

## Flow switches // VHS09, VK309 // for insertion installation



### Your advantages

Series	VHS09 / VK309
	<ul style="list-style-type: none"> <li>• Universal flow switches for copper pipe <math>\varnothing</math> 32...88.9</li> <li>• Adjustable for pipe size and setpoint by trimming the paddle</li> <li>• Soldering adapter for copper pipes</li> </ul>

Technical data	VHS09	VK309
<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>	PN 25	PN 10
<b>Temperature ranges</b>		
<b>Medium</b>	-25...110 °C	-25...100 °C
<b>Ambient</b>	-25...80 °C	-25...70 °C
<b>Electrical data</b>		
<b>Electrical connection</b>	Plug connector DIN EN 175301-803-A incl. cable socket	1.5 m 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>Protection class EN 60730-1</b>	Class II	

### Approvals



## Options

For type	See order code
VHS09	→ Plug connector DIN EN 175301-803-Aincl.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
VK309	→ Reversed switching function → Recognized component ETL according to UL & CSA standards

## Set point ranges

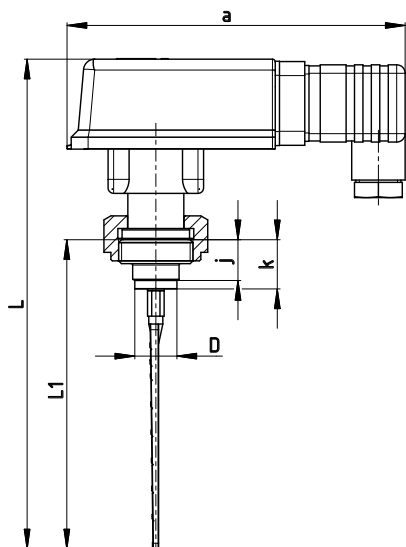
Paddle to be trimmed to								
	Paddle mark	9	15	20	30	40	50	60
	Installation length L <sub>1</sub> [mm]	39	45	50	60	70	80	90
Setpoints* / Max. flow rate [m <sup>3</sup> /h]								
Ø 32 x 1	Increasing flow ON**	2						
	Decreasing flow OFF	1.9						
	Max. flow rate	10						
Ø 35 x 1	Increasing flow ON**	2.6	1.8					
	Decreasing flow OFF	2.4	1.6					
	Max. flow rate	20	13					
Ø 35 x 1.5	Increasing flow ON**	2.5	1.7					
	Decreasing flow OFF	2.2	1.6					
	Max. flow rate	18	12					
Ø 42 x 1.5	Increasing flow ON**	3.9	2.8	2.2				
	Decreasing flow OFF	3.7	2.7	2.1				
	Max. flow rate	30	20	15				
Ø 54 x 1.5	Increasing flow ON**				3.2			
	Decreasing flow OFF				3			
	Max. flow rate				21			
Ø 54 x 2	Increasing flow ON**				3			
	Decreasing flow OFF				2.9			
	Max. flow rate				20			
Ø 64 x 2	Increasing flow ON**		8.6	7.2	5.2	4		
	Decreasing flow OFF		7.9	6.6	4.7	3.7		
	Max. flow rate		53	42	30	24		
Ø 76,1 x 2	Increasing flow ON**		13.6	10.8	8	6.4	5.2	
	Decreasing flow OFF		12.1	10	7.4	5.8	4.7	
	Max. flow rate		80	65	46	35	31	
Ø 88,9 x 2	Increasing flow ON**				10.9	9	7.3	6.1
	Decreasing flow OFF				10.7	8.4	6.9	5.9
	Max. flow rate				67	52	42	39

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

\*\* Typical value

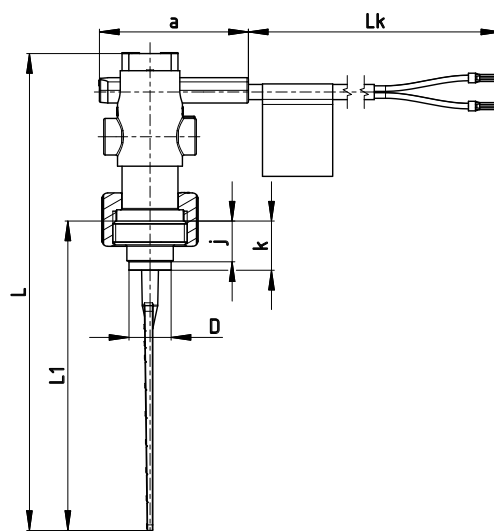
## Dimensions

VHS09



Flow direction

VK309



Flow direction

### Dimensions (mm)

Type	L	L1	D	j	k	a	Lk
VHS09	174	110	Ø 15	14.5	17.5	120	—
VK309	170	110	Ø 15	14.5	17.5	53	1500 ± 10

## Materials

### Materials in contact with fluid

Type	VHS09	VK309
Body	Brass CW614N	PPE+PS Noryl™ 30 % glass fibre reinforced
Paddle / Sleeve	PPE+PS Noryl™ 30 % glass fibre reinforced / Stainless steel	PPE+PS Noryl™ 30 % glass fibre reinforced / Without
Process connection	Brass CW614N	
Pin	Stainless steel 1.4571	Without
Magnet	Hard ferrite	
O-ring	NBR	

## Article numbers

Type	Article Number
<b>VHS09</b>	
Plug connector incl. cable socket (standard)	VHS09M2P171D11
Plug connector incl. cable socket with LED (option)	VHS09M2P191D11
4-pin-sensor plug M12 x 1 (option)	VHS09M2P181D11
<b>VK309</b>	
1.5 m PVC jacket cable	VK309M2P10PD11

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Type	Article Number
<b>VHS09</b>   Plug connector (Standard), Paddle plastic	<b>VHS09M2P171D11</b>