

Flow switches // VHS06, VK306

For insertion installation



VHS06



VK306



Highlights

- Universal flow switches for DN 20...200
- Adjustable for pipe size and setpoint by trimming the paddle
- Threaded adapters for tees or for direct insertion into pipes

Technical data	VHS06	VK306
Switching function	Contact → closes at increasing flow → opens at decreasing flow Reversing possible	Contact → closes at increasing flow → opens at decreasing flow
Pressure rating	PN 25	PN 10
Temperature ranges		
Medium	-25...110 °C	-25...100 °C
Ambient	-25...80 °C	-25...70 °C
Electrical data		
Electrical connection	Plug connector DIN EN 175301-803-A incl. cable socket	1.5 m PVC jacket cable
Max. Switching current	1 A	
Max. Switching voltage	230 VAC, 48 VDC	
Max. Rating	26 VA, 20 W	
Degree of protection EN 60529	IP65	
Protection class EN 60730-1	Class II	
Approvals*		



* Only for flow switches with plastic paddle

Options // Set point ranges

Options	
For type	See order 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 -20...70 °C → or 4-pin-sensor plug M12 x 1
For type	On request
VK306	→ Reversed switching function
VK306 with plastic paddle	→ Recognized component ETL according to UL & CSA standards

VHS06 / VK306 with plastic paddle, installation into pipe tees according to EN 10242

Paddle to be trimmed to						
	Paddle mark	9	15	20	30	40
	Installation length L ₁ [mm]	40	46	51	61	71
Setpoints* / Max. flow rate [m³/h]						
DN 20	Increasing flow ON**	1.1				
	Decreasing flow OFF	0.9				
	Max. flow rate	4				
DN 25	Increasing flow ON**	1.7	1.3			
	Decreasing flow OFF	1.5	1.1			
	Max. flow rate	8.5	5			
DN 32	Increasing flow ON**	2.9	2.2	1.9		
	Decreasing flow OFF	2.6	1.9	1.6		
	Max. flow rate	15	10	8		
DN 40	Increasing flow ON**	4.2	3.2	2.8	2.1	
	Decreasing flow OFF	3.8	2.8	2.4	1.8	
	Max. flow rate	25	18	14	10	
DN 50	Increasing flow ON**	6.5	4.9	4.4	3.3	2.7
	Decreasing flow OFF	6	4.5	4	3	2.4
	Max. flow rate	41	29	24	17	13

VHS06 / VK306 with plastic paddle, installation by welded socket according to EN 10241, G½ female, length 15 mm

Paddle to be trimmed to									
	Paddle mark	15	20	30	40	50	60	70	80
	Installation length L ₁ [mm]	46	51	61	71	81	91	101	111
Setpoints* / Max. flow rate [m³/h]									
DN 65	Increasing flow ON**	8.8	7.4	5.6	4.5				
	Decreasing flow OFF	8.5	7	5.2	4.2				
	Max. flow rate	50	45	34	27				
DN 80	Increasing flow ON**	13.8	11.7	9.2	7.5	6.5	5.1		
	Decreasing flow OFF	11.3	9.6	7.7	6.3	5.3	4.7		
	Max. flow rate	80	65	50	40	33	28		
DN 100	Increasing flow ON**		18.8	14.6	12.3	10.2	8	6.9	6.2
	Decreasing flow OFF		16.3	12	10	8	7.1	6.3	5.9
	Max. flow rate		110	80	65	55	50	40	36
DN 150	Increasing flow ON**				27	22.8	19.5	18	15.7
	Decreasing flow OFF				25	19.8	17.8	16	14.3
	Max. flow rate				150	130	110	100	90
DN 200	Increasing flow ON**					45	38	33.5	30
	Decreasing flow OFF					43.5	36	32	29
	Max. flow rate					230	200	175	160

* Water, 20 °C, horizontal pipe, tolerance ±15 %

** Typical value

Set point ranges

VHS06 / VK306 with stainless steel paddle, installation into pipe tees according to EN 10242					
Paddle to be trimmed to					
	Paddle mark	15	20	30	40
	Installation length L ₁ [mm]	46	51	61	71
Setpoints* / Max. flow rate [m³/h]					
DN 25	Increasing flow ON**	1.2	1		
	Decreasing flow OFF	1	0.9		
	Max. flow rate	10	6		
DN 32	Increasing flow ON**	2	1.7		
	Decreasing flow OFF	1.7	1.5		
	Max. flow rate	20	15		
DN 40	Increasing flow ON**	3.3	2.7	2	
	Decreasing flow OFF	3	2.5	1.8	
	Max. flow rate	34	26	18	
DN 50	Increasing flow ON**	4.8	4	3.2	2.6
	Decreasing flow OFF	4.6	3.8	2.9	2.4
	Max. flow rate	55	45	32	24

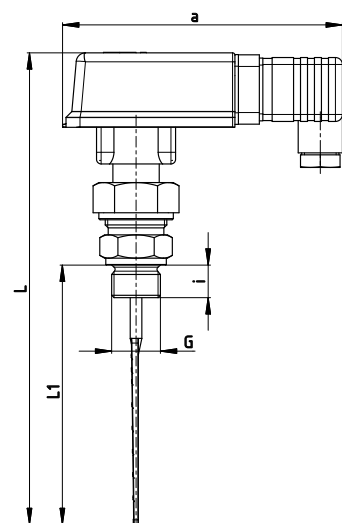
VHS06 / VK306 with stainless steel paddle, installation by welded socket according to EN 10241, G½ female, length 15 mm									
Paddle to be trimmed to									
	Paddle mark	15	20	30	40	50	60	70	80
	Installation length L ₁ [mm]	46	51	61	71	81	91	101	111
Setpoints* / Max. flow rate [m³/h]									
DN 65	Increasing flow ON**	7.2	6.0	4.5	3.6				
	Decreasing flow OFF	6.8	5.7	4.2	3.3				
	Max. flow rate	100	80	65	50				
DN 80	Increasing flow ON**	11.7	10	7.7	6.4	5.3	4.6		
	Decreasing flow OFF	11.4	9.6	7.5	6	4.9	4.2		
	Max. flow rate	150	125	95	75	60	50		
DN 100	Increasing flow ON**		16	12.4	10.3	8.7	7.7	6.7	6.1
	Decreasing flow OFF		15.9	11.9	9.8	8.1	7.1	6.3	5.6
	Max. flow rate		200	150	120	105	90	75	70
DN 150	Increasing flow ON**				24	20.3	18	16.3	14.7
	Decreasing flow OFF				22.7	19	17.3	15.3	13.8
	Max. flow rate				290	250	210	190	170
DN 200	Increasing flow ON**					41	35.7	31.7	26.7
	Decreasing flow OFF					38.7	34	29.7	23.3
	Max. flow rate					450	390	350	310

* Water, 20 °C, horizontal pipe, tolerance ±15 %

** Typical value

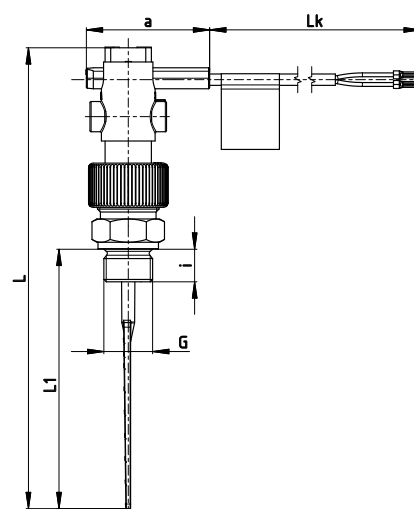
Dimensions

VHS06 with plastic paddle



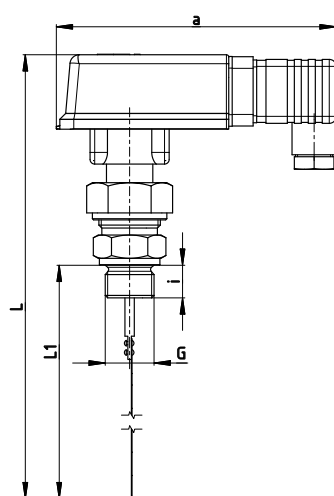
Flow direction

VK306 with plastic paddle



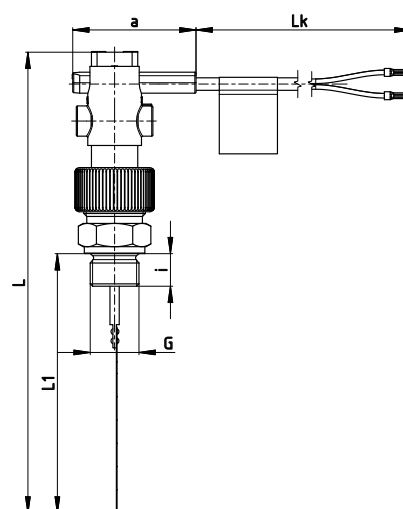
Flow direction

VHS06 with stainless steel paddle



Flow direction

VK306 with stainless steel paddle



Flow direction

Dimensions (mm)

Type	L	L ₁	G	i	a	Lk
VHS06						
→ with plastic paddle	203	111.5	G½ A	14	120	—
→ with stainless steel paddle	202	111.5	G½ A	14	120	—
VK306						
→ with plastic paddle	198	111.5	G½ A	14	53	1500 ± 10
→ with stainless steel paddle	198	111.5	G½ A	14	53	1500 ± 10

Materials

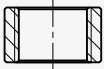
Materials in contact with fluid		
Type	VHS06	VK306
Body	Brass CW614N	PPE+PS Noryl™ 30 % glass fibre reinforced
Paddle		
→ Plastic paddle	PPE+PS Noryl™ 30 % glass fibre reinforced / stainless steel	PPE+PS Noryl™ 30 % glass fibre reinforced
→ Stainless steel paddle	Stainless steel 1.4310 / Brass	Stainless steel 1.4310 / Brass
Pin	Stainless steel 1.4571	Without
Process connection	Brass CW614N	
Magnet	Hard ferrite	
O-ring	NBR	

Article numbers

Type	Article number		
VHS06			
Plug connector incl. cable socket (standard)	VHS06M2		171R21
Plug connector incl. cable socket with LED (option)	VHS06M2		191R21
4-pin-sensor plug M12 x 1 (option)	VHS06M2		181R21
VK306			
1.5 m PVC jacket cable	VK306M2		10PR21
Paddle			
Plastic		P	
Stainless steel		5	
Example article number	VHS06M2	P	171R21

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Type	Article number		
VHS06	Plug connector (standard), paddle plastic	VHS06M2	P 171R21
VHS06	Plug connector (standard), paddle stainless steel	VHS06M2	5 171R21

Accessories	Article number		
	Welding socket according to EN 10241, G½ female thread, lenght 15 mm, steel S 235 JR	XVH1470	