



## Paddle Bellows Flow Monitor for Liquids



measuring  
•  
monitoring  
•  
analysing



- Switching ranges  
0.17 - 0.85 m<sup>3</sup>/h to  
72.6 - 165.7 m<sup>3</sup>/h water
- p<sub>max</sub>: 30 bar, t<sub>max</sub>: 120 °C
- Connection:  
G 1/2, G 3/4 (with fitting)  
R 1, 1 NPT (> NW 25)
- Material:  
brass or stainless steel
- Microswitch 250 V, 15 (8) A
- Any mounting positions
- Conformity certificate

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

**Model:**  
FPS



**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.

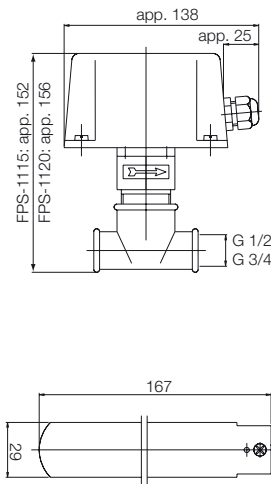
The special version of the flow monitor has been specially designed for minimum switching values. See table for switching values. The devices can be installed in any position.

**Technical Details**

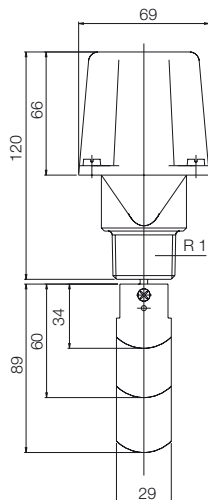
Brass design: MS 58, bellows of bronze, paddle of st. steel 1.4401  
 T piece: steel zinc-plated  
 Stainless steel design: stainless steel 1.4541, paddle of st. steel 1.4401  
 Max. medium temperature: -40 to +120 °C  
 Max. ambient temperature: -35 to +65 °C  
 Max. allowed pressure: brass 11 bar,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

**Dimensions**

FPS-1...



FPS-2...



FPS-3...

**Electrical Details**

Dust-proof microswitch as single-pole changeover contact  
 Switching voltage: max. 24 - 250 V<sub>AC</sub>  
 Switching current: max. 8 A (inductive load), max. 15 A (resistive load)  
 Electr. connection: cable gland  
 Case: ABS  
 Protection type: IP 65  
 Conformity certificate: VdTÜV instructions Flow 100

**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)

Nominal pipe size	Standard switching range				Special switching range					
	m <sup>3</sup> /h Water falling	m <sup>3</sup> /h Water rising	Order number		m <sup>3</sup> /h Water falling	m <sup>3</sup> /h Water rising	Order number			
			Brass	St. steel			Brass	St. steel		
25*	0.6-2	1-2.1	FPS-2100 (Con.: R 1)	FPS-2200 (Con.: R 1)	0.2-1	0.6-1.1	FPS-3100 (Con.: R 1)	FPS-3200 (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)			4.9-17.1 (3.3-11.6)	11.3-19.1 (7.7-13.0)			FPS-6100 (Con.: 1 NPT)	FPS-6200 (Con.: 1 NPT)
125	22.9-53.3 (9.3-25.2)	28.4-55.6 (12.9-26.8)			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)				
	L/h water	L/h water								
15	174-846	480-948	FPS-1115							
20	138-768	408-858	FPS-1120							

\*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 NW 100 to NW 150 and which must be mounted with the three short paddles.