

ROTÂMETRO MONITOR COM ALARME DE VAZÃO PARA MÁXIMA OU E OU MÍNIMA VAZÃO SÉRIE DSV



- Measuring range:
0.25–1.25 to 10–130 l/min.
water
- Accuracy: $\pm 4\%$ f. s.
- Pmax 10 bar,
Tmax 100°C
- Connection:
G 1/4 to G 1 1/4 IG
- Material:
Brass or stainless steel

Description

The proven KOBOLD flow meters and switches model DSV are based on the principle of the well-known float-type flow meters except for the conventional tapering measuring tube.

These patented instruments are provided instead with a cylindrical flow tube with conical slots around the periphery.

This eliminates the usual problems of guiding the cylindrical float within a tapering measuring glass. The novel design including the provision of an appropriately dimensioned annular gap of constant width between the float and the flow tube has enabled the sensitivity to dirt to be considerably reduced.

The float contains a permanent magnet which actuates a bistable reed contact external to the flow circuit, that is, the flowing medium is hermetically separated from the electrical contact. In addition it is embedded in a height-adjustable switch housing thus ensuring that the contact is protected even in an aggressive atmosphere.

As the medium enters the instrument the float rises. Once its magnetic field reaches the contact tips of the reed switch the contact closes. As the flow increases the float rises further until it reaches its stop. This prevents the float from going beyond the contact range of the magnetic operating tube, that is, the contact remains closed thus ensuring bi-stable switching. The top edge of the float serves to indicate the flow on the measuring glass in l/min.

Applications

- Lubrication circuits
- Paper-making machines
- Machine tools
- Glass-melting tanks
- Cooling circuits
- Welding machines
- Induction furnaces
- Pumps
- Prevention of low water levels

Technical Details

| | |
|------------------------|---|
| Housing: | Aluminium anodized (not media-contacted) |
| Connections: | DSV-x1...: Brass Ms 58, nickel-plated DSV-x2...: Stainless steel 1.4301 |
| Float: | See Order Details |
| Nozzle: | DSV-x1...: Brass Ms 58, nickel-plated DSV-x2...: Stainless steel: 1.3955 |
| Measuring glass: | Duran 50 (borosilicate glass) |
| Seals: | DSV-x1...: Buna N DSV-x2...: Viton |
| Max. temperature: | 100°C (metal float) 70°C (PP (polypropylene) or PVDF float) |
| Max. pressure: | 10 bar |
| Accuracy: | ±4% f. s. |
| Installation position: | Vertical, flow in the upward direction |

Contacts:

For DSV-2..., DSV-3...

| | |
|------------------------------|---|
| Electrical connection: | 1.5 m cable (DSV-..E..., DSV-..X...) For all other types: Connector DIN 43 650 |
| Electrical switching values: | N/O contact (SEV, CSA) max. 240 VAC / 100 VA / 1.5 A Changeover contact (SEV, CSA) max. 240 VAC / 60 VA / 1 A N/O contact EEx d IIC T6 max. 250 VAC / 80 VA / 2 A Changeover contact EEx d IIC T6 max. 250 VAC / 60 VA / 1 A N/O contact EEx ia I BVS (mining) max. 250 VAC / 100 VA / 1.5 A Changeover contact EEx ia I BVS (mining) max. 220 VAC / 60 VA / 1 A |
| Protection: | IP 65 |

Order Details (Example: DSV-2101H R0 R08)

Flow meter model: DSV-1...

| Measuring range l/min. water | Pressure loss Δ P (bar) | Float according to version | | Brass | Stainless steel | Contact | Connection | |
|------------------------------|-------------------------|----------------------------|-----------|--------------|-----------------|----------------------------|---------------|--------------|
| | | Brass | St. steel | | | | Standard | Special |
| 0.25...1.25 | 0.04 | PP | PVDF | DSV-1101H... | DSV-1201H... | ...00...= without contacts | ..R08= G 1/4 | ..R15= G 1/2 |
| 0.5...2.5 | 0.06 | PP | PVDF | DSV-1102H... | DSV-1202H... | | ..R08= G 1/4 | ..R15= G 1/2 |
| 1...4,5 | 0.04 | PP | PVDF | DSV-1103H... | DSV-1203H... | | ..R08= G 1/4 | ..R15= G 1/2 |
| 1...10 | 0.04 | PP | PVDF | DSV-1104H... | DSV-1204H... | | ..R15= G 1/2 | ..R20= G 3/4 |
| 2...18 | 0.07 | Brass, nickel-pl. | 1.4301 | DSV-1105H... | DSV-1205H... | | ..R15= G 1/2 | ..R20= G 3/4 |
| 2...25 | 0.08 | PP | PVDF | DSV-1106H... | DSV-1206H... | | ..R20= G 3/4 | ..R25= G 1 |
| 2.5...50 | 0.14 | Brass, nickel-pl. | 1.4301 | DSV-1107H... | DSV-1207H... | | ..R20= G 3/4 | ..R25= G 1 |
| 10...100 | 0.3 | Brass, nickel-pl. | 1.4301 | DSV-1108H... | DSV-1208H... | | ..R25= G 1 | |
| 10...130 | 0.4 | PP | PVDF | DSV-1109H... | DSV-1209H... | | ..R32= G 11/4 | |

Flow meters and switches with 1 contact model: DSV-2...

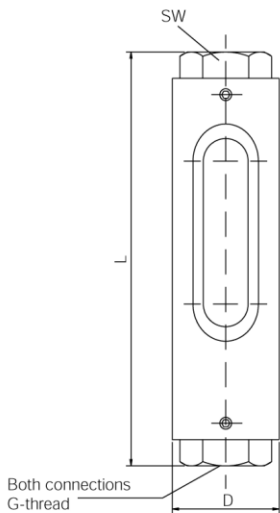
| Measuring range l/min. water | Pressure loss Δ P (bar) | Float according to version | | Brass | Stainless steel | Contact | Connection | |
|------------------------------|-------------------------|----------------------------|-----------|--------------|-----------------|-------------------------------|---------------|--------------|
| | | Brass | St. steel | | | | Standard | Special |
| 0.25...1.25 | 0.04 | PP | PVDF | DSV-2101H... | DSV-2201H... | ...R0...= 1 N/O contact | ..R08= G 1/4 | ..R15= G 1/2 |
| 0.5...2.5 | 0.06 | PP | PVDF | DSV-2102H... | DSV-2202H... | ...U0...= 1 changeover c. | ..R08= G 1/4 | ..R15= G 1/2 |
| 1...4.5 | 0.04 | PP | PVDF | DSV-2103H... | DSV-2203H... | ...E0...= 1 Ex N/O contact | ..R08= G 1/4 | ..R15= G 1/2 |
| 1...10 | 0.04 | PP | PVDF | DSV-2104H... | DSV-2204H... | ...X0...= 1 Ex changeover c. | ..R15= G 1/2 | ..R20= G 3/4 |
| 2...18 | 0.07 | Brass, nickel-pl. | 1.4301 | DSV-2105H... | DSV-2205H... | ...B0...= 1 N/O contact BVS | ..R15= G 1/2 | ..R20= G 3/4 |
| 2...25 | 0.08 | PP | PVDF | DSV-2106H... | DSV-2206H... | ...A0...= 1 changeover c. BVS | ..R20= G 3/4 | ..R25= G 1 |
| 2.5...50 | 0.14 | Brass, nickel-pl. | 1.4301 | DSV-2107H... | DSV-2207H... | | ..R20= G 3/4 | ..R25= G 1 |
| 10...100 | 0.3 | Brass, nickel-pl. | 1.4301 | DSV-2108H... | DSV-2208H... | | ..R25= G 1 | |
| 10...130 | 0.4 | PP | PVDF | DSV-2109H... | DSV-2209H... | | ..R32= G 11/4 | |

Flow meters and switches with 2 contacts model: DSV-3...

| Measuring range l/min. water | Pressure loss Δ P (bar) | Float according to version | | Brass | Stainless steel | Contact | Connection | |
|------------------------------|-------------------------|----------------------------|-----------|--------------|-----------------|-------------------------------|---------------|--------------|
| | | Brass | St. steel | | | | Standard | Special |
| 0.25...1.25 | 0.04 | PP | PVDF | DSV-3101H... | DSV-3201H... | ...RR...= 2 N/O contacts | ..R08= G 1/4 | ..R15= G 1/2 |
| 0.5...2.5 | 0.06 | PP | PVDF | DSV-3102H... | DSV-3202H... | ...UU...= 2 changeover c. | ..R08= G 1/4 | ..R15= G 1/2 |
| 1...4.5 | 0.04 | PP | PVDF | DSV-3103H... | DSV-3203H... | ...EE...= 2 Ex N/O contacts | ..R08= G 1/4 | ..R15= G 1/2 |
| 1...10 | 0.04 | PP | PVDF | DSV-3104H... | DSV-3204H... | ...XX...= 2 Ex changeover c. | ..R15= G 1/2 | ..R20= G 3/4 |
| 2...18 | 0.07 | Brass, nickel-pl. | 1.4301 | DSV-3105H... | DSV-3205H... | ...BB...= 2 N/O contacts BVS | ..R15= G 1/2 | ..R20= G 3/4 |
| 2...25 | 0.08 | PP | PVDF | DSV-3106H... | DSV-3206H... | ...AA...= 2 changeover c. BVS | ..R20= G 3/4 | ..R25= G 1 |
| 2.5...50 | 0.14 | Brass, nickel-pl. | 1.4301 | DSV-3107H... | DSV-3207H... | | ..R20= G 3/4 | ..R25= G 1 |
| 10...100 | 0.3 | Brass, nickel-pl. | 1.4301 | DSV-3108H... | DSV-3208H... | | ..R25= G 1 | |
| 10...130 | 0.4 | PP | PVDF | DSV-3109H... | DSV-3209H... | | ..R32= G 11/4 | |

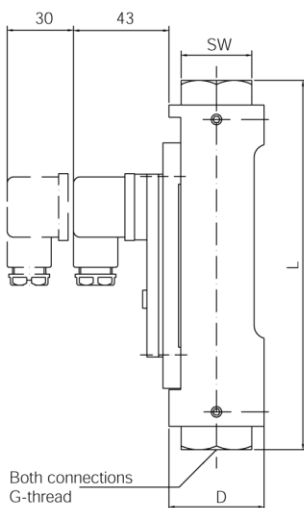
Dimensions

Flow meter model DSV-1...



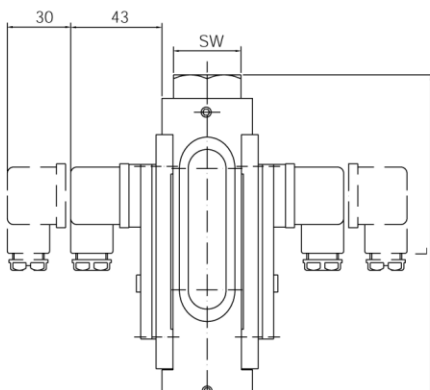
| Model | SW | G | L (mm) | Ø (mm) | Weight approx. (kg) |
|-----------|----|-----------|-----------|--------|---------------------|
| DSV-..01H | 32 | 1/4 (1/2) | 161 (165) | 43 | 0.75 |
| DSV-..02H | 32 | 1/4 (1/2) | 161 (165) | 43 | 0.75 |
| DSV-..03H | 32 | 1/4 (1/2) | 161 (165) | 43 | 0.75 |
| DSV-..04H | 32 | 1/2 (3/4) | 165 | 43 | 0.75 |
| DSV-..05H | 32 | 1/2 (3/4) | 165 | 43 | 0.75 |
| DSV-..06H | 41 | 3/4 (1) | 165 (176) | 48 | 1.0 |
| DSV-..07H | 41 | 3/4 (1) | 165 (176) | 48 | 1.0 |
| DSV-..08H | 41 | 1 | 204 | 48 | 1.2 |
| DSV-..09H | 46 | 1 1/4 | 222 | 55 | 1.5 |

Flow meters and switches with 1 contact model DSV-2...



| Model | SW | G | L (mm) | Ø (mm) | Weight approx. (kg) |
|-----------|----|-----------|-----------|--------|---------------------|
| DSV-..01H | 32 | 1/4 (1/2) | 161 (165) | 43 | 1.0 |
| DSV-..02H | 32 | 1/4 (1/2) | 161 (165) | 43 | 1.0 |
| DSV-..03H | 32 | 1/4 (1/2) | 161 (165) | 43 | 1.0 |
| DSV-..04H | 32 | 1/2 (3/4) | 165 | 43 | 1.0 |
| DSV-..05H | 32 | 1/2 (3/4) | 165 | 43 | 1.0 |
| DSV-..06H | 41 | 3/4 (1) | 165 (176) | 48 | 1.25 |
| DSV-..07H | 41 | 3/4 (1) | 165 (176) | 48 | 1.25 |
| DSV-..08H | 41 | 1 | 204 | 48 | 1.45 |
| DSV-..09H | 46 | 1 1/4 | 222 | 55 | 1.75 |

Flow meters and switches with 2 contacts model DSV-3...



| Model | SW | G | L (mm) | Ø (mm) | Weight approx. (kg) |
|-----------|----|-----------|-----------|--------|---------------------|
| DSV-..01H | 32 | 1/4 (1/2) | 161 (165) | 43 | 1.25 |
| DSV-..02H | 32 | 1/4 (1/2) | 161 (165) | 43 | 1.25 |
| DSV-..03H | 32 | 1/4 (1/2) | 161 (165) | 43 | 1.25 |
| DSV-..04H | 32 | 1/2 (3/4) | 165 | 43 | 1.25 |
| DSV-..05H | 32 | 1/2 (3/4) | 165 | 43 | 1.25 |
| DSV-..06H | 41 | 3/4 (1) | 165 (176) | 48 | 1.5 |
| DSV-..07H | 41 | 3/4 (1) | 165 (176) | 48 | 1.5 |
| DSV-..08H | 41 | 1 | 204 | 48 | 1.7 |
| DSV-..09H | 46 | 1 1/4 | 222 | 55 | 2.0 |