

Product Information

HD1K-008...025GM / K

Flow Switch HD1K

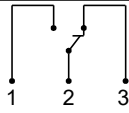
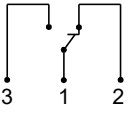


- High switching power
- Compact design

Characteristics

Mechanical flow switch, for fluid or gaseous media, with spring-supported piston and magnetic triggering of a reed switch. Robust construction in brass or stainless steel.

Technical data

Switch	reed switch		
Nominal width	DN 8...25		
Process connection	female thread G 1/4...G 1 (further process connections available on request)		
Switching range	0.1...80 l/min	for details see table "Ranges"	
Pressure loss	0.4...1.6 bar at Q _{max.}		
Q _{max.}	to 100 l/min		
Tolerance	±5 % of full scale value		
Pressure resistance	PN 200,optionally PN 500		
Media temperature	-20...+120 °C optionally -20...+150 °C		
Ambient temperature	-20...+70 °C		
Media	water, oil (gases and aggressive media available on request)		
Wiring	changeover No. 0.213  optionally changeover No. 0.282  optionally red or red / green diode in the DIN 43650-A plug		
Switching voltage	max. 175 V DC / 120 V AC		
Switching current	Max. 0.25 A DC / 0.18 A AC		
Switching capacity	Max. 5 W / VA		
Protection class	2 - Safety insulation		
Ingress protection	IP 65		

Electrical connection	plug DIN 43650-A / ISO 4400 Optionally for round plug connector M12x1, 4-pole	
Materials medium-contact	<i>Brass construction:</i> CW614N nickelled, CW614N, 1.4310, hard ferrite, NBR	<i>Stainless steel construction:</i> 1.4571, 1.4404, 1.4310, hard ferrite PTFE-coated, FKM
Non-medium-contact materials	PA, CW614N, NBR	
Weight	see table "Dimensions and weights"	
Installation location	Standard: horizontal inwards flow from the left; other installation positions are possible; the installation position affects the switching point and range.	

Ranges

For switching ranges, the details in the table correspond to horizontal inwards flow and decreasing flow rate; for display ranges they correspond to horizontal inwards flow and increasing flow rate.

Standard type HD1K

Switching range l/min H ₂ O	Optionally Display range l/min H ₂ O	Q _{max.} recommended	Pressure loss bar at Q _{max.} H ₂ O
0.1 - 1.0	0.1 - 1.2	6	0.4
0.5 - 5.0	0.5 - 6.0	10	0.5
1.0 - 10.0	1.0 - 12.0	20	0.6
2.0 - 20.0	2.0 - 23.0	30	0.4
3.0 - 30.0	3.0 - 34.0	40	
4.0 - 40.0	4.0 - 45.0	60	0.8
6.0 - 60.0	6.0 - 65.0	80	1.4
20.0 - 80.0	20.0 - 85.0	100	1.6

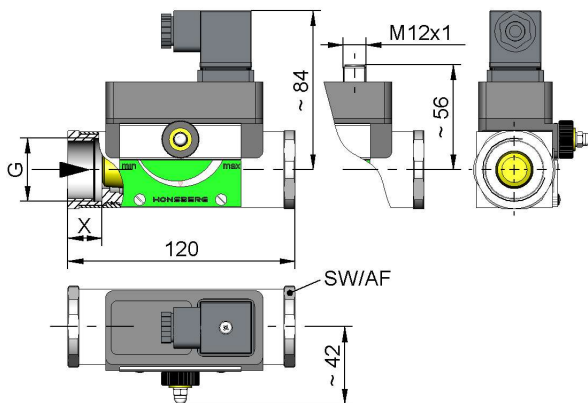
Special ranges are available.

Product Information

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Dimensions and weights

	G	Types	AF	X	Weight kg
Brass	G 1/4	HD1K-008GM	40	15	1.4
	G 3/8	HD1K-010GM			
	G 1/2	HD1K-015GM		18	1.3
	G 3/4	HD1K-020GM			
	G 1	HD1K-025GM			1.2
Stainless steel	G 1/4	HD1K-008GK	41	15	1.3
	G 3/8	HD1K-010GK			
	G 1/2	HD1K-015GK		18	1.2
	G 3/4	HD1K-020GK			
	G 1	HD1K-025GK			1.1



additional weights for options

additional switching head 0.10 kg Display O 0.10 kg
Display O1 / Z1 0.05 kg

Handling and operation

Note

- Include straight calming section of 5 x DN in inlet and outlet
- If the media are dirty, install a filter (use magnetic filter for ferritic components).
- It must be ensured that the values given for voltage, current, and power are not exceeded.
- When switch on, a load must be connected in series.
- The electrical details apply to ohmic loads. Capacitive, inductive and lamp loads must be operated using a protective circuit.

Adjustment

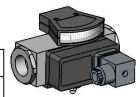
If it is necessary to set the switching value, the switching head can be adjusted by adjustment of a pinion. When the switching value is reached, the switching unit is fixed in place by a fastening bolt (AF 8).



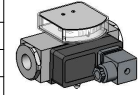
Ordering code

HD1K - 1. 2. 3. 4. 5. 6.

1. Display options					
-	no mechanical display				
O1-	with measurement display at side O1				
O-	with measurement display at side O				
Z1-	with frontal measurement display Z1				
2. Nominal width					
008	DN 8 - G 1/4				
010	DN 10 - G 3/8				
015	DN 15 - G 1/2				
020	DN 20 - G 3/4				
025	DN 25 - G 1				
3. Process connection					
G	female thread				
4. Connection material					
M	brass				
K	stainless steel				
5. Switching range H₂O for horizontal inwards flow					
001	0.1 - 1 l/min				
005	0.5 - 5 l/min				
010	1.0 - 10 l/min				
020	2.0 - 20 l/min				
030	3.0 - 30 l/min				
040	4.0 - 40 l/min				
060	6.0 - 60 l/min				
080	20.0 - 80 l/min				
6. Special switching head					
A	Switching head ATEX A-H1.1 / A-H2.1 Please order the switching head for ⚠ -use in addition.				



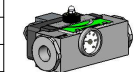
HD1K01-



HD1K0-



HD1KZ1-



Temperature display



Options

- Signal lamp red or red / green in the plug DIN 43650-A
- Switch contact SPST change over 250 VAC, 0,35 A, 30 VA - increased hysteresis depending on switching value. Only available with fixed switch point.
- Switch contact SPST N.O. 250 V DC 1.5 A 50 W / 265 V AC 1.1 A 50 VA
- Temperature resistant up to 150 °C
- Reinforced piston (only if made of brass)
- Additional switching head
- Connection for round plug connector M12x1
- High pressure model PN 500 (only if made of brass)
- Adjustment scale with markings in l/min
- Temperature monitoring
- Damping for gas monitoring (only for standard version)
- Switching values for oil or gas
- Special values
- Temperature display 0...120 °C
- Switching head made of metal

Ordering information

- Specify direction of flow, medium, and switching range.
- For viscous media specify viscosity, temperature, and medium (e.g. ISO VG 68) (enquire about switching range).
- For gases, state pressure (relative or absolute), temperature and medium (e.g. air) (request switching range).