Klinger flowswitch

Mechanical paddle with T-piece

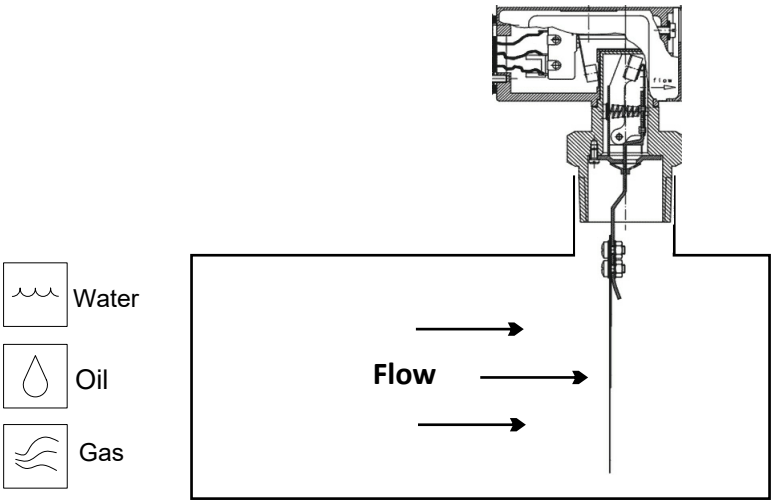
Monitoring flow is today a discipline that is very widespread, and in the majority of installations, where liquids are transported, there is interest in monitoring the flow and being able to take action if leaks should occur or the expected liquid supply disappears / changes .

Mounting a flow meter will be the immediate solution, but in many applications it is "just" an alarm that is needed, and a flow switch will therefore be an attractive solution - not least because of the price, that will be more attractive than a complete meter with electrical output signals.

Selection of flowswitch

There are several different types of flow switches on the market, but it is probably the paddle switch that is the most common for safety monitoring.

The type is preferred because the alarm function is direct and activated without delay - solely on the basis of the liquid flow, independent of pressure and temperature.



The principle is simple

The switch is built around a paddle that is in contact with the medium. The paddle is attached to the center, and provided with a permanent magnet at the opposite end. This is used to actuate a switch that is located outside the fluid flow.

When the liquid flow to be monitored is in motion, it pushes against the paddle which will rotate around the suspension point and in this way activate the switch.

As soon as the liquid flow is interrupted, the paddle will move back to the starting position and deactivate the electrical switch. The force required to push the paddle back into the starting position is provided by a spring.

T-piece in several materials

In this version, the paddle switch comes with a T-piece that is adapted to your pipe.

The T-piece is available in several materials, with thread, solder or glue connection (depending on the material).

If you choose a metal connection, you can also choose between internal and external threads.

If you want a special setpoint, you can choose between 4 different paddles for each dimension, as well as an option for mechanical fine-tuning.

T-piece paddle switch:

- Pipe dimensions from DN08 to DN50
- T-piece in brass, stainless steel, PVC or copper
- Brass or stainless steel paddle
- Connector or cable connection
- Switch point can adjusted

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Technical data

Design:	Flowswitch with T-piece	
Type:	S22xxxBA	
Materials:	Paddle:	Brass or Stainless Steel
	T-piece:	Nickelplated Brass, Stainless Steel, PVC or Copper
	Cover:	ABS
Process connection:	Thread Female/male, Glue sleeve (PVC), solder sleeve (Cu)	
Pipe dimensions:	DN 08 to DN 50mm	
Ranges:	See table below	
Elektrical connection:	Plug:	DIN 43650A
	Cable:	1,0 m PVC cable
Output:	Microswitch: Max 250VAC, 24VDC / 3A	
Ingress protection:	IP 65	
Media Temperature:	-20…90 °C	
Pressure:	Max 25 bar (Brass/Stainless T-piece)	
Pressure loss:	0,01bar at max Flow	

Ranges

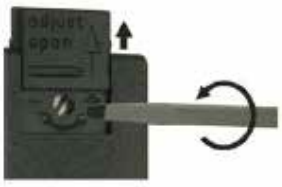
Dimension	Range A	Range B	Range C	Range D	Max Flow
mm	l/min Water	l/min Water	l/min Water	l/min Water	l/min Water
DN15	3.3(2.8)…4.4(3.7)	5.3(4.5)…7.2(6.1)	6.0(5.1)…8.1(6.9)	8.4(7.1)…11.3(9.6)	20
DN20	5.8(4.9)…7.8(6.7)	9.4(8.0)…12.8(10.8)	10.6(9.1)…14.4(12.2)	14.9(12.6)…20.1(17.1)	40
DN25	9.1(7.7)…12.3(10.4)	14.7(12.5)…19.9(16.9)	16.6(14.1)…22.5(19.1)	23.2(19.8)…31.4(26.7)	60
DN32	14.8(12.6)…20.1(17.1)	24.1(20.5)…32.7(27.8)	27.3(23.2)…36.9(31.4)	38.1(32.4)…51.5(43.8)	80
DN40	23.2(19.7)…31.4(26.7)	37.7(32.1)…51.0(43.4)	42.6(36.2)…57.6(49.0)	59.5(50.6)…80.5(68.4)	100
DN50	36.2(30.8)…49.0(41.7)	59.0(50.1)…79.8(67.8)	66.6(56.6)…90.0(76.5)	93.0(79.0)…125.8(106.9)	150

Indication of measuring range: min. Increasing flow (decreasing flow)… max. Increasing flow (decreasing flow)

Values are for water at 20°C, horizontal pipe / tolerance 15%

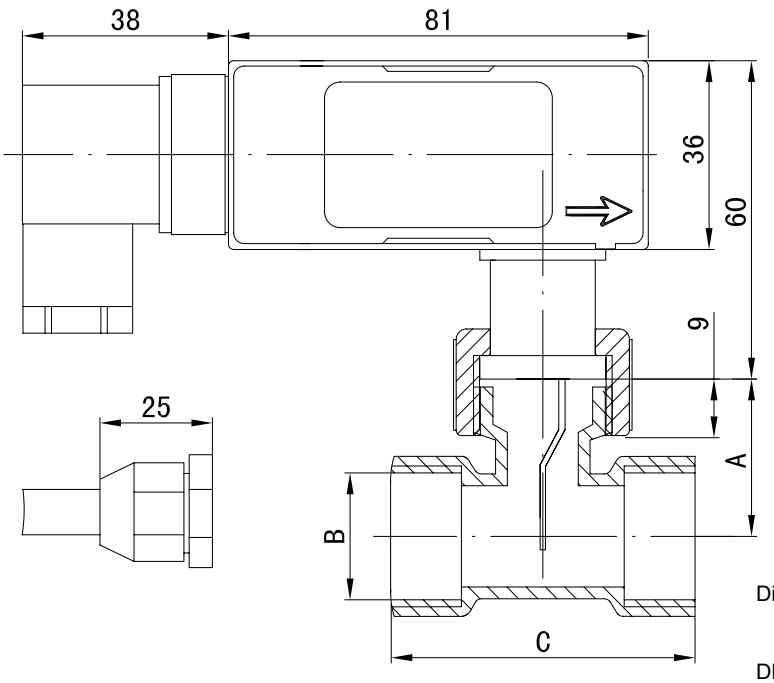
Switchpoint Setting:

1. Open the cover



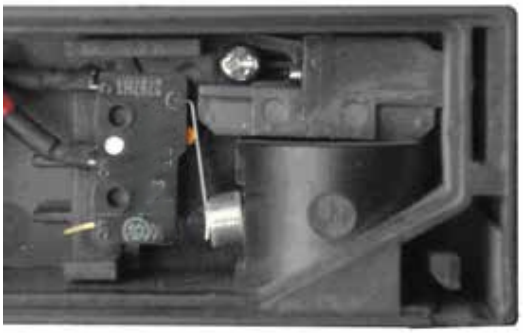
2. Adjust the switchpoint by turning the screw

Dimensions



Diameter	A	B	C
	mm	mm	mm
DN15	28	G1/2	50
DN20	28	G3/4	58
DN25	36	G1	58
DN32	34	G1-1/4	72
DN40	39	G1-1/2	72
DN50	44	G2	72

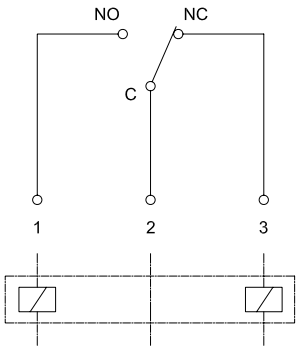
Electrical connection



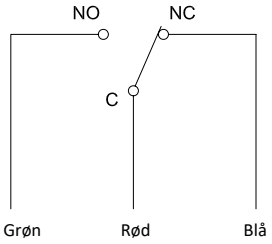
The output of the Paddleswitch are a Microswitch, allowed load:

Max. Current: 3A
Max. Voltage: 250 VAC / 24 VDC +/- 10%

Plug EN 175301-803-A



Cable



Product type

S22	020	B	A	1A	A	/1M	Specifikation
S22							S22 Paddle switch
	15						Dimension G 1/2 (T-piece)
	20						Dimension G 3/4 (T-piece)
	25						Dimension G 1 (T-piece)
	32						Dimension G 1-1/4 (T-piece)
	40						Dimension G 1-1/2 (T-piece)
	50						Dimension G 2 (T-piece)
		B					T-piece: nickel plated brass
		P					T-piece: PVC
		S					T-piece: Stainless Steel
			A				Process Connection: Thread / male
				1A			El-connection: Plug DIN 43650
				2A			El-connection: Cable
					A		Range: A, see table
					B		Range: B, see table
					C		Range: C, see table
					D		Range: D, see table
						/1M	Cable length (standard 1m)
						… …	

Sample type:

Paddleswitch for DN32 w. T-piece in brass, DIN 43650 and switchpunkt at 30 l/min decreasing

Product type: S22032BA1AC

Other Models

Universel:

Insertion:

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