

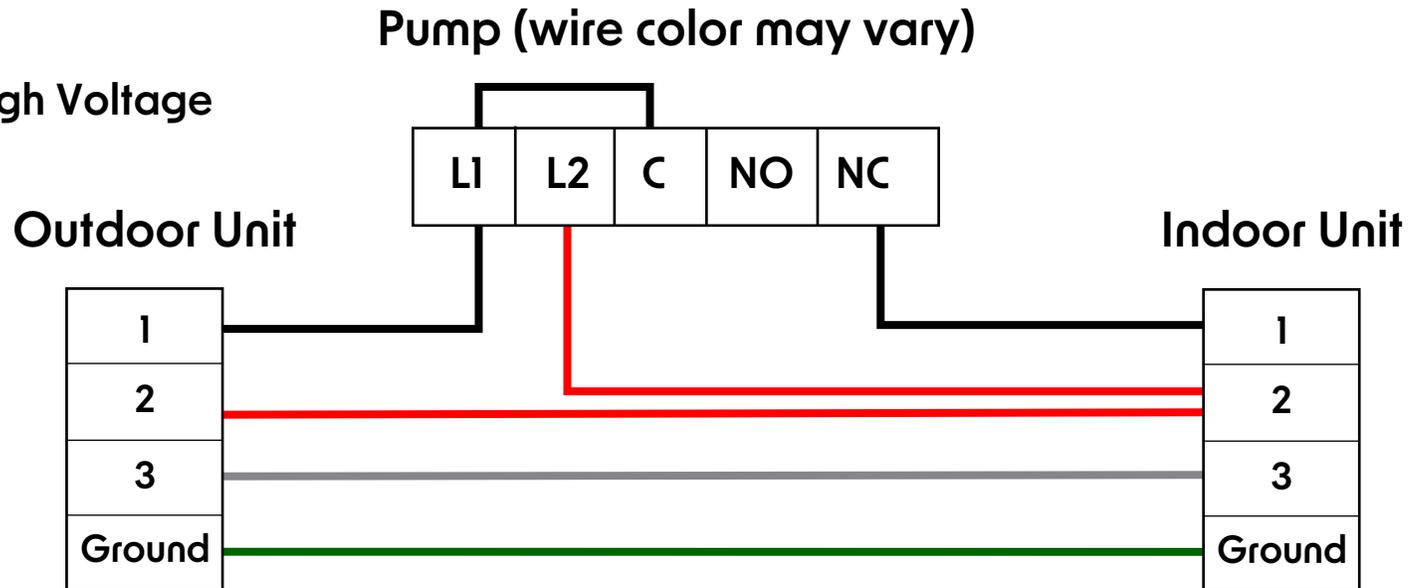
Accessory Options



Condensate Pump Connections – 4-Wire Ductless Systems

The Pumps Normally Closed (N.C.) safety switch should break "1" to the Indoor unit, never break "2" or "3".

4-wire systems
All Connections High Voltage



Little Giant
599124 – ACS-3
220-Volt Pan Switch

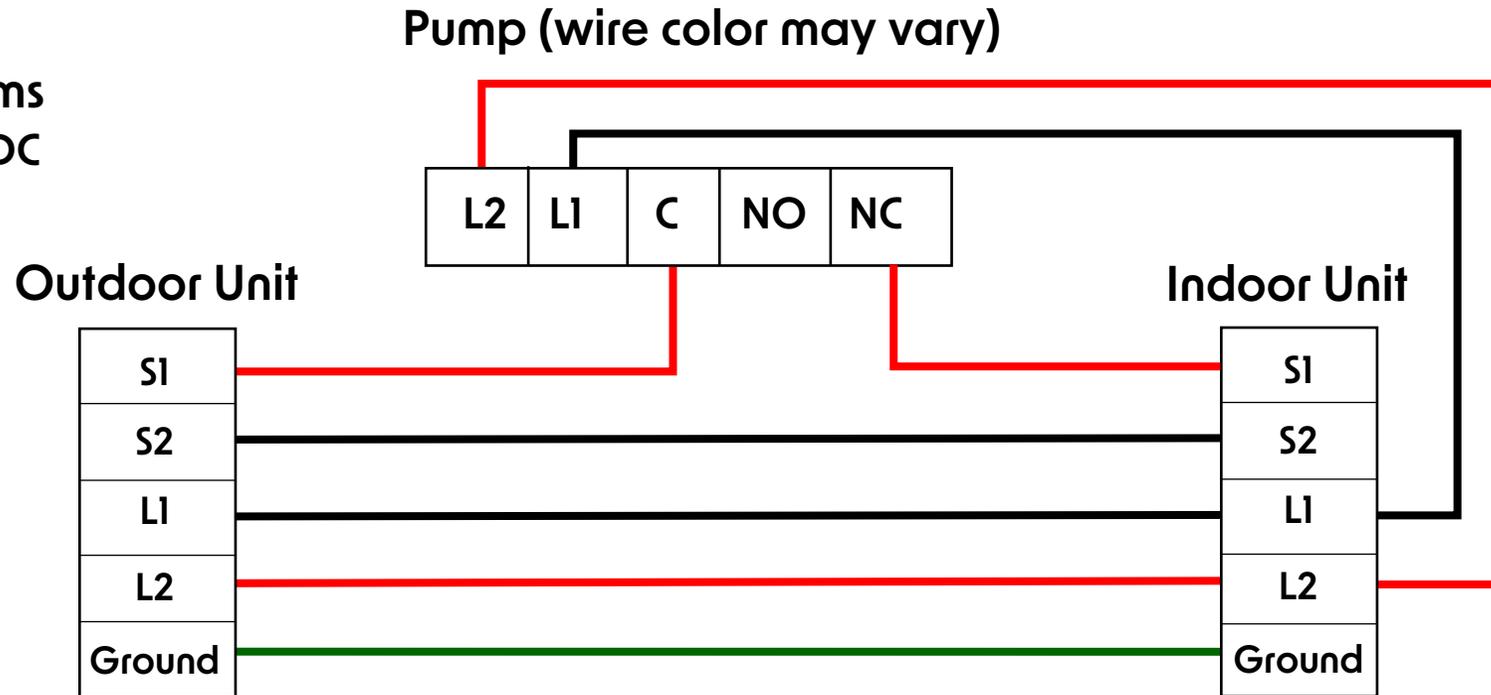
Accessory Options



Condensate Pump Connections – 2-Wire Ductless Systems

The Normally Closed (N.C.) safety switch should break the one leg of the S1, S2 connections.

2-Wire Systems
S1, S2 – 0~10 VDC



Accessory Options

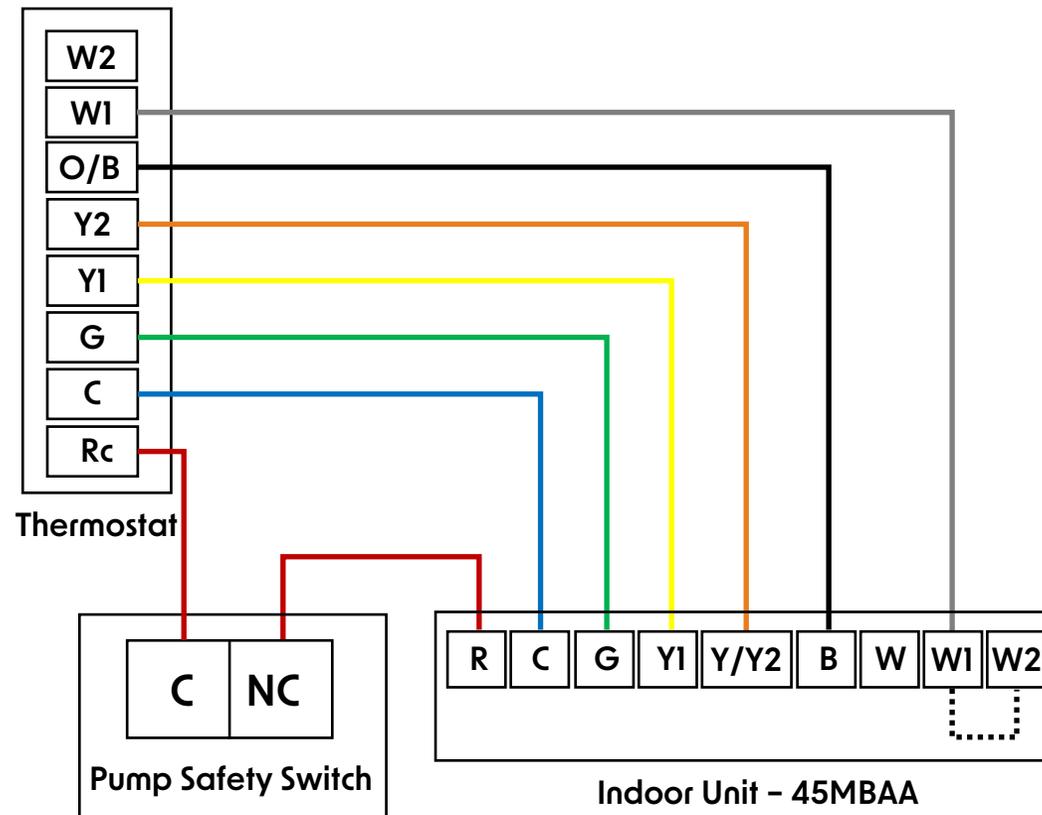
Condensate Pump Connections - 24-Volt Systems

The Normally Closed (N.C.) safety switch should break the "R" wire supplying power to the Thermostat.

24-Volt Systems

Example: 45MBAA

3 Stage Heat & 2 Stage Cool



Accessory Options

Air Handler: 45MBAA

Remote ON/OFF (CN2) (must remove JRI Jumper)

N.C. contacts – When contacts open a "CP" Code will appear and system will shut down.

UV LED (CN43)

When Fan is ON, 24-Volts are available from contacts to power a pilot relay or other small device.

Alarm Output (CN33)

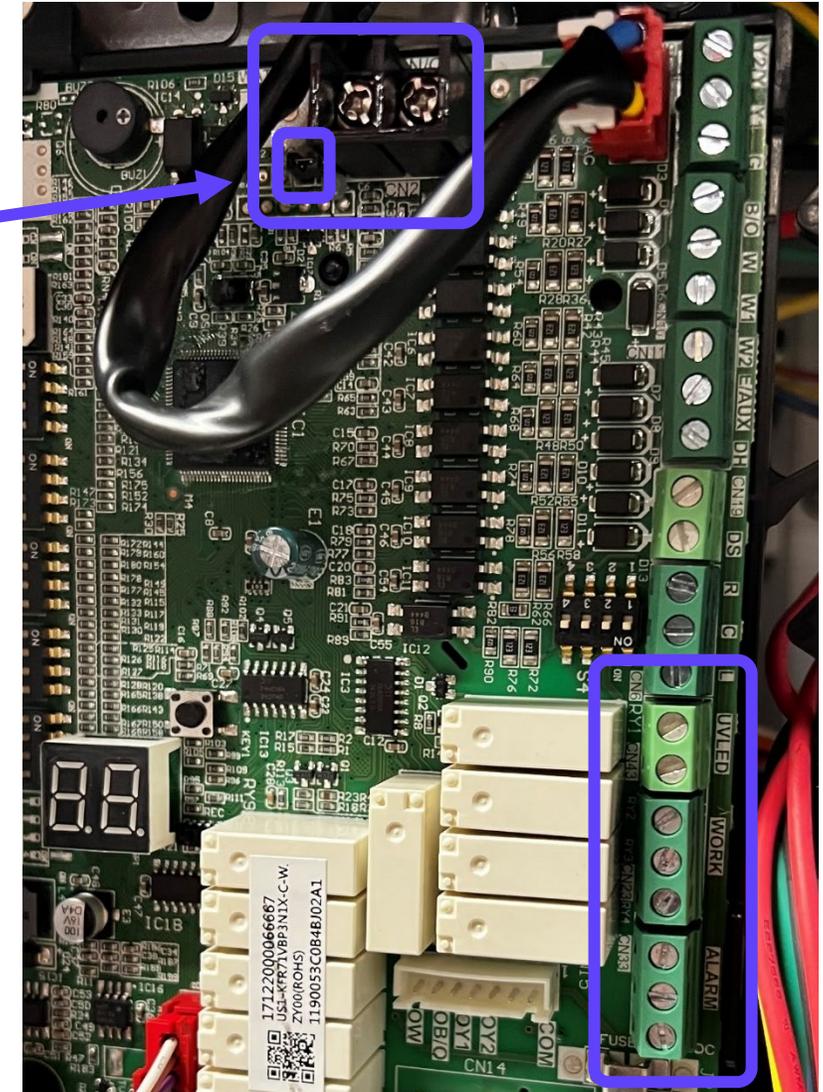
N.O. contacts – Contacts closes on Error.
Contacts rated: 250VAC, 10 Amps max.

Work (CN23)

N.O. contacts – Contacts closes when fan is ON,
Contacts rated: 250VAC, 10 Amps max.

Codes will only appear on the 1401 Wired Controller and/or the Communication PCB only.

Section of Communication PCB



Accessory Options

Air Handler: 45MBAA

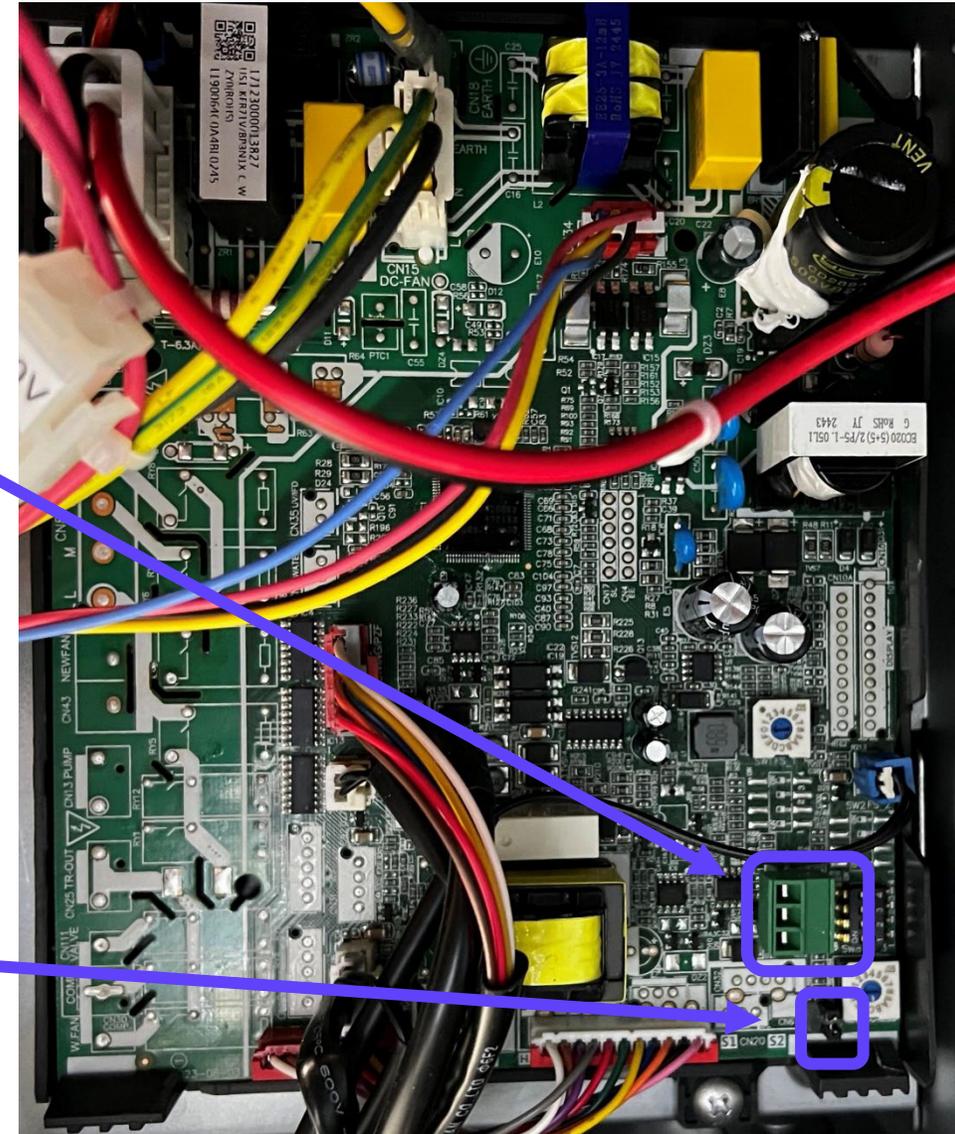
Water (CN23) (must remove J7 Jumper)

N.C. contacts – When contacts open an "EH0E" Code will appear, and system will shut down.

Codes will only appear on the 1401 Wired Controller and/or the Communication PCB only.



J7 Jumper



Main PCB

These Green Terminal Blocks can be removed for easier wire connections. Always use the outside connections, the middle terminal is not active.

Accessory Options

High Walls: 45MHH, 45MAHA/615AHA, 45MPHA/615PHA

Locate the unit's Multifunction Board

Remote ON/OFF (CN46)

N.C. contacts – When contacts open a "CP" Code will appear and system will shut down.

Alarm Output (CN45)

N.O. contacts – Contacts closes on Error.



Accessory Options

Typical 45MBD Main PCB Layout

Ducted: 45MBD

New Fan (CN43)

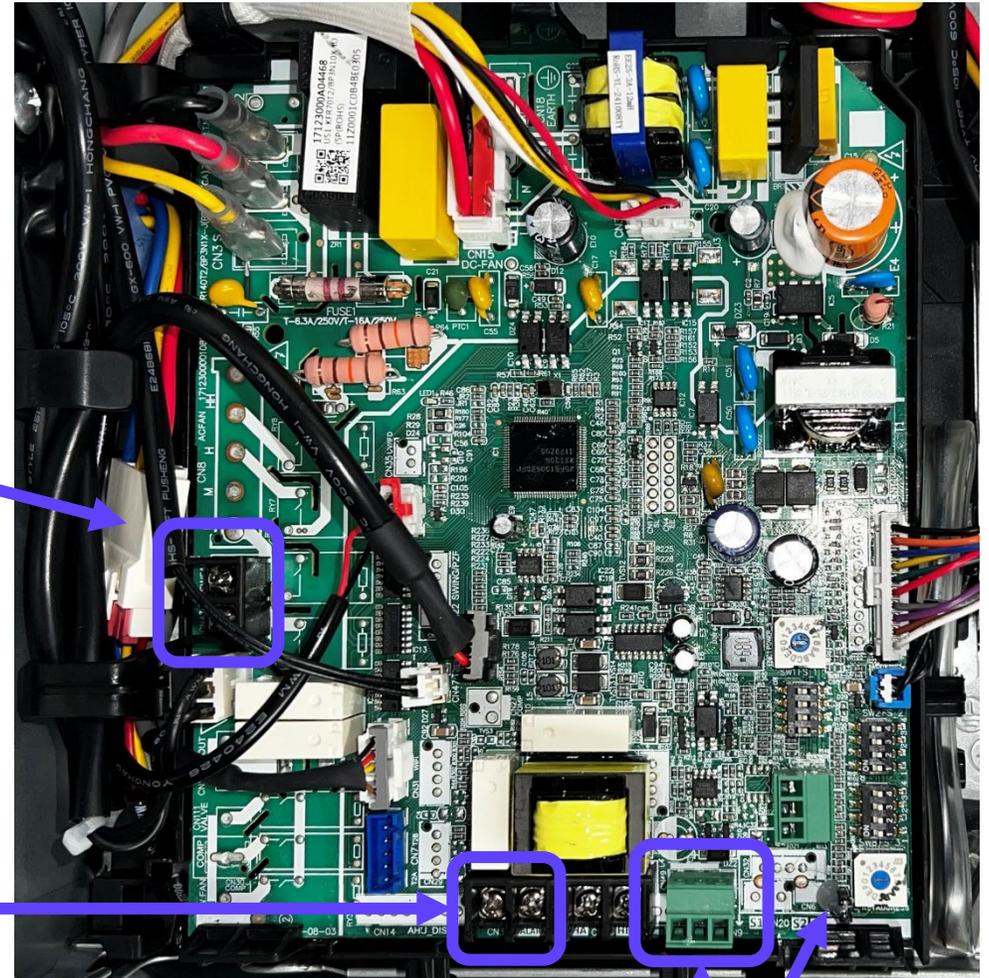
When fan is ON contact's supply
220VAC, 1 Amp max.

Alarm Output (CN33)

N.O. contacts - Contacts closes on Error.

Remote ON/OFF (CN23) (must remove J7 Jumper)

N.C. contacts - When contacts open a "CP"
Code will appear and system will shut down.



J7
Jumper

Accessory Options

For ON/OFF connections use the outside connections, the middle terminal is not active.

4-Way Cassettes: 45MBC

Remote ON/OFF (CN23) (must remove JR6 Jumper)

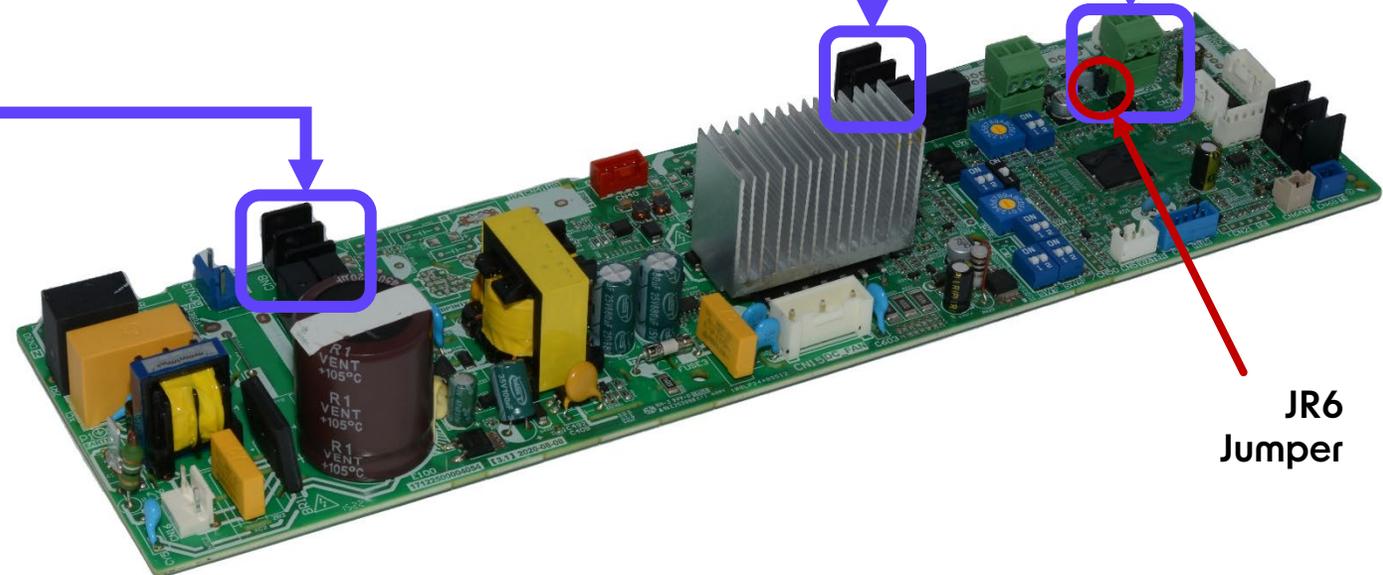
N.C. contacts - When contacts open a "CP" Code will appear and system will shut down.

Alarm Output (CN33)

N.O. contacts - Contacts closes on Error.

Fresh Air (CN8)

When fan is ON contact's supply 220VAC, 1 Amp max.



JR6 Jumper

Accessory Options

I-Way Cassette: 45MCC

Remote ON/OFF (CN23) (must remove JR6 Jumper)
N.C. contacts - When contacts open a "CP"
Code will appear and system will shut down.

Alarm Output (CN33)
N.O. contacts - Contacts closes on Error.

New Fan (CN8)
When fan is ON contact's supply
220VAC, 1 Amp max.

For ON/OFF connections use
the outside connections, the
middle terminal is not active.



Accessory Options

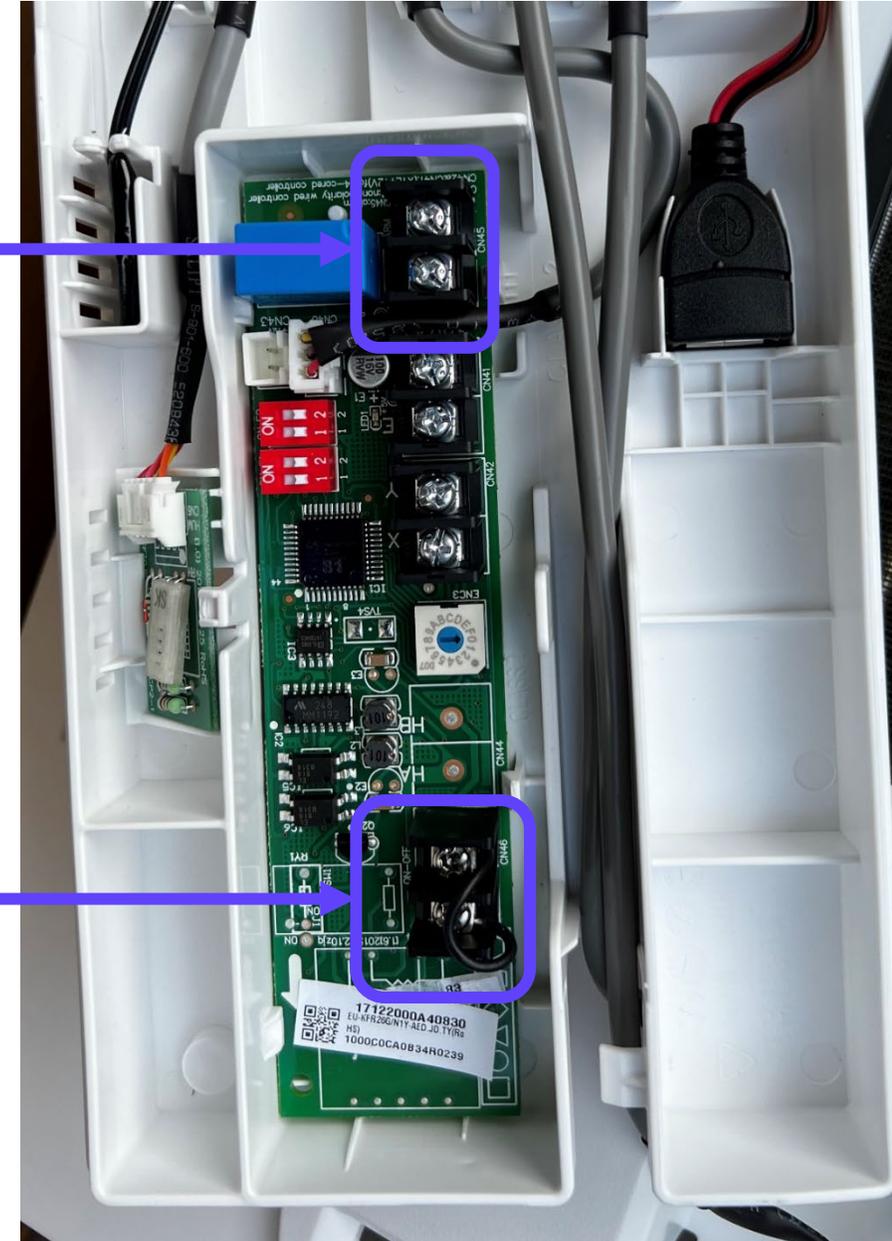
Floor Console / Wall: 45MBF

Alarm Output (CN45)

N.O. contacts - Contacts closes on Error.

Remote ON/OFF (CN46)

N.C. contacts - When contacts open a "CP" Code will appear and system will shut down.



Accessory Options

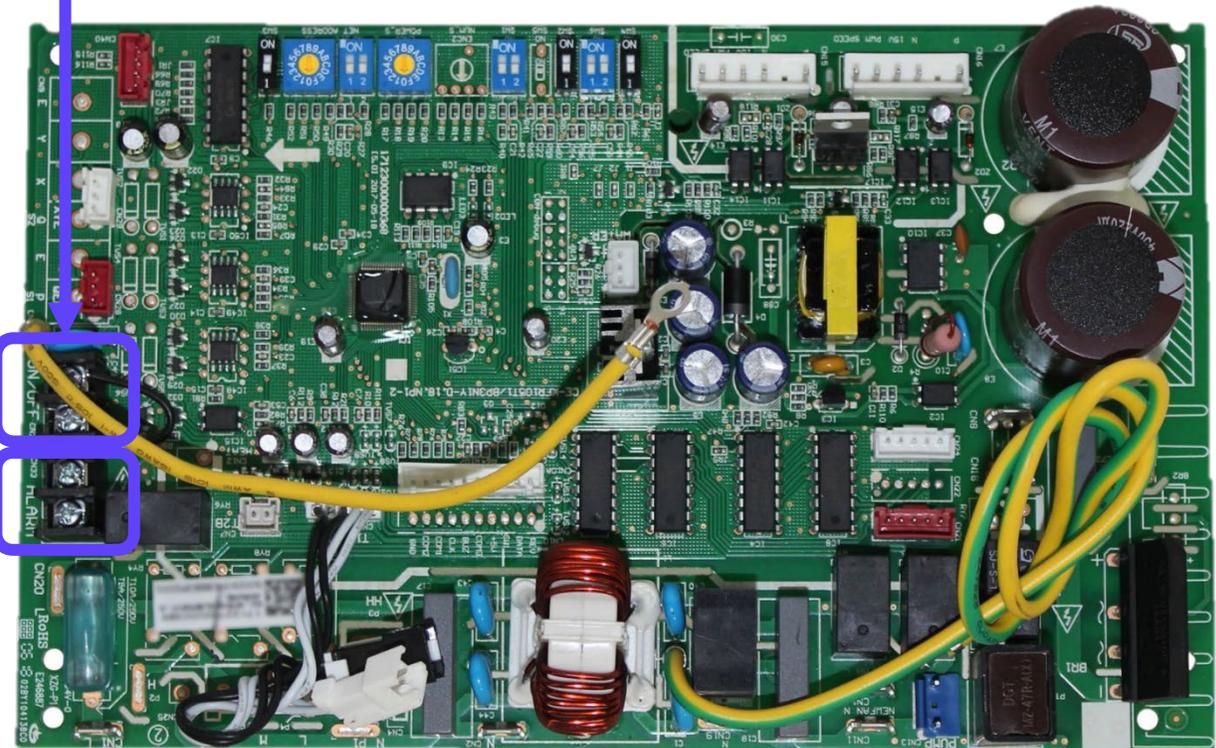
Floor Console / Wall / Underceiling: 45MCF

Remote ON/OFF (CN23)

N.C. contacts - When contacts open a "CP" Code will appear and system will shut down.

Alarm Output (CN33)

N.O. contacts - Contacts closes on Error.



Accessory Options

X, Y, E Terminals

The following units have X, Y, E terminals:

High Wall - 45MHH / 45MAHA/615AHA / 45MPHA/615PHA

Air Handler - 45MBAA

Ducted - 45MBD

4-Way Cassette - 45MBC

1-Way Cassette - 45MCCA

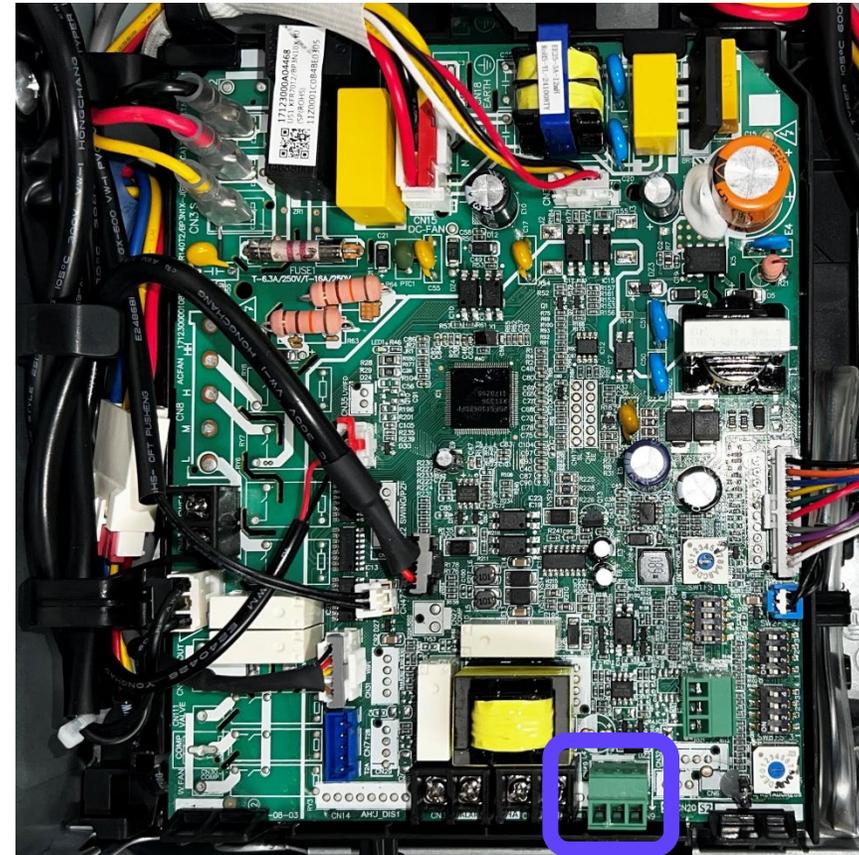
Floor Console - 45MBF

Floor Console / Underceiling: 45MCF

Air Handler - 45MBAA



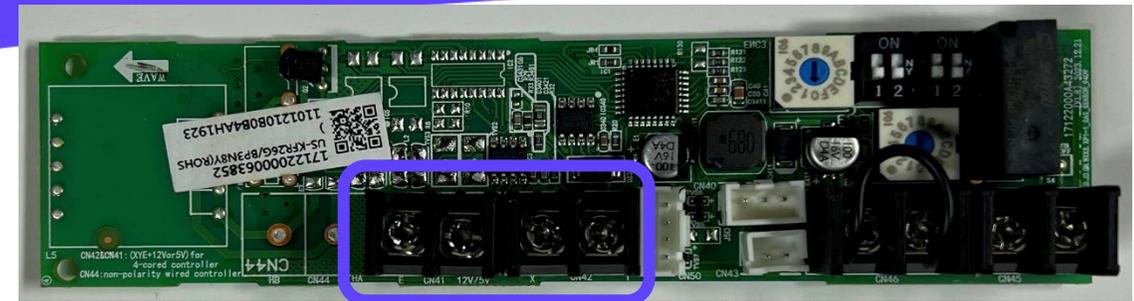
Ducted - 45MBD



Accessory Options

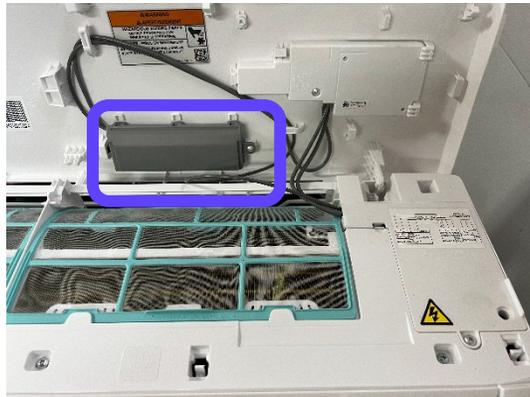
X, Y, E Terminals (cont.)

The following units have X, Y, E terminals:
Locate the Multifunction PCB

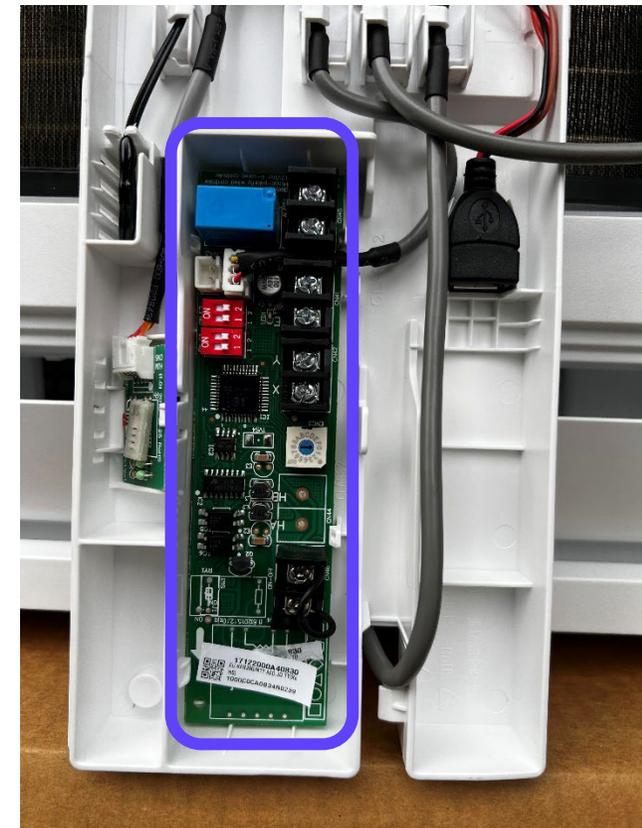


E - 12v - X - Y

High Wall - 45MHH / 45MAHA/615AHA / 45MPHA/615PHA



Floor Console - 45MBF



Accessory Options

X, Y, E Terminals (end)

The following units have X, Y, E terminals:

Cassette 45MBC



1-Way Cassette - 45MCC



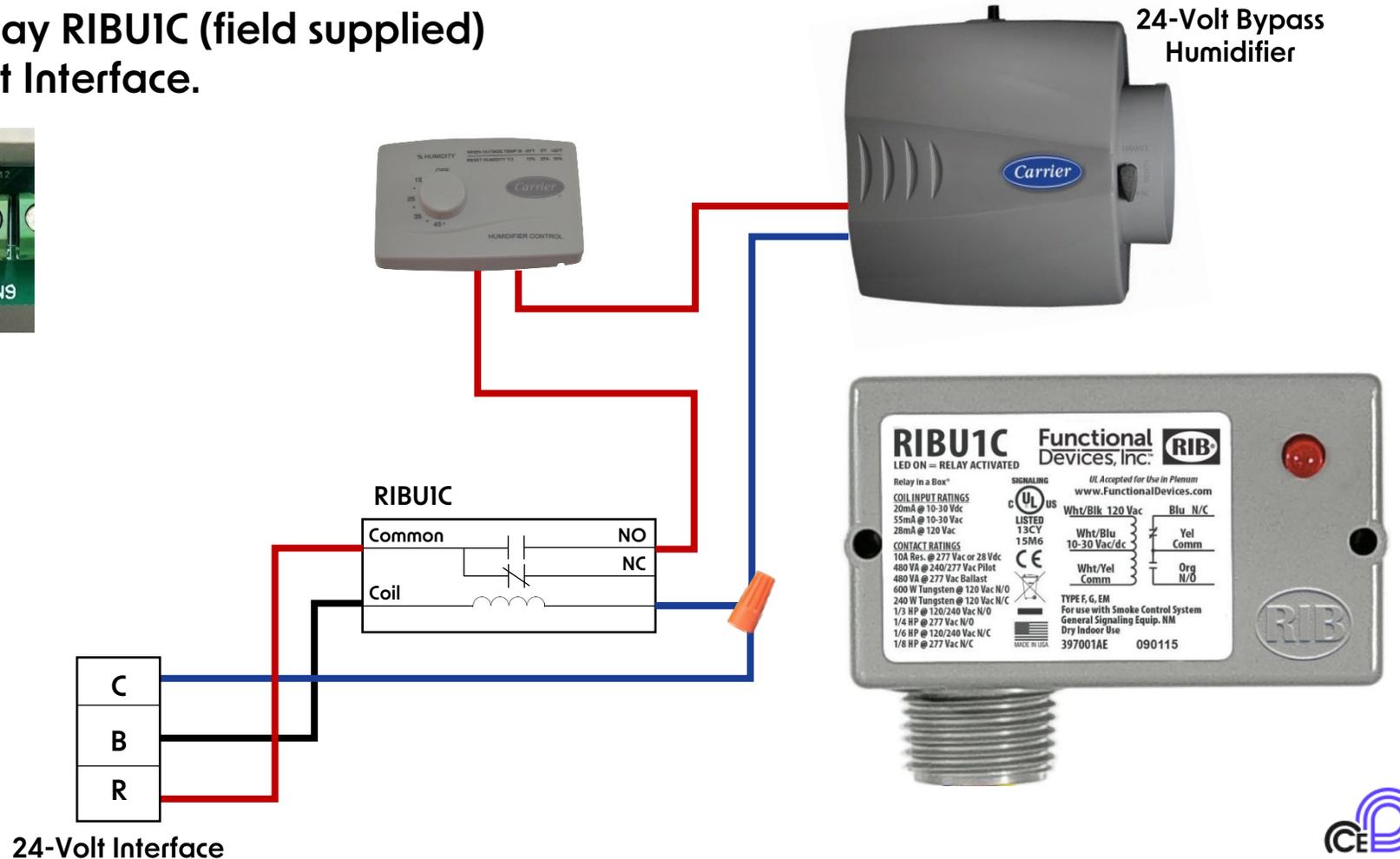
Accessory Options

24-Volt Interface: KSAIC0501230

Only additional wiring for Humidifier shown.
We recommend a RIB style Relay RIBUIC (field supplied)
mounted directly to the 24-Volt Interface.



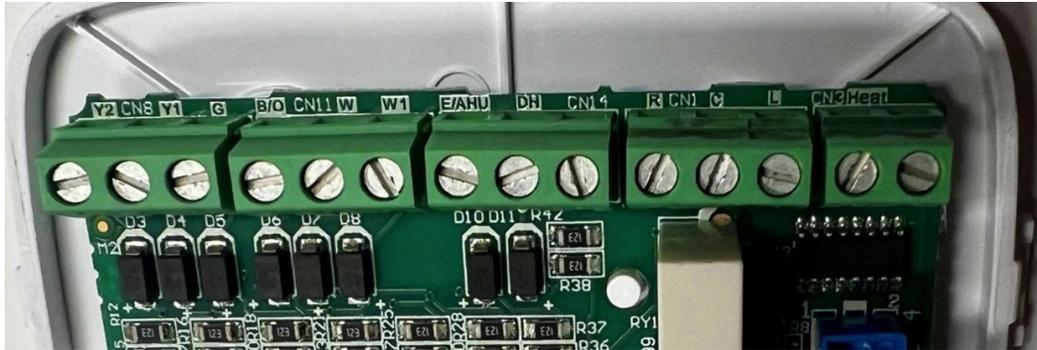
Humidifier will only be able to operate during a heating call.



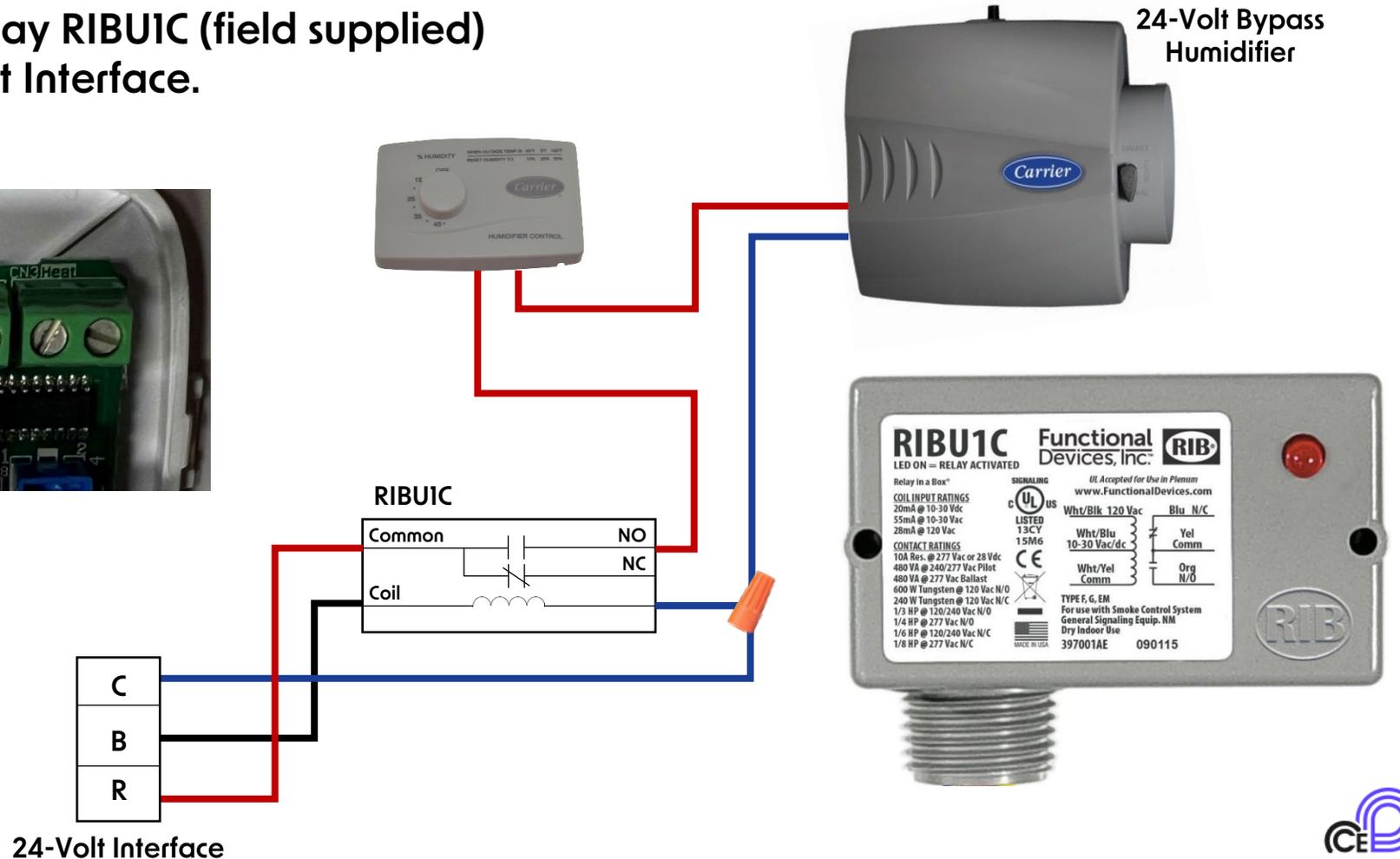
Accessory Options

24-Volt Interface: KSAIC0601230

Only additional wiring for Humidifier shown.
We recommend a RIB style Relay RIBUIC (field supplied)
mounted directly to the 24-Volt Interface.



Humidifier will only be able to operate during a heating call.



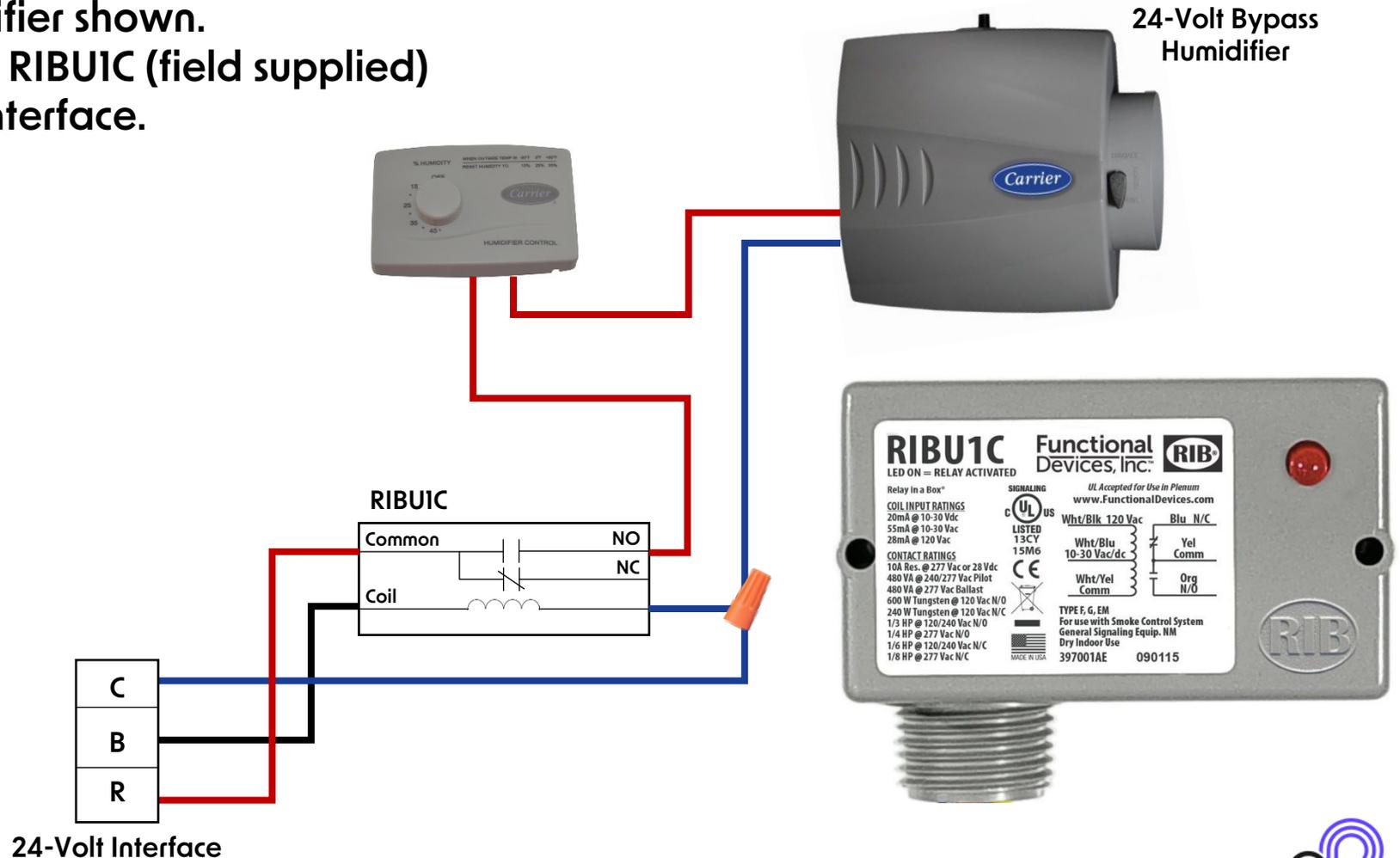
Accessory Options

Air Handlers: 45MBAA

Only additional wiring for Humidifier shown.
We recommend a RIB style Relay RIBU1C (field supplied)
mounted directly to the 24-Volt Interface.



Humidifier will only be able to operate during a heating call.



Accessory Options

ecobee

An ecobee ACC+/ACC- terminals can be used to control a humidifier, dehumidifier or ventilator.

- You can use 1-wire (common power supply) or 2-wires (separate power supplies) to the ACC+/ACC- terminals.
- ecobee thermostats can only support one device connected to ACC+/ACC- at a time.
- ecobee3 lite does not have accessory terminals.

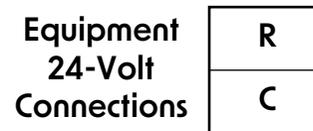
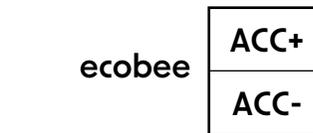


Accessory Options

ecobee (cont.)

I-Wire hook up, system and humidifier using same 24-Volt power supply.

When configuring thermostat, the humidifier option must be selected.



Humidistat is not needed, humidifier can be controlled by ecobee

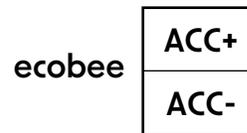


Accessory Options

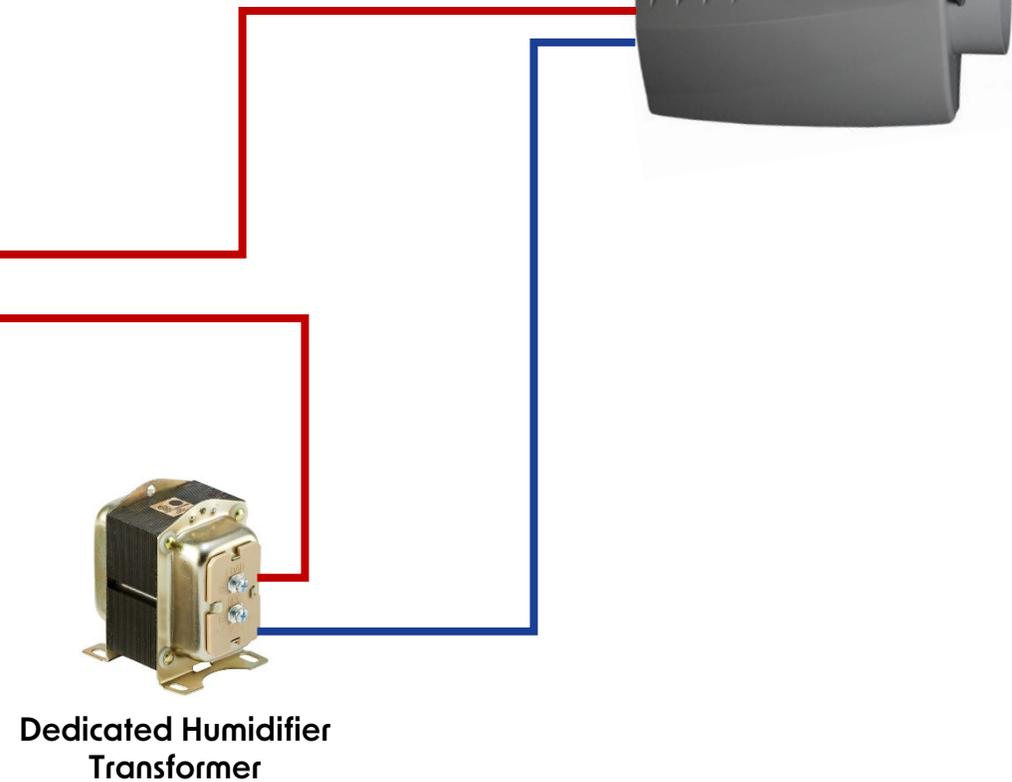
ecobee (cont.)

2-Wire hook up, system and humidifier using different 24-Volt power supplies.

When configuring thermostat, the humidifier option must be selected.



Humidistat is not needed, humidifier can be controlled by ecobee



Accessory Options

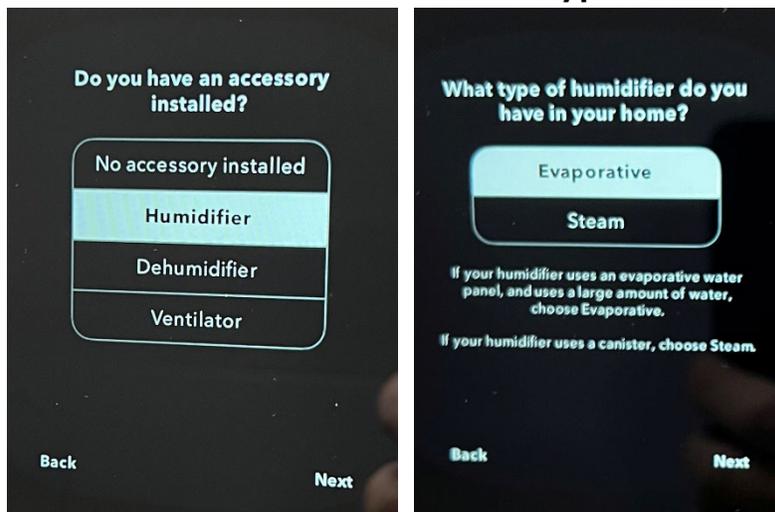


ecobee (cont.)

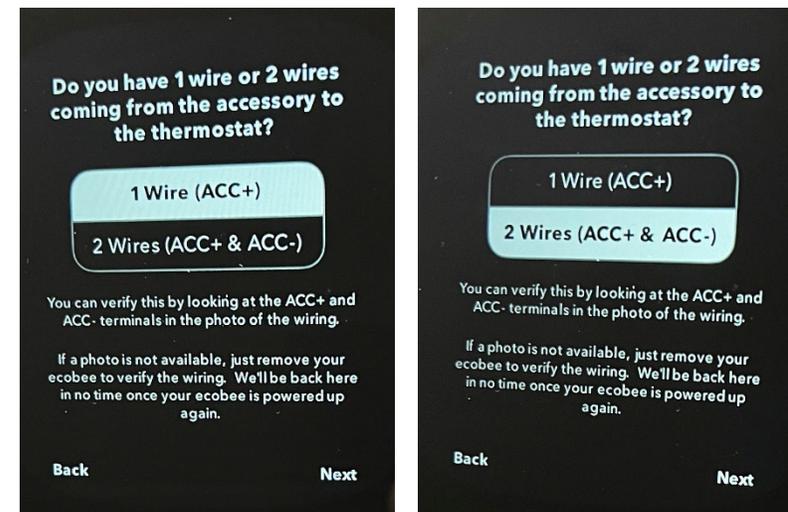
ecobee Humidifier Control Setup

- During the initial setup of the thermostat, you will be asked about installed accessories.
- If adding to an already setup ecobee stat, you will need to reconfigure equipment and start the initial setup over.
- You can only select one of the options shown.
- The below screen shots are from a few of the settings worked into all initial settings, they are not necessarily in order of appearance.

Select Humidifier and Type



You will be asked how it was wired.

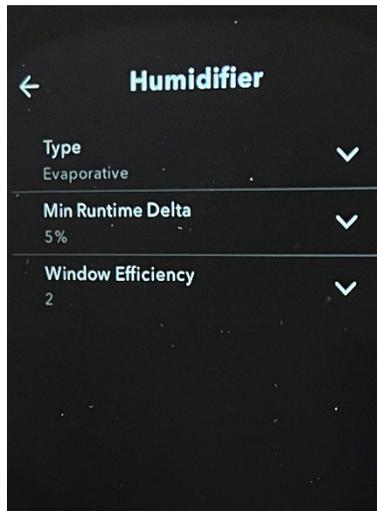


Accessory Options

ecobee (cont.)

ecobee Humidifier Control Setup

- After Initial setup of ecobee you will need to navigate to the Installation Settings for the Humidifier before operating.
- Here you will set three times: Type, Min Runtime Delta and Window Efficiency.
- Suggested Humidity design is Winter 35% vs. Summer 50%.
- If unsure, start at Min Runtime set to 3% & Window Efficiency set to 4. These can be changed at any time.



Goto:

- "Main Menu" (three lines top right of screen)
- "Gear" (lower right of screen)
- "Installation Settings" (scroll down)
- "Equipment"
- "Humidifier"



- Humidifier Type: Evaporative humidifiers are design to work with a heating cycle to aid in the evaporation of water whereas a Steam humidifier only requires air flow from the furnace fan. A Steam setup can operate independent of heating cycle.
- Min Runtime Delta (2-10%): to reduce short cycling, the humidifier will run beyond the desired humidity by the selected amount (%). Default is 5%.
- Window Efficiency: The humidifier frost Control setting uses this efficiency rating to compute the desired humidity within the range of 15% to 50%. The chosen setting will determine the maximum indoor humidity permitted.

Accessory Options

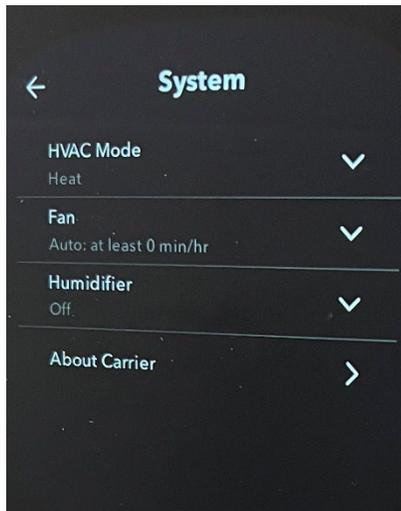
ecobee (end)

ecobee Humidifier Operation

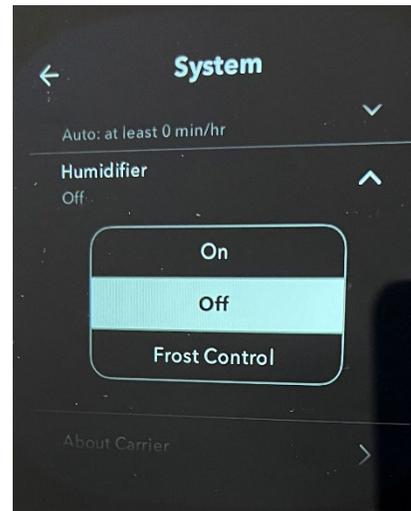
- To operative access the System Menu and select Humidifier.
- From here you have two choices:
 - On: Manually set % at one setting no matter what the outdoor temp is
 - Frost Control: Auto sets % based on outdoor temp



Goto: Humidifier



Select On of Frost Control



Goto:

- "Main Menu" (three lines top right of screen)
- "System"
- "Humidifier"

On:

Requires a preferred humidity level (%) to be manually set. If the actual RH% is below this setpoint the humidifier will be turned on.

Frost Control:

Will optimize the humidity level to 50% based on the outdoor temperature, indoor temperature, and window efficiency. Use this setting to dynamically adjust the humidity level to avoid excessive condensation forming on windows when outdoor weather is very cold.