Sontay®
Four Elms Road - Edenbridge
Kent - TN8 6AB - UK

FS-W & FS-541S

Liquid Flow Paddle Switch

Issue Number 10.0
01/09/2026



Features and Benefits

- Adjustable switching point
- Suitable for applications up to 11bar
- Lid-mounted screws provide tamper proofing
- Well suited for many general industrial plant applications

Technical Overview

The FS-W is a paddle switch intended to monitor liquid flow within pipes and provide a switch output on detection of either a specific flow rate or flow failure. The FS-W & FS-541S screws directly into a 1" BSP boss.

Switching sensitivity can be adjusted by means of a calibration screw within the unit. The paddle can be trimmed to increase sensitivity if necessary.

Product Codes

FS-W	Water flow switch 1” BSP brass fitting
FS-541S	Water flow switch 1” BSP stainless steel fitting

Specification

Contact Rating		15(8)A @ 24 to 250Vac	
Switch		Dust tight micro-switch	
Housing dimensions		113.5 x 65 x 62mm	
Paddles		28.5, 54.5, 83.5 & 161.5mm x 29mm	
Materials:			
	Main Body	ABS	
	Cover	Transparent PC	
	Paddles	Stainless steel 316	
		FS-W	*FS-541S*
	Boss	Brass	SS 316
	Rod	Brass	SS316
Ambient:			
	Media	-40 to +120°C	
	Ambient	-40 to +85°C	
	Humidity	10 to 90% non-condensing	
Max Static Pressure:			
	FS-W	11 bar	
	FS-541S	30 bar	
Protection		IP65	
Country of origin		Italy	
Conformity		LVD, CE & UKCA Marked	

WEEE Directive:

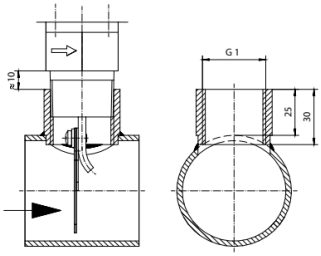
At the end of the products useful life please dispose as per the local regulations.
Do not dispose of with normal household was
Do not burn.

Tel: +44 (0)1732 861200 - E-mail: sales@sontay.com - Web: www.sontay.com
© 2017 Sontay Limited. All rights reserved

Installation

- The FS-W maybe positioned with the housing above in horizontal or in vertical position away from elbows and narrowing of the pipework.

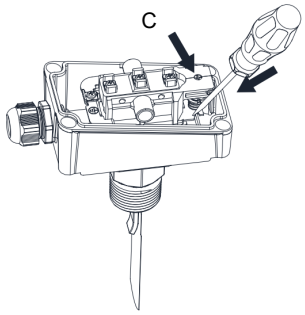
- The directional arrow must be orientated downstream:



- If pipe is vertical, recalibrate range to balance paddle weight.

- If the device is downwards mounted take care to slags and apply it in a straight pipe far from filters, valves, etc with length at least 5 times the diameter of pipe upstream and downstream the unit.

- After installation check that the paddle moves freely within the pipework. With a screwdriver press lightly until you hear a click from the micro-switch. Apply the minimum flow rate and adjust screw “C” to obtain the opening of the red/white contact:



The FS-W is factory calibrated to its minimum sensitivity. To increase the sensitivity, turn the adjustment screw clockwise. The cut-out value must be > the minimum flow necessary to guarantee operation.

Connections

Dangerous voltages may exist within this unit.

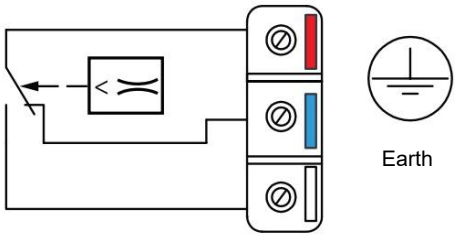
Connection should be carried out by a competent and suitably qualified electrician only.

The relevant earthing requirements should be observed when connecting the unit, especially when using higher voltages.

Do not over tighten the terminals.

Connect the red-white contacts. These contacts will open when the value drops below the set level in the event of a flow decrease.

The red-blue contacts close simultaneously and can be used as a signal contact.



© 2017 Sontay Limited. All rights reserved

Flow Rates, Paddle Requirements & Dimensions

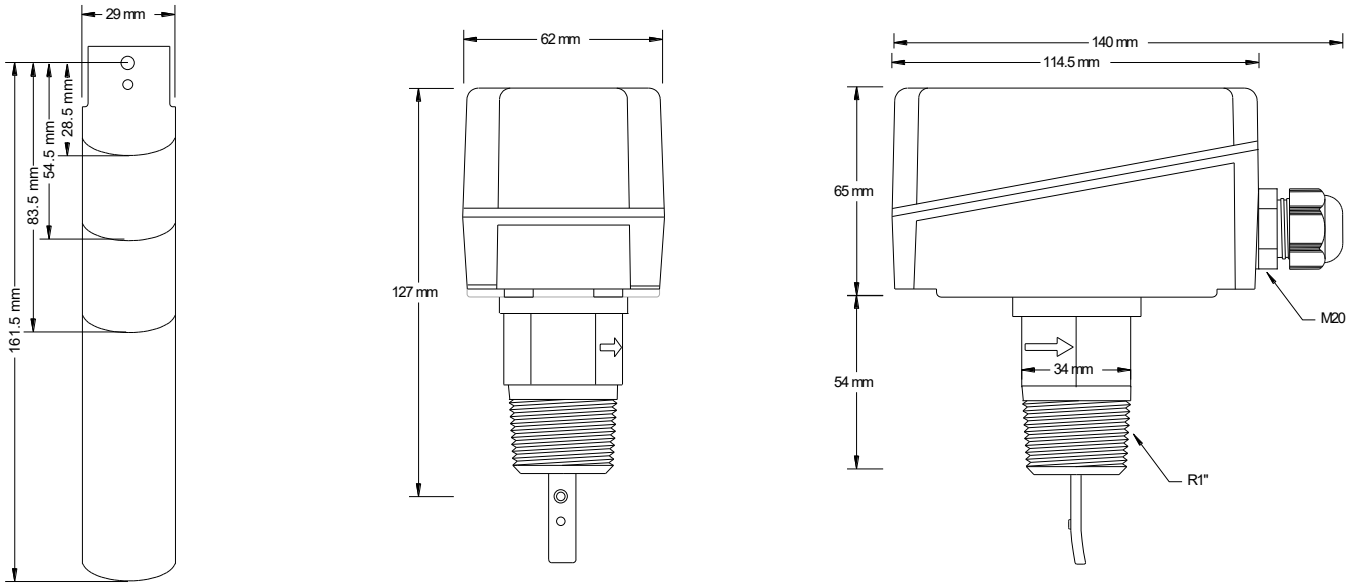
Pipe Size	Paddles	Qmax m³/h Recommended	Min. Adjustment m³/h cut-off/cut-in	Max. Adjustment m³/h cut-off/cut-in
1½"	1	9	1.1 (1.7)	3.7 (4.0)
2"	1 & 2	15	2.2 (3.1)	5.7 (6.1)
2½"	1 & 2	24	2.7 (4.0)	6.5 (7.0)
3"	1, 2 & 3	26	4.3 (6.2)	10.7 (11.4)
4"	1, 2, & 3	60	11.4 (14.7)	27.7 (29.0)
4" *	1, 2, 3 & 4	60	6.1 (8.0)	17.3 (18.4)
5"	1, 2 & 3	94	22.9 (28.4)	53.3 (55.6)
5" *	1, 2, 3 & 4	94	9.3 (12.9)	25.2 (26.8)
6"	1, 2 & 3	120	35.9 (43.1)	81.7 (85.1)
6" *	1, 2, 3 & 4	120	12.3 (16.8)	30.6 (32.7)
8"	1, 2 & 3	240	72.6 (85.1)	165.7 (172.5)
8" *	1, 2, 3 & 4	240	38.6 (46.5)	90.8 (94.2)

For pipe sixes with suffix "*" the longest paddle must be used to obtain the values indicated in this table.

Pressure drop at the max. flow (Qmax) 0.08bar

When using multiple paddles, they must be arranged in order of decreasing length downstream, i.e. with the longest paddle facing the oncoming liquid.

Dimensions



Whilst every effort has been made to ensure the accuracy of this specification, Sontay cannot accept responsibility for damage, injury, loss or expense resulting from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.

Tel: +44 (0)1732 861200 - E-mail: sales@sontay.com - Web: www.sontay.com
© 2017 Sontay Limited. All rights reserved