INSTALLATION INSTRUCTIONS

king

F912GFCI

ClearTouch™

DANGER

ELECTRIC SHOCK OR FIRE HAZARD

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

Specifications:

Power Supply: 120VAC/240VAC 50/60Hz

Max Range: 1800W @120V or 3600 W @ 240 V

Max Range: 15A Max, Resistive

GFCI: Class A 5mA

Listing: c ETL us

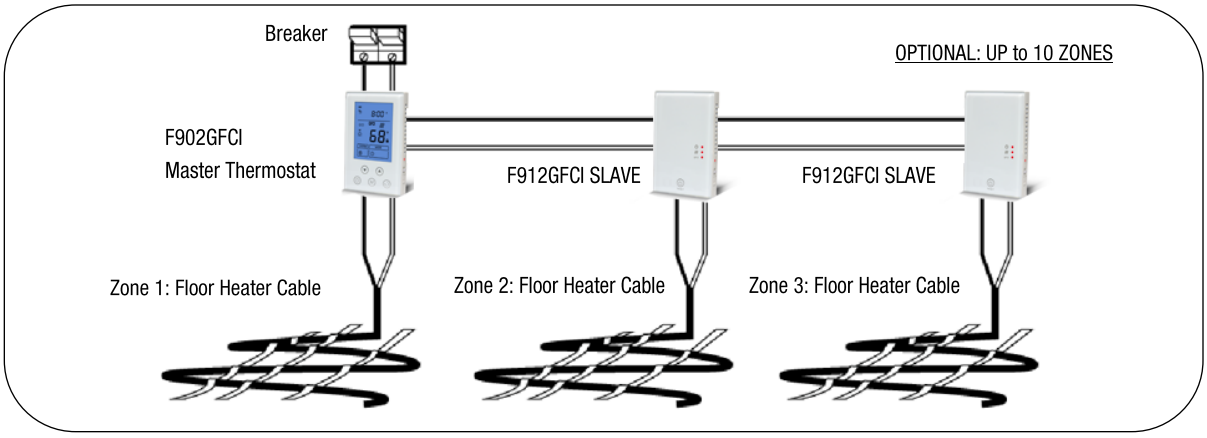
WARNING

READ CAREFULLY - *These instructions will help prevent difficulties that might arise during thermostat installation. Studying the instructions first may save considerable time and money later. Observing the following procedures will keep installation time to a minimum. Save these instructions for future use.*

FUNCTIONS AND FEATURES

This Slave Relay has been designed for floor heating applications that exceed 15 amps. The built in Ground Fault Circuit Interrupt (GFCI) provides worry-free operation . Required for Floor Heat applications

- Dual Voltage (120vac or 240vac)
- Connect up to 10 Slave Relays per Master
- Must use with F902GFCI Master Thermostat
- Touch-Sensitive Buttons
- Blue Backlit Display
- Built-in GFCI



PRODUCT OVERVIEW

The F912GFCI Slave Relay output board is a new intelligent product for temperature control. It can control a heating load 120V/240V in accordance with the main thermostat input signal. It is equipped with a Ground Fault Circuit Interrupter (GFCI). It is accurate and sensitive with high reliability and high performance. This remote module will function only if connected to a thermostat F902GFCI Master Thermostat.

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The installation of the thermostat must comply with the applicable local and/or national electrical code and utility requirements. This installation should be performed by a qualified electrician where required by law. Ensure that all wiring connections to the thermostat are correct and tight to prevent electrical shorts. Use the appropriate wire to meet local and national electrical codes for rated power consumption.

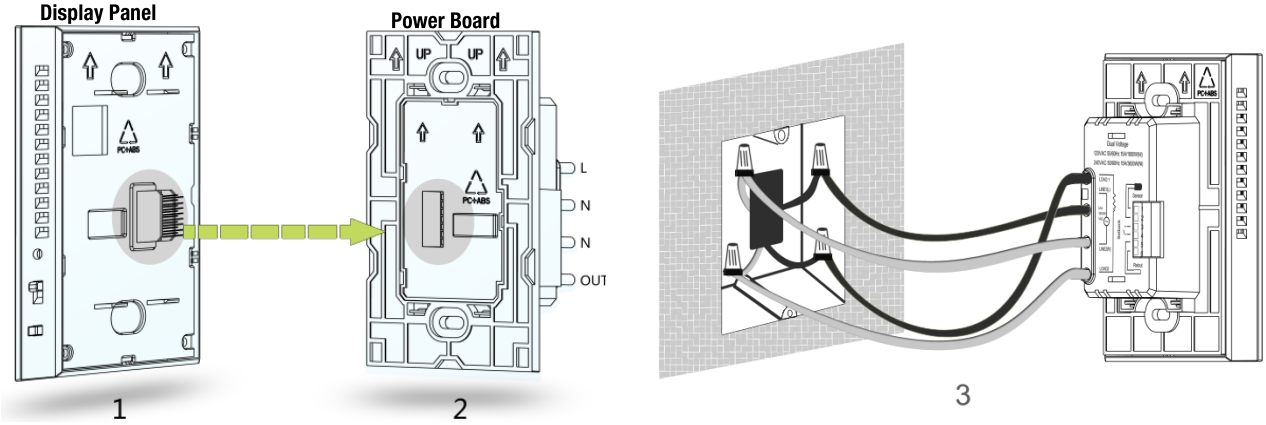
WARNING!

Warning: Turn OFF the power at the circuit breaker before Installing. Installation to be performed by a qualified electrician or authorized technician.

Refer to thermostat and heater load specifications before installation of the thermostat to see if it can handle the amp load. The maximum this thermostat can run is 1800W @120V or 3600 W @ 240 V (15A). Install unit in a grounded metal or plastic wall junction box, indoors 4 ½' to 5' above the floor. Avoid any area where it can come in contact with external sources of heat and cold. This includes plumbing pipes, direct sunlight, a T.V. set, lamps, and drafts from a door or window, as this may cause inaccurate temperature readings. The most convenient place is above the light switch. Not for Outdoor use.

WIRING INSTRUCTIONS

Caution: Turn off power at the circuit breaker before performing any work on the electrical connections. None of the electrical connections must be live until the installation has been completed and the housing is closed. Only a qualified electrician or authorized technician are permitted to open the terminal box.



Wiring requires a Phillips screwdriver

1. Disconnect power supply to prevent electrical shock or damage to the product.
2. Run line voltage wiring to the location of thermostat.
3. Use a screwdriver to separate the Display Panel and power board of the thermostat, as shown in Figure 1 and Figure 2
4. Choose the proper installation location. Installation height is about $4^{1/2}$ to 5 feet above the floor. For indoor use only.
5. Do not install close to a heat source, such as hot water pipe, heating pipe, wall-mounted light fixture or in direct sunlight.
6. Connect the incoming power wires to Line 1(L) & Line 2(N) wires on the power board, using the provided wire nuts, as shown on figure 3.
7. Connect the floor heating load wires to the Load 1 & Load 2 wires of the power board, using the connectors, as shown on figure 3.

Connection to the Master Thermostat (F902GFCI)

A. Connect the low voltage wire from the master thermostat (F902GFCI) into terminals no. 3 & 4 on back of the power board and tighten the screws with the screwdriver provided in the box.

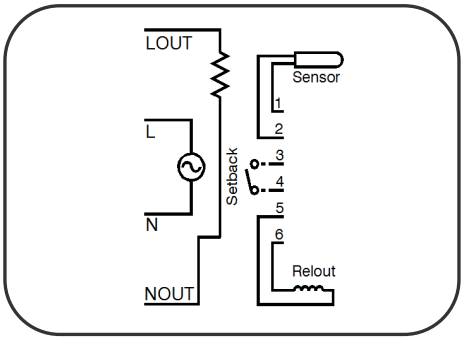
B. If required: To add an additional Slave Relay, connect the low voltage wire from the second Slave Relay into terminals no. 5 & 6 (Relout) on back of the power board and tighten the screws with the screwdriver provided in the box. See below diagram.

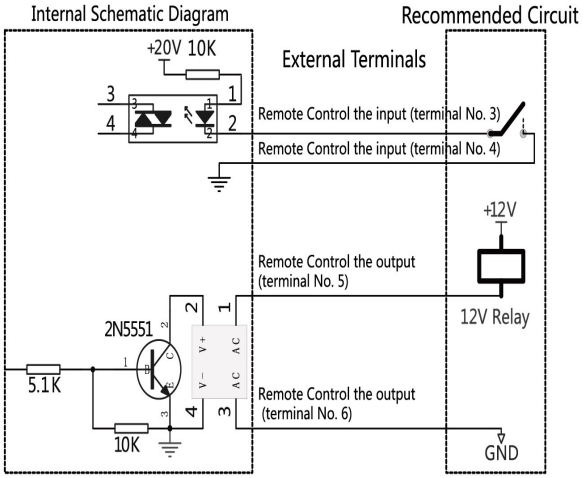
8. Install the power board into the electrical box with the 2 screws provided, and then clip & fasten the front Display Panel into place with the bottom screw.

9. Make sure your F902GFCI thermostat is COMPLETELY RECESSED into the junction box and flush with the wall. NO WIRES SHOULD BE EXPOSED outside the metal or plastic junction box.

WIRING INSTRUCTIONS (CONTINUED)

WIRING DIAGRAM:





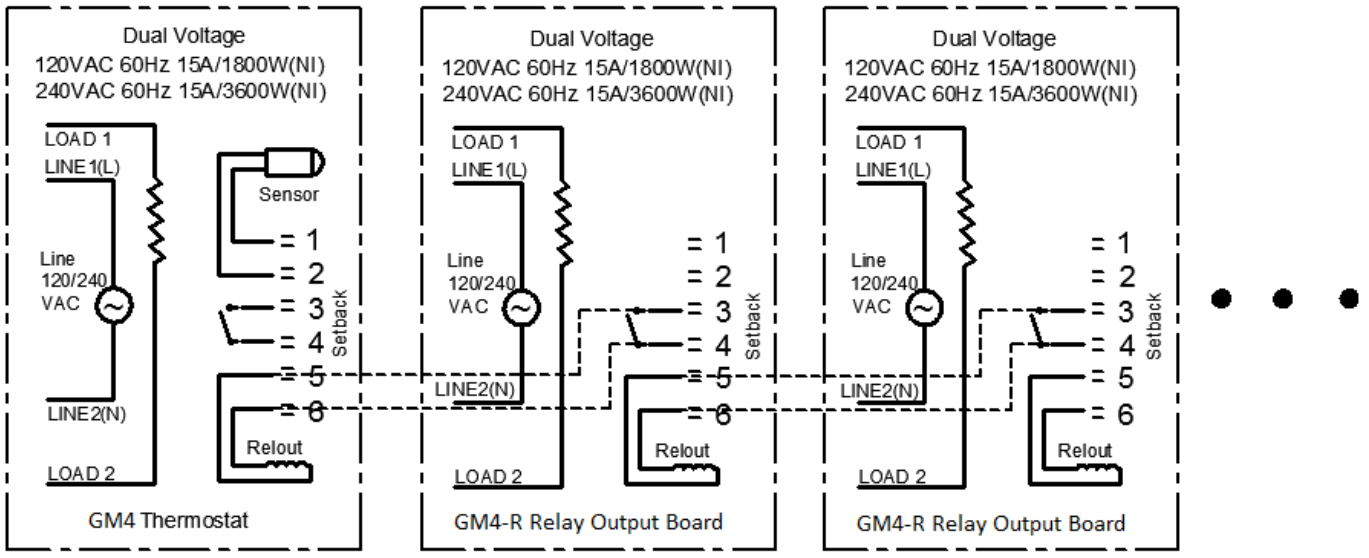
Safety Information:

- Installation must be carried out by a certified professional electrician.
- Disconnect all power before performing maintenance work to avoid product damage.
- Shocking, dropping or stepping on the product will damage it and void the warranty.
- The thermostat should be kept away from corrosive chemicals.
- Damage to the product could result in a faulty electrical system that may cause fire.

Control Wiring :

- **Setback:** This is an **input** signal driven by a remote contact. One terminal connects to the internal power source by 10K resistance; another terminal connects to the internal ground. The circuit diagram as shown on the left.
- **Relout:** This is an **output** allowing the remote control of a series of Slave Relays (F912GFCI). Inside the thermostat is an open drain circuit, driving a 24V relay. The maximum drive current is 30mA. The circuit diagram as shown in the left. This is used to connect to a Slave Relay (F912GFCI) to expand the heating surface. Multiple Slave Relays can be interconnected in a daisy chain, see below:

Master / Slave Wiring Diagram



Master Thermostat—F902GFCI **Slave Relay #1—F912GFCI** **Slave Relay #2—F912GFCI**

OPERATION INSTRUCTIONS

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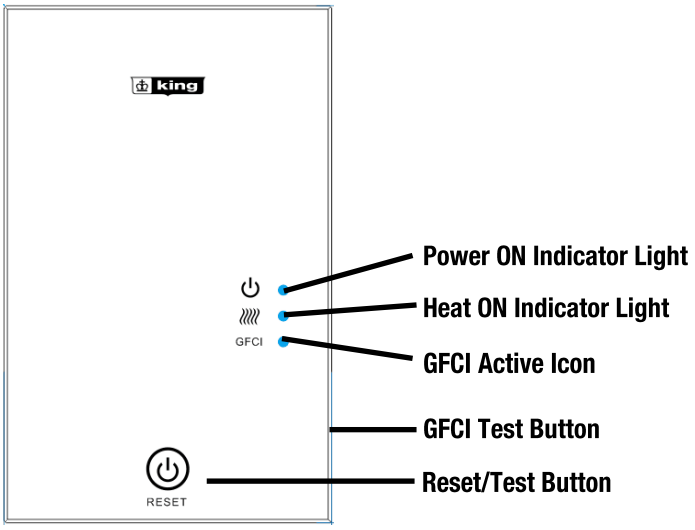
RESET AND MONTHLY TESTING (REQUIRED)



Reset/ Test Button

If there is no remote control signal from the main thermostat, press the RESET button to perform an electrical function test loop of the heating relay.

During or after the test loop, press Reset/Test button again to resume normal operation.

GFCI Button (side button)

The GFCI button is used to perform monthly GFCI test.

GFCI Test

- Enter into GFCI test: while the electrical load is heating, press GFCI button, the heating indicator light turns off, and the red GFCI indicator light turns on.
- Exit from GFCI test: Press “Reset/Test” button to exit the GFCI test, the electrical heating output starts, the electrical heating indicator light turns on and the GFCI indicator light turns off.

Note: GFCI is a current leakage protector circuit inside the thermostat. It is used to protect the owner/operator from electric shock if the system is damaged or short-circuit. After installing the device, test this function to make sure of its proper operation.

4. Please adjust the set point up temporarily to allow the thermostat to switch to heating mode,
5. When you press GFCI button, the GFCI icon will be displayed on the screen, and the heating output will stop, the GFCI indicator light turns on. If not proceed with a megger test on the heating cable insulation. Check with the original tag info. If ok, then the thermostat may need to be replaced. Contact your supplier.
6. Press the RESET/TEST button.
7. Please readjust the set point down to normal value. The test is over.

OPERATION INSTRUCTIONS

Output Control

Electrical Heating Test（Time :30min）

Press Reset/Test button for 3 sec., the power indicator light will blink, the electrical heating indicator light turns on, and the electrical heating begins to output, the signal of Relout begins to output. Press Reset/Test button for 3 sec., the power indicator light stops blinking, and the electrical heating indicator light turns off. Otherwise, after 30min, the device will exit the test mode automatically. The output signal of Relout to the next relay output board is also turned off.

Troubleshooting

Problem	Solution
Thermostat functions but no heat from the system	1. Check wiring instructions and wire identification 2. If the GFCI is tripped, reset the thermostat with the side switch 3. Check the resistance of the floor warming system. Refer to the cable manufacturer installation manual
No display	Check wiring connection on the back of the unit
GFCI is tripped	1. Check wiring connections 2. Reset thermostat by switching off then back on 3. Check resistance of the floor warming system. Refer to the cable manufacturer installation manual
Heat occurs at wrong time	Check the current time and schedule are properly set at AM or PM