

## Flow Switch UB1



- Can be used from nominal width DN 25..200
- Micro switch with gold-plating for small currents, and silver-plating for larger currents
- Visual function control through transparent cover
- Suitable for media with ferritic particles.

### Characteristics

The devices function via the principle of a paddle supported by a metal bellows, and the triggering of a microswitch.

### Technical data

|   |   |                                |                     |                           |
|---|---|--------------------------------|---------------------|---------------------------|
| <b>Switch</b>                               | Micro switch  |                                |                     |                           |
| <b>Nominal width</b>                        | DN 25..200  |                                |                     |                           |
| <b>Process connection</b>                   | male thread R 1" or installation flange DIN 2527 DN 32 PN 16 sealing surface as per DIN 2526 form C |                                |                     |                           |
| <b>Switching range</b>                      | 1.2..34 m <sup>3</sup> /h   | for details see table "Ranges" |                     |                           |
| <b>Q<sub>max.</sub></b>                     | up to 75 m <sup>3</sup> /h  |                                |                     |                           |
| <b>Tolerance</b>                            | ±15 % of full scale value   |                                |                     |                           |
| <b>Pressure resistance</b>                  | PN 16 bar   |                                |                     |                           |
| <b>Medium temperature</b>                   | -20..+140 °C (no superheated steam)   |                                |                     |                           |
| <b>Ambient temperature</b>                  | -20..+70 °C   |                                |                     |                           |
| <b>Media</b>                                | water (oils and aggressive media available on request)  |                                |                     |                           |
| <b>Wiring</b>                               | changeover no. 0.371  |                                |                     |                           |
| <b>Switching voltage/ Switching current</b> | max.  | 250 V AC/DC                    | A max. ohmic<br>6 A | A max. inductive<br>1.5 A |
|   |   | 125 V AC/DC                    | 6 A                 | 2 A                       |
|   |   | 24 V DC                        | 6 A                 | 5 A                       |
|   |   | 12 V DC                        | 6 A                 | 6 A                       |
|   | min.  | 4 V                            | A min.<br>1 mA      |                           |
| <b>Protection class</b>                     | 2 - safety insulation   |                                |                     |                           |
| <b>Ingress protection</b>                   | IP 65   |                                |                     |                           |

|                                     |   |   |
|-------------------------------------|---|---|
| <b>Electrical connection</b>        | plug DIN 43650-A / ISO 4400, optionally for round plug connector M12x1, 4-pole (max. 4A)  |   |
| <b>Materials medium-contact</b>     | <i>Brass construction:</i><br>CW614N nickelled, 1.4305, 1.4310, 1.4541, NBR for flange type Rg 5  | <i>Stainless steel construction:</i><br>1.4305, 1.4310, 1.4541, FKM |
| <b>Non-medium-contact materials</b> | PC, PA  |   |
| <b>Weight</b>                       | Threaded type:  | 1.3 kg  |
|                                     | Flanged type:   | 2.5 kg  |
| <b>Installation location</b>        | Standard: horizontal inwards flow; switching unit not recommended underneath; other installation positions are possible; the installation position affects the switching point and range. |   |

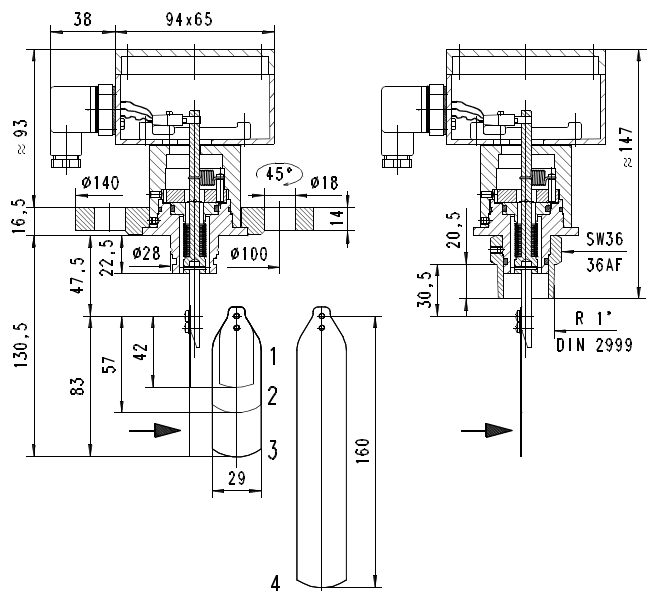
### Ranges

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

DN 25..32 threaded type only. DN 125..200 available on request

| DN  | Switching range m <sup>3</sup> /h H <sub>2</sub> O |             |              | Q <sub>max.</sub> recommended |
|-----|--|-------------|--------------|-------------------------------|
|     | Paddle 1   | Paddle 1,2  | Paddle 1,2,3 |                               |
| 25  | 2.0 - 2.5  |             |              | 4                             |
| 32  | 3.0 - 3.5  |             |              | 8                             |
| 40  | 4.0 - 5.0  |             |              | 12                            |
| 50  | 8.8 - 10.2   | 3.5 - 4.3   |              | 20                            |
| 65  | 16.5 - 20.0  | 9.2 - 11.0  |              | 30                            |
| 80  | 25.5 - 31.0  | 14.0 - 18.0 | 8.7 - 11.0   | 45                            |
| 100 | 44.0 - 55.0  | 27.0 - 32.0 | 17.0 - 22.0  | 75                            |

### Dimensions



Adapt paddle 1 for DN 25.  
From DN 100, adapt paddle 4:  
DN 100 Paddle length 92  
DN 125 Paddle length 117  
DN 150 Paddle length 143  
from DN 175 unshortened

**Attention! Flange seal not included in scope of delivery**

## Handling and operation

### Note

- Attention! Paddle fixing unsecured. For critical conditions (e.g. vibration), fit a bolted fixing.
- Include straight calming section of 10 x DN in inlet and outlet
- If the media are dirty, install a filter.
- 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 and inductive loads must be operated using a protective circuit.

### Loosen adjustment

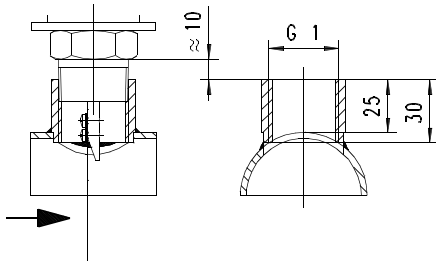
Open cover, loosen the screw slightly on the micro switch fixing. Push the switch into the desired position. Retighten the screw.



## Installation recommendation

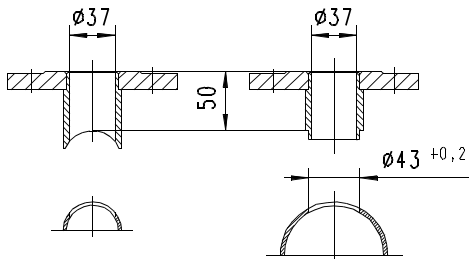
### Threaded type

Use a tube with standard wall thickness as per DIN 2448



### Flanged type

Use a tube with standard wall thickness as per DIN 2448



The type FL installation flanges are available as an accessory.

## Ordering code

UB1 -  1.  2.

| 1. Process connection  |                                   |
|------------------------|-----------------------------------|
| 025H                   | threaded connection DN 25 - R 1 " |
| 032E                   | flange DN 32                      |
| 2. Connection material |                                   |
| M                      | brass                             |
| K                      | stainless steel                   |

## Options

- Signal lamp red or red/green in the plug DIN 43650-A
- Double contact
- Aluminium hood with IP 67
- Opaque cover
- Switching ranges for oil
- Special values
- TÜV-certification 0000021402

## Ordering information

- Specify direction of flow, medium, and switching range.
- For oils, state viscosity, temperature and designation (e.g. ISO VG 68) (enquire about range).