

INSTALLATION AND MAINTENANCE



KB PLATINUM^X

Electronic Unit Heater with Remote Thermostat Option



DANGER

ELECTRIC SHOCK OR FIRE HAZARD

READ ALL WIRE SIZING, VOLTAGE REQUIREMENTS AND SAFETY DATA TO AVOID PROPERTY DAMAGE AND PERSONAL INJURY

WARNING

READ CAREFULLY - Use the heater only as described in this manual. Any other use is not recommended and could result in fire, electric shock, and personal injury. Following these instructions will prevent difficulties that might occur during the installation and use of the heater. Please study the instructions first, as they may save considerable time and trouble during use addition to providing important safety information. Make sure to save these instructions for future use.

- WARNING** To prevent a possible electrical shock, disconnect all power coming to heater at main service panel before wiring or servicing.
- WARNING** All wiring must be in accordance with the National Electrical Code (Canadian Electrical Code in Canada) and all applicable local codes. The heater must be grounded as a precaution against electrical shock. Supply wiring must be copper and suitable for at least 75° C.
- WARNING** Verify power supply and control voltages coming to the heater match the ratings printed on the heater nameplate before energizing.
- WARNING** Heater must be installed so the minimum clearances shown in Specifications table are maintained.
- WARNING** This heater is NOT suitable for use in hazardous locations as described by the National Fire Protection Association (NFPA). this heater has hot and arcing or sparking parts inside. DO NOT use in areas where gasoline, paint or other flammable liquids are used or stored.
- WARNING** The mounting structure and anchoring hardware **MUST BE** capable of reliably supporting the weight of the heater plus mounting bracket if used. Refer to specifications table for heater weight.
- WARNING** Heater air flow **MUST** be directed parallel to or away from adjacent walls.
- WARNING** To prevent a possible fire, DO NOT block air intakes or exhaust openings in any manner. DO NOT allow foreign objects to enter grill openings as this may cause electric shock, fire or damage to heater.
- WARNING** Louver adjustment (Do not attempt to adjust while heater is operational): The Louvers are opened during testing at factory, but may have shifted during shipping, make sure the louvers are rotated less than 45 degrees from horizontal before operation. To adjust the opening angle, grasp the left and right end of louver and twist with two hands to the desired position. **CAUTION:** Increasing the angle beyond 45° degrees from horizontal may restrict air flow causing the over temperature limit to activate and shut off the heater.



**CAUTION—RISK OF ELECTRIC SHOCK
DO NOT OPEN HEATER SHELL**



KB PLATINUMX INSTALLATION

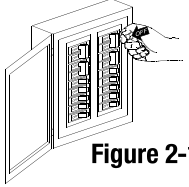


Figure 2-1

CAUTION!
Turn OFF all electrical power to install heater



Selecting A Location For Your Heater:

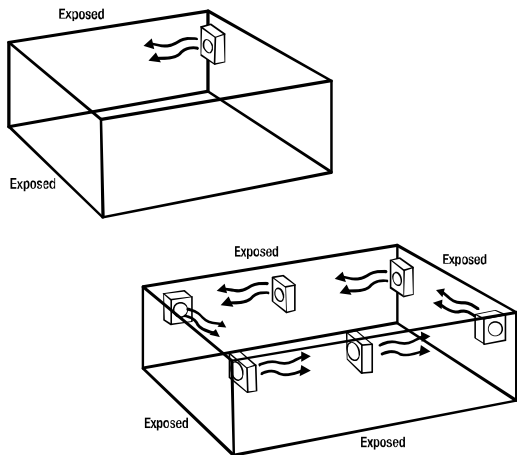
The heater should be installed out of the reach of persons. The direction of air flow should not be restricted by machinery, beams, columns or partitions, etc., and the air flow should wipe exposed walls rather than blowing directly at them.

Heaters should be directed away from room occupants in comfort heating and are directed along the windward side when installed in a building exposed to a prevailing wind.

Small rooms can be heated by one unit heater. Large rooms require multi-unit installations. Number and capacity of units will be determined by volume of building and square feet of floor area to be heated.

When more than one heater is used in an area the heaters should be arranged so that the air discharge of each heater supports the air flow of the others to provide best circulation of warm air.

(see air flow chart)



Unpack & Inspect Your New Heater

Remove heater from the box and inspect it for any damage. Verify you have received the universal wall/ceiling mounting bracket.

Tools Needed

You will need the following tools to install your unit heater:

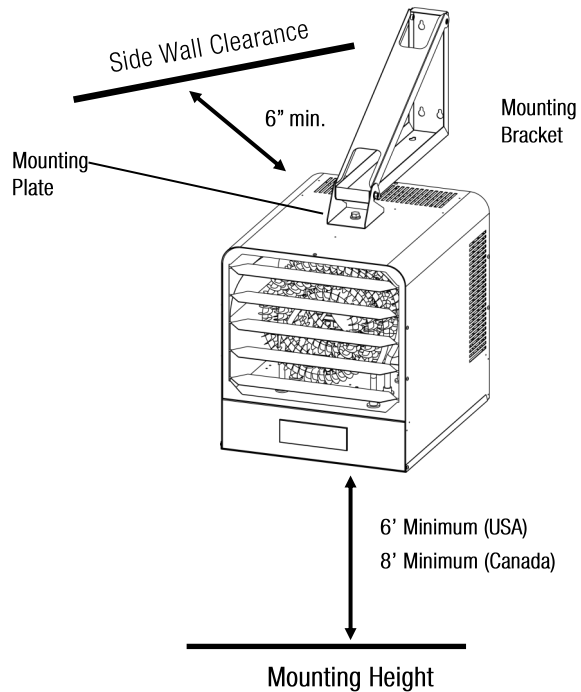
- Screwdriver - (Phillips head & slotted)
- Wire Cutters
- Pliers
- Adjustable Wrench
- Electric Drill

Hardware Needed For Installation

You will also need the following hardware, which can be purchased from your local hardware store or electrical supply house:

- adequate gauge and length of wire for your application
- proper size fuses or breakers to handle amperage
- proper wire connectors for your application
- fasteners appropriate for application that are strong enough to hold unit

For certain applications conduit may be required. Check local electrical codes. Also, if you run the wiring in conduit and wish to be able to turn the heater, be sure to purchase enough flexible conduit to allow the heater to be turned.



Mounting Height

When the airflow of the heater is directed vertically or horizontally the minimum mounting height of 6 feet above floor (8 feet above floor for Canada).

Mounting heights depend upon building utilization and heater kW capacity.

Distance From Vertical Side Walls

Be sure to maintain 6" minimum clearance to walls and ceilings.

KB PLATINUMX INSTALLATION

! **DANGER** !

ELECTRIC SHOCK OR FIRE HAZARD

LINE VOLTAGE IS PRESENT ON SOME OF THE TERMINALS ON THE CONTROL TERMINAL BOARD. ALWAYS DISCONNECT THE POWER FROM THE HEATER BEFORE MAKING ANY CONNECTIONS TO THE CONTROL BOARD TO PREVENT ELECTRIC SHOCK HAZARD.



KB PLATINUMX WIRING

WIRING Branch Circuit (Power)

1. Connect heater only to the voltage, and frequency specified on the nameplate.
2. Field wiring must be properly sized to carry the amperage of the heater in accordance with the NEC.
3. The electrical access door is hinged and has a screw on the bottom. Remove the screw to gain access.
4. Electrical knockouts are provided in the back of the heater close to the power contactor. Use the diameter that fits the required conduit fitting size.
5. A ground terminal is provided. The ground wire should be connected before other connections are made.
6. The power contactor is equipped with lugs to accept the power supply wire. Copper wire must be rated at 600 V and 60° C for the heater branch circuit.
7. Each heater has a wiring diagram affixed to the inside of the access door. Consult this diagram before making any field connections.
8. Single or three-phase power connections may be used with heater models marked –3MP. These units are factory wired for single phase operation. If these heaters are for use with three-phased power, reconnect the wires as indicated in the wiring diagram attached to the heater. Additional information can be found by looking at the wiring diagram shown above.
9. The optional field-installed disconnect switch is shown above using dashed lines on the heater wiring diagram above.

KB PLATINUMX INSTALLATION

Installing the Ceiling/Wall Mounting Bracket

Heater can be installed in either a Ceiling Mount or Wall Mount orientation. Locate a stud in ceiling or wall and securely fasten L-shaped mounting bracket to supporting surface with at least 2 fasteners strong enough to hold unit at least 1-1/4" in length.

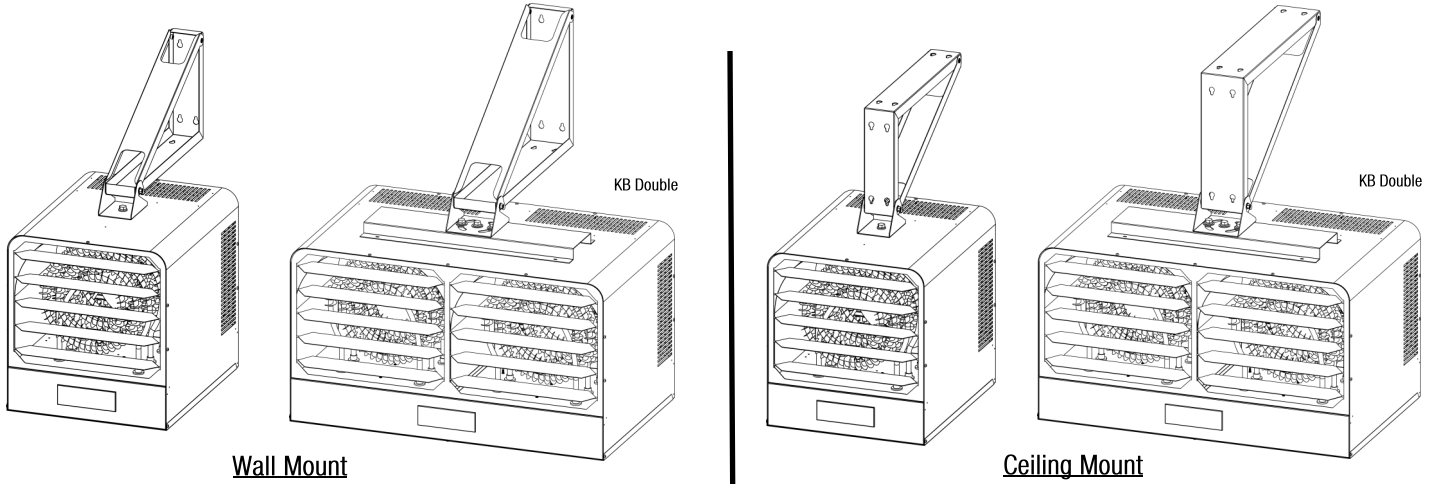
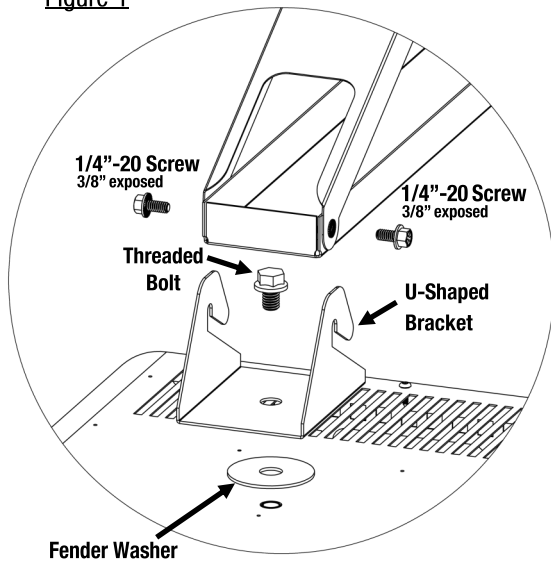


Figure 1

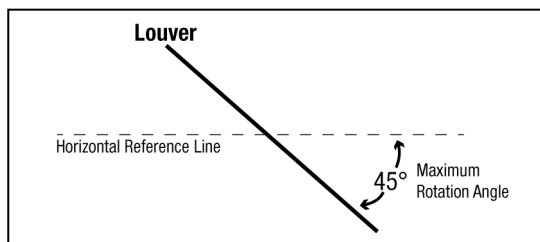


Louver Adjustment: (Do not adjust while heater is operational):

The Louvers are opened during testing at factory, but may have shifted during shipping. Confirm louvers are rotated less than 45 degrees from horizontal before operation. To adjust the opening angle, grasp the left and right end of louver and twist with two hands to the desired position.

CAUTION: Increasing angle beyond 45° degrees from horizontal may restrict air flow causing over temperature limit to activate & shut off the heater.

Louver Adjustment



CONNECTION OF OPTIONAL 24V REMOTE THERMOSTAT

Controlling PlatinumX with a Remote 24V Thermostat

KB PlatinumX heaters come standard with the provisions to connect any 24V remote wall thermostat, for remote temperature sensing and control. Provides silent operation control for use with a 24 Volt Thermostat. Follow steps below for setup and to select Single Stage or Two Stage Control.

Step 1:

Dip Switch Selection On Display For Remote Thermostat—

Local or Remote Thermostat (Figure 1)

The 2 dip switches on the back of the display are used for selecting between the onboard thermostat control and the optional remote wall thermostat control.

Set dip switch 2 to the OFF position to switch to 24V Remote Thermostat Control

24V Remote Thermostat



Dip switch #2:
Off = Remote 24V
Thermostat Control

Local Thermostat (default)



Dip switch #2:
On = Local Thermostat
Control (default)

Step 2:

Dip Switch Selection On Controller PCB—1-Stage or 2-Stage Thermostat (Figure 2)

Refer to the thermostat operating instructions to determine if the thermostat is a single stage or two stage thermostat.

Select the dip switch setting required.

For 2-Stage Heating > Dip Switch = OFF

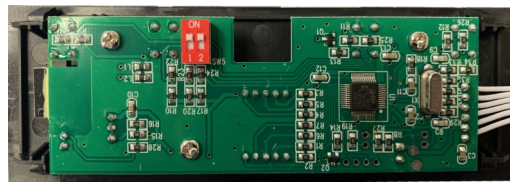
For 1-Stage Heating > Dip Switch = ON

Step 3:

Wiring 24V Remote Thermostat to KB Platinum (Figure 3)

Following thermostat manufacturer's instructions.

Figure 1: Back of Display



(factory default shown)

Figure 2: Controller PCB

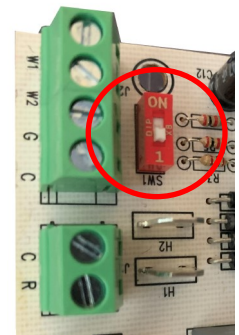


Figure 3: Wiring Schematic Overview

1 DISPLAY (101271)

DIP SWITCH 1

OFF = EXTERNAL SENSOR CONTROL (102806)

ON = LOCAL SENSOR CONTROL (DEFAULT SETTING)

DIP SWITCH 2

OFF = REMOTE STAT (CUSTOMER PROVIDED)

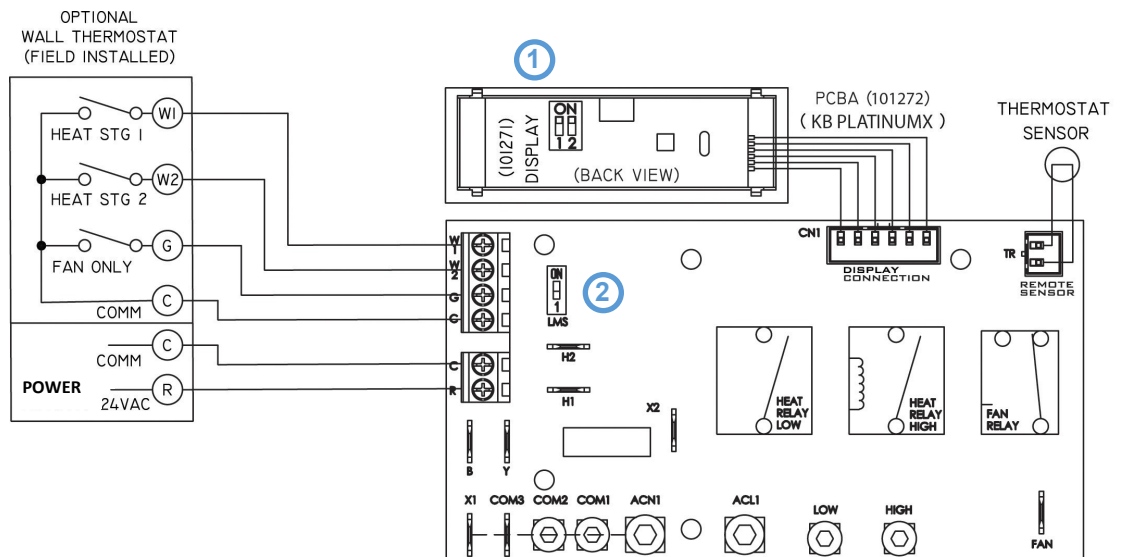
ON = LOCAL STAT (CONTROL SETTING BY DISPLAY) (DEFAULT)

CONTROL BOARD (101272)

2 DIP SWITCH LMS

ON = SINGLE STAGE REMOTE STAT (DEFAULT)

OFF = TWO STAGE REMOTE STAT



CONNECTION OF OPTIONAL NEST THERMOSTAT

To connect a Nest to PlatinumX, you will need to run 4-conductor thermostat wire between the Nest Thermostat and the PlatinumX terminal board per the wiring diagram below. Thermostat wire is a class 2 power-limited circuit cable for use in thermostat control applications.

Nest King PlatinumX

G ----- G, FAN ONLY

W1 ----- W1, STAGE 1 HEAT

W2 ----- Not used

RH ----- R, POWER (24VAC)

C ----- C, COMMON

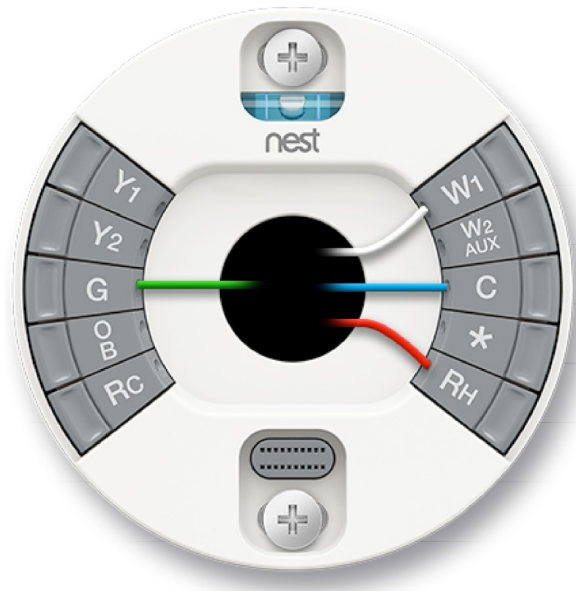


NOTE:

1. Y1,Y2,OB,RC,AND (*) are for Heat Pumps and Air Conditioning, NOT USED on KING HEATERS
2. The C wire keeps the Nest battery power charged.

Conventional 1 Stage Heating

Label:	Function:
Y1	Compressor Relay (Stage 1)
Y2	Compressor Relay (Stage 2), 2nd-speed fan relay
G	Fan Relay*
O/B	Heat Pump Changeover Valve
Rc	24VAC power from cooling transformer
W1	Heat Relay (Stage 1)
W2/AUX	Heat Relay (Stage 2) / Auxiliary Heat Relay
C	24VAC Common Wire †
*	Star: W3, E, HUM/DHUM, 3rd-speed fan relay
Rh	24VAC power from heating transformer

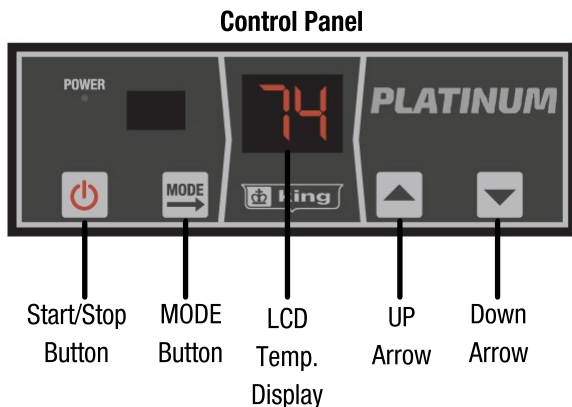


Credit: Nest Installation Instructions

* Fan relay (G) is optional. However, without a G wire, Nest will not be able to control the fan independent of heating.

† Common wire (C) not required in most cases, but strongly recommended.

PLATINUMX OPERATING INSTRUCTIONS



Infrared Remote Control

Operating Instructions

1. Push the button, the heater will come on and heat to the default setting of 72°F.
2. Once the room temperature reaches the set point, heat elements will turn off followed by a 3 minute fan delay period to exhaust excess heat from the case. Afterwards the unit will turn off.
3. In normal operation the display will show the current room temperature.

Room Temperature Selection

- During operation, push or arrow buttons to set the temperature from 40°F-99°F, Hold down the UP or DOWN arrow to speed up the selection process. The LCD will go back to display room temperature after 5 seconds.

Timer Mode Selection

- During operation, press the button 1 time, the display window will show the timer mode setup. Push the UP or DOWN arrows to set the timer from 1 hour—9 hours.

Fan Only Mode Selection

- During operation, press the button 2 times, the display window will show [H] (Heat Mode) or [F] (Fan Only Mode). Push or to switch between Fan Only & Heat modes.

Display Lock Feature

Display Lock is designed for high traffic areas and deactivates the heater display buttons to prevent unwanted temperature adjustments. However settings can still be adjusted through the remote control.

- During operation, press the and HOLD for 5 seconds to set

the display lock. [L] will appear on the display temporarily if a user attempts to make a temperature adjustment. While in Display Lock, heater can be adjusted using remote control.

Setting “Environment” Mode

Two Environment Options: Standard [SF] and Bedroom [BE].

Bedroom Mode turns off the display after 30 seconds for people using this heater in a light sensitive environment. Once any button is pressed the display turns back on.

- During operation, press the and HOLD the and buttons for 3 seconds. Then press or to select “Bedroom Mode” [BE] or “Standard Mode” [SF]

Factory Reset

During operation, press the and HOLD for 5 seconds to reset to the factory settings.

Sensor Error Code

- During operation, if the display shows [E1] that indicates an issue with the sensor. The sensor connector may have come loose from the control board. Open the wiring compartment and reseal the sensor onto the control board. Or it may be possible the sensor needs to be replaced. Contact customer support for assistance.

Setting Differential Value

The differential or gap affects how often the heater cycles. The lower the differential setting, the more the heater will cycle. If heater cycles too often, raise the differential setting to a higher degree.

Press the and HOLD the and buttons for 5 seconds. The display will show the previously set differential. Press UP or DOWN to adjust the differential value between -0 to -5.

SMART LIMIT PROTECTION AND MAINTENANCE



Heater Safety Limit Tripped?

This heater is equipped with a thermal overload Smart Limit Protection which disconnects elements and motor in the event normal operating

temperatures are exceeded. If thermal overload trips due to abnormal operating temperatures, thermal overload shall remain open until manually reset by turning the heater OFF for fifteen minutes. Inspect for any objects on or adjacent to the heater that may cause high temperatures. After inspecting the heater, keep the power to the heater off for 15 minutes to reset the SLP thermal protector. If the SLP thermal protector shuts the heater off again, immediately turn the heater OFF at the circuit breaker and inspect the heater for possible fan motor failure or dirt and lint on the heating element. Repeat the starting procedure.

DO NOT TAMPER OR REMOVE THIS THIS DEVICE

Maintenance

With proper care your electric heater should last a lifetime, however, seasonal cleaning is recommended to maintain the efficiency of the heater. Keep heating element, fan and motor free of debris. Use compressed air to blow out any debris.

We're Here to Help!

For any difficulties installing or operating this product

Call Us Toll Free at:

1-800-603-5464

7:00 am -3:30 pm PST Mon-Fri

Visit king-electric.com

or email us at info@king-electric.com

