

Product Information

Sensors and Instrumentation

Flow switch VD-...FT



- Highly reproducible
- Insensitive to dirt
- DIN flange housing
- Precise setting of the switching valve by means of a 180° scale / setting diagram

Characteristics

Mechanical flow switch, for fluid media, with no-contact triggering of an adjustable Reed contact.
Robust construction in cast steel material.

Technical data

| | | |
|---------------------------------|---|--------------------------------|
| Switch | Reed switch | |
| Nominal width | DN 15 – 300 | |
| Process connection | flange | |
| Adjustment range | 2 – 1600 l/min | For details see table "Ranges" |
| Q_{max.} | up to 8000 l/min | |
| Hysteresis | Depending on the switching value, minimum 0.3 l/min | |
| Tolerance | ±5 % of full scale value | |
| Pressure resistance | PN 40 bar | |
| Medium temperature | -20 – +120 °C | |
| Ambient temperature | -20 – +70 °C | |
| Media | Water, oils (gases and aggressive media available on request) | |
| Wiring | Transformer No. 0.213 | |
| Switching voltage | max. 250 V AC | |
| Switching current | max. 1.5 A | |
| Switch performance | max. 50 VA | |
| Protection class | 2 - Safety insulation | |
| Ingress protection | IP 44 | |
| Connection | Plug DIN 43650-A / ISO 4400 | |
| Materials medium-contact | 1.4310, Cast steel GSC 25, CW614N, POM, NBR, Klingerit, hardferrite | |

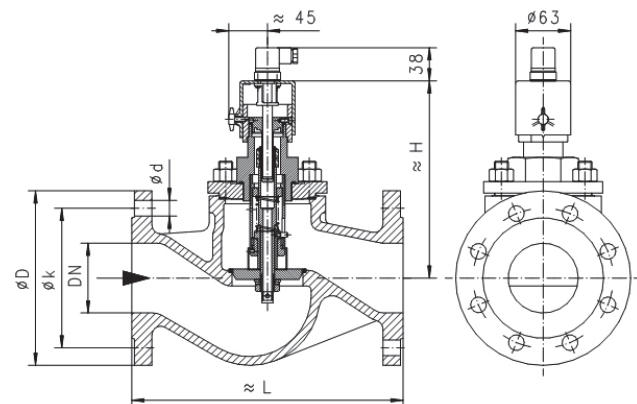
| | |
|-------------------------------------|---|
| Non-medium-contact materials | ABS |
| Weight | see table "Dimensions and weights" |
| Installation location | Standard: horizontal inwards flow; switching head not recommended underneath; other installation positions are possible; the installation position affects the switching point and range. |

Ranges

Details in the table correspond to horizontal inwards flow with decreasing flow rate.

| Type | Nominal width | Adjustment range | | Q _{max.} recommended | |
|-------------|---------------|------------------------|-------------|-------------------------------|-----|
| | | l/min H ₂ O | | | |
| VD-015FT... | DN 15 | 2 - 8 | 4 - 20 | 20 | 30 |
| VD-020FT... | DN 20 | 4 - 20 | 10 - 40 | 40 | 55 |
| VD-025FT... | DN 25 | 10 - 40 | 20 - 60 | 60 | 80 |
| VD-032FT... | DN 32 | 20 - 60 | 30 - 100 | 100 | 135 |
| VD-040FT... | DN 40 | 30 - 100 | 50 - 200 | 150 | 270 |
| VD-050FT... | DN 50 | 50 - 200 | 100 - 250 | 270 | 340 |
| VD-065FT... | DN 65 | 100 - 250 | 150 - 300 | 400 | |
| VD-080FT... | DN 80 | 150 - 300 | 300 - 450 | 600 | |
| VD-100FT... | DN 100 | 200 - 400 | 350 - 500 | 950 | |
| VD-150FT... | DN 150 | 600 - 750 | 700 - 950 | 2000 | |
| VD-200FT... | DN 200 | 850 - 1050 | 1050 - 1250 | 4000 | |
| VD-250FT... | DN 250 | 1100 - 1300 | 1200 - 1400 | 6000 | |
| VD-300FT... | DN 300 | 1300 - 1500 | 1400 - 1600 | 8000 | |

Dimensions and weights



Overall length DIN 3202, range F1
Flange DIN 2545 PN 40
Flange size DIN 2501 PN 40
Sealing bar DIN 2526 form C

| Types | H mm | L mm | D mm | k mm | d mm | Weight kg |
|-------------|------|------|------|------|------|-----------|
| VD-015FT... | 180 | 130 | 95 | 65 | 4x14 | 4.0 |
| VD-020FT... | 180 | 150 | 105 | 75 | 4x14 | 4.4 |
| VD-025FT... | 190 | 160 | 115 | 85 | 4x14 | 6.3 |
| VD-032FT... | 190 | 180 | 140 | 100 | 4x18 | 8.2 |
| VD-040FT... | 210 | 200 | 150 | 110 | 4x18 | 11.1 |
| VD-050FT... | 220 | 230 | 165 | 125 | 4x18 | 12.8 |
| VD-065FT... | 230 | 290 | 185 | 145 | 8x18 | 23.5 |
| VD-080FT... | 240 | 310 | 200 | 160 | 8x18 | 29.0 |
| VD-100FT... | 260 | 350 | 235 | 190 | 8x22 | 36.0 |
| VD-150FT... | 330 | 480 | 300 | 250 | 8x26 | 85.0 |

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| | | | | | | |
|-------------|-----|-----|-----|-----|-------|-------|
| VD-200FT... | 390 | 600 | 375 | 320 | 12x30 | 152.0 |
| VD-250FT... | 450 | 730 | 450 | 385 | 12x33 | 212.0 |
| VD-300FT... | 490 | 850 | 515 | 450 | 16x33 | 309.0 |

Ordering code

1. 2. 3. 4. 5.
VD -

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 switched 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

To adjust the switching point, the fixing screw for the switching head must be loosened. The switching head can then be rotated. Turning to the right increases the switching point, and vice-versa. Then retighten the fixing screw.



| | |
|---|--|
| 1. Nominal width | |
| 015 | DN 15 |
| 020 | DN 20 |
| 025 | DN 25 |
| 032 | DN 32 |
| 040 | DN 40 |
| 050 | DN 50 |
| 065 | DN 65 |
| 080 | DN 80 |
| 100 | DN 100 |
| 150 | DN 150 |
| 200 | DN 200 |
| 250 | DN 250 |
| 300 | DN 300 |
| 2. Process connection | |
| F | flange |
| 3. Connection material | |
| T | Cast steel |
| 4. Adjustment range H₂O for horizontal inwards flow | |
| 008 | 2 - 8 l/min |
| 020 | 4 - 20 l/min |
| 040 | 10 - 40 l/min |
| 060 | 20 - 60 l/min |
| 100 | 30 - 100 l/min |
| 200 | 50 - 200 l/min |
| 250 | 100 - 250 l/min |
| 300 | 150 - 300 l/min |
| 400 | 200 - 400 l/min |
| 450 | 300 - 450 l/min |
| 500 | 350 - 500 l/min |
| 750 | 600 - 750 l/min |
| 950 | 700 - 950 l/min |
| 1050 | 850 - 1050 l/min |
| 1250 | 1050 - 1250 l/min |
| 1300 | 1100 - 1300 l/min |
| 1400 | 1200 - 1400 l/min |
| 1500 | 1300 - 1500 l/min |
| 1600 | 1400 - 1600 l/min |
| 5. Optionally for ATEX | |
| A | For ATEX A-V1 switching head (The switching head is ordered in addition) |

Product Information

Sensors and Instrumentation

Options

- Other signal lamp
- Temperature display 0 – 120 °C
- Temperature monitoring 40 – 90 °C
- Temperature resistant up to 150 °C
- Protection class IP 65
- Metal cap
- Germanischer Lloyd (Type VR)
- Switching ranges for oil or gas
- Special values
- Selected hysteresis
- Rhodium contact

Ordering information

- Specify direction of flow, medium, and switching range.
- For oils, state viscosity, temperature and designation (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).