

Flow switches // VHS09, VK309

For insertion installation



VHS09



VK309



Highlights

- Universal flow switches for copper pipe Ø 32...88.9
- Adjustable for pipe size and setpoint by trimming the paddle
- Soldering adapter for copper pipes

Technical data	VHS09	VK309
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
Switching current	Max. 1 A	
Switching voltage	Max. 230 VAC, 48 VDC	
Rating	Max. 26 VA, 20 W	
Degree of protection EN 60529	IP65	
Protection class EN 60730-1	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

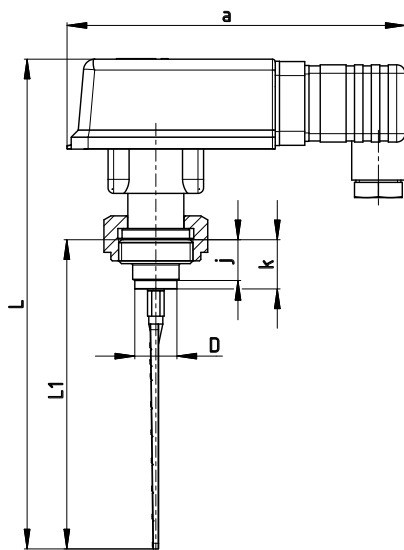
Paddle to be trimmed to								
	Paddle mark	9	15	20	30	40	50	60
	Installation length L ₁ [mm]	39	45	50	60	70	80	90
Setpoints* / Max. flow rate [m³/h]								
Ø 32 x 1	Increasing flow ON**	2						
	Decreasing flow OFF	1.9						
	Max. flow rate	10						
Ø 35 x 1	Increasing flow ON**	2.6	1.8					
	Decreasing 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 %

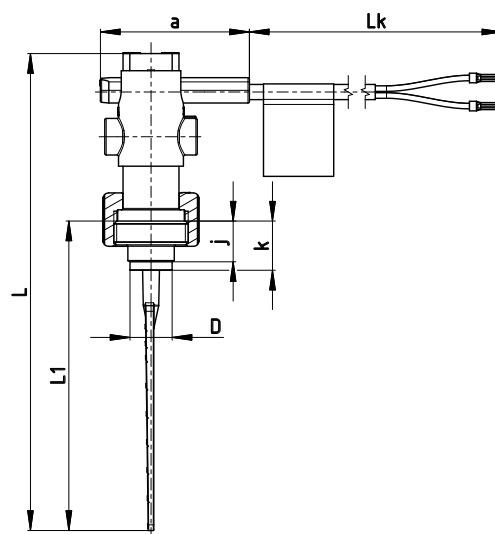
** Typical value

Technical drawings // Dimensions

VHS09



VK309



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	Artikelnummer
VHS09	
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
VK309	
1.5 m PVC jacket cable	VK309M2P10PD11

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Type	Article Number
VHS09	
Plug connector (Standard), Paddle plastic	VHS09M2P171D11