

Paddle Bellows Flow Switch for Liquids



measuring
•
monitoring
•
analyzing

FPS



- Switching Ranges:
0.9... 4.4 GPM to
375... 760 GPM (Water)
- $p_{\max}$: 435 PSIG
- $t_{\max}$: 250 °F
- Process Connection: 1" NPT
- Material: Brass or Stainless Steel
- Micro Switch: 250 V, 15 (8) A
- Universal Mounting Position
- Switching Range Adjustable via
Easily Accessible Range Screw



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KOBOLD Instruments, Inc.
1801 Parkway View Drive
Pittsburgh, PA 15205
Main Office:
1.800.998.1020
1.412.788.4890
info@koboldusa.com
www.koboldusa.com

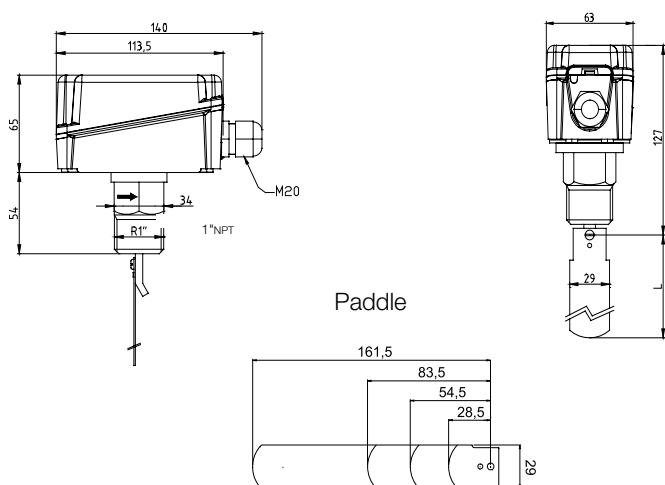


Paddle Bellows Flow Switch Model FPS

Description

The KOBOLD model FPS flow switch operates according to the proven paddle bellows principle. The flowing media acts upon the paddle, actuating a micro switch. The switching point may be freely adjusted and the device mated to different nominal pipe sizes by means of both the replaceable paddle and the easily accessible range screw located within the housing. The electrical switching cavity is separated hermetically from the process fluid by means of a bellows. The FPS-6000P version of the flow switch has been specially designed to accommodate lower switching values than standard. Although horizontal flow orientation is preferred, the devices may be installed in any orientation with some additional variation to the switching ranges indicated in the order details section seen below.

Dimensions



Technical Details

Brass Design:

Bellows: MS 58 Bronze
Paddle: Stainless Steel 316L
Bellows: Stainless Steel 321
Paddle: Stainless Steel 316L

Stainless Steel Design:

Max. Media Temperature:

-40...250 °F

Max. Ambient Temp:

-30...150 °F

Max. Allowed Pressure:

Brass: 160 PSIG
Stainless Steel: 435 PSIG

Max. Pressure Loss:

Approx. 0.15 ... 0.44 PSIG

Process Connection:

1" NPT Male

Inlet/Outlet Pipe Section:

5 x Nominal Pipe Size

Electrical Details

Switch:

SPDT Contact

Switching Voltage:

Max. 24 ... 250 V_{AC}

Switching Current:

Max. 8 A (Inductive Load)
Max. 15 A (Resistive Load)

Electrical Connection:

Cable Gland

Case:

Base: ABS

Cover: PC (Transparent)

Protection Type:

IP 65

Electrical Connection

RED-WHITE opens with reduction in flow

RED-BLUE closes with reduction in flow

Applications

- Monitoring Cooling or Lubricant Circuits
- Dry-Run Protection for Pumps
- Prevention of Low Water Levels

Order Details

Pipe Size	Standard Switching Ranges Series FPS-5...					Special Switching Ranges Series FPS-6...				
	GPM Water De-actuating	GPM Water Actuating	Max. Flow Rate (Water)	Order Number		GPM Water De-actuating	GPM Water Actuating	Max. Flow Rate (Water)	Order Number	
				Brass	St. Steel				Brass	St. Steel
1"	2.6...8.8	4.4...9.3	15.8	FPS-5100P	FPS-5200P	0.9...4.4	2.6...4.8	15.8	FPS-6100P	FPS-6200P
1-1/4"	3.5...12.3	5.7...13.2	26.4			1.1...6.2	4.0...7.0	26.4		
1-1/2"	4.8...16.3	7.5...17.6	39.6			2.2...7.0	5.3...9.7	39.6		
2"	9.7...25.1	13.7...26.9	66.0			4.0...15.9	10.1...18.1	66.0		
2-1/2"	11.9...28.6	17.6...30.8	105			5.3...21.6	13.7...24.2	105		
3"	18.9...47.1	27.3...50.2	158			9.3...32.6	21.6...36.1	158		
4"	50.2...122.0 (26.9 - 76.2)	64.7...127.7 (35.2 - 81.0)	264			21.6...75.3 (14.5...51.0)	49.8...84.1 (33.9...57.2)	264		
5"	100.8...234.7 (41.0 - 111.0)	125.1...244.8 (56.8...118.0)	413			42.7...149.7 (22.0...77.0)	98.6...166.9 (50.6...86.3)	413		
6"	158.1...360.0 (54.2...134.7)	189.8...375.0 (74.0...144.0)	528			59.9...209.6 (26.9...94.2)	138.7...234.2 (62.1...105.2)	528		
8"	319.7...729.6 (170.0...400.0)	374.7...759.5 (204.7...414.8)	1056			113.2...396.7 (95.6...243.5)	262.4...443.4 (160.7...272.1)	1056		

The values in brackets apply when using the supplied long paddle, shortened accordingly for service in larger, 4"...6" pipes, in addition to the three shorter paddles.