

GENERAL CHARACTERISTICS

Mechanical Flow Switch for liquids or gaseous media, with spring-supported piston and magnetic triggering of a reed switch. Rugged construction in brass with additional viscosity compensation.

- * viscosity compensation 1-200mm²/s
- * good repeatability
- * dirt-resistance
- * high switch capability
- * hermetic separation of mechanical and electrical component
- * exact setting of switch via scale + gear



Female thread G1/4 to G1 brass



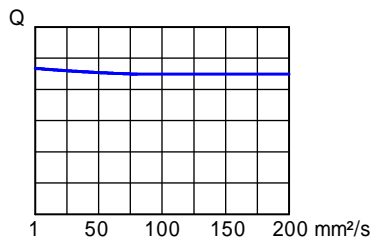
HD1KV-020GM025

TECHNICAL DATA

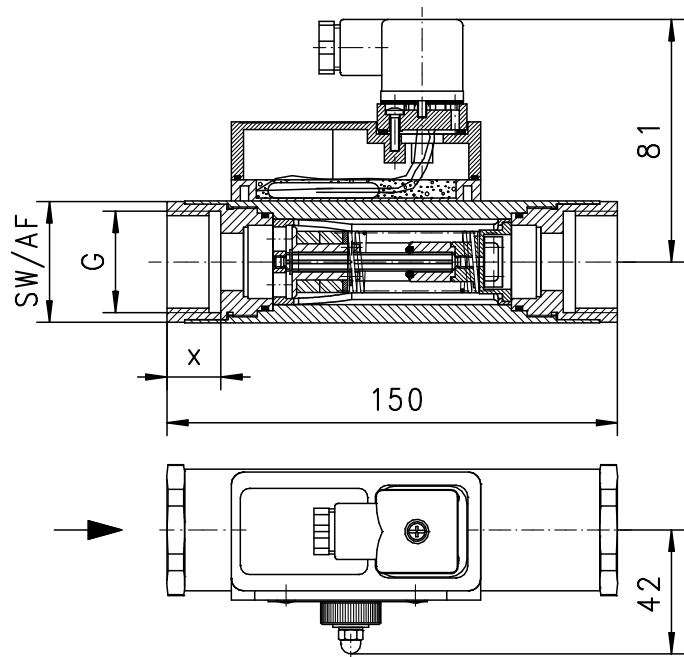
| | G | Type | PN bar | Qmax. recom. l/min oil 1-200mm ² /s | adjustable range | | AF mm | X mm | weight kg |
|-------|-------|----------------|--------|--|------------------|-------------------------|-------|------|-----------|
| | | | | | l/min oil | 1-200mm ² /s | | | |
| brass | G 1/4 | HD1KV-008GM005 | 200 | 10 | 0.5 - 5 | | 40 | 15 | 1.7 |
| | G 3/8 | HD1KV-010GM... | 200 | 20 | 0.5 - 5 | 2 - 12 | 40 | 15 | 1.7 |
| | G 1/2 | HD1KV-015GM... | 200 | 40 | 2 - 12 | 5 - 25 | 40 | 15 | 1.6 |
| | G 3/4 | HD1KV-020GM... | 200 | 60 | 5 - 25 | 10 - 40 | 40 | 18 | 1.6 |
| | G 1 | HD1KV-025GM... | 200 | 80 | 10 - 40 | 15 - 60 | 40 | 18 | 1.5 |

Adjustable range is indicated for horizontally decreasing flow. Calibration with oil ISO VG64 - 80mm²/s.

- viscosity stability ±3%
- tolerance ±5% of full scale
- media temperature max. 120°C
- average pressure loss 0.5 bar at Qmax.
- hysteresis depending on switch value value minimum 0.5 l/min.



Within the mechanical viscosity compensation the flow velocity in the piston area is increased sharply with the effect that the viscosity impact declines and the metering results stabilise even with changing viscosity ratings.

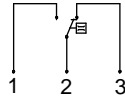


MATERIALS

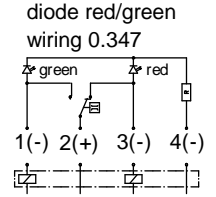
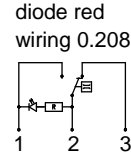
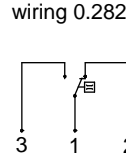
- body brass Ms58 nickel plated
- metering unit brass Ms58
- spring stainless steel 1.4310
- magnet neodymium
- seal NBR
- switch head polycarbonate

ELECTRICAL DATA

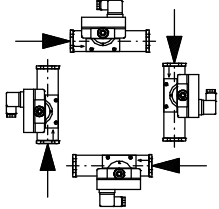
reed switch - wiring 0.213 change over
250 V AC 1.5 A 50 VA
plug DIN 43650-A
protection class 2
protection class IP 65



OBASIC
Programme-
options



MOUNTING POSITION



Installation position may influence switch value.

METERING SUBSTANCES



oil



gas/air

TYPENNOMENKLATUR

For combination see table "technical data"

| HD1KV | - | 008 | G | M | 005 | | basic type | | |
|------------------|----|-----|---|---|-----|---|---|----------------------------|--|
| HD1KV | | | | | | | specification | | |
| H1V | | | | | | | Flow Switch | | |
| | - | | | | | | Flow Indicator | | |
| | | | | | | | without metering unit | | |
| | O- | | | | | | Flow Switch with lateral flow metering unit | Description see next page. | |
| | Z- | | | | | | Flow Switch with front flow metering unit | | |
| | | 008 | | | | | nominal diameter | DN 8 - G1/4 | |
| | | 010 | | | | | | DN 10 - G3/8 | |
| | | 015 | | | | | | DN 15 - G1/2 | |
| | | 020 | | | | | | DN 20 - G3/4 | |
| | | 025 | | | | | | DN 25 - G1 | |
| | | | G | | | | | female thread | |
| | | | | M | | | | brass | |
| | | | | K | | | | stainless steel | |
| | | | | | 005 | | adjustable range | 0.5 - 5 l/min | oil 1-200mm ² /s horizontal flow |
| | | | | | 012 | | | 2 - 12 l/min | |
| | | | | | 025 | | | 5 - 25 l/min | |
| | | | | | 040 | | | 10 - 40 l/min | |
| | | | | | 060 | | | 15 - 60 l/min | |
| | | | | | | A | switch ATEX (produkt information 92.1.H1-1) | | |
| | | | | | | E | connection by local electronic (e.g. omni-HD1KV) | | |
| Programme option | | | | | | | wiring 0.342 | | |
| BASIC | | | | | | | wiring 0.208 - diode red integrated in plug DIN 43650-A | | |
| | | | | | | | wiring 0.347 - diode red/green integrated in plug DIN 43650-A | | |
| Special option | | | | | | | high pressure PN 500 | | |
| VARIO | | | | | | | incremented scale | | |
| | | | | | | | switch head metal | | |
| | | | | | | | flat switch head plastic | | |
| | | | | | | | selected hysteresis / vibration-proof | | |
| | | | | | | | rhodium contact | | |
| | | | | | | | contact for locking plug M 12x1, 4-pole | | |
| | | | | | | | two to four independent switch heads | | |
| | | | | | | | temperature control 30-95°C | | |
| | | | | | | | setting / adjustable ranges for oil or gas | | |

IMPORTANT FOR YOUR ORDER

- Please indicate flow direction, metering substance and adjustable range with your order.
- With viscous liquids (>200mm²/s) please indicate viscosity, temperature and type of liquid (e.g. ISO VG 68! Range upon request)
- With gaseous media indicate pressure (relative or absolute), temperature and metering substance (adjustable range on request)

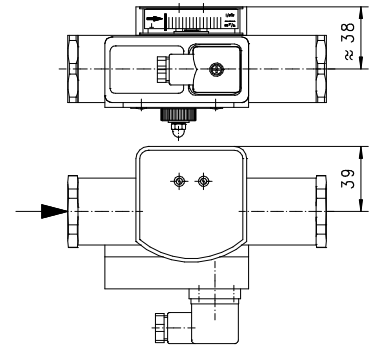
All technical changes reserved

●BASIC Standard ○BASIC Programme option □VARIO Special option ⊕ PLUS Accessories ✗ not recommendable

○ **HD1KVO-** Flow Switch with lateral flow metering unit

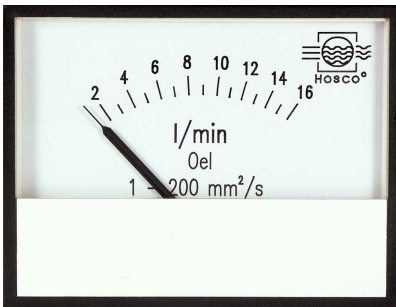


| adjustable range l/min H ₂ O | metering range l/min H ₂ O |
|--|--|
| 0,5 - 5 | 0,5 - 6 |
| 2 - 12 | 1 - 15 |
| 5 - 25 | 4 - 28 |
| 10 - 40 | 10 - 45 |
| 15 - 60 | 10 - 65 |

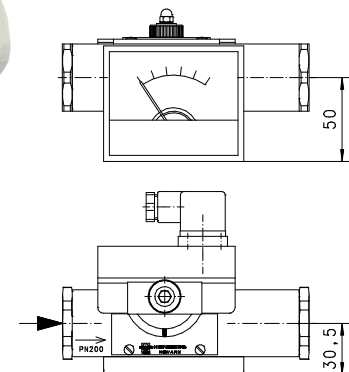


The metering range is indicated for horizontally increasing flow
protection class IP 60
additional weight 0.1kg

○ **HD1KVZ-** Flow Switch with front flow metering unit



| adjustable range l/min H ₂ O | metering range l/min H ₂ O |
|--|--|
| 0,5 - 5 | 0,5 - 6 |
| 2 - 12 | 2 - 16 |
| 5 - 25 | 5 - 28 |
| 10 - 40 | 10 - 45 |
| 15 - 60 | 10 - 70 |



The metering range is indicated for horizontally increasing flow
media temperature max. 70°C
protection class IP 40
additional weight 0.1kg

EXAMPLES FOR FURTHER OPTIONS



switch head metal or flat switch head plastic
switch head ATEX



Flex-K-HD1KV
switch- or frequency output
0..10V or 4..20mA
PNP, NPN



omni-HD1KV
2xNPN and PNP switch point
4(0)..20mA output
graphical LCD display
with flashing LED, program ring

All technical changes reserved

●BASIC Standard ○BASIC Programme option □VARIO Special option ⊕ PLUS Accessories ✗ not recommendable