PISTON TYPE FLOW SWITCH

1. DESIGNS AND APPLICATIONS:

The piston-type switch (FS) operates according to a modified variable area principle. The device is equipped with a spring-loaded piston inside a cylindrical tube. The flowing medium moves the piston in the direction of the flow corresponding to flow rate. A reed contact is situated outside the device. This reed contact is infused in a stepless adjustable housing and thus protected from external influences. When the float reaches along with its integrated magnet the reed switch contact actuates. If the flow is higher the piston continues to move (maximum up to the stopper that prevents overriding of the operating range). This ensures a bistable switching action at any time.

- **RANGE OF APPLICATION:**
  This is intended for measuring and monitoring low-viscosity fluid or gaseous media, for example, in cooling system for welding machines, laser and pipe installations, pump monitoring, compressors, high-pressure cleaners and so on.

- **SWITCHING HYSTERESIS:**
  In actual application, a switching hysteresis of only 0.5-1.5 mm piston stroke has been achieved by careful selection of the reed contacts being used.

3. SPECIAL FEATURES:

- Female thread connection
- Compact design
- Horizontal or vertical installation
- For water, oils and liquids
- Accuracy 5% FS, high accuracy consult factory.
- High pressure option on request.

4. TECHNICAL DATA:

Material	Brass, stainless steel or other	
Switch	Reed switch	
Nominal size	8 NB, 10NB, 15 NB, 20NB, 25 NB	
Process Connection	Female thread G ¼...G 1 (further process connection available on request)	
Switching Range	0.4...60 l/min	For details see table "Range"
Pressure Loss	0.4....1.4 bar at Q_{max}	
Q_{max}	To 80 l/min	
Tolerance	±5% of full scale value	
Pressure Resistance	10 bar, 50 bar & high pressure on request	
Media temperature	-20....+100° C, high temperature on request.	
Media	Water (oils, gases and aggressive media available on request)	
Switching Voltage	Max. 230 V AC / 24 V DC	
Switching Current	Max. 1 A	
Switching Capacity	Max. 50 VA / max. 20 VA (depending upon switch model)	
Ingress Protection	IP 65 or better	
Electrical Connection	Plug DIN 43650-A, optionally round plug connector m12×1, 4-pole	
Set Point	Adjustable	

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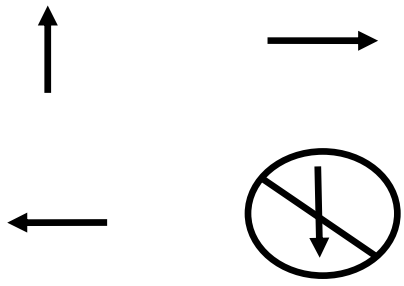
5. RANGE TABLE:

Nominal Pipe Size (mm)	Setting Range (Falling) LPM (Water)	Max. Flow LPM	Process Connection BSPF (inches)
8, 10, 15, 20	0.5 to 5	10	1/4, 3/8, 1/2, 3/4
10, 15, 20, 25	2 to 12	20	3/8, 1/2, 3/4, 1
15, 20, 25	5 to 25	40	1/2, 3/4, 1
20, 25	10 to 40	60	3/4, 1
25	20 to 60	100	1

6. ORDERING CODES:

CODE	TYPE OF FLOW SWITCH					
FS*	PISTON TYPE FLOW SWITCH					
	CODE	PROCESS CONNECTION				
	8	FEMALE THREAD G 1/4"				
	10	FEMALE THREAD G 3/8"				
	15	FEMALE THREAD G 1/2"				
	20	FEMALE THREAD G 3/4"				
	25	FEMALE THREAD G 1"				
		CODE	MATERIAL			
		B	BRASS			
		S	STAINLESS STEEL			
		0	OTHER			
			CODE	SCALE		
			1	FOR WATER		
			2	FOR OIL		
			3	OTHER FLUID		
				CODE	NUMBER OF CONTACT	
				1	1 SPST	
				2	1 SPDT	
				3	2 SPDT	
					CODE	SPECIAL ISSUES
					S	SPECIAL FEATURES
FS	**15**	**B**	**1**	**1**	**S**	

7. MOUNTING INSTRUCTION:



NOTE: Flow switch value may differ according to the type of installations. [Please take care of surge currents to avoid damage of Reed switch element, in such cases please apply R.C. Network (Resistor & Capacitor)].

For Higher flow applications, please consult factory.

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