 - f. Remove Yellow (HP) [BLK] wire from contactor and plug into control at HPS.
 - g. Install the new Blue wire (from kit) from the common side of the contactor to "C" on the new control by M1.
 - h. Remove Brown [56] wire from contactor and install the new Brown wire (from kit) from the contactor to "M" on the control. Note the connection at the control is with a 3/16" terminal. Strip terminal with insulated 1/4" terminal and connect to M terminal on control.
8. Re-wire per Figure 3 for E*CS.
 - a. Remove the 65A (RS) and 52A wire from the defrost relay and plug into the control at RV and RVG.
 - b. Remove the two fan leads (Black) from the defrost relay and plug into the L1 & ODF terminals on the new control for the condenser fan. Power supply should be connected to L1.
 - c. Remove the following wires from the defrost relay and dispose of the wires:
 1. 52 @ B
 2. 65 @ 4
 3. 51 @ 7
 4. 54 @ A
 - d. Remove 57 wire from contactor and strip end with plug (previously connected to the control.) Disconnect 52B @ Rev. Valve Sol, Strip and wire nut to 57. The wire length may need to be extended.
 - e. Remove 57A (HP) wire from contactor and plug into control at HPS. The wire length may need to be extended or a new wire fabricated.
 - f. Install the new Blue wire (from kit) from the common side of the contactor to "C" on the new control by M1.
 - g. Remove 56 wire from contactor and install the new Brown wire (from kit) from the contactor to "M" on the control. Note the connection at the control is with a 3/16" terminal. Strip and terminate with insulated 1/4" terminal.

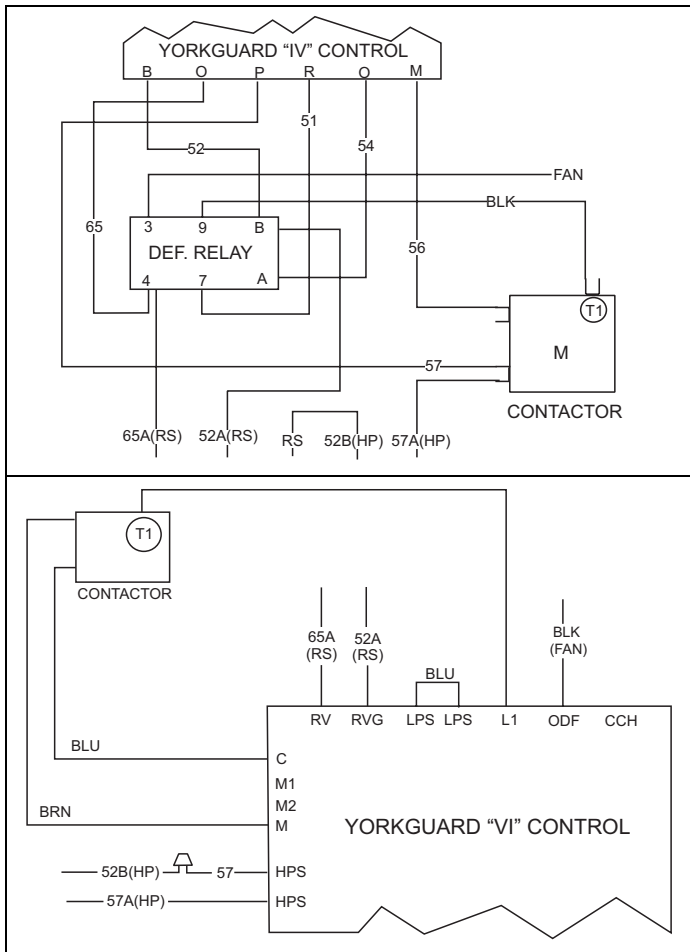


FIGURE 3: Wiring Connections for E*CS

9. Rewire sensor leads as follows.
 - a. Liquid line sensor leads (blue) - cut and strip and reterminate with 1/4" terminals. Connect to the control at LL & LLG.
 - b. Ambient sensor leads (white) - cut and strip and reterminate with one 1/4" and one 3/16" terminal. Connect to control at AMB & AMBG.
 - c. Discharge sensor leads (red) - cut and strip and reterminate with 3/16" terminals. Connect to control at DIS & DISG.
10. Apply a new wiring diagram for either electric heat installations (278019) or fossil fuel installations (278020) supplied in the kit to the inside of the control box of the outdoor unit. Note: The wiring diagram notes colored wires.
11. Verify the settings for the balance point and low temperature cut-out. The settings are found at the top left of the control and are set using the supplied jumpers.

INDOOR UNIT MODIFICATIONS

NOTE: Indoor transformer should be rated for a minimum of 40VA. Replace transformer if necessary.

FOSSIL FUEL APPLICATION - The YorkGuard VI control does not require an add-on fossil fuel kit. Remove existing fossil fuel kit if present. An optional bonnet sensor may be used if desired. See "OPERATION INSTRUCTIONS - "DEMAND DEFROST CONTROL BOARD" on upgnet.com for details of functionality with and without bonnet sensor installed.

B1PH CONTROL REPLACEMENT

YORKGUARD IV REMOVAL

Remove YorkGuard IV from B1PH units as follows:

1. Disconnect the unit power supply.

Mark and disconnect all thermostat, sensor, and low voltage wires at the YorkGuard IV control.

2. Remove the two #10 screws holding the old YorkGuard IV control and remove the control.
3. Remove the two screws mounting the defrost relay 2R and move the relay to the side but do not disconnect the wires.

YORKGUARD VI INSTALLATION

Use the two #10 screws removed in step 3 above, to attach the mounting plate to the control box. Install YorkGuard VI control and mounting plate oriented with the thermostat connections to the left, to the mounting plate with #6 screws supplied.

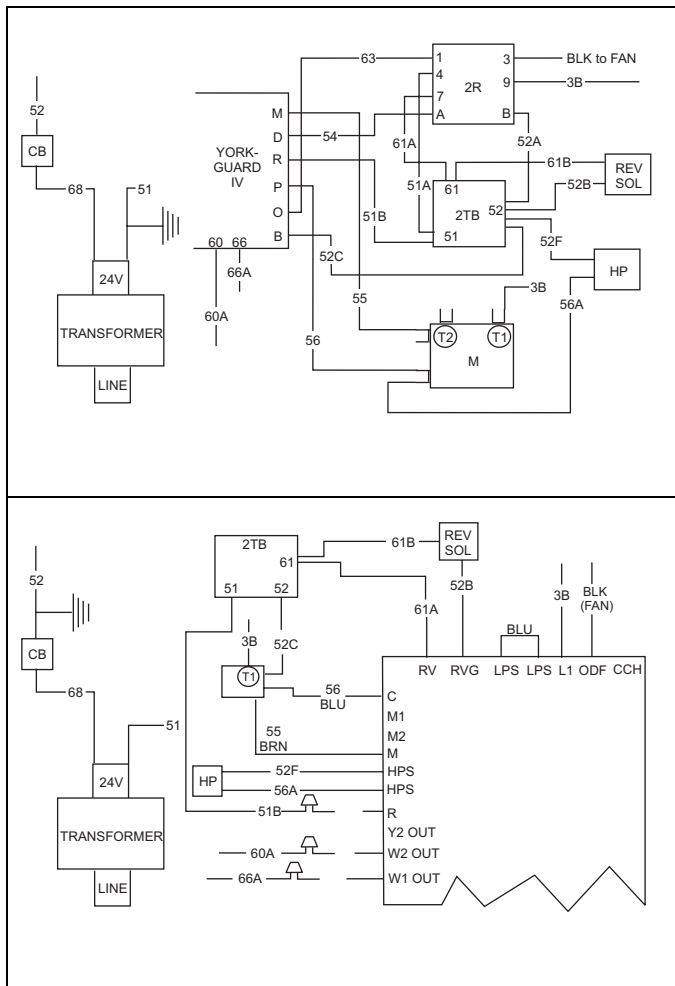
RE-WIRING B1PH CONTROL BOX

See Figure 4 (Before) and the enclosed wiring diagram 278191 to re-wire the B1PH control box, or follow the step by step procedure below:

1. Disconnect the black OD fan motor wire from relay 2R-3 and connect to YorkGuard VI - ODF.
2. Disconnect the black wire from relay 2R-9 and connect to the other terminal at YorkGuard VI - L1.
3. Disconnect the black wire from relay 2R-7 and connect to YorkGuard VI - RV.
4. Disconnect the orange wire from relay 2R-4 and TB1-51 and connect between TB1-52 and YorkGuard VI - RVG.
5. Remove relay 2R and discard the remaining attached wires and the relay.
6. Disconnect the two brown high pressure switch wires (one at TB1-51 and one at 1M coil) and connect them to YorkGuard VI-HPS.

NOTE: There are several brown wires at TB1-51. The wire connected to the high pressure switch can be easily confused with the wire connected to the reversing valve. You may want to use an meter to check continuity through the high pressure switch to find the correct wire.

7. Cut the purple and blue wires at the low voltage plug that was connected to the old YorkGuard IV. Terminate the cut end of the blue wire with a 1/4" push-on terminal and connect to YorkGuard VI - M. Terminate the cut end of the purple wire with a 1/4" push-on terminal and connect to YorkGuard VI - C by M1.
8. Move the brown circuit breaker (CB) wire from TB1-52 to TB1-51.
9. Move the black transformer wire from TB1-51 to TB1-52.
10. Cut the orange wire from TB1-51 to the low voltage plug at the plug and strip the end about 1/2". Terminate this wire and the red low voltage wire with one 1/4" push-on terminal and connect to YorkGuard VI - R terminal.
11. Terminate the remaining low voltage wires with 1/4" push-on terminals and connect to the YorkGuard VI low voltage terminals.
12. Remove and discard the low voltage plug and the wires still attached to it.
13. Rewire the sensor leads as follows:
 - a. Liquid line sensor leads (blue) - cut at plug, strip end, and re-terminate with 1/4" terminals. Connect to the YorkGuard VI - LL & LLG.
 - b. Ambient sensor leads (yellow) - cut at plug, strip end, and re-terminate with one 1/4" terminal and one 3/16" terminal. Connect to the YorkGuard VI - AMB & AMBG.
 - c. Discharge sensor leads (red) - cut at plug, strip end, and re-terminate with 3/16" terminals. Connect to the YorkGuard VI - DIS & DISG.
14. Apply a new B1PH wiring diagram (278191) supplied with the kit to the inside of the control box cover.
15. Use the jumper pins supplied on the control to set the balance point (BAL PT) and low temperature cut-out (LTCO) settings to the same settings that were on the control.



START-UP OPERATION

1. Reapply power to the unit and the control voltage circuit.
2. The LED on the defrost control will flash on and off when there is power to the control and it is working properly.
3. Verify unit operation.

For more information on control operation, refer to “OPERATION INSTRUCTIONS - “DEMAND DEFROST CONTROL BOARD” on upgnet.com.

FIGURE 5: Wiring Connections for B1PS

TEMPLATE

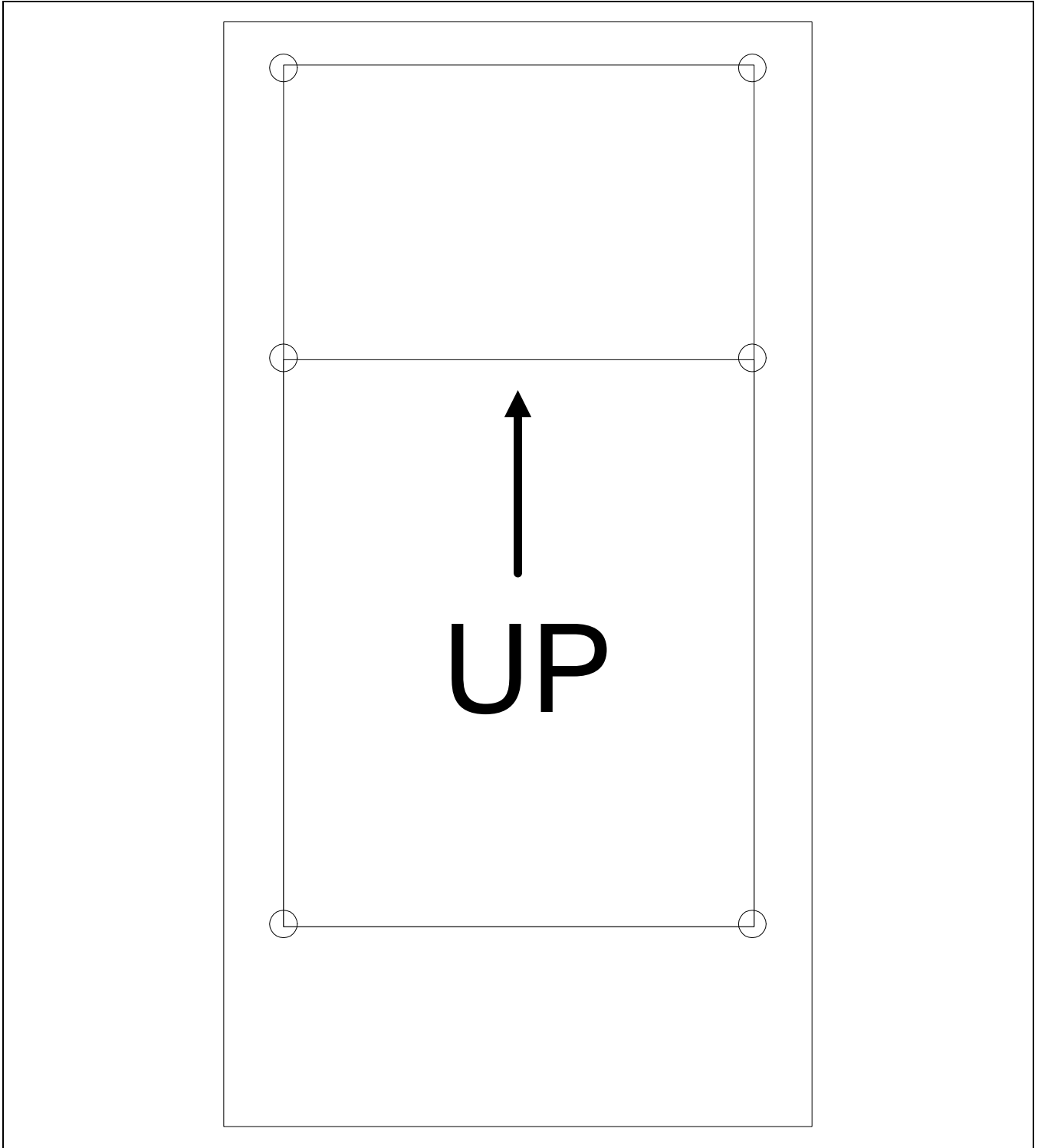


FIGURE 6: Control Mounting Template

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