

Flow switch

For industrial heat exchangers

Model FSM-6100

WIKA data sheet FV 30.10

Applications

- Detects the “no flow” condition of liquid carrying flow lines entering industrial heat exchangers (water chillers or heaters). The signals from flow switch prevents system failure (e.g. Chiller freezing)
- Operational controls of pumps, burners and motorized valves in additive pumping and other commercial flow lines to avoid system failure upon lack of water or liquid supply

Special features

- Switch point repeatability of $\leq 5\%$ for reliable switching
- High quality bellows & micro switch for endurance > 500,000 cycles
- Stainless steel paddles with rigid construction to withstand pressure surges and high media temperatures



Flow switch, model FSM-6100

Description

The model FSM-6100 is an electromechanical flow switch designed for "no flow" detection of water or any non-corrosive liquids entering industrial chillers, heaters or any commercial flow lines. The signal from the flow switch is been used for operational controls that prevents system failure.

FSM-6100 is an economical flow switch that comes with a plastic cover and IP30 protection to prevent accidental intrusions.

The model FSM-6100 is equipped with high quality UL certified micro switch and protective bellows to ensure high endurance with durable operation and long service life.

The flow range options with line sizes from 25 ... 150 NB enables for variable applications to detect the flow in non-critical areas.

Specifications

Case

ABS plastic cover, RAL 3028
Sealing: Nitrile, phosphor bronze bellows

Ingress protection per IEC/EN 60529

IP30

Process media

Water, ethylene glycol, any other liquid non corrosive to brass, phosphor bronze and Nitrile material.

Measuring element

Paddle, stainless steel 316

Process connection

ASTMBC38500 brass, lower mount
 ■ 1" BSPT male per ISO 7
 ■ 1" NPT male per ANSI B1.20.1 (option)

Switch point repeatability

±5% of FSR

Operating life cycle

>500,000

Operating pressure

10 bar

Withstand pressure

15 bar

Permissible temperature ranges

■ Ambient: -20 ... 70°C [-4 ... 158°F]
 ■ Medium: -20 ... 100°C [-4 ... 212°F]
 ■ Storage: -20 ... 70°C [-4 ... 158°F]

Switching function

1 × SPDT (single pole double throw)
Silver - alloy contacts, UL certified

Electrical connection

M16 via grommet

Mounting

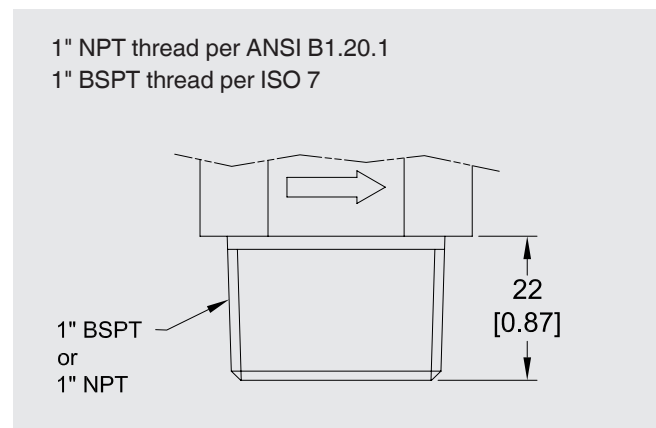
- Horizontal pipe mounting
- Vertical pipe mounting

Flow should be along the direction of arrow mark indicated on process connection.

Weight

Approx. 400 ... 420 grams, depending on setting range

Process Connection



Electrical rating

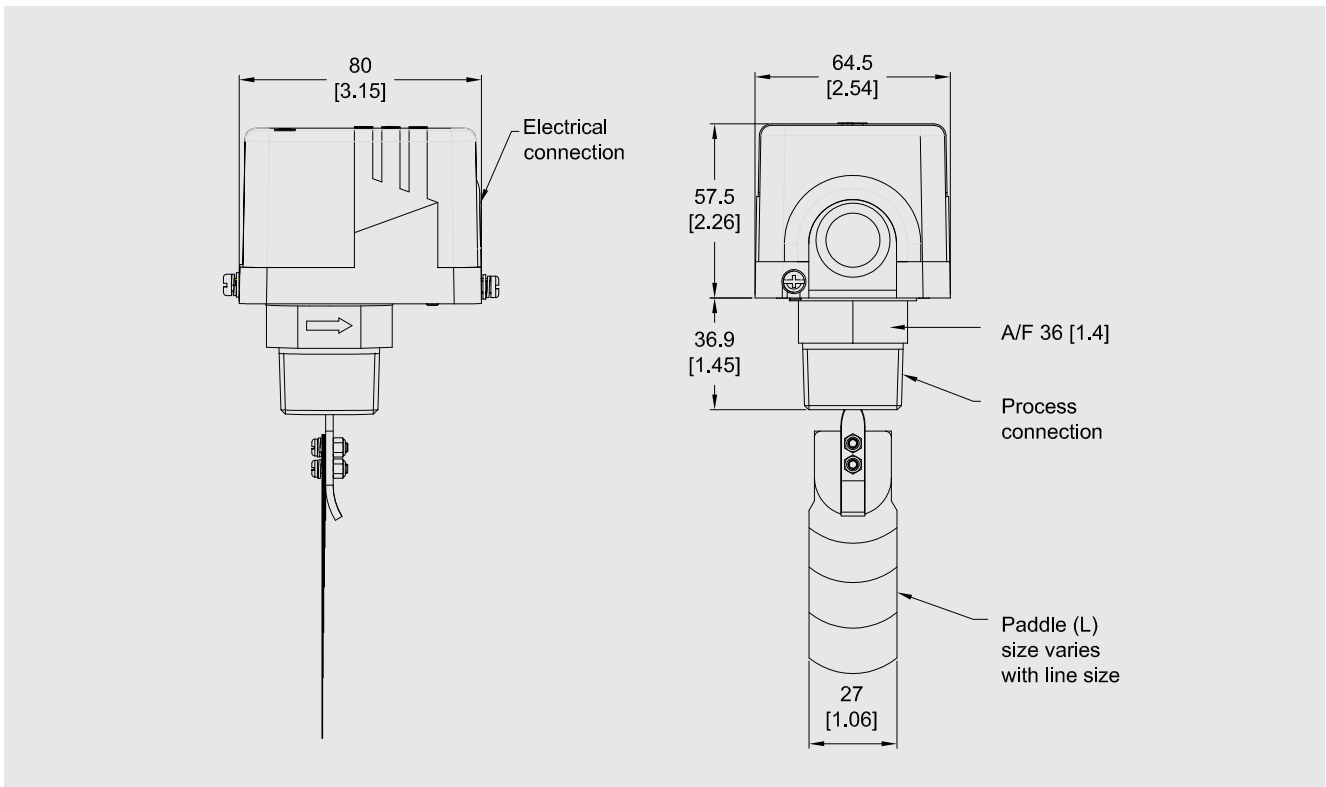
AC rating				DC rating				
Resistive load		Inductive load		Resistive load		Inductive load		
125V	250V	125V	250V	125V	250V	30V	125V	250V
15A	15A	15A	15A	0.5A	0.25A	6A	0.05A	0.03A

Setting range

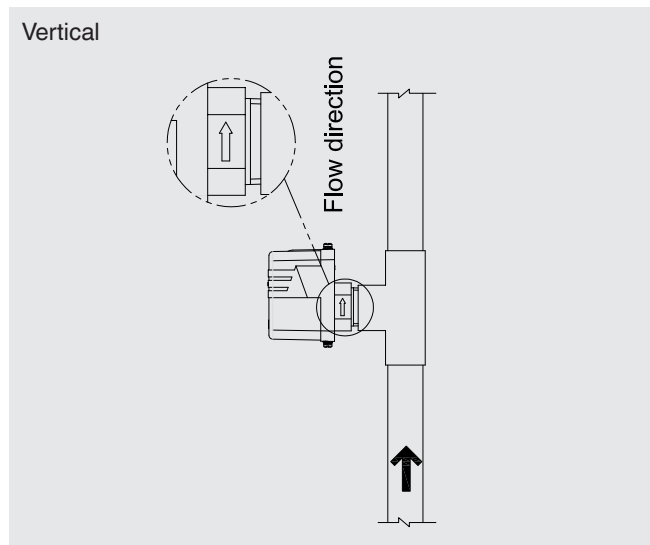
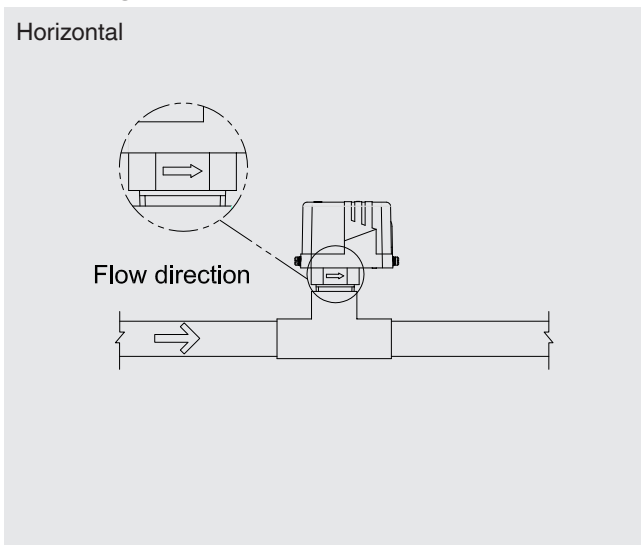
Nominal Bore		Paddle combinations	'ON' falling flow (LPM)		'ON' rising flow (LPM)		Maximum operating flow (LPM)
in	mm	'L' mm	Minimum	Maximum	Minimum	Maximum	
1	25	28	15	50	25	60	150
1.25	32	28	45	100	50	110	150
1.5	40	28	50	140	60	160	350
2	50	37	100	240	110	260	450
		37+50	50	160	60	180	450
2.5	65	37	225	480	230	520	1100
		37+50	140	320	150	340	1100
3	80	37	320	750	380	860	1100
		37+50	210	550	225	635	1100
		37+50+80	105	320	115	340	1100
4	100	37	500	1400	590	1700	2000
		37+50	350	1100	400	1300	2000
		37+50+80	200	580	230	680	2000
5	125	37	730	1750	1030	2100	2000
		37+50	500	1500	650	2050	2000
		37+50+80	400	1000	475	1250	2000
		37+50+80+100	300	800	330	930	2000
6	150	37	2650	3000	2750	3100	3200
		37+50	850	2400	990	2600	3200
		37+50+80	650	1800	750	1900	3200
		37+50+80+100	350	1450	450	1550	3200

Above flow ranges are considered with water as medium
(at density = 1000 kg/m³, pressure = 1 atm, temperature = 25 °C)

Dimensions in mm [in]



Mounting



Ordering information

Model / Process connection

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 We reserve the right to make modifications to the specifications and materials.