

# TRIM-TO-SIZE PADDLE-TYPE SWITCHES FOR FLOW/NO FLOW DETECTION

For Piping Systems 1/4" and Up

## FSW-20 Series



- ✓ Easy to Install
- ✓ Switch Acts Bidirectionally
- ✓ Minimum Flow Restriction
- ✓ Less Than 3 psig Pressure Drop
- ✓ Low Cost
- ✓ Reed Relay for Long Life

FSW-20 Series paddle-type switches are easily installed into pipes ranging in size from 1/4" and up, using an ordinary pipe tee or threaded weld coupling. The paddle pivots to move out of the liquid's path with increasing flow, thereby activating the switch. The paddle is easily cut for desired flow setting. Models FSW-21 and FSW-22 feature high-pressure (2000 psig max) and high-temperature [to 150°C (300°F)] ratings for rugged installations.

### SPECIFICATIONS

**Body Length:** 86 mm (3.4")

**Paddle Length:** 140 mm (5.5")

**Paddle Width:** 25 mm (1")

**Pressure Drop:** 3 psig

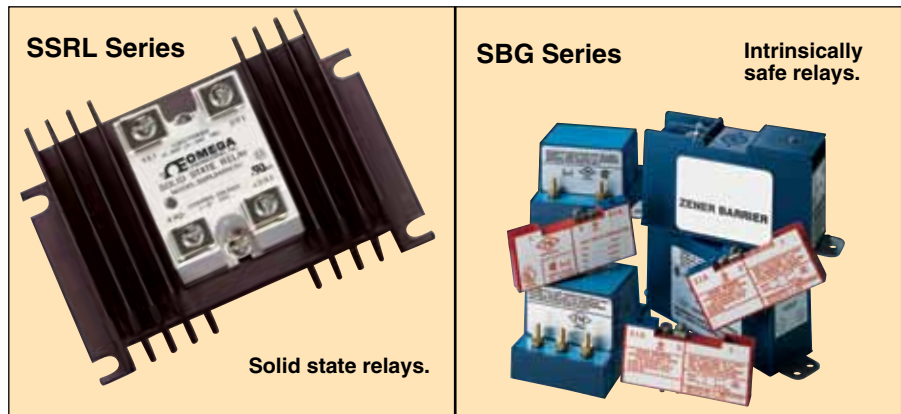
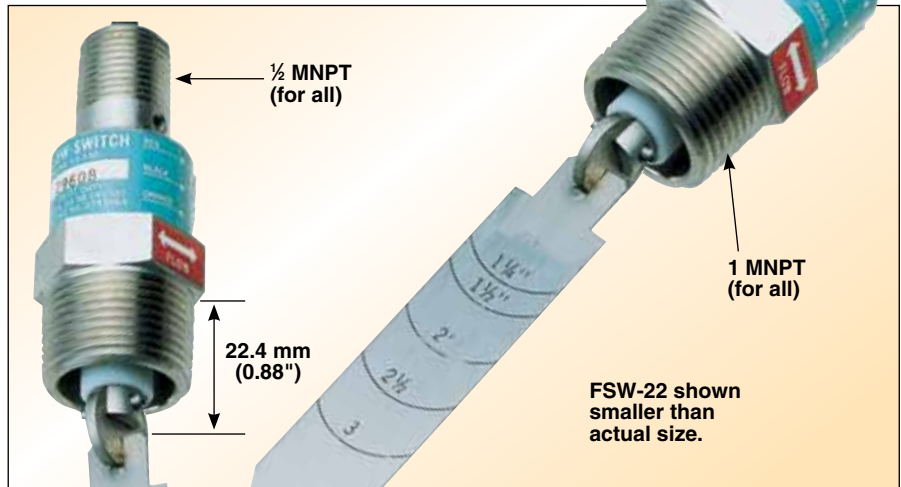
**Repeatability:** ±5%

**Setpoint Accuracy:** ±25%

**Note:** 22 mm (0.9") max height boss from pipe or tee OD for full paddle swing

**Lead Wires:** 18 AWG, 0.6 m (2') long, polymeric

**Max Viscosity:** 200 SSU or 43 centistokes



To Order						
Model No.	Materials			Operating Temperature °C (°F)	Max Pres Rating (psig)	Switch
	Housing	Paddle	Other Wetted			
FSW-21	Brass	302 SS	PTFE, ceramic	-34.4 to 149 (-30 to 300)	2000	SPDT, 20 VA
FSW-22	316 SS					

### Models FSW-21 and FSW-22 Standard Actuation and De-Actuation Setpoints

Pipe Size Marked at Paddle Cut-off Point	Pipe Line Sizes											
	1/4"		1/2"		2"		2 1/2"		3"		4"	
	Act.	De-Act.	Act.	De-Act.	Act.	De-Act.	Act.	De-Act.	Act.	De-Act.	Act.	De-Act.
1/4"	5	3	13	8	22	15	29	22				
1/2"			15	11	28	21	38	30				
2"					22	15	27	20	48	38		
2 1/2"							21	14	40	26	52	39
3"									31	20	45	32
4"											39	25

All flow rate tests for the above table were conducted with the switch installed in a standard "T" fitting. For calculation of flow rates in pipe sizes larger than 5", a flow velocity of approximately 0.5 fps actuates the switch with a full length (5") paddle.

Comes complete with operator's manual.

**Ordering Example:** FSW-21, brass and 302 SS switch.