10', 25', & 40' Wire Harness *(10' pn 20736, 25' pn 20670; 40' pn 20737)*

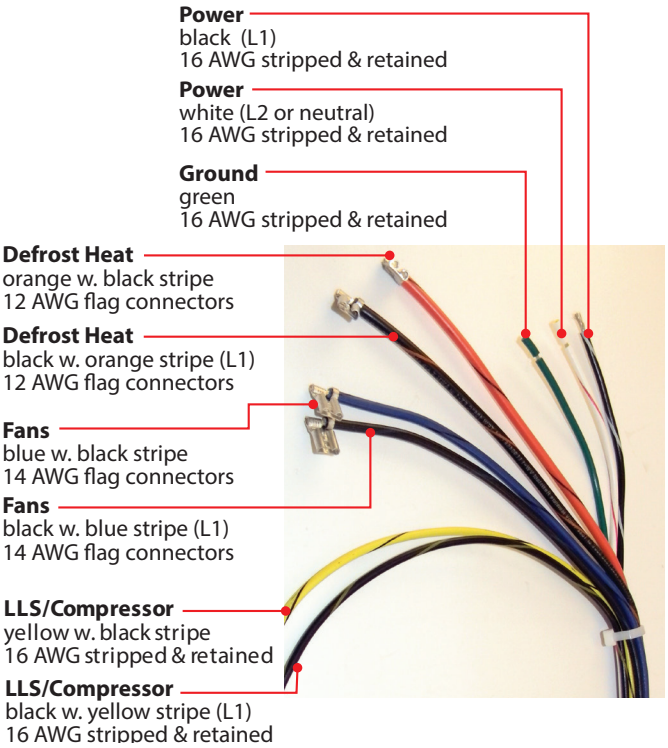
Simplified wiring for the KE2 Evap, KE2 Controlled Environment, KE2 Evap-RE & the KE2 Adaptive Control

Introduction

The wire harness simplifies installation by providing color coded wires with connectors that correspond to the controller's inputs. This speeds installation by eliminating on site wire preparation, wire labeling, and reduces the need to stock multiple colors and gauges of wires.

The stranded wires used in the harness are flexible, making them easier to pull and route, and the wire harness is kept from tangling by a cable tie at each end. The wires are 10', 25' or 40' from cable tie to cable tie, making the overall harness approximately a foot longer.

Function	Color		Gauge	Wire Ends
Power	black with white stripe	L1	16 AWG	stripped and retained
Power	white with red stripe	L2 / neutral	16 AWG	stripped and retained
Ground	green		16 AWG	stripped and retained
Defrost Heat	orange with black stripe		12 AWG	flag connectors
Defrost Heat	black with orange stripe	L1	12 AWG	flag connectors
Fans	blue with black stripe		14 AWG	flag connectors
Fans	black with blue stripe	L1	14 AWG	flag connectors
LLS/Compressor	yellow with black stripe		16 AWG	stripped and retained
LLS/Compressor	black with yellow stripe	L1	16 AWG	stripped and retained



Mounting Box *(pn 20687)*

For the KE2 Evap, KE2 Controlled Environment and KE2 Evap-RE

Introduction

The mounting box simplifies the installation of KE2 Therm controllers. Constructed of 40 mil embossed aluminum, it blends into the refrigeration environment, providing a clean appearance to the finished install.

The mounting box measures 12.3 x 6.4 x 2.0 inches, and accommodates the controller's wiring and service loops. Once the box is mounted attach conduit to the box and secure the controller for easy installation and service. The controller hangs securely, with the wiring side facing outward for initial wiring. See **Photo A**.

When making the high and low voltage connections, it is important to find a safe location to store the controller. Once installed, mount the controller properly on the four mounting screws provided. See **Photo B**.

Photo A: *When installing or servicing, hang by two screws, to support the controller. shown wired using the Wire Harness.*

Photo B: *Controller installed on a mounting box.*

KE2 TerminalBoard *(pn 20996)*

for KE2 Evaporator Efficiency, KE2 Evap for Rack Efficiency, KE2 Controlled Environment, KE2 Adaptive Control and KE2 Low Temp+Defrost

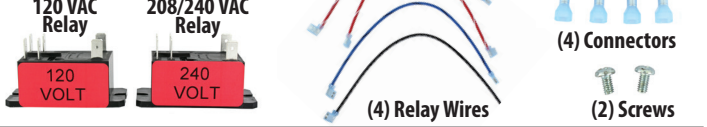
Introduction

The KE2 Terminal Board matches the wiring needs of KE2 Therm controllers, making installation more convenient, and standardizing every install. It's marked with common symbols for the fan, heaters, and LLS. When used with a KE2 Therm wire harness the install is simplified further.

The fuses on the terminal board protect every controller relay from power surges. The board also has a spot for an EC Motor Relay. Relays are available that withstand the damaging back EMF voltage from EC motors. They are sold in a complete kit or as individual relays when using older terminal boards, without space for the relay. *See Figure 4 on page 2*

Continued on page 2.

Relay Kit (pn 21409) - Kit Contents



Individual Relays - each sold separately & without accessories

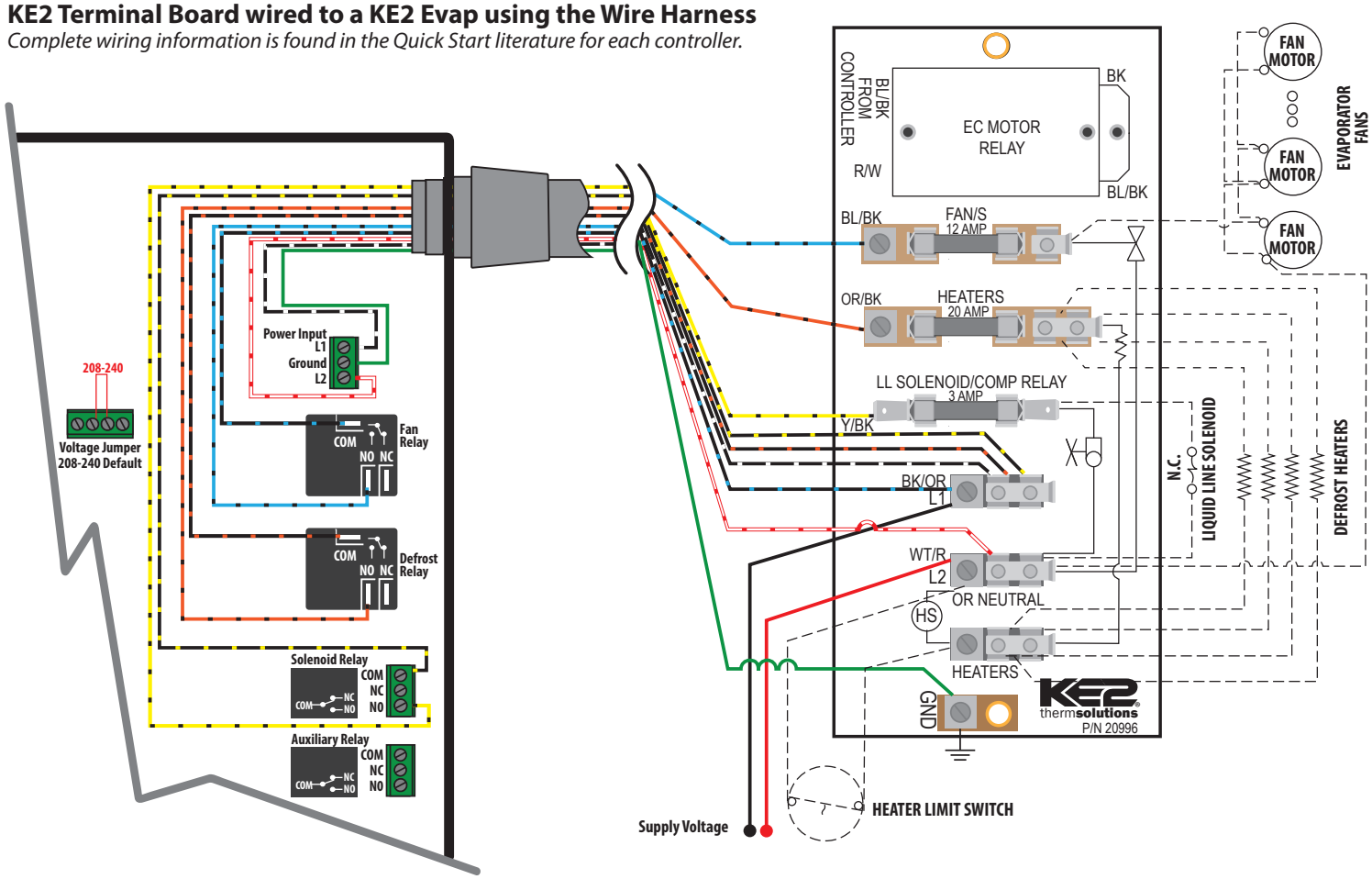
KE2 TerminalBoard *(pn 20996)*

for KE2 Evaporator Efficiency, KE2 Evap for Rack Efficiency, KE2 Controlled Environment, KE2 Adaptive Control and KE2 Low Temp+Defrost

Q.1.30 June 2019

KE2 Terminal Board wired to a KE2 Evap using the Wire Harness

Complete wiring information is found in the Quick Start literature for each controller.



Wiring that is not shown on Figures 2 - 4 is wired the same as the KE2 Evap illustration above.

Figure 2 - KE2 Low Temp + Defrost, and KE2 Adaptive Control
Wiring Diagram using the KE2 Terminal Board & Wire Harness

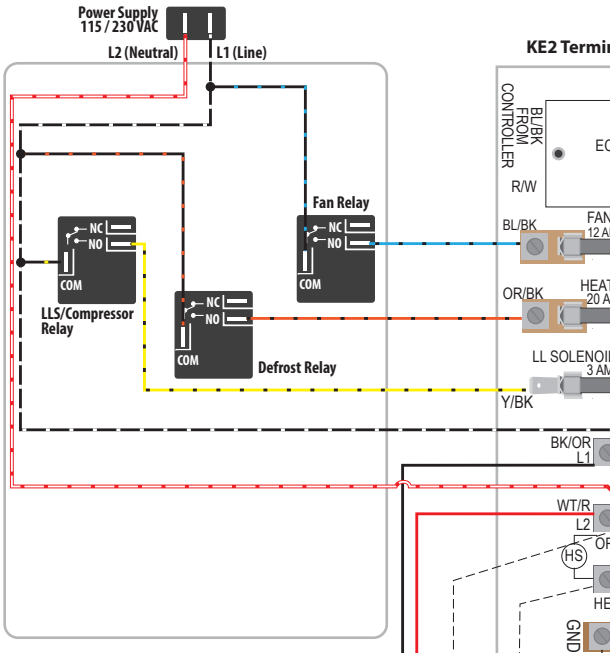


Figure 3 - Simplified Wiring After Adding Supplemental Relays for ECM Fans

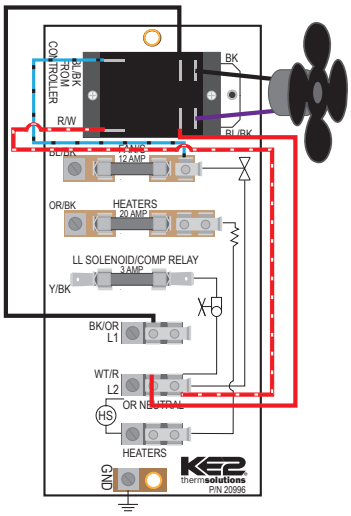
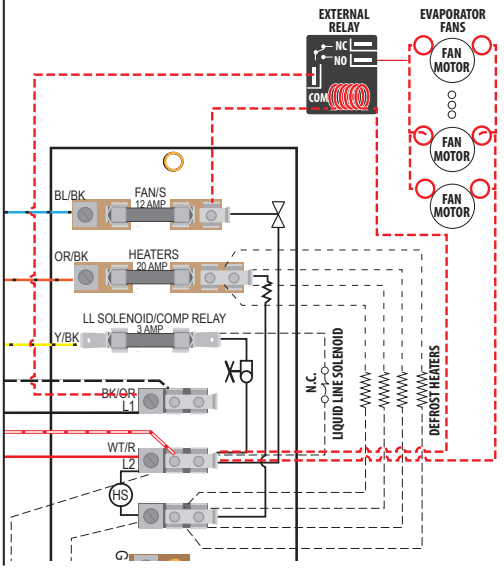


Figure 4 - External Relay Wiring with Previous Style of Terminal Board



Q.1.21 June 2019 supersedes Q.1.21 March 2016 and all prior publications.
Q.1.30 June 2019 supersedes Q.1.30 February 2018 and all prior publications.