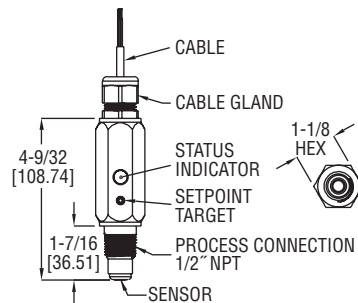


THERMAL DISPERSION FLOW SWITCH

Non-Mechanical, Low Pressure Drop



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The **SERIES TDFS** Thermal Flow Switch uses impulse thermal dispersion measurement technique to indicate whether the flow rate is above or below a user set flow rate. It provides NO and NC NPN outputs and two LED, one green and one red for high and low set point indication.

FEATURES/BENEFITS

- Better long term reliability and life expectancy than mechanical flow switches with no paddles or vanes to wear or break, no jams in the paddle movement, and no seals on movement assembly to wear or leak
- Not affected by empty pipe detection and avoids overheating by actively heating above the process temperature and then cooling down to process temperature
- Set point is easily field set by taping the included magnet on the set point target three times at the desired flow rate
- LED status indicators provide visual switch indication of set point
- Low pressure drop, only needs to be 10% into the flow (e.g. 1/8" for 3/4" schedule 40 pipe)

APPLICATIONS

- Boiler flow proving
- Hot water heaters
- Chillers
- Liquid transfer systems

SPECIFICATIONS

Service: Compatible water-based fluids.
Wetted Materials: 316 SS, Polysulfone, and FKM.
Setpoint Range: 0.5 to 10 ft/s (0.15 to 3.0 m/s).
Repeatability: 0.07 ft/s +3% of setpoint.
Typical Deadband: 0.1 ft/s +15% of setpoint.
Temperature Limits: Process: 5 to 185°F (-15 to 85°C) (non-freezing); Ambient: 5 to 167°F (-15 to 75°C), Storage: -40 to 185°F (-40 to 85°C).
Pressure Limits: 300 psig (20.67 bar), max. momentary surge: 500 psig (34.47 bar).
Response Time: Approximately 8 s.
Power Requirement: 9 to 24 VDC.

Switching Current: 400 mA, derate 5 mA/°C above 23°C.
Current Consumption: Average: 93 mA, Peak: 300 mA.
Electrical Connection: 4 conductor 22 AWG, 6' (1.83 m) long with cable gland.
Process Connection: 1/2" NPT male.
Enclosure Rating: NEMA 4X (IP65).
Housing Materials: 316 SS, 416 SS, polycarbonate, neoprene, and acrylated urethane.
Switch Type: 1 NO NPN, 1 NC NPN.
Input Power and Protection: 0.5A fuse (resettable) reverse polarity protected.
Switched Output Protection: 0.5 A fuse (resettable) reverse polarity protected.
Agency Approvals: CE.

MODEL CHART

Model	Description
TDFS-1-P-06	Thermal flow switch, 6' cable with cable gland

Note: Consult factory for longer cable lengths