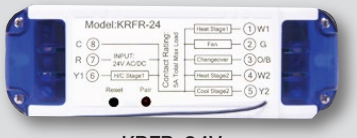
Wireless 24V RF Multi-System Thermostat Kit KRF-B-KIT

with Backup Line Voltage Electric Heat Control

Therma Link

KRFTP-B



KRFR-24V

KRFLR-120/240V

- Kit includes KRFTP-B RF 24V RF Thermostat, KRFLR-120/240V 20A RF heating relay, & KRFR-24V 24V RF HVAC relay
- Wireless Two-way RF communication - 915 MHz
- 24V HVAC control (Heating & Cooling)
- 120/240V Backup Electric Heat control
- 7-day programmable schedule
- Modes: Auto/Cool/Fan Only/Off/Heat with Auto Emergency Heat/ Manual Emergency Heat
- Boost Emergency Heat Stage (Electric) Time Variable: 5 minutes to 30 minutes
- Range:44°F to 90°F (7°C to 32°C) Accuracy: ± 1°F
- Meets State Energy Code Requirements: Prevents emergency electric heat from activating unless heat pump fails to maintain setpoint within a designated timeframe.
- Optimal start/stop
- Keypad lockout
- Maximum cooling & heat temperature limits 44°F to 90°F
- Optional RF sensors to limit operation based on room activity or outdoor air conditions.
- 2 Year Limited Warranty

KRF-B-KIT: **A Multi-System Thermostat Platform That Runs Itself.** It allows buildings with existing electric heaters to upgrade to a heat pump system, retaining the original heaters as backup. It meets State Energy Code requirements by using automatic controls that only activate emergency electric heat if the heat pump cannot maintain the desired temperature. The standard kit includes a 7-day programmable thermostat, a 120/240V 20A electric heat relay, and a 24V HVAC relay. Optional wireless RF sensors can detect when someone is in the room or if a door or window is left open and adjust the temperature automatically. An outdoor sensor can also be added to reduce electric heat use when the heat pump can handle the heat demand. Plus, multiple rooms can connect to a wireless master switch, letting you adjust the whole building with one button.

Ordering Information - Complete Kit

MODEL	UPC	DESCRIPTION
KRF-B-KIT	70133	RF Thermostat Kit, w/ KRFTP-B Programmable BP Thermostat, KRFLR-120/240V Heat Relay & KRFR-24V HVAC Relay

Order A'la Carte

MODEL	UPC	DESCRIPTION
KRFTP-B	70134	Programmable Battery Powered RF Thermostat
KRFLR-120/240V	70135	20A Heat Relay, 120V or 240V
KRFR-24V	70136	24V HVAC Relay, 24VAC/VDC, 2A

Optional Accessories

MODEL	UPC	DESCRIPTION
KRF-PIR-SENSOR	70152	PIR Sensor, Battery Powered, For KRFTP Thermostat
KRF-OUTDOOR-SENSOR	70153	Outdoor Temperature Sensor, Battery Powered, For KRFTP Thermostat
KRF-REPEATER	70154	RF Repeater, USB Powered, For KRFTP Thermostat
KRF-WINDOW-SENSOR	70155	Window/Door Sensor, Battery Powered, For KRFTP Thermostat
KRF-MASTERSWITCH	70156	Master Switch, Battery Powered, For KRFTP Thermostat

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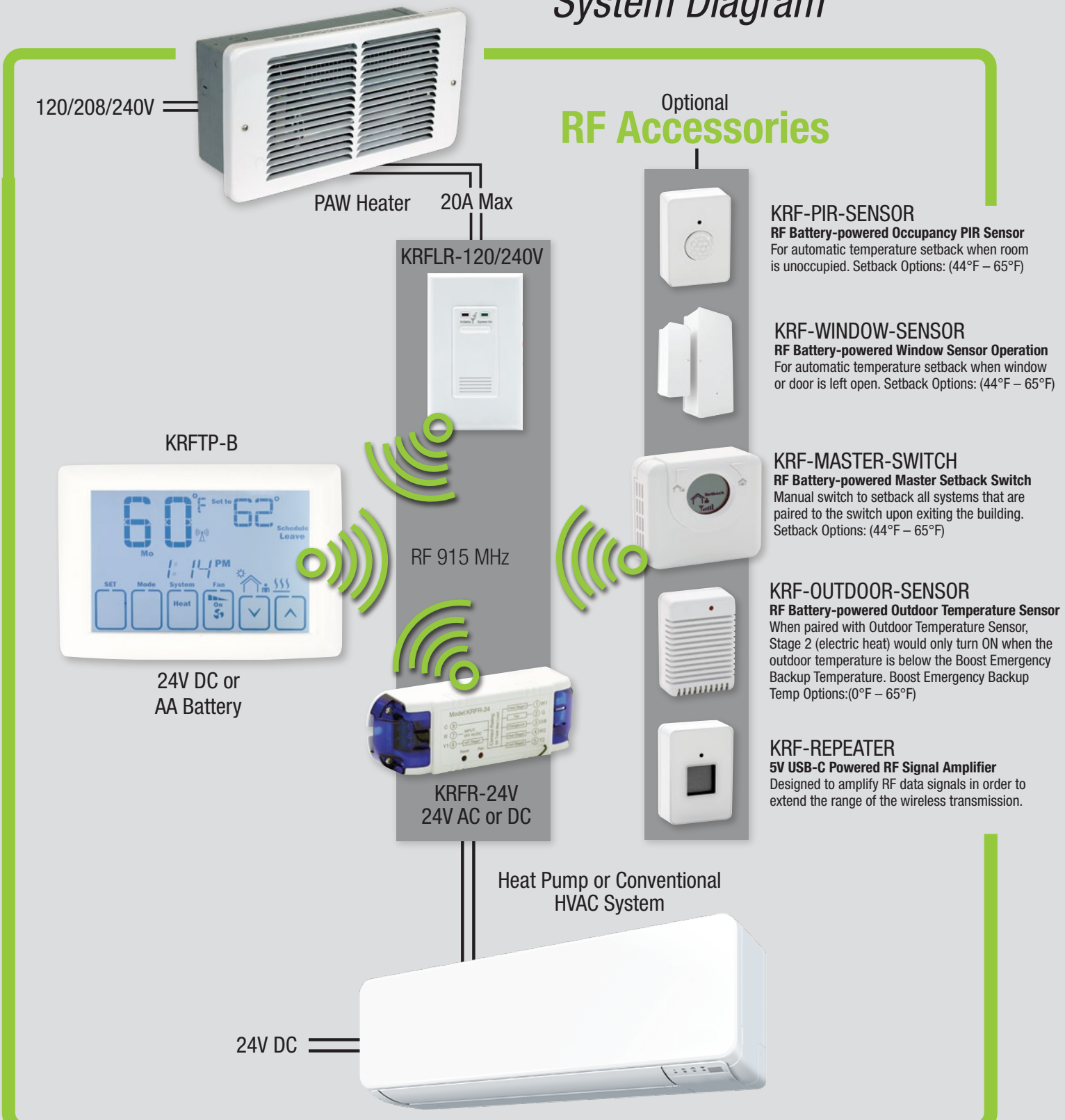
Wireless 24V Multi-System Control

System Diagram



KRF-PIR-SENSOR
RF Battery-powered Occupancy PIR Sensor
For automatic temperature setback when room is unoccupied. Setback Options: (44°F – 65°F)

KRF-WINDOW-SENSOR
RF Battery-powered Window Sensor Operation
For automatic temperature setback when window or door is left open. Setback Options: (44°F – 65°F)

KRF-MASTER-SWITCH
RF Battery-powered Master Setback Switch
Manual switch to setback all systems that are paired to the switch upon exiting the building. Setback Options: (44°F – 65°F)

KRF-OUTDOOR-SENSOR
RF Battery-powered Outdoor Temperature Sensor
When paired with Outdoor Temperature Sensor, Stage 2 (electric heat) would only turn ON when the outdoor temperature is below the Boost Emergency Backup Temperature. Boost Emergency Backup Temp Options:(0°F – 65°F)

KRF-REPEATER
5V USB-C Powered RF Signal Amplifier
Designed to amplify RF data signals in order to extend the range of the wireless transmission.

King Electrical Manufacturing Company / 9131 10th Avenue South, Seattle, WA 98108 / phone 206.762.0400 / fax 206.763.7738 / www.king-electric.com

Wireless 24V RF Multi-System Thermostat Kit KRF-B-KIT

with Backup Line Voltage Electric Heat Control

Engineering Specifications

KRFTP-B Programmable Thermostat Specifications:

Input Rating: 24Vac/24Vdc, 2A
Wireless Operation: Rf Connect Button
Working Frequency: 915 MHz
Heat Pump Control: (Heating and Cooling).
Touch Screen: Touch Sensitive
Temperature Display Range: 0°F to 95°F (-17°C to 35°C)
Temperature Control Range: 44°F to 90°F (07° C to 32°C)
Display Accuracy: ± 1°F

Optimal Start/Stop: Optimal Start ensures that the set temperature is reached at the scheduled time, while Optimal Stop shuts down the system early upon PROG transition to achieve energy savings.
Deadband: Adjustable 4 to 6 Degrees. (Default 5)
Differential: adjustable from 0.5°F to 2.0°F (Default 1°F)
2nd Stage Offset: adjustable from 2°F to 5°F (Default 3°F)
Boost Emergency Heat Stage (Electric) Time Variable:
5 minutes - 30 minutes range. (default 15 min)
Heat Schedule Options: 5+2 / 5+1+1/ 7-Day (Default: 5+2)
Continued on next page

KRFR-24V HVAC Relay Specifications:

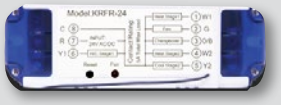
Input Rating: 24Vac/24Vdc, 2A
Wireless Connect: Rf Connect Button
Two-way Communication
Working Frequency: 915 MHz
Working Distance: 30 Meters (98.5 feet)
Dimension: 120*40*28 mm

KRFLR-120/240V Electric Heat Relay Specifications:

Power Supply: 120-240VAC /50-60Hz
Power Consumption: 25VA
Relay Contact Rating: 240Vac/20A
Wireless Operation: Rf Connect Button
Working Frequency: 915 MHz
Working Distance: 30 Meters
Approvals: cULus

KRFPT-B
Multi-System Source RF Thermostat

KRFR-24V
HVAC Relay



KRFLR-120/240V
Electric Heat Relay

Available Heating/Cooling Modes

Heat with Automatic Boost Emergency Backup Mode: Emergency electric heat will automatically kick in if the set point temperature is not reached within the Boost Emergency Heat Stage (Electric) Time Variable.
5 minutes and 30 minutes (default 15 min).

Manual Emergency Electric Heat Only Mode: When activated, only the electric heat will run and the PTAC is disabled. The thermostat continues to control the room temperature with electric heat only.

Cooling Mode:
Electric heating relay is locked out when the thermostat is set to cooling mode.

Fan Only Mode:
Electric heating relay is locked out when the thermostat is set to fan only mode.

Available Optional Accessories

RF Battery-powered Occupancy PIR Sensor
For automatic temperature setback when room is unoccupied.
Setback Options: (44°F – 65°F) (Model: KRF-PIR-SENSOR)

RF Battery-powered Outdoor Temperature Sensor
When paired with Outdoor Temperature Sensor, Stage 2 (electric heat) would only turn ON when the outdoor temperature is below the Boost Emergency BackupTemperature. Boost Emergency Backup Temp Options: (0°F-65°F) (Model: KRF-OUTDOOR-SENSOR)

RF Battery-powered Window/Door Sensor Operation
For automatic temperature setback when window or door is left open.
Setback Options: (44°F – 65°F) (Model: KRF-WINDOW-SENSOR)

RF Battery-powered Master Setback Switch
Manual switch to setback all systems that are paired to the switch upon exitingthe building.
Setback Options: (44°F – 65°F)
(Model: KRF-MASTER-SWITCH)

RF 5V USB-C Powered RF Signal Amplifier.
Designed to amplify RF data signals in order to extend the range of the wireless transmission.
(Model: KRF-REPEATER)