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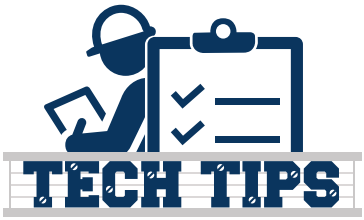
LINK CONTROL WIRING WITH R454B

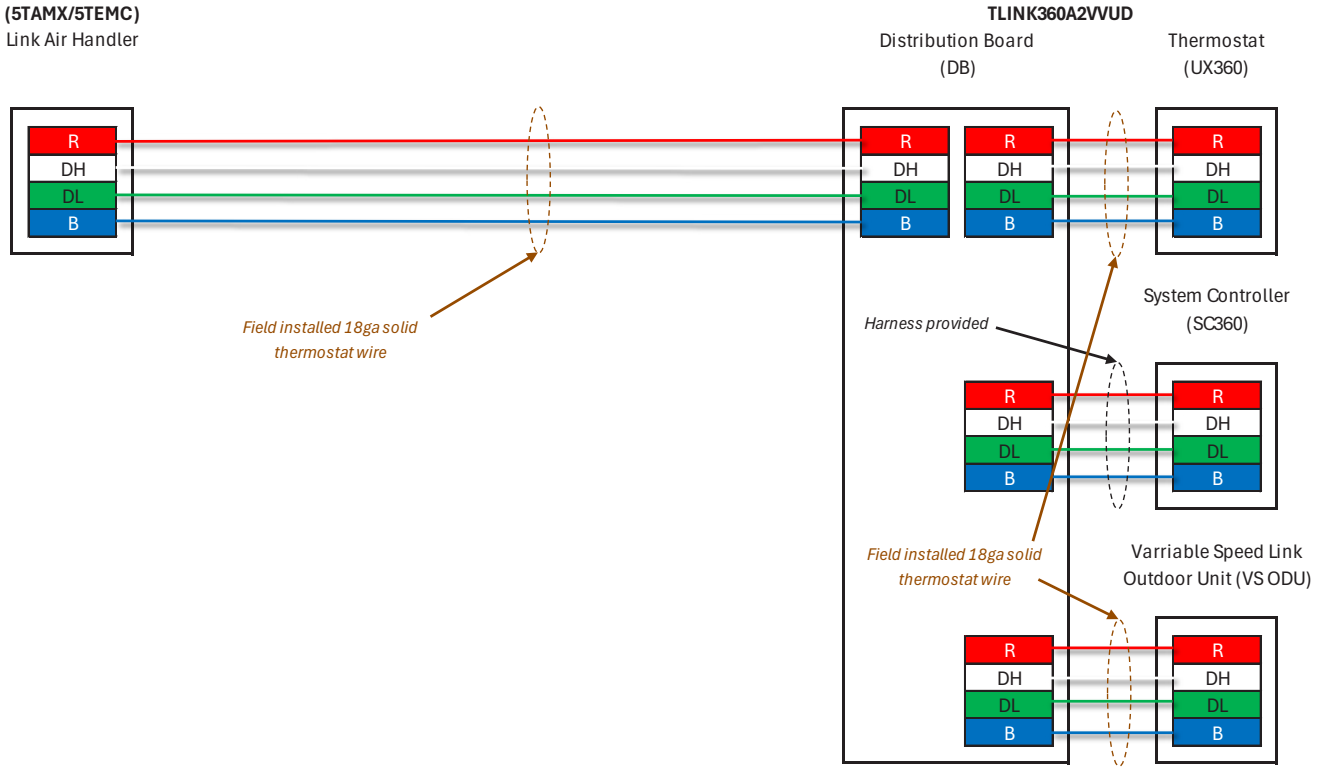


Due to the discontinuation of R410A systems, demand is increasing for R454B systems, which are becoming the new standard. R454B is classified as A2L and is slightly flammable, requiring a risk mitigation strategy to ensure safety. This strategy involves the use of a sensor connected to a Mitigation Control Board (MCB). The purpose of this tech tip is to provide wiring diagrams for the low-voltage connections of R454B Link communicating equipment and components.

Link air handlers (AHUs) have integrated MCB's and no extra control wiring is needed. See Diagram A.

Diagram A

Link Communicating VS Heat Pump or AC, Link Air Handler with Integral Mitigation

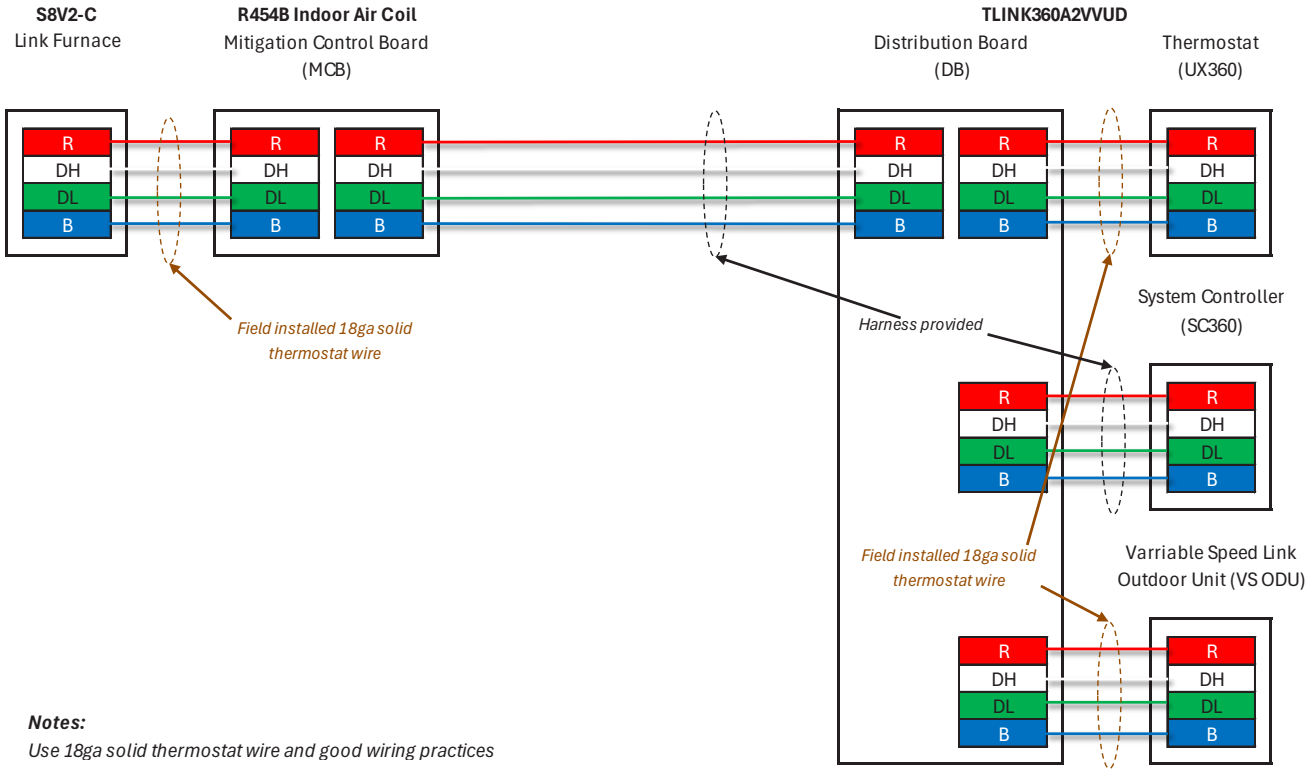


Notes:
Mitigation is integral to AHU.
Use 18ga solid thermostat wire and good wiring practices

In our area, we mostly see gas furnaces and MCBs come as part of the indoor air coil, not the furnace. The S8V2-C is fully communicating. It will communicate on the Link BUS to all the other communicating components and equipment, including the MCB. See Diagram B.

Diagram B

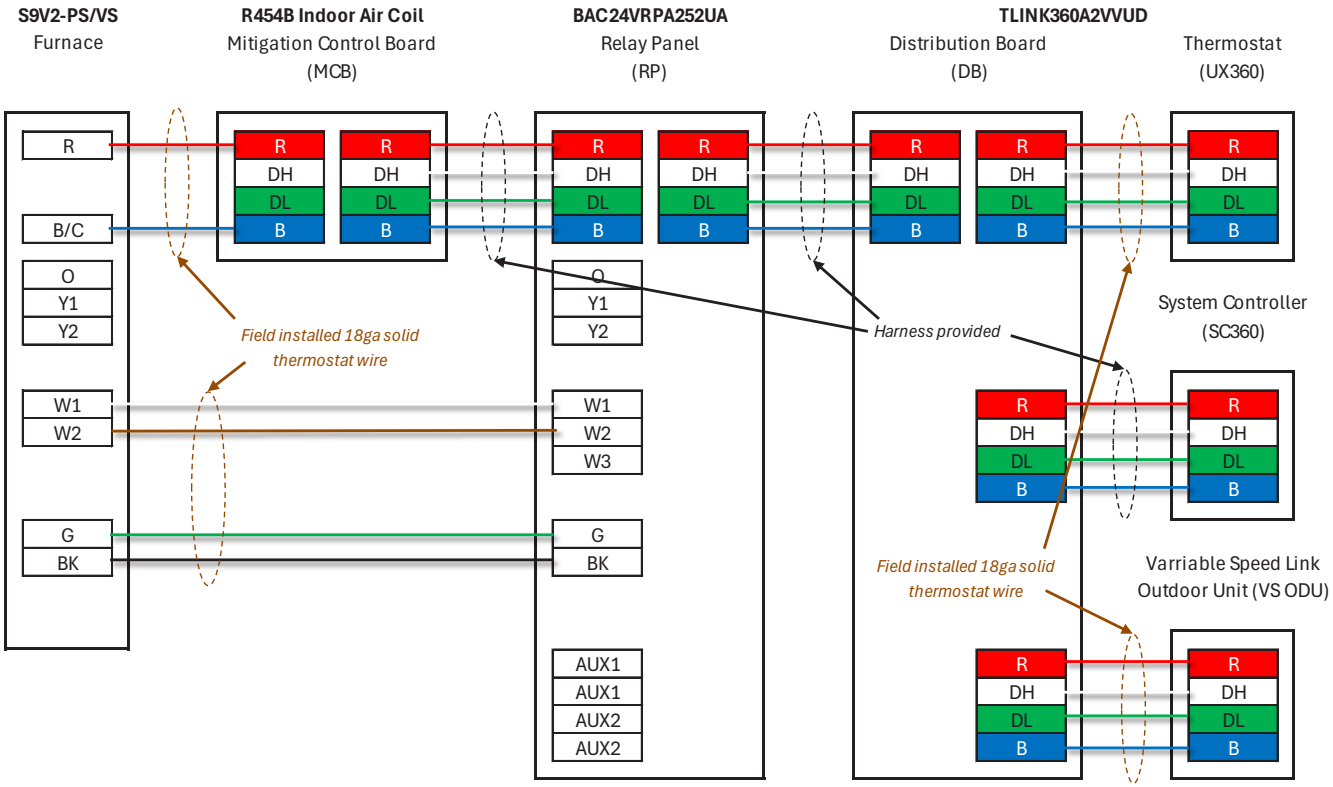
Link Communicating VS Heat Pump or AC, Link Furnace and External Mitigation Board



S9V2s are not communicating. A Link Relay Panel (RP) must be used to convert the communicating signal to a conventional 24 VAC analog signal. Think of it as a remote sub-base for a conventional thermostat. Link can control the blower like a fully communicating furnace or AHU through the BK connection and a PWM signal. The MCB and RP both communicate on the Link BUS, but the furnace does not. Feedback about its operational state is not reported to the Link system. See Diagram C.

Diagram C

Link Communicating VS Heat Pump or AC, Link Relay Panel, 24v Furnace, and External Mitigation Board



Harness provided

Notes:

Cut the BK jumper on the IFC and connect wiring per the diagram.
IFC OD tonnage (ODT) must match VS ODU tonnage.
IFC Cooling CFM per Ton (CPC) must be set to 400cfm/ton (A/C only and heat pump).
IFC Heating CFM per Ton must be set to 400cfm/ton (heat pump).
Furnace LED's will display "CoF", continuous airflow during compressor operation.
Wire condensate switch in series with R to the thermostat.
AUX1 and AUX2 terminals are dry contacts for accessories such as humidifiers and air cleaners.
Terminals O, Y1 and Y2 are not used.
Use 18ga solid thermostat wire and good wiring practices

When possible, consider the placement of each component to use the pre-made harnesses provided. If distances are too great, use conventional thermostat wire and the provided push-in type connectors.

Not every installation is the same. These diagrams will help with most of them. For more information, see the appropriate published literature for your equipment and components.

For questions, contact Munch's Supply's Technical Support Department at (815) 215-5020.