Thermal

Items are net priced and are not subject to any discount.

or NC operation and are not damaged by overranging flow velocities. Units feature selectable NO
with remote PLC or relay control device. The adjustable switch point is factory calibrated
of non-coating liquids for pump and process protection. SPDT output allows for interfacing
local alarm conditions.

Controller. The Series TSP combine a liquid flow switch with a failsafe relay controller to
detect a flow or no flow situation and provides switching for direct actuation of pumps and
valves. Controller features adjustable time delay, selectable NO or NC operation, and LED
indication of sensor, relay, and power status. Four models (TSP110S, TSP210S, TSP210S, TSP220S) are designed with an integral flash alarm to provide immediate indication of
local alarm conditions.

Protect pumps and valves from dry running with the Series TSP Liquid Flow Controller. The Series TSP combine a liquid flow switch with a failsafe relay controller to
detect a flow or no flow situation and provides switching for direct actuation of pumps and
valves. Controller features adjustable time delay, selectable NO or NC operation, and LED
indication of sensor, relay, and power status. Four models (TSP110S, TSP210S, TSP210S, TSP220S) are designed with an integral flash alarm to provide immediate indication of
local alarm conditions.

SPECIFICATIONS
Service: Compatible liquids.

Wetted Materials: Polypropylene/PPS or polyvinylidene fluoride.

Range: 0.04 to 3 fps (1.2X10⁻² to .91
m/s).

Temperature Limits: -40 to 158°F
(-40 to 70°C).

Pressure Limits: 150 psi (10 bar) @
77°F (25°C), derated 1.67 psi (.113 bar)
per °C above 25°C.

Relay Output: 1 SPDT form C, isolated and sealed.

Relay Load: 250 VAC, 10 A resistive, 1/2 hp.

Switching Mode: Selectable NO or NC.

Supply Voltage: 120/240 VAC, 50/60 Hz, selectable.

*Applies to models with flash alarm only.

Current Consumption: 25 amps maximum.

Sensor Voltage Supply: 13 VDC, 1 Watt max., nominal.

Sensor Trigger Point: Dry <10 mA, wet >10 mA.

Time Delay: Adjustable, 0.15 to 60 seconds.

Flash Type: *Xenon tube.

Flash Frequency: *1 per second.

Brightness: *=50,000 CP.

Strobe Life: *10 M cycles.

Conduit Connection: 1/2” NPT.

Mounting Connection: 3/4” NPT.

Enclosure: Polypropylene, flame retardant, probe NEMA 4X (IP65).

Agency Approvals: CE.

Flowswitches.Thermal

Series

TDS

Thermal Dispersion Flow Switch

Adjustable Switch Point, LED Indication

The Series TDS Thermal Dispersion Flow Switch offers solid state flow detection of non-coating liquids for pump and process protection. SPDT output allows for interfacing
with remote PLC or relay control device. The adjustable switch point is factory calibrated
at 0.2 fps with LED indication of flow and calibration status. Units feature selectable NO or
NC operation and are not damaged by overranging flow velocities.

SPECIFICATIONS
Service: Liquids.

Wetted Materials: Polypropylene /PPS or polyvinylidene fluoride.

Range: 0.04 to 3 fps (1.2X10⁻² to .91
m/s).

Temperature Limits: 32 to 140°F (0 to
60°C).

Pressure Limits: 150 psi (10 bar) @
25°C, derated 1.987 psi (.139 bar)
per °C above 25°C.

Repeatability: ±5% of setpoint.

Switch Type: SPDT.

Electrical Rating: 60 VAC/60 VDC @
1 A.

Electrical Connections: 22 AWG 3-wire, 10 ft (3 m) length.

Process Connections: 3/4” male NPT.

Mounting Orientation: Any orientation, for pipe sizes 3/4” to 1-1/2” use 3.0” (7.6 cm) length switch; for 2” to 16” pipe sizes use 4.5” (11.4 cm) length switch.

Setpoint Drift: 0.5% of setpoint.

Response Time: 1-10 seconds.

Viscosity Range: 1 to 200 centipoise.

Supply Voltage: 12 to 36 VDC.

Consumption: 50 mA (nominal).

Indication: LED for flow status.

Weight: 3 oz (94 g).

Agency Approvals: CE.

<table>
<thead>
<tr>
<th>Model</th>
<th>Wetted Parts</th>
<th>Length</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDS112</td>
<td>PP/PPS</td>
<td>3.0” (7.6 cm)</td>
<td>$180.00</td>
</tr>
<tr>
<td>TDS212</td>
<td>PP/PPS</td>
<td>3.0” (7.6 cm)</td>
<td>287.00</td>
</tr>
<tr>
<td>TDS122</td>
<td>PP/PPS</td>
<td>4.5” (11.4 cm)</td>
<td>190.00</td>
</tr>
<tr>
<td>TDS222</td>
<td>PVDF</td>
<td>4.5” (11.4 cm)</td>
<td>290.00</td>
</tr>
</tbody>
</table>

* Items are net priced and are not subject to any discount.