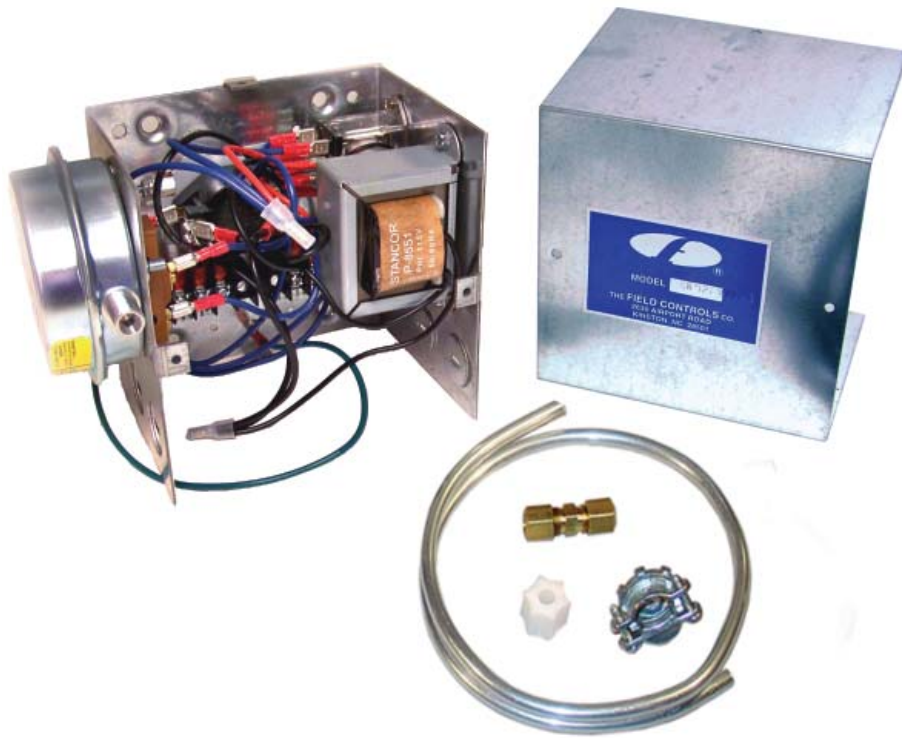


SYSTEM CONTROL KIT

Model: CK-81



Designed for use with the SWG Series Power Venter for controlling 750 millivolt controlled Natural and LP Gas appliances with a 24AC voltage thermostat or wall switch, such as a gas fireplace.

NOTE: The use of flue gas spillage switches such as the Field Controls Model GSK-3, or equivalent, is recommended. Manual operation controls to gas valve must be rendered inoperative.

Items included in Kit:

- 1- Junction box with mounted pressure switch
- 1- 1 ft. length of 1/8" aluminum tubing
- 1- 1/8" tubing connector
- 1- 1/8" tubing to 1/8" NPT elbow
- 1- Flexible conduit connector
- 1- Mounted 115 VAC/24 VAC transformer
- 1- Mounted post-purge timer (non-adjustable)

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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MOUNTING JUNCTION BOX

The junction box can be mounted at the venter or remotely mounted away from the venter. (See Figures 1 & 2)

1. Remove one of the knockouts from the side of the junction box where the pressure switch is mounted. Install the flexible conduit connector onto the CK-81 junction box and secure with fastening nut. If remote mounting the CK-81 junction box, mount the flexible conduit connector onto a 2" x 4" installer supplied junction box.
2. Fasten the flexible conduit from the SWG Venter into the conduit connector. Mount the CK-81 junction box or installer supplied junction box onto the wall or floor joist without straining the flexible conduit. Fasten the CK-81 junction box through the four dimpled locations on the base of the box. (See Figure 3)

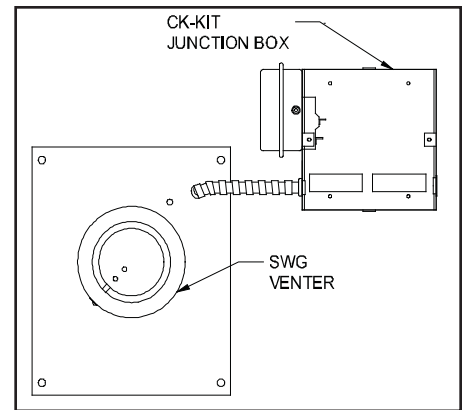


Figure 1

WIRING (See Figure 4 and Table 1)

Wire the venter motor and controls in accordance with the National Electrical Code, manufacturer's recommendations, and/or applicable local codes. **UNITS MUST BE GROUNDED.** Check ground circuit to make certain that the unit has been properly grounded. The wiring should be protected by an over-current circuit device rated at 15 amperes. **CAUTION** must be taken to ensure that the wiring does not come into contact with any heat source. All line voltage and safety control circuits between the venter and the appliance **MUST** be wired in accordance with the National Electrical Code for Class I wiring or equivalent methods.

1. Route the venter motor and control wiring with an appropriate wiring method.
2. All wiring to be Class I or equivalent for line voltage or safety control circuits.
3. All manual operation controls to gas valve must be rendered inoperative.

SEQUENCE OF OPERATION

1. Thermostat calls for heat. The relay closes and the power venter energizes.
2. After motor is up to speed, the pressure switch closes and the gas valve energizes.
3. When the thermostat is satisfied, the thermostat opens and stops the power venter and gas valve operation. The post-purge timer in the CK-81 will cause operation of the venter motor for an additional period of approximately one to three minutes.

PRESSURE SWITCH SENSING

TUBE INSTALLATION

1. Attach the 1/4" tubing connector to the pressure tube on the SWG Venter. (See Figure 3)
2. Connect the supplied 1/4" aluminum tubing to the tubing connector. Route the tubing to the CK-81 junction box and connect the tubing to the pressure switch. When routing the tubing, avoid kinking the tubing by bending the tubing too sharply.

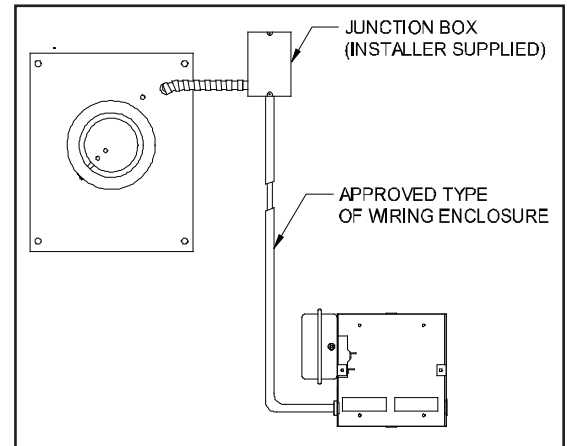


Figure 2

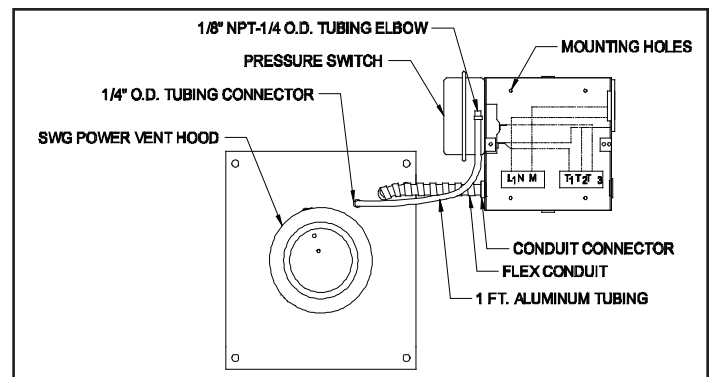


Figure 3

Table 1

| WIRE LENGTH FOR 750 MILLIVOLT WIRING | | |
|--------------------------------------|----------------------------|---------------------------------------|
| Wire Sizes | Max. Length (2-wire cable) | Max. Combined Length (2 single wires) |
| No. 18 | 30 ft. | 60 ft. |
| No. 16 | 50 ft. | 100 ft. |
| No. 14 | 80 ft. | 160 ft. |

NOTE: For remote mounted CK-81 Junction Box, use ¼" OD copper, aluminum, or plastic tubing, and route the tubing to avoid contact with any heat source. Refer to the SWG Venter installation instructions for setting system airflow.

PRESSURE SWITCH ADJUSTMENTS

With the venter airflow set and the appliance operating at the best operating efficiency, adjust the pressure switch by rotating the adjustment screw clockwise until the burner shuts off, then rotate the adjustment screw counterclockwise until the burner fires. Rotate the adjustment screw an additional ¼ turn counterclockwise to ensure proper switch setting. (See Figure 5)

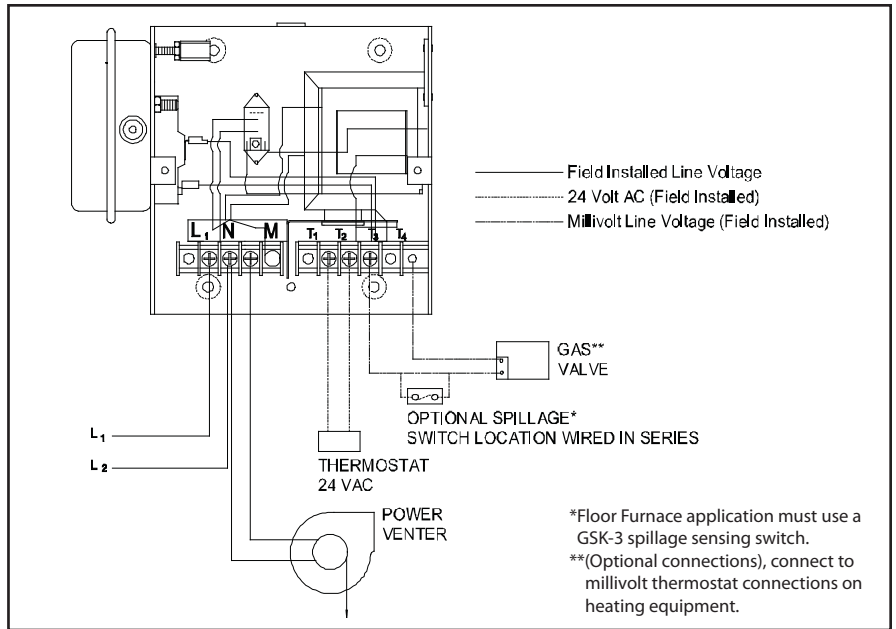


Figure 4

SYSTEM CONTROL CHECK OUT PROCEDURES

1. Adjust the thermostat to call for heat and observe the power venting system for proper operating sequence. (Repeat if necessary.)
 - a. Thermostat or wall switch calls for heat.
 - b. Venter motor starts.
 - c. Pressure switch closes and burner starts.
 - d. Thermostat is satisfied or wall switch is turned off. The burner stops; the venter runs for 1-3 minutes longer.
2. While system is operating, disconnect power to the venter motor. This should open the pressure switch contacts and stop burner operation.

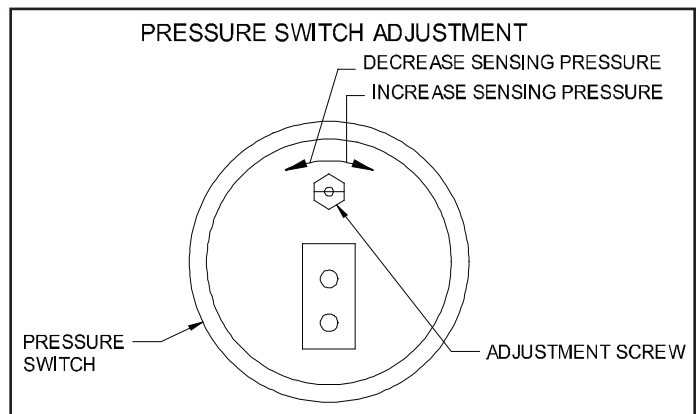


Figure 5

TROUBLESHOOTING HINTS

1. Main burner does not fire when thermostat or wall switch calls for heat with venter operating.
 - a. Check pressure switch adjustment.
 - b. Check wiring connections between pressure switch and burner.
 - c. Check pressure switch for continuity across terminals, during venter operation.
2. Venter does not activate when thermostat or wall switch calls for heat.
 - a. Check wiring.
3. Flue gas odor.
 - a. Check system draft.
 - b. Check for negative pressure in building.

MAINTENANCE

1. Motor: Inspect motor once a year, the motor should rotate freely.
2. Wheel: Inspect venter wheel annually to clear any soot, ash, or coating which inhibits either rotation or air flow. Remove all foreign material before operating.
3. Vent System: Inspect all vent pipe connections annually for looseness and for evidence of flue gas leakage. Seal or tighten pipe connections if necessary.

WARRANTY

For warranty about this or any Field Controls product, visit:
www.fieldcontrols.com/warranty



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