The Series TSF Thermocouple FM Approved Limit Control provides audible alarm status along with a robust 16 amp relay output. Unit allows the user to easily select automatic or manual reset along with 10 other parameters. The TSF series has a built-in reset button on the front panel or can accept an external reset.

<table>
<thead>
<tr>
<th>Model</th>
<th>Supply Power</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSF-4010</td>
<td>115 VAC</td>
<td>°F</td>
</tr>
<tr>
<td>TSF-4011</td>
<td>115 VAC</td>
<td>°C</td>
</tr>
<tr>
<td>TSF-4021</td>
<td>230 VAC</td>
<td>°C</td>
</tr>
<tr>
<td>TSF-4040</td>
<td>24 VAC/VDC</td>
<td>°F</td>
</tr>
</tbody>
</table>

**ACCESSORIES**
- TCS-J, J type thermocouple, 4” probe, 48” extension
- TCS-K, K type thermocouple, 4” probe, 48” extension
- TS2-K, Configuration Key

### SPECIFICATIONS
- **Probe Range:** 32 to 999°F (0 to 700°C) for type J thermocouple; 32 to 999°F (0 to 999°C) for type K or S thermocouples.
- **Input:** Type J, K or S thermocouple.
- **Output:** SPDT relay rated 16A @ 240 VAC resistive.
- **Horsepower Rating (HP):** 1 HP.
- **Control Type:** ON/OFF; manual/automatic reset.
- **Power Requirements:** 115 VAC, 230 VAC, 12 VAC/VDC or 24 VAC/VDC (depending on model).
- **Power Consumption:** 4 VA.
- **Accuracy:** ±1% FS.
- **Display:** 3-digit, red, 1/2˝ (12.7 mm) digits, plus sign.
- **Resolution:** 1°.
- **Memory Backup:** Nonvolatile memory.
- **Temperature Limits:** Ambient: 32 to 150°F (0 to 65°C); Storage: -4 to 176°F (-20 to 80°C).
- **Weight:** 2.3 oz (65 g).
- **Front Panel Rating:** IP64 (NEMA 3R).
- **Agency Approvals:** CE, FM, cUR, UR.

The Series TSF-DF Digital Thermocouple Limit Alarm is a UL approved temperature limit control that provides visual alarm status along with a 16 amp SPST relay output. The Series TSF-DF controls have a built-in reset button on the front panel or can accept an external reset signal. Program settings on model TSF-DF controls cannot be changed through the buttons on the device. It is necessary to purchase a model TSF-MDF and a model TS2-K in addition to the model TSF-DF. Desired program parameters are entered on a TSF-MDF programming control. Using the TS2-K configuration key, the parameters can be easily copied from the TSF-MDF and transferred to the TSF-DF Limit Alarms.

<table>
<thead>
<tr>
<th>Model</th>
<th>Control</th>
<th>Supply Power</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSF-4010-DF</td>
<td>Limit Alarm</td>
<td>115 VAC</td>
<td>°F</td>
</tr>
<tr>
<td>TSF-4011-DF</td>
<td>Limit Alarm</td>
<td>115 VAC</td>
<td>°C</td>
</tr>
<tr>
<td>TSF-4021-DF</td>
<td>Limit Alarm</td>
<td>230 VAC</td>
<td>°C</td>
</tr>
<tr>
<td>TSF-4040-DF</td>
<td>Limit Alarm</td>
<td>24 VAC/VDC</td>
<td>°F</td>
</tr>
<tr>
<td>TSF-4010-MDF</td>
<td>Programming Control</td>
<td>115 VAC</td>
<td>°F</td>
</tr>
<tr>
<td>TSF-4011-MDF</td>
<td>Programming Control</td>
<td>115 VAC</td>
<td>°C</td>
</tr>
<tr>
<td>TSF-4021-MDF</td>
<td>Programming Control</td>
<td>230 VAC</td>
<td>°C</td>
</tr>
<tr>
<td>TSF-4040-MDF</td>
<td>Programming Control</td>
<td>24 VAC/VDC</td>
<td>°F</td>
</tr>
</tbody>
</table>

**ACCESSORIES**
- TCS-J, J type Thermocouple, 4" Probe, 48" Extension
- TCS-K, K type Thermocouple, 4" Probe, 48" Extension
- TS2-K, Configuration Key

### SPECIFICATIONS
- **Probe Range:** 32 to 999°F (0 to 700°C) for thermocouple J type; 32 to 999°F (0 to 999°C) for thermocouple K or S type.
- **Input:** Type J, K or S thermocouple.
- **Output:** NO SPST relay rated 16A @ 240 VAC resistive.
- **Horsepower Rating (HP):** 1 HP.
- **Control Type:** ON/OFF; manual/automatic reset.
- **Power Requirements:** 115 VAC, 230 VAC, 12 VAC/VDC or 24 VAC/VDC (depending on model).
- **Power Consumption:** 4 VA @ 230 VAC.
- **Accuracy:** ±1% FS.
- **Display:** 3-digit, red, 1/2” (12.7 mm) digits, plus sign.
- **Resolution:** 1°.
- **Memory Backup:** Nonvolatile memory.
- **Operating Temperature:** Ambient: 32 to 140°F (0 to 60°C); Storage: -4 to 176°F (-20 to 80°C).
- **Weight:** 2.3 oz (65 g).
- **Front Panel Rating:** IP64 (NEMA 3R).
- **Agency Approvals:** DF Models: CE, cUR, UR; MDF Models: None.