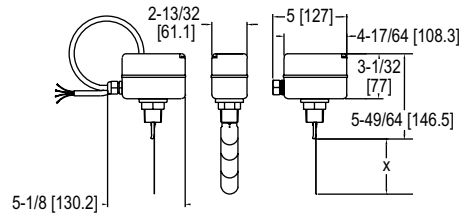


VANE FLOW SWITCH

Low Cost, Field Adjustable Set Point and Paddle



Shown with conduit connection option

The **Series FS-2 Vane Flow Switch** offers an economical flow proving solution. The FS-2 paddles are adjustable to fit 1 to 8" size pipe.

BENEFITS/FEATURES

- Field adjustable set point adjustment screw allows for easy flow switch modification
- Custom application set points enabled by field adjustable vane layers
- Aluminum weatherproof housing permits outdoor installation

APPLICATIONS

- Boiler flow proving
- Hot water heaters
- Chillers
- Cooling lines
- Machinery
- Liquid transfer systems

APPROXIMATE ACTUATION/DEACTUATION FLOW RATES FOR WATER; GPM (LPM)

Pipe Size	Blade Vane Length in (mm) Dim. X	Minimum Setting		Maximum Setting	
		Actuate	Deactuate	Actuate	Deactuate
1"	1.34 (34)	4.0 (15.0)	1.8 (6.7)	8.8 (33.3)	6.6 (25.0)
1-1/4"	1.34 (34)	5.3 (20.0)	2.6 (10.0)	11.4 (43.3)	8.4 (31.7)
1-1/2"	2.24 (57)	7.0 (26.7)	4.0 (15.0)	14.5 (55.0)	11.4 (43.3)
2"	2.24 (57)	14.1 (53.3)	9.7 (36.7)	31.3 (118.3)	22.5 (85.0)
2-1/2"	3.46 (88)	18.5 (70.0)	15.4 (58.3)	35.2 (133.3)	30.8 (116.7)
3"	3.46 (88)	27.7 (105.0)	25.1 (95.0)	52.8 (200.0)	46.2 (175.0)
4"	3.46 (88)	59.4 (225.0)	52.8 (200.0)	123.3 (466.7)	114.5 (433.3)
5"	6.57 (167)	52.8 (200.0)	39.6 (150.0)	132.1 (500.0)	123.3 (466.7)
6"	6.57 (167)	75.7 (286.7)	52.8 (200.0)	154.1 (583.3)	140.9 (533.3)
8"	6.57 (167)	184.9 (700.0)	158.5 (600.0)	396.3 (1500.0)	374.2 (1416.7)

SPECIFICATIONS

Service: Compatible liquids.
Wetted Materials: Bellow: Tin-bronze; Vane: SS; Body: Forged brass.
Temperature Limit: 230°F (110°C).
Pressure Limit: 145 psig (10 bar).
Enclosure Rating: NEMA 4 (IP64).
Switch Type: SPDT snap switch.
Electrical Rating: 10 A res, 3 A ind @ 250 VAC.
Electrical Connection: Cable gland with attached wire leads or optional conduit connection.

Process Connection: 1" male NPT or BSPT.
Mounting Orientation: Switch must be installed vertically on horizontal pipe runs.
Set Point Adjustment: Four vane combinations and an adjustment screw.
Enclosure: Die-cast aluminum alloy.
Weight: 28.22 oz (0.8 kg).
Agency Approvals: CE.

MODEL CHART

Model	Description
FS-2	Paddle flow switch

OPTIONS

To order add suffix:	Description
-BSPT	Process connection
Example: FS-2-BSPT	
-CND	Conduit connection, 1" NPT female conduit connection with no wire leads.
Example: FS-2-CND	

USA: California Proposition 65

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

SERIES TDFS2 | W.E. ANDERSON™ BY DWYER

THERMAL DISPERSION FLOW SWITCH

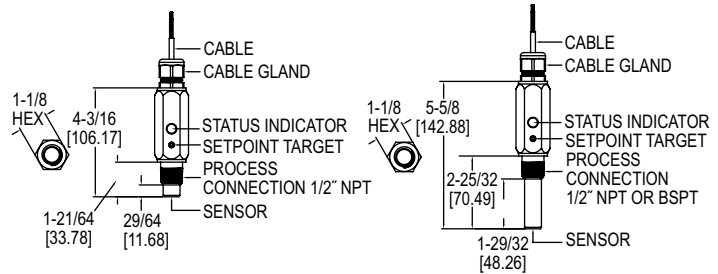
Non-Mechanical, Low Pressure Drop, Large Pipe Sizes



TDFS2-1-P-06



TDFS2-2-P-06



TDFS2-1-P-06

TDFS2-2-P-06

The **Series TDFS2 Thermal Dispersion Flow Switch** is a thermal flow switch that indicates whether the flow rate is above or below a user set flow rate. The unit incorporates two LED status indicators providing visual switch indication. The set flow rate (setpoint) is easily field adjustable with included magnet and the unit has both NO and NC NPN outputs.

BENEFITS/FEATURES

- Better 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
- Long operation life, as it is not affected by empty pipe by avoiding overheating with heating above the process temperature and then cooling down to process temperature
- Lower system run cost with low pressure drop with 10% insertion into the flow (e.g. 1/8" for 3/4" schedule 40 pipe)

APPLICATIONS

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

MODEL CHART

Example	TDFS2	-1	-C	-06	-BSPT	TDFS2-1-C-06-BSPT
Series	TDFS2					Thermal dispersion flow switch
Pipe Size		1 2				1/2 to 2" (15 to 50 mm) 2-1/2 to 10" (65 to 250 mm)
Electrical Connection*			C B P			1/2" female NPT with PVC cable for conduit connection Cable gland with burial rated cable Cable gland with PVC jacketed cable
Cable Length				X		Cable length (ft.)
Options					BSPT	1/2" BSPT process connection

*Per ft cable length adder.

SPECIFICATIONS

Service: Compatible water-based fluids.
Wetted Materials: 316 SS.
Pipe Range: 1/2 to 1-1/2" (15 to 40 mm) or 2 to 10" (50 to 250 mm) (model selectable).
Setpoint Range: 0.5 to 10 ft/s (0.15 to 3.0 m/s).
Repeatability: 0.07 ft/s (0.02 m/s) +3% of setpoint.
Typical Deadband: 0.1 ft/s (0.03 m/s) +15% of setpoint.
Temperature Limits: Ambient: 5 to 140°F (-15 to 60°C); Process: 5 to 140°F (-15 to 60°C); Storage: -40 to 185°F (-40 to 85°C).
Pressure Limits: 300 psig (20.67 bar).
Response Time: Approximately 8 s.
Power Requirement: 9-24 VDC.

Switching Current: 400 mA, derate 5 mA/°C above 23°C.
Current Consumption: Average: 93 mA; Peak: 300 mA.
Electrical Connection: 1/2" NPT female or cable gland with 4 conductor 22 AWG 6" (1.83 m) long (model selectable).
Process Connection: 1/2" NPT or BSPT male (model selectable).
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: 0.5A fuse (resettable) reverse polarity protected.
Agency Approvals: CE.