

### Description

KWFS(S) series liquid flow switch, suitable for pipelines in industrial plants: heating and air conditioning, refrigeration systems and heat pumps; flow control of water and conventional liquid media.

### Features

- Flow control of water and normal media
- Renovated SPDT micro switch ensures the reliable switch function
- 15(8A) 250VAC switch rating IP65, class I enclosure
- Setpoint adjustable
- Stainless steel paddle
- Stainless Steel 304 material
- Max. liquid temp 120°C
- Max working pressure 13.5 Bar

### Applications

Control and monitor liquid flow of boilers, pumps, etc., of heating, cooling, and air conditioning equipment.



### Technical Data

Model	KWFS(S)
Type of operation	On/Off, single-stage, micro switch
Output	SPDT, 24/250 VAC, 15 (8) A
Flow rate switching	See flow rate table
Flow rate setting adjustment	Internal screw
Sensing element	Paddle
Liquid applications	Hot, chilled, well, pool and sea water, Brine or ethylene glycol
Parts material in contact with fluid	Stainless Steel 304
Paddle material	Stainless steel
Liquid temperature	-20°C~120°C
Permissible ambient temperature	-40°C~85°C
Permissible ambient humidity	10 ... 90% RH, non-condensing
Cable entry	M18 fitting
Housing	Fire Resistance ABS or PC
Protection	IP 65
Color	White
Weight	1.0 Kg

### Liquid Flow Rate Table

Line Pipe Size(in.)		1	1-¼	1-½	2	2-½	3	4	4Z	5	5Z	6	6Z	8	8Z
Min. flow	Flow Increase ①&② Connected	4.2 (1.0)	5.8 (1.3)	7.5 (1.7)	13.7 (3.1)	17.6 (4.0)	27.5 (6.2)	64.7 (14.7)	35.2 (8.0)	12.5 (28.4)	57.01 (12.9)	90.0 (43.1)	74.0 (16.8)	374.7 (85.1)	204.7 (46.5)
	Flow Decrease ①&③ Connected	2.5 (0.6)	3.7 (0.8)	5.0 (1.1)	13.7 (2.2)	11.9 (2.7)	19 (4.3)	50.1 (11.4)	26.9 (6.1)	101.1 (22.9)	41.0 (9.3)	158.0 (35.9)	54.0 (12.3)	319.7 (72.6)	170.0 (38.6)
Max. flow	Flow Increase ①&② Connected	9.2 (2.1)	13.3 (3.0)	17.6 (4.0)	26.9 (6.1)	30.8 (7.0)	50.2 (11.4)	127.6 (29.0)	81.0 (18.4)	245.0 (55.6)	118.0 (18.4)	374.7 (85.1)	144.0 (32.7)	759.5 (172.5)	415.0 (94.2)
	Flow Decrease ①&③ Connected	8.1 (1.9)	12.5 (2.8)	16.3 (3.7)	25.1 (5.7)	28.6 (6.5)	471 (10.7)	122.0 (27.7)	76.2 (17.3)	234.7 (53.3)	111.0 (25.2)	359.7 (81.7)	134.7 (30.6)	729.6 (165.7)	400.6 (90.8)



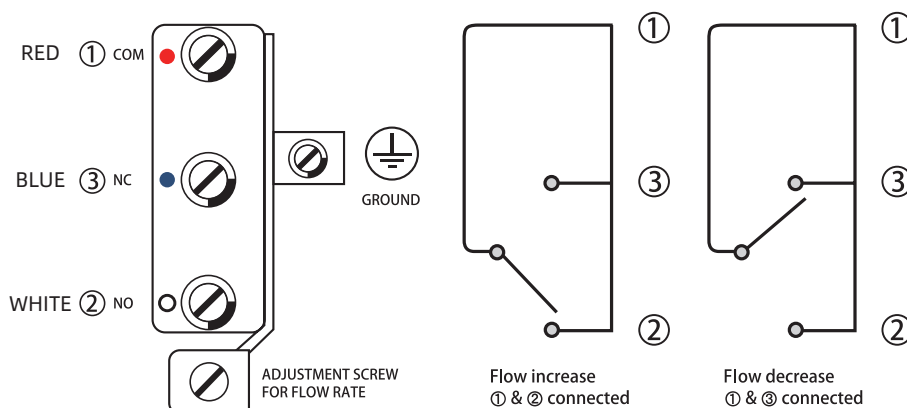
#### Note:

①For flow rates with suffix "Z", the 6 inch paddle must be installed. ②The flow rate unit of the above table is GPM (m³ /h).

### Types Of Model

Model	Connection
KWFS(S)-1	1/2"-14 NPT
KWFS(S)-2	3/4"-14 NPT
KWFS(S)-3	1" -11½NPT

### Electrical Wiring



### Installation

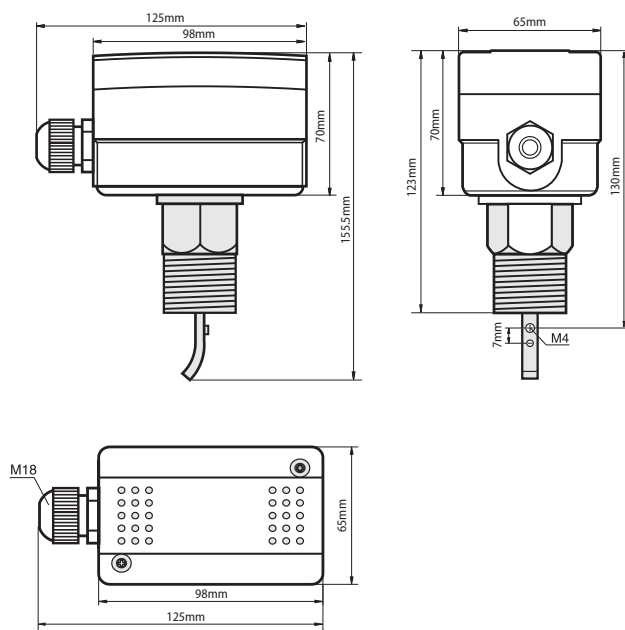
The flow switch can be installed in every position far from elbows or throttlings, with arrow on flow direction. If pipe is vertical, recalibrate range to balance paddle weight. If the device is downwards mounted, take care to slugs and apply it in a straight pipe that is far from filters, valves, etc. with length at least 5 times the diameter of pipe upstream and downstream the unit.



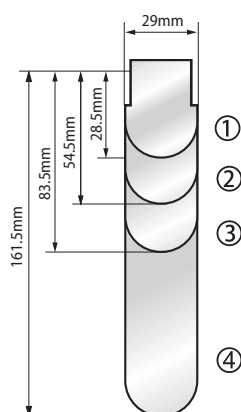
#### Note:

The flow switch is factory calibrated at its minimum sensitivity. To increase the set valve, turn the adjustment screw clockwise. The cut-out valve must be  $\geq$  the minimum flow necessary to guarantee the protection of the plant.

### Dimensions (mm)



### Paddles



Install Paddle	
Pipe	No.
1"	1
1 ¼"	1
1 ½"	1
2"	1,2
2 ½"	1,2
3"	1,2,3
4"	1,2,3
4"Z	1,2,3,4
5"	1,2,3
5"Z	1,2,3,4
6"	1,2,3
6"Z	1,2,3,4
8"	1,2,3
8"Z	1,2,3,4