

REPAIR PART INSTALLATION INSTRUCTIONS

CONTROL REPAIR KIT FOR DEMAND DEFROST CONTROLS 031-01098-011, -013, & -015

GENERAL

Demand defrost control repair kit part number 33101975001 is a direct replacement for demand defrost controls 031-01098-011, -013, & -015 and the associate repair part numbers (03101098711, 713, & 715). The new control, part number 3887/031-01975-001, replaces all three previous controls. The new control has a shunt jumper that can be used to select the appropriate demand defrost "curve" for the specific control being replaced.

INSTALLATION PROCEDURE

WARNING

Disconnect electrical power to the AC unit before installing this control. Failure to remove power could result in electrical shock, equipment damage, or death.

NOTE: All wiring must be in accordance with the National Electrical Code, latest edition, and all local electrical codes.

1. Disconnect electrical power from both indoor and outdoor units.
2. Remove control panel access cover.
3. Disconnect thermostat wires at low voltage control box.
4. Remove the unit's eight thermostat connection wires from the low voltage control box. Remove and retain grommets as necessary.
5. Remove and retain three screws that secure the existing control to the control box.
6. Using the original screws, attach the new control to the control box. In most models, the control box will have three holes that can be used to mount the control. The lower left mounting hole for the old control will also be used as the lower left mounting hole for the new control. If necessary, drill 7/64" holes to provide at least three mounting screws for the control board. The control should be oriented so the TEST pins are at the top and the low voltage connections are on the left.
7. Connect the wire harness to the new control terminals as shown in Table 1.

TABLE 1: Wire Harness to Control Connections

WIRE HARNESS WIRE COLOR	NEW CONTROL CONNECTION	TERMINAL
PUR	X/L	1/4" quick connect
RED	R	1/4" quick connect
BLK	C	1/4" quick connect with two wires
YEL	Y	1/4" quick connect
ORG	O	1/4" quick connect
WHT	W	1/4" quick connect
BRN	W1/66	1/4" quick connect
YEL	M	3/16" quick connect

8. Remove the yellow, black, and gray wires from the contactor coil terminals.
9. Connect the black wire of the new control harness to one of the contactor coil terminals. This black wire is one of the two wires connected to the "C" terminal of the new control.
10. Connect the yellow and gray wires of the new control harness to the other contactor coil terminal.
11. Route the gray wire from the contactor coil terminal to the low voltage control box.
12. Route the stripped ends of the thermostat connection wires of the new control harness to the low voltage control box.
13. Insert the gray wire and the stripped thermostat connection wires into the low voltage control box using the original grommets.
14. Move the component wires from the old control to the new control as shown in the following table.
15. Neatly bundle and secure the wires using a tie wrap.
16. Set the proper demand defrost "curve" using the shunt jumper in the upper left corner of the control. See Figure 1. The position of the jumper must correspond with the control being replaced. Table 2 shows the proper jumper pin positions for the various controls that might be replaced.
17. Install new wiring diagram.
18. Connect thermostat wires using field-supplied wire nuts.
19. Install control panel access cover.
20. Reconnect power to units.
21. Verify proper operation of unit.

TABLE 2: Component Wiring Changes

COMPONENT	WIRE COLOR	OLD CONTROL CONNECTION	NEW CONTROL CONNECTION	TERMINAL
Reversing Valve	Black	"O" & "B"	"REV VALVE"	1/4" quick connects
Coil Sensor	Brown	"COIL"	"COIL" & "COILG"	1/4" quick connects
Outdoor Ambient Temperature Sensor	White	"RED AMBIENT"	"AMBIENT" & "AMBG"	3/16" quick connects
Outdoor Fan	Black	Onboard relay	"COND FAN"	1/4" quick connects
High Temperature Switch	Brown, Blue, or Yellow	"Y"	"PRESSURE SWITCH"	1/4" quick connects
High Pressure Switch	Yellow	"P"	"PRESSURE SWITCH"	1/4" quick connects

TABLE 3: Demand Defrost "Curve" Jumper Positions

ORIGINAL CONTROL PART NUMBER	REPLACEMENT CONTROL PART NUMBER	JUMPER SETTING ON NEW CONTROL	COMMENTS
03101098711	3887/031-01975-001	3	
031-01098-013 / 03101098713	3887/031-01975-001	2	
031-01098-015 / 03101098715	3887/031-01975-001	1 or 4	Position 1 is factory default . Position 4 is "curve" used with no jumper present.

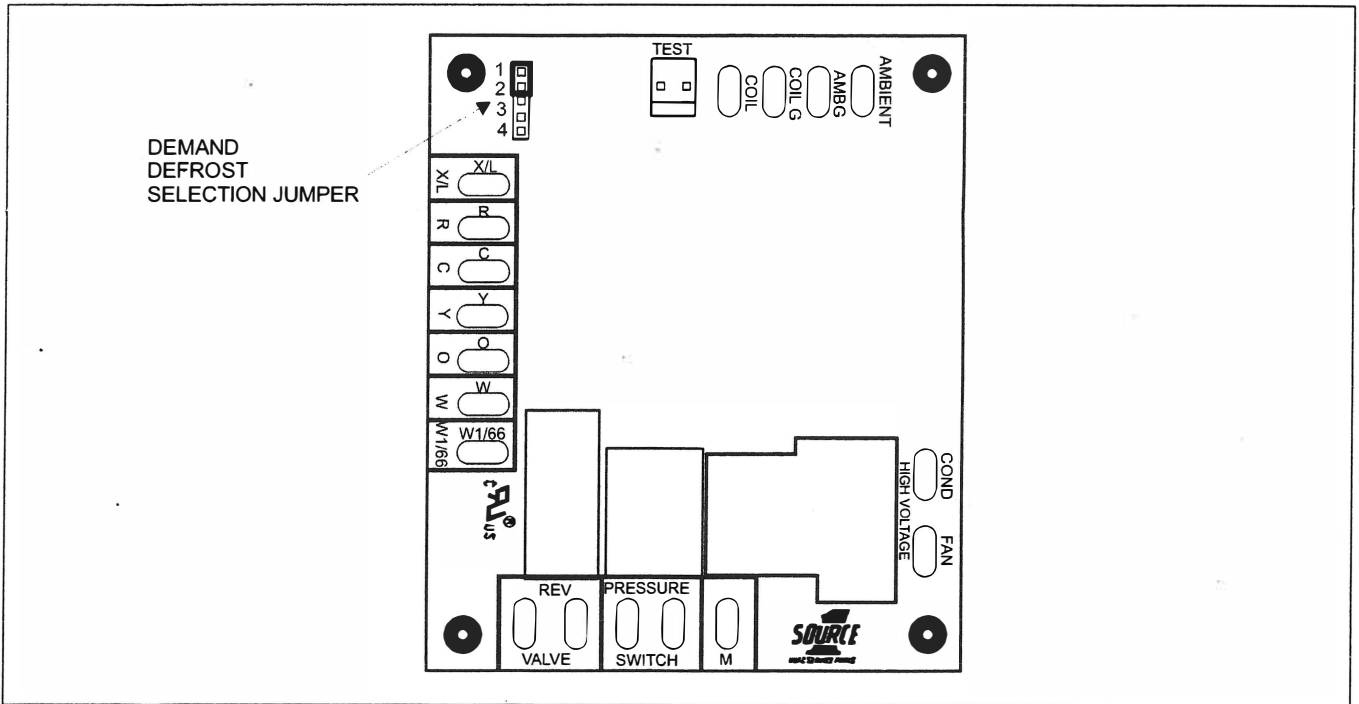


FIGURE 1: Demand Defrost "Curve" Selection Jumper

WIRING DIAGRAM

- ① COMPONENTS SHOWN IN DASHED LINES ARE OPTIONAL.
- ② DUAL CAPACITOR SHOWN SEPARATE CAPACITORS MAY BE USED ON ACTUAL UNIT.
- ③ WIRE COLOR MAY BE EITHER: YELLOW, BLUE, BROWN.
- ④ WIRING MUST CONFORM TO NATIONAL AND LOCAL CODES.
- ⑤ IF ANY OF THE ORIGINAL WIRE SUPPLIED WITH THIS UNIT MUST BE REPLACED, IT MUST BE REPLACED WITH TYP 105C THERMOPLASTIC OR ITS EQUIVALENT.
- ⑥ WHEN POWER SUPPLY HAS ONE (1) 240 VOLT CONDUCTOR AND ONE (1) NEUTRAL CONDUCTOR, CONNECT L2 OF CONTACTOR TO NEUTRAL.
- ⑦ GRAY WIRE ONLY USED WITH ACCESSORY OUTDOOR THERMOSTAT KIT.

HTS - HIGH TEMPERATURE SWITCH
 HPS - HIGH PRESSURE SWITCH
 RV - REVERSING VALVE SOLENOID
 AS - AMBIENT SENSOR
 DEFT - DEFROST THERMOSTAT
 CCH - CRANKCASE HEATER
 HS - HEATER SWITCH
 SR - START RELAY
 SC - START CAPACITOR
 CC - CONTACTOR COIL

— HIGH VOLTAGE FACTORY WIRING
 — LOW VOLTAGE FACTORY WIRING
 - - - OPTIONAL WIRING
 — FIELD WIRING, LINE VOLTAGE

DANGER - SHOCK HAZARD
 TURN OFF ELECTRICAL POWER BEFORE SERVICING TO PREVENT POSSIBLE DAMAGE TO THE EQUIPMENT AND POSSIBLE PERSONAL INJURY.

CAUTION
 TO PREVENT ELECTRICAL SHOCK OPEN REMOTE DISCONNECT SO ELECTRICAL SUPPLY TO HEAT PUMP IS SHUT OFF. CONTACTOR DOES NOT OPEN BOTH SIDES OF THE 230 VOLT CIRCUIT.

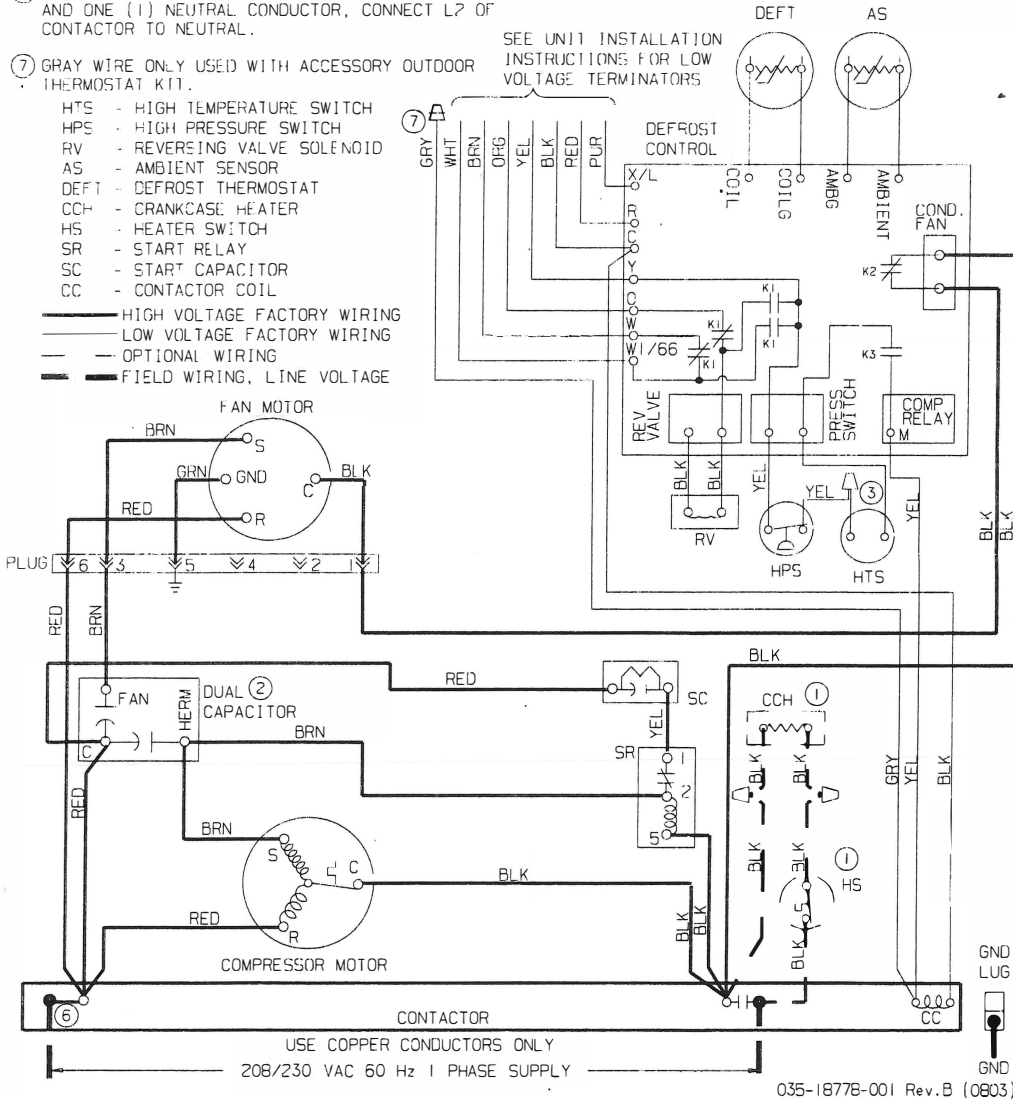


FIGURE 2: Wiring Diagram