

# THERMOCOUPLE JUNCTION BLOCK

Model: TCA-1



This device is used to attach spill switches to a 30 millivolt water heater. It is designed to be used with GSK SERIES spill switches, TSP SERIES spill switch, or SSK SERIES spill switch kits for connecting flue gas sensing spillage switches to 30 millivolt gas valves.

## REQUIRED ACCESSORIES:

2-GSK series spill switches

6 ft. of 12 ga. two (2) wire stranded (preferably) conductor

**OR**

1-TSP series spill switch

6 ft. of 12 ga. two (2) wire stranded (preferably) conductor

**OR**

1-SSK series spill switch kit

Including two (2) spill switches and 12 ga. wire

## READ THESE INSTRUCTIONS CAREFULLY AND COMPLETELY BEFORE PROCEEDING WITH THE INSTALLATION.

This device **MUST** be installed by a qualified agency in accordance with the manufacturer's installation instructions. The definition of a qualified agency is: any individual, firm, corporation or company which either in person or through a representative is engaged in, and is responsible for, the installation and operation of HVAC appliances, who is experienced in such work, familiar with all the precautions required, and has complied with all the requirements of the authority having jurisdiction.

Please retain these instructions after installation.

Installed By: \_\_\_\_\_ Phone: \_\_\_\_\_ Installation Date: \_\_\_\_\_



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## INSTALLATION

**CAUTION:** Shut off gas supply before working on appliance.

1. Remove thermocouple from gas control valve. (See Figure 1)
2. Thread the junction block into the thermocouple port and thread the thermocouple into the bottom of the junction block. DO NOT over tighten the junction block. Hand thread the block into thermocouple port then tighten lightly with a wrench.
3. Mount the two (2) spill switches onto the draft hood so the switches do not contact any metal. (See Figure 2)
4. Connect the one terminal of each switch with 12 ga wire and then connect it to the thermocouple junction block. Next, connect the two remaining terminals together using a short length of 12 ga wire. (See Figure 3)
5. Route and secure the wires to the water heater enclosure with acceptable hold down tabs, keeping the wires away from any hot surface area.

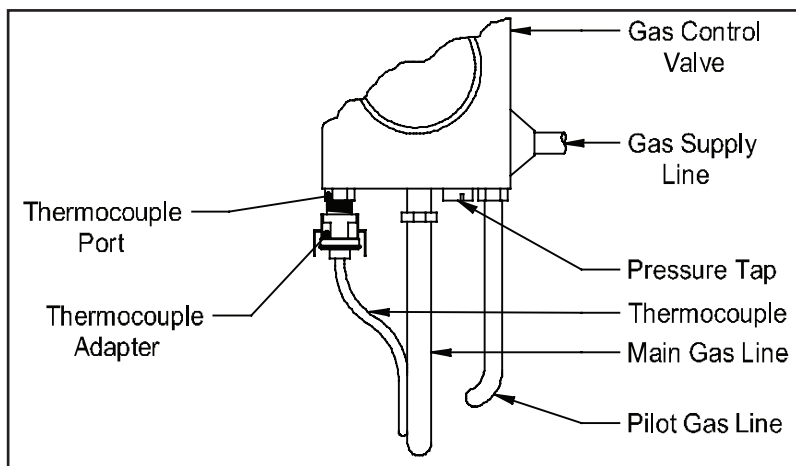


Figure 1

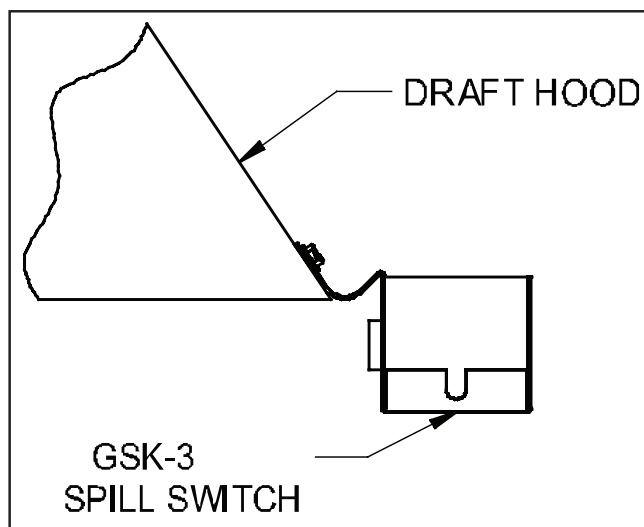


Figure 2

## SYSTEM CHECK-OUT PROCEDURE FOR GAS SPILLAGE SWITCH CONTROL

1. Shut off gas supply to appliance(s).
2. Block the flue pipe above the draft hood or draft diverter.
3. Re-establish gas supply to appliance and re-light pilot.
4. Adjust thermostat to call for heat.
5. Flue gases should be emitting from draft diverter or draft hood. Note the location of the most flue gas spillage. Allow approximately 2 minutes for the system to back up and the gas burner to shut down. Wait 2 to 3 minutes, reset switches, and re-light pilot. If the spillage switch does not trip within the 2 minute period, relocate the switch onto the area where the observed highest spillage occurred. Then perform this test again.

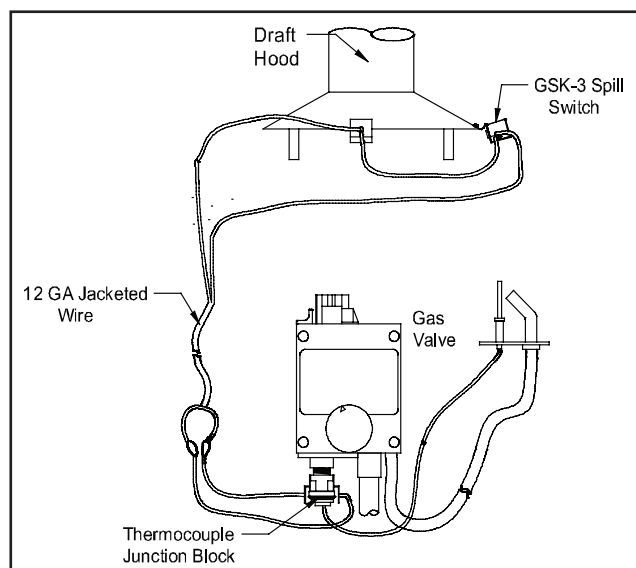


Figure 3

**CAUTION:** If for any reason the system has shut down during normal operation, the cause of the system failure should be investigated and corrected before resetting the safety switch and relighting the pilot.

## LIMITED WARRANTY

Field Controls, LLC ("Company") warrants that its products shall be free from defects in material and workmanship under normal use for the limited period indicated, **from the date of manufacture, subject to the provisions 1-8 below.**

### **Eighteen (18) months**

All Field Controls Products (except for those listed below as 5 years or 90 days).

### **Five (5) years**

Field Controls Direct Vent Systems (FDVS), Field Oil Vent Kits (FOVP), and ComboVents (CV).

Field Controls warrants that the products listed below shall be free from defects in material and workmanship under normal use for the limited period indicated, **from the date of purchase by the consumer, subject to the provisions 1-8 below.**

### **Ninety (90) days**

UV lamps/bulbs

### **Provisions:**

1. During the limited warranty period, Company, or its authorized service representative, will repair or replace, at Company's option, without charge, a defective Product. Product that is repaired may be repaired with new or refurbished replacement parts. Product that is replaced may be replaced with a new or refurbished product of the same or similar design. Company will return repaired or replacement Product to customer in working condition. Labor charges are not covered as part of the limited warranty.
2. With regard to UV lamps/bulbs, customer shall be required to include a "valid proof of purchase" (sales receipt) identifying the Product purchased (Product model or accurate date code information) and the date the Product(s) was purchased.
3. Product whose warranty/quality stickers, Product serial number plates or electronic serial numbers have been removed, altered or rendered illegible shall not be covered under the limited warranty.
4. Defective Product must be returned to Company, postage prepaid.
5. IN NO EVENT SHALL COMPANY BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR SIMILAR DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOST PROFITS OR REVENUE, INABILITY TO USE PRODUCT, OR OTHER ASSOCIATED EQUIPMENT, THE COST OF SUBSTITUTE EQUIPMENT, AND CLAIMS BY THIRD PARTIES) RESULTING FROM THE USE OF PRODUCT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
6. THIS WARRANTY AND REMEDIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL, WRITTEN, EXPRESS, STATUTORY OR IMPLIED. TO THE EXTENT PERMITTED BY LAW, COMPANY DISCLAIMS ALL IMPLIED AND STATUTORY WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
7. Company makes no warranty of any kind in regard to other manufacturer's products distributed by Company. Company will pass on all warranties made by the manufacturer and where possible, will expedite the claim on behalf of the customer, but ultimately, responsibility for disposition of the warranty claim lies with the manufacturer.
8. Product that has been subjected to misuse, accident, shipping or other physical damage, improper installation or application, abnormal operation or handling, neglect, fire, water or other liquid intrusion are not covered by the warranty.



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