



Paddle Bellows Flow Monitor for liquids



measuring
•
monitoring
•
analysing

FPS



- Switching ranges:
0,17 ... 0,85 m³/h ... 72,6 ... 165,7 m³/h water
- p_{max}: 30 bar, t_{max}: 120 °C
- Connection:
G 1/2, G 3/4 (with fitting)
R 1, 1" NPT (>DN 25)
- Material: brass or stainless steel
- Microswitch 250 V, 15 (8) A
- Any mounting positions



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KOBOLD Messring GmbH
Nordring 22-24
D-65719 Hofheim/Ts.
☎ Head Office:
+49(0)6192 299-0
+49(0)6192 23398
info.de@kobold.com
www.kobold.com



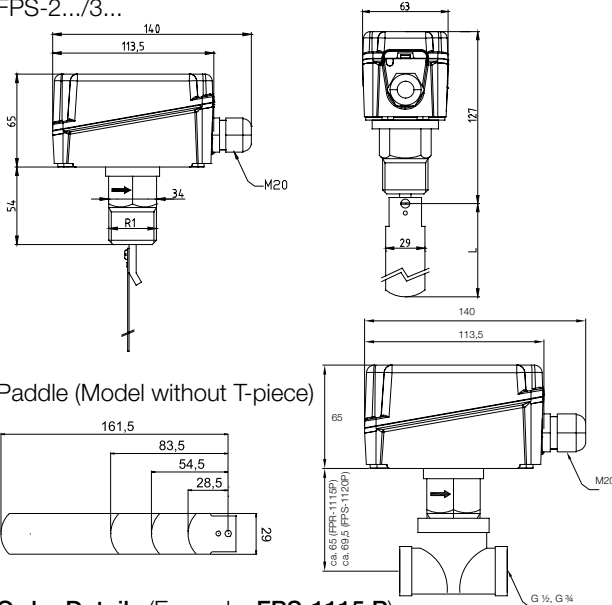
Description

The KOBOLD flow monitor FPS operates according to the proven paddle bellows principle. The flowing medium acts on the paddle thus actuating a microswitch. Switching point can be freely adjusted and the device mated to different nominal pipe sizes by means of the replaceable paddle in conjunction with the additional adjustment features. The electrical device section is separated hermetically from the process fluid by means of a bellows.

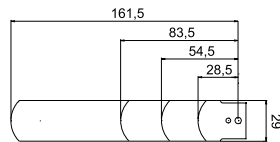
The special version of the flow monitor has been specially designed for minimum switching values. See table for switching values. The devices can be installed in any position.

Dimensions [mm]

FPS-2.../3...



Paddle (Model without T-piece)



Technical Details

Brass design: MS 58, bellows of bronze, paddle of st. steel 1.4401
 Stainless steel design: T-piece: steel zinc-plated stainless steel 1.4541, paddle of st. steel 1.4401
 Max. medium temperature: -40 ... +120 °C
 Max. ambient temperature: -35 ... +65 °C
 Max. allowed pressure: brass 11 bar, stainless steel 30 bar
 Max. pressure loss: approx. 0.01 ... 0.03 bar
 Inlet and outlet pipe section: 5 times nominal pipe size

Electrical Details

Dust-proof microswitch as single-pole changeover contact
 Switching voltage: max. 24 - 250 V_{AC}
 Switching current: max. 8 A (inductive load) max. 15 A (resistive load)
 Electr. connection: cable gland
 Case: base part ABS, cover PC (transparent)
 Protection type: IP65

Electrical connection

RED-WHITE opens with reduction in flow
 RED-BLUE closes with reduction in flow

Applications

- Monitoring cooling circuits, lubricant circuits
- Dry running protection for pumps
- Prevention of low water levels

Order Details (Example: FPS-1115 P)

Nominal pipe size	Standard switching range				Special switching range							
	m ³ /h Water falling	m ³ /h Water rising	Order number		m ³ /h Water falling	m ³ /h Water rising	Order number					
			Brass	St. steel			Brass	St. steel				
25*	0.6-2	1-2.1	FPS-2100 P (Con.: R 1)	FPS-2200 P (Con.: R 1)	0.2-1	0.6-1.1	FPS-3100 P (Con.: R 1)	FPS-3200 P (Con.: R 1)				
32	0.8-2.8	1.3-3			0.25-1.4	0.9-1.6						
40	1.1-3.7	1.7-4			0.5-1.6	1.2-2.2						
50	2.2-5.7	3.1-6.1			0.9-3.6	2.3-4.1						
65	2.7-6.5	4.0-7.0			1.2-4.9	3.1-5.5						
80	4.3-10.7	6.2-11.4			2.1-7.4	4.9-8.2						
100	11.4-27.7 (6.1-17.3)	14.7-29.0 (8.0-18.4)			FPS-5100 P (Con.: 1" NPT)	FPS-5200 P (Con.: 1" NPT)			4.9-17.1 (3.3-11.6)	11.3-19.1 (7.7-13.0)	FPS-6100 P (Con.: 1" NPT)	FPS-6200 P (Con.: 1" NPT)
125	22.9-53.3 (9.3-25.2)	28.4-55.6 (12.9-26.8)			Models with T-piece				9.7-34.0 (5.0-17.5)	22.4-37.9 (11.5-19.6)		
150	35.9-81.7 (12.3-30.6)	43.1-85.1 (16.8-32.7)							13.6-47.6 (6.1-21.4)	31.5-53.2 (14.1-23.9)		
200	72.6-165.7 (38.6-90.8)	85.1-172.5 (46.5-94.2)							25.7-90.1 (21.7-55.3)	59.6-100.7 (36.5-61.8)		
15	174-846	480-948	FPS-1115 P									
20	138-768	408-858	FPS-1120 P									

* For DN 25 a fitting is required in which the paddle can move freely. The values in brackets apply when using the supplied long paddle, which is shortened for service in DN 100 to DN 150 and which must be mounted with the three short paddles.



Order Details Spare parts

Model	Description	Image
ERS-FPSPAD01	Set of spare paddles for FPS	A photograph showing four metal paddles of varying lengths and two small screws. The paddles are arranged vertically, with the shortest on the left and the longest on the right. Each paddle has two small holes near the top. The screws are positioned to the left of the shortest paddle.