**Series FTS**

**Thermal Flow and Temperature Switch**

For Industrial Cooling Systems

Series FTS Thermal Flow Switch is especially designed, for all types of cooling systems, as a reliable alternative to failure prone mechanical flow switches. The thermal flow switch continually samples the temperature of the coolant and adjusts the low flow setpoint automatically, providing a solid state switch should the coolant flow rate fall below the setpoint value. In addition, the thermal flow switch will provide an alarm output should the coolant temperature rise above acceptable levels. You have double protection with the FTS.

**SPECIFICATIONS**

- **Service:** Water based liquids.
- **Low Flow Set Point:** 0.4 m/s (1.2 fps) (water related) typical.
- **Temperature Set Point:** 122°F (50°C) or 158°F (70°C), other settings possible on OEM demand.
- **Temperature Limits:** -4 to 176°F (-20 to 80°C).
- **Response Time:** 5 to 10 seconds.
- **Repeatability:** 0.5%.
- **Hysteresis:** < 20% of set-point value.
- **Pressure Limit:** 150 psi (10 bar).
- **Protection Class:** NEMA 6 (IP67).
- **Wetted Material:** 303 SS.
- **Process Connection:** 1/2˝ male NPT.
- **Electrical Connection:** M12 male socket 4-pin with 6´ (2 m) connection cable with M12 connector sold separately.
- **Power Requirement:** 18 to 30 VDC.
- **Electrical Rating:** < 200 mA.
- **Power Consumption:** 4 W max.
- **Initial Operation:** After 15 seconds.
- **Switch Type:** PNP NO (switch closes with flow).

<table>
<thead>
<tr>
<th>Model</th>
<th>Temp. Set Point</th>
<th>Sensor Length (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTS-AS</td>
<td>122°F (50°C)</td>
<td>1/2˝ (12.7 cm)</td>
</tr>
<tr>
<td>FTS-AL</td>
<td>122°F (50°C)</td>
<td>2˝ (50.8 cm)</td>
</tr>
<tr>
<td>FTS-BS</td>
<td>158°F (70°C)</td>
<td>1/2˝ (12.7 cm)</td>
</tr>
<tr>
<td>FTS-BL</td>
<td>158°F (70°C)</td>
<td>2˝ (50.8 cm)</td>
</tr>
</tbody>
</table>

**ACCESSORY**

A-284, Wiring cable 6 ft (2 m) long with M12 connector

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**Series TDC**

Remote Flow Controller

Single or Dual Relay Output, Adjustable Time Delay

Series TDC Remote Flow Controller coupled with a thermal dispersion flow switch (Series TDS) provides a complete system for leak detection, signaling high or low flow conditions, low flow cutoff, and pump or valve actuation. Controller features adjustable time delay for dampening of relay chatter, selectable NO or NC operation, and LED indication of sensor, relay, and power status. Model TDC1 accepts single switch input and single relay output. Model TDC2 accepts three switch inputs and two relay outputs.

**SPECIFICATIONS**

- **Relay Output:** TDC1: 1 SPDT form C; TDC2: 2 SPDT form C (one latching relay).
- **Relay Load:** 240 VAC, 12 A resistive, 1/2 HP.
- **Switching Mode:** Field-selectable NO or NC.
- **Supply Voltage:** 120/240 VAC, 50/60 Hz., selectable.
- **Current Consumption:** .25 amps max.
- **Time Delay:** Adjustable, 0.15 to 60 s.
- **Sensor Voltage Supply:** 13.5 VDC, 100 mA max., nominal.
- **Sensor Trigger Point:** Dry <12 mA; Wet >12 mA.
- **Sensor Input:** Terminal block.
- **Mounting:** EN 50 022 standard 32 mm DIN or panel mount.
- **Enclosure:** Polypropylene, flame retardant.
- **Temperature Limits:** -4 to 158°F (-20 to 70°C).
- **Agency Approvals:** CE.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDC1</td>
<td>Single Point Flow Controller</td>
</tr>
<tr>
<td>TDC2</td>
<td>Dual Point Flow Controller</td>
</tr>
</tbody>
</table>