

# SF1K-US

## Liquid Flow Switch

ACI's liquid flow switch is a mechanical switch for the detection and verification of liquid flow. The flow switch is designed to be used in 1 to 8" (25.4 to 203.2 mm) diameter pipe sizes. The switch mounts into a 1" NPT pipe connection. The enclosure carries a IP65 rating with 1/2" conduit connection. The switch includes various 316 stainless steel paddles. The paddle size to install will be determined by the pipe size and flow rate. When liquid pushes against the paddle, it triggers a SPDT micro switch that is controlled by a manually adjustable set point.

Common application areas include heating and air conditioning systems, refrigeration systems, heat pumps, water fire suppression, and many more.

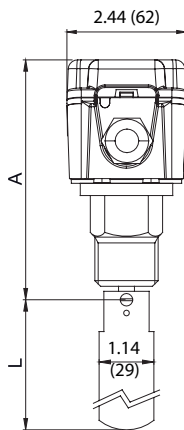
**Applications:** Monitoring flow in heating and air conditioning systems, refrigeration systems, heat pumps, water fire suppression

**The SF1K Series Flow Switches are covered by ACI's Two (2) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's website, [workaci.com](http://workaci.com).**

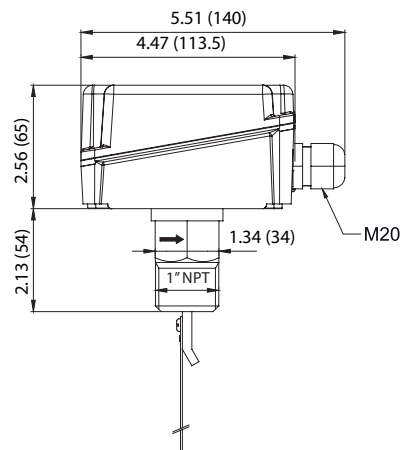
### PRODUCT SPECIFICATIONS

<b>Contact Form:</b>	Form 1C (SPDT Contact)
<b>Contact Rating:</b>	15 (8) A, 24 to 250 VAC
<b>Pipe Size:</b>	1 to 8" (25.4 to 203.2 mm) Diameter
<b>Maximum Pressure:</b>	159.5 PSI (11 bar)
<b>Flow Rate:</b>	See Flow Rate Table Below
<b>Connection:</b>	NPT 1"
<b>Body Material:</b>	Brass
<b>Paddle Material:</b>	Stainless steel AISI 316L
<b>Housing Material:</b>	Base in ABS, transparent PC cover
<b>Housing Operating Temperature   Humidity:</b>	-40 to 85°C (-40 to 185°F)   10 to 90% RH, non-condensing
<b>Maximum Liquid Temperature:</b>	-40 to 120°C (-40 to 248°F)
<b>Recommended Storage Temperature   Humidity:</b>	-40 to 85°C (-40 to 185°F)   < 95% RH, Non-Condensing
<b>Enclosure Ratings:</b>	IP65, Class 1
<b>Product Dimensions (L x W x H):</b>	5.51" (140 mm) x 2.44" (62 mm) x 2.56" (65 mm)
<b>Approvals:</b>	CE
<b>Product Weight:</b>	2.1 lbs. (0.95 kg)

### DIMENSIONAL DRAWING



Top View



Right View



<b>H2O FLOW RATE SF1K</b>					
Pipe Connector Ø	Qmax GPM (m <sup>3</sup> /h) Recommended	Min. Adjustment GPM (m <sup>3</sup> /h)		Max. Adjustment GPM (m <sup>3</sup> /h)	
		Cut-Off	Cut-In	Cut-Off	Cut-In
1"	15.9 (3.6)	2.6 (0.6)	4.4 (1.0)	8.8 (2.0)	9.2 (2.1)
1 1/4"	26.4 (6.0)	3.5 (0.8)	5.7 (1.3)	12.3 (2.8)	13.2 (3.0)
1 1/2"	39.6 (9.0)	4.8 (1.1)	7.5 (1.7)	16.3 (3.7)	17.6 (4.0)
2"	66.0 (15.0)	9.7 (2.2)	13.6 (3.1)	25.1 (5.7)	26.9 (6.1)
2 1/2"	105.7 (24.0)	11.9 (2.7)	17.6 (4.0)	28.6 (6.5)	30.8 (7.0)
3"	158.5 (36.0)	18.9 (4.3)	27.3 (6.2)	47.1 (10.7)	50.2 (11.4)
4"	264.2 (60.0)	50.2 (11.4)	64.7 (14.7)	122.0 (27.7)	127.7 (29.0)
4" Z	264.2 (60.0)	26.9 (6.1)	35.2 (8.0)	76.2 (17.3)	81.0 (18.4)
5"	413.9 (94.0)	100.8 (22.9)	125.0 (28.4)	234.7 (53.3)	244.8 (55.6)
5"Z	413.9 (94.0)	40.9 (9.3)	56.8 (12.9)	111.0 (25.2)	118.0 (26.8)
6"	528.3 (120.0)	158.1 (35.9)	189.8 (43.1)	359.7 (81.7)	374.7 (85.1)
6" Z	528.3 (120.0)	54.2 (12.3)	74.0 (16.8)	134.7 (30.6)	144.0 (32.7)
8"	1,056.7 (240.0)	319.6 (72.6)	374.7 (85.1)	729.6 (165.7)	759.5 (172.5)
8" Z	1,056.7 (240.0)	170.0 (38.6)	204.7 (46.5)	399.8 (90.8)	414.8 (94.2)

For models with suffix "Z" the longest paddle must be used to obtain the values indicated on the table.

Pressure drop at the maximum flow (Qmax): 1.2 PSI (0.08 bar)

<b>STANDARD ORDERING</b>		
ACI Model #	Item #	Description
SF1K-US	151604	Liquid Flow Switch, SPDT, IP65, Paddle Kit, 1-8" Pipe Size