







Thermal Safety Switches

Our thermal safety switches detect flue gas spillage due to a blocked flue. With the safety switch wired in series with the burner circuit, the switch will de-energize the system's burner or burner control once it senses the spillage of hot flue gases. Available for gas-fired and oil-fired applications.

Venting

| Model | | Typical Applications |
|--|------------------------------------|---|
|  <p>FTS</p> | <p>FTS-4 & FTS-6</p> | <p>Designed for use on large gas furnaces and boilers. Can be mounted on Draft Hood or double-acting Barometric Draft Control (both brackets included). Manual reset.</p> |
|  <p>SSK</p> | <p>SSK-1 & SSK-3</p> | <p>Kit form of GSK-3 or GSK-4 generally used on millivolt water heaters. Can also be used with 24 VAC gas furnaces or boilers. Kit includes (2) GSK style Thermal Safety Switches, (1) 12-gauge Jumper Wire and (1) 6 ft. length 12-gauge lead wire. SSK-3 switches not supplied with switch enclosures. TCA-1 Thermocouple Adapter required for 30 millivolt applications.</p> |
|  <p>WMO</p> | <p>WMO-1</p> | <p>Designed for use with power venting and chimney vented systems for oil-fired applications. Manual reset.</p> |
|  <p>GSK</p> | <p>GSK-160A & GSK-250M</p> | <p>The GSK-160A is designed for use on draft induced furnaces. Activates at 160°F. Silver Contacts. Auto reset. The GSK-250M is designed for use on steam boilers. Activates at 250°F. Silver Contacts. Manual reset.</p> |
| | <p>GSK-3 & GSK-4</p> | <p>Designed for use on residential and light commercial millivolt or 24 VAC gas furnaces, boilers and water heaters. Generally used with sidewall venting applications.</p> |
|  <p>LS</p> | <p>LS-140A, LS-550A</p> | <p>Installation of a high temperature vent limit switch is recommended for LP and Natural gas fired power vented and natural draft water heaters. This device is installed to limit the vent temperature in either plastic pipe (140° F temperature limit) or B vent installations (550° F temperature limit) caused by scaled up tanks and/or inadequate venting.</p> |
|  <p>TCA</p> | <p>TCA</p> | <p>Note: For 30 millivolt applications (residential water heaters), a thermocouple adapter is required to connect the GSK. The TCA is used to splice into the thermocouple circuit. The TCA-1 has standard threads.</p> |

Thermal Safety Switches

How Thermal Safety Switches Work

The Thermal Safety Switch detects the increased heat generated by the flue gas spillage and deactivates the furnace or boiler. It will not allow the burner to restart until the switch has been manually reset.

When to use a Thermal Safety Switch

On Barometric Draft Controls and draft hoods to detect flue gas spillage and deactivate oil and gas burners.

| Thermal Safety Switches | | | | | | | | |
|-------------------------|----------------|------------------|-------------|--------------------|------------------------|--------------------|-------------|--|
| Model | Field Part No. | Contact Material | Load-Rating | | Normally Closed Switch | | Switch Type | Application |
| | | | AMP | Volts | Opens | Closes | | |
| FTS-4 | 01170004 | Silver | 12 6 | 120 AC 240 AC | 140°F | Manual Reset | SPST | Draft Control or Draft Hood mounting Manual reset. Quicker response time than FTS-6. |
| FTS-6 | 01170006 | Silver | 12 6 | 120 AC 240 AC | 180°F | Manual Reset | SPST | Draft Control or Draft Hood mounting Manual reset. For use on 24/120/240 Volt conversion burner equipment over 400,000 BTU/hr. |
| GSK-160A | 46086403 | Silver | - 24 VA | 120AC | 160°F | Automatic Reset | SPST | Draft induced furnaces. Activates at 160°. Auto reset. |
| GSK-250M | 46086404 | Silver | - 24 VA | Millivolt 24 AC | 250°F | Manual Reset | SPST | Steam Boilers. Activates at 250°. Manual Reset. |
| GSK-3 | 46086400 | Gold | - 24 VA | Millivolt 24 AC | 180°F | Manual Reset | SPST | Standard Gold Contact Manual Reset Switch. For gas-fired millivolt or 24 VAC application. |
| GSK-4 | 46086402 | Gold | - 24 VA | Millivolt 24 AC | 200°F | Manual Reset | SPST | Manual Reset Switch, same as GSK-3. Where slower response time is a requirement. |
| SSK-1 | 46111501 | Gold | - 24 VA | Millivolt 24 AC | 180°F | Manual Reset | SPST | Kit includes (2) GSK-3 switches (1) 6 ft. length of 12 GA wire and Switch Jumper Wire. |
| SSK-3 | 46111503 | Gold | - 24 VA | Millivolt 24 AC | 200°F | Manual Reset | SPST | Kit same as SSK-2 Kit, except switches not enclosed in electrical box. |
| TCA-1 | 46082700 | - | - | - | - | - | - | Required adapter for operation of Gold Contact Thermal Safety Switches with 30 millivolt systems (residential water heaters). |
| LS-140A | 46564100 | Silver | 15 | 120 AC | 140°F | Automatic Reset | SPDT | For plastic vent applications. Recommended for LP and Natural gas fired power vented and natural draft water heaters. |
| LS-550A | 46564200 | Silver | 15 | 120 AC | 550°F | Automatic Reset | SPDT | For B-Vent applications. Recommended for LP and Natural gas fired power vented and natural draft water heaters. |
| WMO-1 | 46086900 | Silver | 10 | 120 AC | 200°F | Manual Reset | SPST | Manual reset. Designed for use with power venting and chimney vented systems for oil-fired applications. |

NOTE: SPST = Single Pole Single Throw, SPDT = Single Pole Double Throw

Replacement Parts

VENTING

MODEL RJR-5, RJR-6

| MODEL | DESCRIPTION | PART NO. |
|-------|---------------------|----------|
| RJR-5 | 24 Volt SPDT Relay | 46080200 |
| RJR-6 | 120 Volt SPDT Relay | 46111100 |

24 or 120 Volt
SPDT Relay



MODEL CK-20FV MILLIVOLT GAS-FIRED WATER HEATER CONTROL KIT

| MODEL | DESCRIPTION | PART NO. |
|---------|---------------------------------------|----------|
| CK-20FV | Fan Control Gas Pressure Switch | 46506800 |
| | GSK-3 Spillage Switch Kit | 46086400 |
| | TCA-1 Thermocouple Adapter (FV model) | 46082700 |

Fan Control
Gas Pressure
Switch



GSK-3 Spillage
Switch Kit



MODEL CK-21 MILLIVOLT INSTANTANEOUS GAS-FIRED WATER HEATER CONTROL KIT

| MODEL | DESCRIPTION | PART NO. |
|-------|---------------------------------|----------|
| CK-21 | Fan Control Gas Pressure Switch | 46506800 |
| | SSK-3 Spillage Switch Kit | 46111503 |

TCA-1
Thermocouple
Adapter
(FV model)



SSK-3 Spillage
Switch Kit



MODEL CAC-24 AND CAC-120 COMBUSTION AIR CONTROLLER

| MODEL | DESCRIPTION | PART NO. |
|-------------------|------------------------------------|----------|
| CAC-24 CAC-120 | Pressure Switch | 46273100 |
| CAC-24 | RJR-5 24 Volt Relay Kit (CAC-24) | 46080200 |
| CAC-120 | RJR-6 120 Volt Relay Kit (CAC-120) | 46111100 |

Pressure Switch



Timer Fixed
Post Purge



MODEL CK-41F and CK-41P GAS-FIRED CONTROL KIT WITH FIXED POST PURGE

| MODEL | DESCRIPTION | PART NO. |
|------------------|--------------------------------|----------|
| CK-41F CK-41P | Pressure Switch | 46273100 |
| | Timer Fixed Post Purge | 46282800 |
| | GSK-3 Spillage Switch | 46086400 |
| CK-41P | Wiring Harness for CK-41P only | 46457200 |

Wiring Harness
for CK-41P



Replacement Parts

VENTING

CK-81 OPERATED OFF A 24-VOLT CIRCUIT

| MODEL | DESCRIPTION | PART NO. |
|-------|------------------------------------|----------|
| CK-81 | Pressure Switch with Gold Contacts | 46158500 |
| | 24 Volt Relay | 46161400 |
| | Timer Fixed Post Purge | 46282800 |

Pressure Switch with Gold Contacts



24 Volt Relay



MODEL CK-91FV, GAS-FIRED APPLIANCE and WATER HEATER COMBINATION KIT

| MODEL | DESCRIPTION | PART NO. |
|---------|-------------------------------|----------|
| CK-91FV | Timer Fixed Post Purge | 46282800 |
| | Pressure Switch | 46273100 |
| | Gas Pressure Switch W/PP Opt. | 46506800 |
| | GSK-3 Spillage Switch Kit | 46086400 |
| | 4" MG1 Draft Control | 46198901 |

Timer Fixed Post Purge



Pressure Switch



Gas Pressure Switch W/PP Opt.



GSK-3 Spillage Switch Kit



4" MG1 Draft Control



Wiring Harness only used with P series



MODEL CK-92FV, CK-92 FVP GAS-FIRED APPLIANCE and WATER HEATER COMBINATION KIT

| MODEL | DESCRIPTION | PART NO. |
|----------------------|--|----------|
| CK-92FV CK-92 FVP | Timer Fixed Post Purge | 46282800 |
| | Pressure Switch | 46273100 |
| | Gas Pressure Switch W/PP Opt. | 46506800 |
| | GSK-3 Spillage Switch Kit | 46086400 |
| | 4" MG1 Draft Control | 46198901 |
| | Wiring Harness only used with P series | 46457200 |

Note: All of these parts are not in all of the Control Kits listed.