AFAINTHWC01A
Interface Relay Kit
Hydronic Heat for Communicating Fan Coils

Installation Instructions

NOTE: Read the entire instruction manual before starting the installation.

SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock or other conditions which may cause death, personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory-authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing.

Follow all safety codes. Wear safety glasses, protective clothing and work gloves. Use quenching cloths for brazing operations. Have fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions attached to the unit. Consult local building codes and the current editions of the National Electrical Codes (NEC) NFPA 70.

In Canada, refer to the current editions of the Canadian Electrical Code CSA C22.1.

Recognize safety information. This is the safety-alert symbol ⚠. When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which will result in severe personal injury or death. WARNING signifies hazards which could result in personal injury or death. CAUTION is used to identify unsafe practices, which may result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which will result in enhanced installation, reliability, or operation.

INTRODUCTION

Systems with FE4B, FE5B, FCMB4, and FCMA5 communicating fan coils do not use 24VAC signals to communicate system operation commands. System control is accomplished through computer level commands on a system "bus" that requires fewer low voltage interconnecting wiring. System components that are not capable of communication through this bus require an interface kit. This kit provides interface of FE4B, FE5B, FCMB4, and FCMA5 communicating fan coils with Hydronic Heat equipment.

NOTE: This kit will provide the necessary interface function when applied with communicating wall controls.

DESCRIPTION AND USAGE

The Interface Relay Kit consists of:

- a 22 VDC relay fitted with a rectifier circuit board that can be mounted within the fan coil
- a wiring harness that is pre-wired to the relay and terminated with a 12-pin AMP Mate-N-Lok receptacle that connects to the fan coil's heater control connector
- two No. 16 AWG stripped leads for connecting the relay normally open contacts into the Hydronic system control circuit
- two mounting screws
- two wire nuts
- instructions

The wiring harness includes an ID device (270k resistor) that is recognized by the fan coil control as assigned to Hydronic Heat equipment. The relay provides switching control of the Hydronic equipment through its normally open contacts. Refer to the User Interface literature for further configuration information.

NOTE: The relay provided with this kit may not be suitable for use with electronic control inputs using very low level current. Review the Hydronic equipment control power requirements prior to use of this kit. The minimum load rating for reliable switching of the relay contacts is 500 mA at 12VAC/VDC, additional loading may be required. The maximum relay ratings are:

Table 1 – Volt Load Ratings

30 A @ 120/277 VAC resistive
1.5 HP (10 A) @ 220/240 VAC
1.5 HP (5 A) @ 440/480 VAC

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Before installing, modifying or servicing system, always turn off main power to system. There may be more than one disconnect switch. Lock out and tag switch with a suitable warning label.

⚠ CAUTION

Failure to follow this caution may result in personal injury.

Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate protective clothing and gloves when handling parts.

INSTALLATION

1. Turn off all electrical supply to the fan coil and the Hydronic equipment.
2. Remove fan coil upper door.
3. Unplug and discard the factory provided power harness that is connected to the 12-pin heater control connector.
4. Remove the blank plate that is installed over the heater installation opening.
5. Punch or drill two 1/8” (3.175 mm) diameter holes in the center of the blank plate, 2-3/8” (60.325 mm) apart (Fig. 1).
6. Mount the relay using 2 sheet metal screws.
7. Replace the heater blank plate with the relay mounted to it in its original location.
8. Connect the 12-pin receptable to the heater control connector.
9. Use wire nuts to connect stripped red leads to the incoming Hydronic equipment control power wires (Fig. 2).
10. Use field supplied wire nuts to connect the stripped black and yellow leads to the fan coil 240VAC power supply connection.

IMPORTANT: Be sure to consult local building codes and the National Electrical Code (NEC) for special requirements.

11. Reinstall the upper door.
12. Turn on electrical supply to both fan coil and Hydronic equipment.

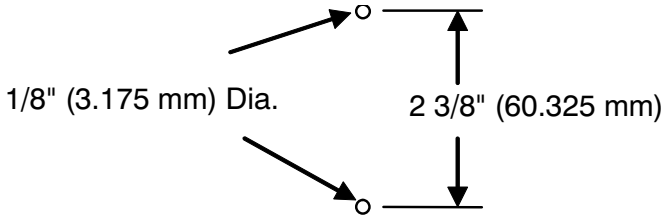

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Fig. 1 – Relay Mounting Hole Detail

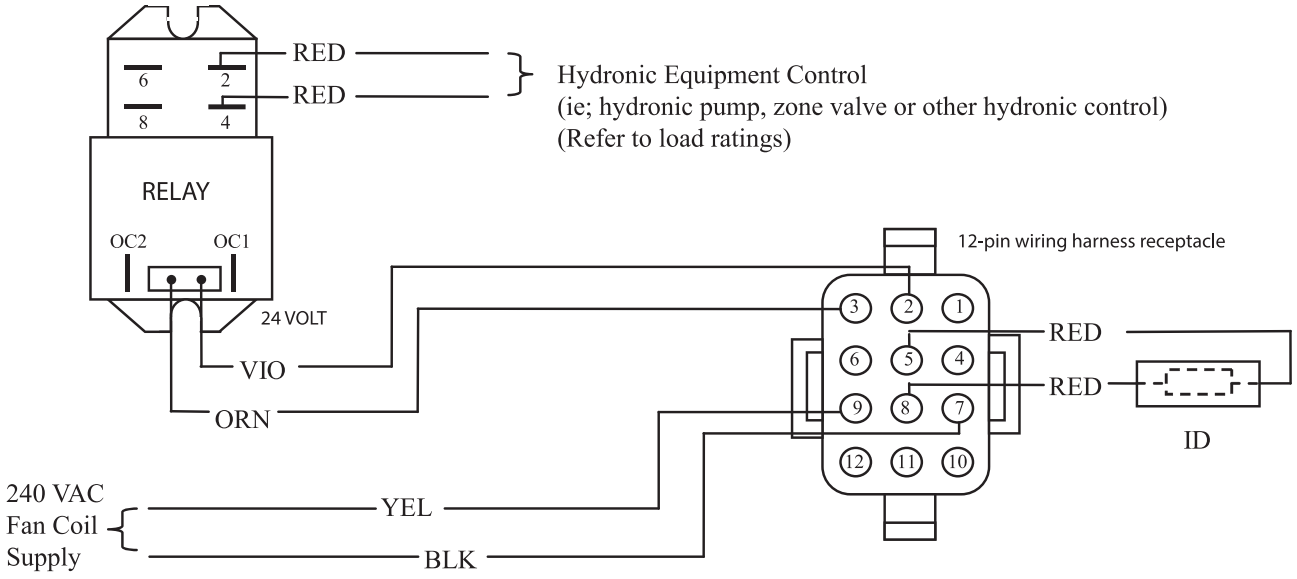

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Fig. 2 – Interface Relay Kit Wiring Schematic

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