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General

- URK-3A is a relay kit for use with Hylex™ ACU (AHU Control Unit) model number MXD-U000XN to provide control of up to three (3) fan speeds when applying to air handling units with PSC motors.
- URK-3A is not compatible with furnaces.
- URK-3A Must be installed indoors near the MXD-U000XN ACU and the indoor unit.
- Ambient operation range: -40°F (-40°C) to 149°F (65°C)
- All internal wiring of URK-3A was completed before shipping. Removal of the cover during installation is not necessary.

Attention

If the air handling unit has a controller that is used to turn on the fan while operating other devices (ex: hydronic heating, outside air introduction, etc.), URK-3A cannot be applied as the AHU controller will no longer be able to control the fan for other functions.



WARNING

California Proposition 65 Warning (US)

Cancer and Reproductive Harm - www.P65Warnings.ca.gov.



WARNING

Always disconnect the air conditioner from the power supply before servicing it or accessing its internal components.

Verify that the product is not installed in an easily accessible area by the general public.



WARNING

For personal safety be sure to turn the electrical power “OFF” at the main entrance (Home Circuit Breaker Box) and at the unit control box circuit breakers before attempting any service or maintenance operations.

Homeowners should never attempt to perform any maintenance which requires opening the control box door.

ATTENTION: DISCONNECT POWER SUPPLY TO THE INDOOR UNIT, MXD-U000XN, AND THE SAMSUNG OUTDOOR UNIT BEFORE INSTALLING THE RELAY KIT.

AHU High Voltage Connection

1. Mount the relay kit near or on the indoor unit, in a dry location. Make sure that the URK-3A is installed close enough to the indoor unit to ensure that the relay kit wires are long enough to connect to the PSC fan motor and to the high voltage power connection inside the indoor unit. While mounting the relay kit, take care not to damage indoor unit components with mounting screws.
2. If the relay kit will be installed outside of the indoor unit chassis, install a short prevention and pull-restraint device per local, state, and national electrical codes through the indoor unit chassis for the high voltage power wires (example, Romex connector).
3. Run the URK-3A high voltage power and ground wires into the indoor unit chassis.
4. Connect the ground (green) wire from the relay kit to the indoor unit ground terminal or grounded chassis.
5. Locate the three (3) PSC fan motor speed wires inside the indoor unit.
6. Disconnect the blower motor's low fan speed wire from the indoor unit. Using an appropriate wire connector, connect the yellow (low speed) 120 VAC output wire to the low speed PSC motor wire (refer to *Diagrams 1 and 2*). Before connecting, remove excessive wire length.
7. Disconnect the blower motor's medium fan speed wire from the indoor unit. Using an appropriate wire connector, connect the blue (medium speed) 120 VAC output wire to the medium speed PSC motor wire (refer to *Diagrams 1 and 2*). Before connecting, remove excessive wire length.
8. Disconnect the blower motor's high fan speed wire from the indoor unit. Using an appropriate wire connector, connect the red (high speed) 120 VAC output wire to the high speed PSC motor wire (refer to *Diagrams 1 and 2*). Before connecting, remove excessive wire length.

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9. Connect the relay kit's brown 120 VAC power supply wire to 120 VAC from the indoor unit. Before connecting, remove excessive wire length.
- a) 120 VAC Indoor units - The power supply will be the same as the main unit power supply. See example in *Diagram 1* below.

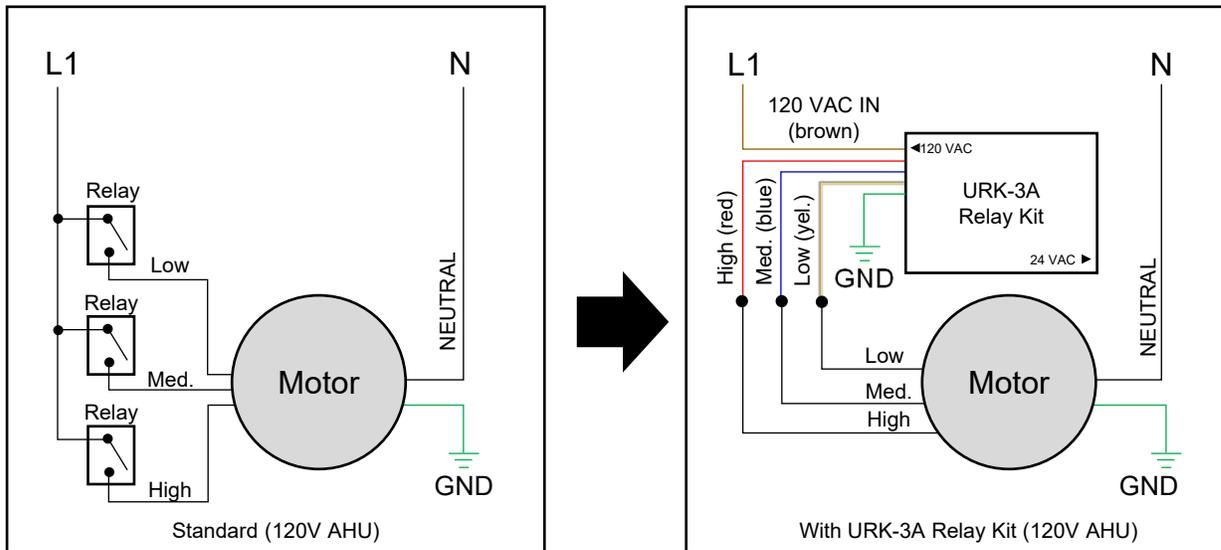


Diagram 1 – 120VAC unit power connection

Diagram 1 Notes

- *For reference only*
- *The diagram does not include low voltage connections, motor capacitor, etc.*

ATTENTION: FAILURE TO CONNECT THE PROPER WIRES FROM THE RELAY KIT TO THE INDOOR UNIT MAY RESULT IN INDOOR UNIT DAMAGE.

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- b) 208/230 VAC Indoor Units - Determine which power supply leg is connected to the 120 VAC COMMON power supply on the PSC motor. Connect the relay kit's brown 120 VAC power supply wire to the other power supply leg, where the blower motor's fan speed wires were powered from. See example in *Diagram 2* below.

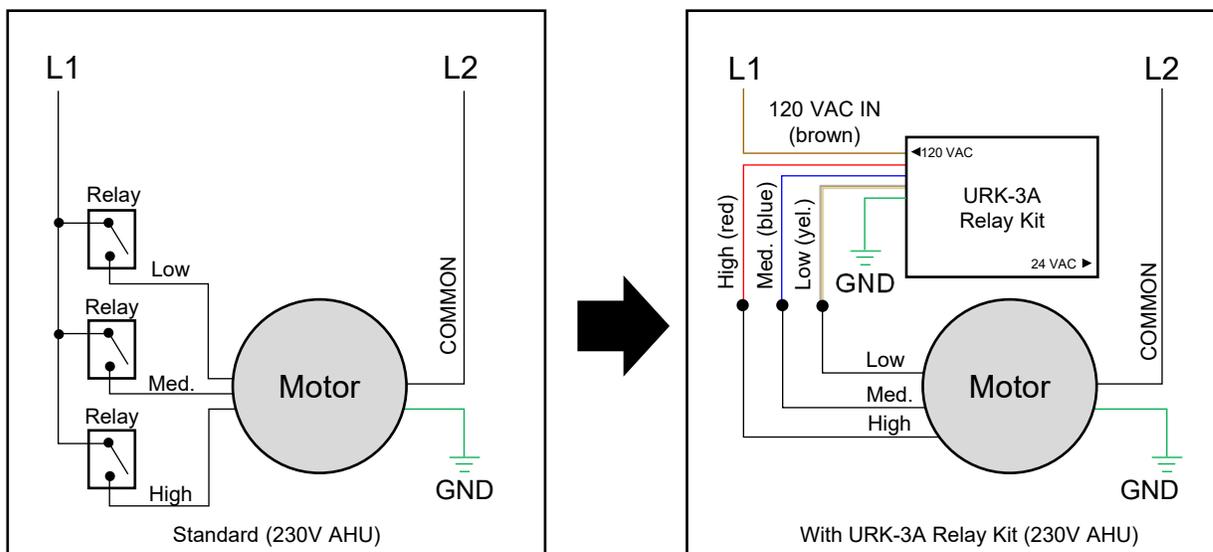


Diagram 2 – 208/230VAC unit power connection

Diagram 2 Notes

- For reference only
- The diagram does not include low voltage connections, motor capacitor, etc.

10. Cover/insulate any unused 120 VAC wires with a wire nut or approved insulator. Secure wires with wire ties.

ATTENTION: FAILURE TO CONNECT THE PROPER WIRES FROM THE RELAY KIT TO THE INDOOR UNIT MAY RESULT IN INDOOR UNIT DAMAGE.

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Low Voltage Connection

1. Connect the included MXD-U000XN G1/G2/G3 wire harness into the ACU (AHU Control Unit).
2. Using an appropriate wire connector, connect the yellow (low speed) 24 VAC wire to the yellow low speed wire from the MXD-U000XN wire harness. Before connecting, remove excessive wire length.
3. Using an appropriate wire connector, connect the blue (medium speed) 24 VAC wire to the blue medium speed wire from the MXD-U000XN wire harness. Before connecting, remove excessive wire length.
4. Using an appropriate wire connector, connect the red (high speed) 24 VAC wire to the red high speed wire from the MXD-U000XN wire harness. Before connecting, remove excessive wire length.
5. Connect the brown 24 VAC wire from the relay kit to the COMMON terminal on the MXD-U000XN control PCB.
6. Cover/insulate any unused 24 VAC wires with a wire nut or approved insulator. Secure wires with wire ties.

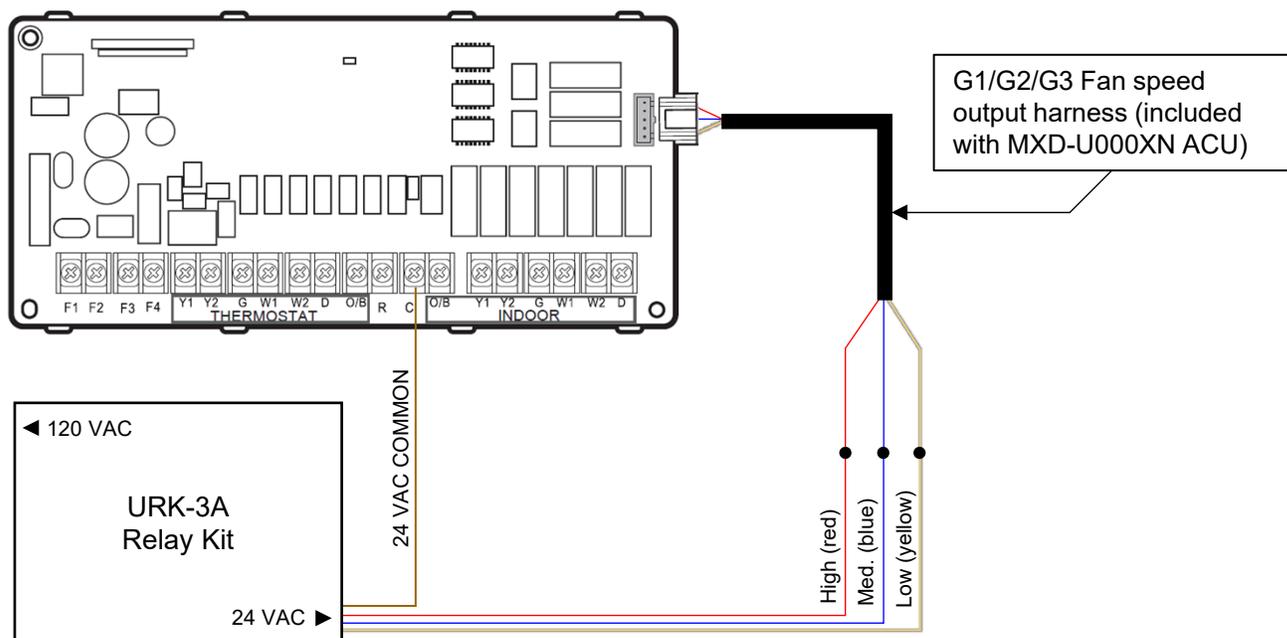


Diagram 3 – Low voltage connection

Diagram 3 Notes

- The diagram above does not include all high and low voltage connections.

Final Steps

1. Review all high and low voltage wiring for accuracy and secure connections.
2. Install the indoor unit control box and unit cover.
3. Using dip switches on the control PCB, configure MXD-U000XN to use multiple fan speed outputs.
4. After the low and high voltage wiring of MXD-U000XN and the URK-3A relay kit is completed, follow the system startup steps detailed in the Hylex™ outdoor unit and MZD-U000XN installation manuals.