Flow Switch Operation Manual

Introduction

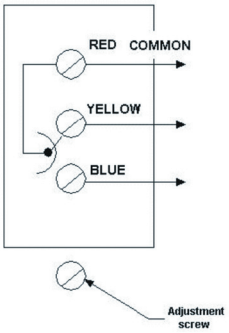
- TF50-P flow switch used to sense the change of flow that passes the pipe line, playing a role to protect the torrential flow
- It can be regulated based upon different require of flow
- It employs a SPDT micro switch with large capacity, possessing the advantages of quick action to guarantee the transient of the switch
- The outer covering of switches applies the totally enclosed construction, while the inside parts use the corrosion-proof stainless steel materials, ensuring switch's normal work under any medium.
- Liquid temperature: 0~120°C(0~248°F)
- Max. working pressure: 13.5 bar(193 psig)

Electrical Data:

Rated Voltage (V) / Rated Current (A)		Power	125V	250V
		COS Ø	AC	AC
Non-inductive Load Current		1	15	15
Inductive Load	Full Load Current	15	3.5	2.5
Current	Starting Current	0.45	21	15

Type	Pipe Size(in.)	Junction	Max. Working Pressure	Flow Temperature	Weight	Flow Adjusting Range				
						Tubing	Min.		Max.	
						Size	Flow Decrease	Flow Increase	Flow Decrease	Flow Increase
TF50-P	3"	1"-11 ½ (NPT)	1000Kpa	0~100°C	0.6Kg	1"	2.5	4.2	8.5	8.8
						2"	9.5	13.7	27	29
						3"	19	27.5	50	53

Function of Contacts



Action of flow switch when enough fluid passing pipeline, connect RED-YELLOW contacts loop.

Note

- When going out of factory, the flow switch is equipped with 1”, 2” and 3” paddle can be trimmed followed with the template in the principle that trimmed paddle should not touch with the pipe wall in the bottom.
- The flow switch must installed in the 1” pipeline and a 1” * 1” * 1” tee must be applied. If the flow switch is installed on the pipeline of the large diameter, a reducing tee must be used to cooperate with the flow switch and a paddle of the corresponsive length should be equipped.
- The flow switch should be installed on the horizontal line or vertical line where the flow direction is upward. Never install the flow switch on the vertical line where the flow direction is downward. When installing the flow switch on the vertical line where the flow direction is upward, the data of runoff should be modified considering the affection of the gravity of the liquid.

Flow Data for Action of Switch GPM (m^3 / hr)											
Pipeline (in.)		1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"
Min. Adjustment	Flow Increase	4.2	5.8	7.5	13.7	18	27.5	65	125	190	375
	Red ----- Yellow	-1	-1.3	-1.7	-3.1	-4.1	-6.2	-14.8	-28.4	-43.1	-85.2
	Close							37.0+	57.0+	74.0+	205.0+
								-8.4	-12.9	-16.8	-46.6
	Flow Decrease	2.5	3.7	5	9.5	12.5	19	50	101	158	320
	Red ----- Blue	-0.6	-0.8	-1.1	-2.2	-2.8	-4.3	-11.4	-22.9	-35.9	-72.7
	Close							27.0+	41.0+	54.0+	170.0+
								-6.1	-9.3	-12.3	-38.6
Max. Adjustment	Flow Increase	8.8	13.3	19.2	29	34.5	53	128	245	375	760
	Red ----- Yellow	-2	-3	-4.4	-6.6	-7.8	-12	-29.1	-55.6	-85.2	-172.6
	Close							81.0+	118.0+	144	415.0+
								-18.4	-26.8	-32.7	-94.2
	Flow Decrease	8.5	12.5	18	27	32	50	122	235	360	730
	Red ----- Blue	-1.9	-2.8	-4.1	-6.1	-7.3	-11.4	-27.7	-53.4	-81.8	-165.8
	Close							76.0+	111.0+	135.0+	400.0+
								-17.3	-25.2	-30.7	-90.8

Adjustment Flow Switch Procedure

- Remove the case of flow switch.
- Adjust flow value to max. clockwise rotates adjustment screw; on the opposition, flow value is adjusted min., anti-clockwise rotates adjustment screw.
- Press down main lever for several times, and the lever has no “clatter” sound, namely flow switch is lower than set point value.