




# Flow switches for insertion installation

## Threaded adapter with trimmable paddle



Technical data	VHS06	VK306
<b>Switching function</b>	Contact → closes at increasing flow → opens at decreasing flow Reversing possible	Contact → closes at increasing flow → opens at decreasing flow
<b>Pressure rating</b>	Max. 360 psi	Max. 160 psi
<b>Temperature ranges</b>		
<b>Medium</b>	-13...230 °F	-13...212 °F
<b>Ambient</b>	-13...176 °F	-13...158 °F
<b>Electrical data</b>		
<b>Electrical connection</b>	Plug connector DIN EN 175301-803-A incl. cable socket	59 inch PVC jacket cable
<b>Switching current</b>	Max. 1 A	
<b>Switching voltage</b>	Max. 230 VAC, 48 VDC	
<b>Rating</b>	Max. 26 VA, 20 W	
<b>Degree of protection EN 60529</b>	IP65	
<b>Approvals</b>		
	 	 <ul style="list-style-type: none"> <li>• UL 508</li> <li>• UL 353</li> <li>• CSA C22.2#14-10</li> </ul>

### Advantages

- Universal Flow switches for 3/4...8"
- Fully adjustable for pipe size and setpoint by trimming the paddle
- Glass fiber reinforced plastic paddle or stainless steel paddle for higher flow rates
- Threaded adapters for tees or for direct insertion into pipes
- Easy installation due to union nut

Options	
For type	See oder code
VHS06	→ Plug connector DIN EN 175301-803-A incl.cable socket with two LED for switching voltages 24 V...230 V AC/DC ±20 %, ambient temperature -4...158 °F → or 4-pin-sensor plug M12 x 1
For type	On request
VK306	→ Reversed switching function

**VHS06 / VK306 with plastic paddle, installation into pipe tees**

Paddle to be trimmed to						
	Paddle mark	9	15	20	30	40
	Installation length L <sub>1</sub> [inch]	1.6	1.8	2.1	2.5	2.9
Nominal pipe size	Setpoints* / Max. flow rate [GPM]					
¾"	Increasing flow ON**	4.8				
	Decreasing flow OFF	4.0				
	Max. flow rate	17.6				
1"	Increasing flow ON**	7.7	5.7			
	Decreasing flow OFF	6.9	4.8			
	Max. flow rate	37	22			
1¼"	Increasing flow ON**	12.7	9.2	7.8		
	Decreasing flow OFF	11.5	8	6.6		
	Max. flow rate	66	44	35.2		
1½"	Increasing flow ON**	19.3	14.5	12	9.1	
	Decreasing flow OFF	17	12.7	10.5	7.7	
	Max. flow rate	110	90	70	44	
2"	Increasing flow ON**		21	18.5	14.3	11.5
	Decreasing flow OFF		20	16.5	12.8	10.3
	Max. flow rate		150	130	100	61

**VHS06 / VK306 with plastic paddle, installation by welded socket ½" NPT female threaded, length 1 inch**

Paddle to be trimmed to									
	Paddle mark	15	20	30	40	50	60	70	80
	Installation length L <sub>1</sub> [inch]	1.8	2	2.4	2.8	3.2	3.6	4	4.4
Nominal pipe size	Setpoints* / Max. flow rate [GPM]								
2½"	Increasing flow ON**	38	31	23.5	19	16			
	Decreasing flow OFF	35	29.5	22	18	14.5			
	Max. flow rate	200	170	130	100	88			
3"	Increasing flow ON**	52	42	34	27	23	19	18	
	Decreasing flow OFF	50	41	31	25.5	22	18.5	16.5	
	Max. flow rate	390	300	240	190	160	140	120	
4"	Increasing flow ON**		68	55	46	39.5	34	28.5	27
	Decreasing flow OFF		64	50	42	35	31	26.5	25.5
	Max. flow rate		420	340	270	230	200	175	150
6"	Increasing flow ON**			150	120	100	86	79	68
	Decreasing flow OFF			140	110	88	78	70	61.5
	Max. flow rate			750	600	520	460	400	370
8"	Increasing flow ON**				240	198	167	147	130
	Decreasing flow OFF				230	192	159	141	126
	Max. flow rate				1100	990	870	770	695

\* Water, 68 °F, horizontal pipe, tolerance ±15 %

\*\* Typical value

**VHS06 / VK306 with stainless steel paddle, installation into pipe tees**

Paddle to be trimmed to					
	Paddle mark	15	20	30	40
	Installation length L <sub>1</sub> [inch]	1.8	2	2.4	2.8
Nominal pipe size	Setpoints* / Max. flow rate [GPM]				
¾"	Increasing flow ON**	3.1			
	Decreasing flow OFF	2.6			
	Max. flow rate	30			
1"	Increasing flow ON**	5.5	4.4		
	Decreasing flow OFF	4.6	3.9		
	Max. flow rate	44	26		
1¼"	Increasing flow ON**	9.7	8.1	6.2	
	Decreasing flow OFF	8.8	7	5.3	
	Max. flow rate	88	65	50	
1½"	Increasing flow ON**	15	12	8.8	
	Decreasing flow OFF	13	11	7.9	
	Max. flow rate	144	100	80	
2"	Increasing flow ON**	22	18	14	12
	Decreasing flow OFF	20	17	13	10
	Max. flow rate	240	170	120	100

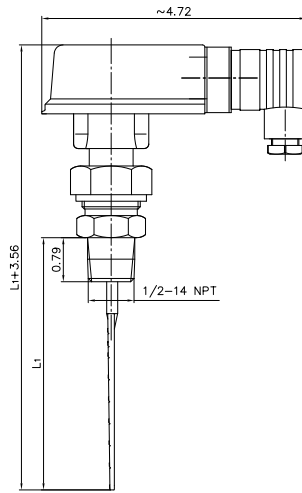
**VHS06 / VK306 with stainless steel paddle, installation by welded socket ½" NPT female threaded, length 1 inch**

Paddle to be trimmed to									
	Paddle mark	15	20	30	40	50	60	70	80
	Installation length L <sub>1</sub> [inch]	1.8	2	2.4	2.8	3.2	3.6	4	4.4
Nominal pipe size	Setpoints* / Max. flow rate [GPM]								
2½"	Increasing flow ON**	36	31	24	19	15			
	Decreasing flow OFF	34	28.5	22	17.5	14.5			
	Max. flow rate	400	320	250	200	150			
3"	Increasing flow ON**	50	42	33	27	23	20		
	Decreasing flow OFF	48.5	41.5	31	25.5	21	18		
	Max. flow rate	650	550	450	380	300	250		
4"	Increasing flow ON**		66	55	46	37.5	33	28.5	27
	Decreasing flow OFF		61	52.5	42	35	30	27	25
	Max. flow rate		800	650	520	450	400	350	300
6"	Increasing flow ON**				101	81.5	72.5	66	70
	Decreasing flow OFF				97	79	70	61	65
	Max. flow rate				1200	1000	900	800	700
8"	Increasing flow ON**					176	147	140	118
	Decreasing flow OFF					167	140	136	114
	Max. flow rate					1900	1600	1400	1300

\* Water, 68 °F, horizontal pipe, tolerance ±15 %

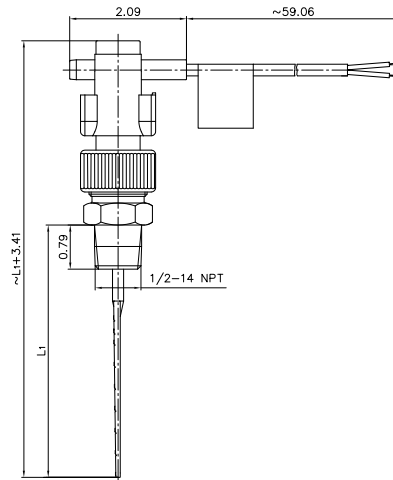
\*\* Typical value

VHS06 with plastic paddle



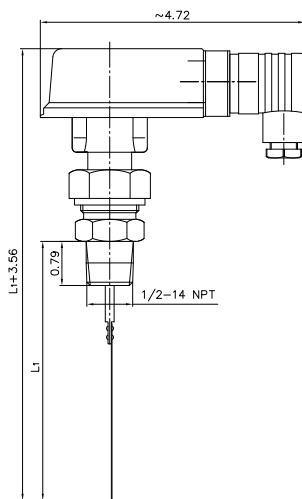
Flow direction

VK306 with plastic paddle



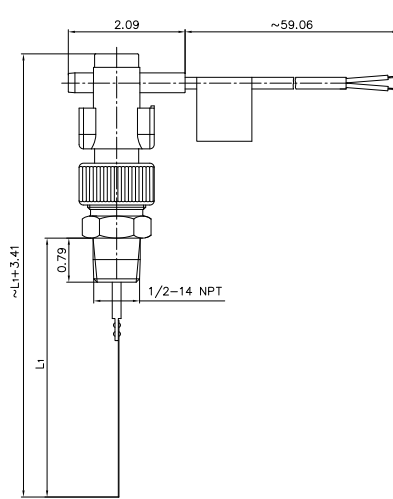
Flow direction

VHS06 with stainless steel paddle



Flow direction

VK306 with stainless steel paddle



Flow direction

**Materials in contact with fluid**

Type	VHS06	VK306
<b>Body</b>	Brass CW614N	PPE+PS Noryl™ 30 % glass fiber reinforced
<b>Paddle</b>	Plastic paddle: PPE+PS Noryl™ 30 % glass fiber reinforced / stainless steel Stainless steel paddle: Stainless steel 1.4310 / brass	
<b>Process connection</b>	Brass CW614N	
<b>Magnet</b>	Hard ferrite	
<b>O-ring</b>	NBR	

Order code	Example → VHS06M2	P	171Z21
<b>Type</b>			
<b>Flow switches VHS06</b>			
Plug connector incl. cable socket (standard)	VHS06M2		171Z21
Plug connector incl. cable socket with LED (option)	VHS06M2		191Z21
4-pin-sensor plug M12 x 1 (option)	VHS06M2		181Z21
<b>Flow switches VK306</b>			
59 inch PVC jacket cable	VK306M2		10PZ21
<b>Paddle</b>			
Plastic		P	
Stainless steel		5	