

# Flow Switch UM3K-...G / A

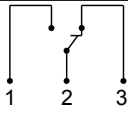
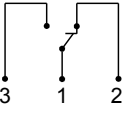


- Threaded connection
- Micro switch
- Low pressure loss
- Compact design
- Threaded connection
- Plug DIN 43650-A / ISO 4400

## Characteristics

The devices function via the principle of a spring-supported paddle, and the magnetic triggering of a micro switch.

## Technical data

|                              |  |                                |
|------------------------------|--|--------------------------------|
| <b>Switch/sensor</b>         | micro switch   |                                |
| <b>Nominal width</b>         | DN 10..50  |                                |
| <b>Process connection</b>    | female thread G <sup>3</sup> / <sub>8</sub> ..G 1<br>(further process connections available on request)  |                                |
| <b>Switching range</b>       | 4..93 l/min  | for details see table "Ranges" |
| <b>Q<sub>max.</sub></b>      | to 150 l/min   |                                |
| <b>Tolerance</b>             | ±15 % of full scale value  |                                |
| <b>Pressure resistance</b>   | PN 25 bar  |                                |
| <b>Medium temperature</b>    | -20..+110 °C   |                                |
| <b>Ambient temperature</b>   | -20..+70 °C  |                                |
| <b>Media</b>                 | water (oils, gases and aggressive media available on request)  |                                |
| <b>Wiring</b>                | changeover no. 0.371<br><br>optionally changeover no. 0.282<br><br>optionally red or red / green diode in the DIN 43650-A plug |                                |
| <b>Switching voltage</b>     | max. 250 V AC  |                                |
| <b>Switching current</b>     | max. 5 A (round plug connector max. 4 A)   |                                |
| <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   |                                |

|                                     |   |  |
|-------------------------------------|---|--|
| <b>Materials medium-contact</b>     | <i>Brass construction:</i> CW617N nickelled, CW614N nickelled, 1.4310, 1.4301, hard ferrite, NBR  | <i>Stainless steel construction:</i> 1.4305, 1.4571, 1.4301, 1.4310, hard ferrite PTFE-coated, FKM |
| <b>Non-medium contact materials</b> | ABS, PA, NBR  |  |
| <b>Weight</b>                       | see table "Dimensions and weights"  |  |
| <b>Installation location</b>        | Standard: horizontal inwards flow; switching head not recommended underneath; other installation positions are possible; the installation position affects the switching point and range. |  |

## Ranges

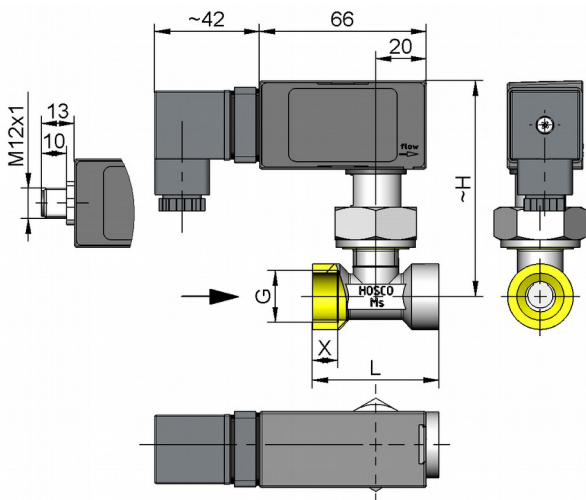
Details in the table correspond to horizontal inwards flow with decreasing flow rate

| G                               | DN    | Switching range l/min H <sub>2</sub> O | Types         | Q <sub>max.</sub> recommended |
|---------------------------------|-------|--|---------------|-------------------------------|
| G <sup>3</sup> / <sub>8</sub>   | DN 10 | 4.0 - 5.5                              | UM3K-010G.055 | 10                            |
| G <sup>1</sup> / <sub>2</sub>   | DN 15 | 5.5 - 7.0                              | UM3K-015G.070 | 20                            |
| G <sup>3</sup> / <sub>4</sub>   | DN 20 | 7.5 - 10.0                             | UM3K-020G.100 | 40                            |
| G 1                             | DN 25 | 14.0 - 18.0                            | UM3K-025G.180 | 60                            |
| G 1 <sup>1</sup> / <sub>4</sub> | DN 32 | 22.0 - 30.0                            | UM3K-032G.300 | 80                            |
| G 1 <sup>1</sup> / <sub>2</sub> | DN 40 | 37.0 - 50.0                            | UM3K-040G.500 | 100                           |
| G 2                             | DN 50 | 67.0 - 93.0                            | UM3K-050G.930 | 150                           |

Special ranges are available.

## Dimensions and weights

| G                               | Types      | H   | L  | X  | Weight kg |
|---------------------------------|------------|-----|----|----|-----------|
| G <sup>3</sup> / <sub>8</sub>   | UM3K-010GM | 87  | 50 | 10 | 0.45      |
|                                 | UM3K-010GK |     |    |    | 0.50      |
| G <sup>1</sup> / <sub>2</sub>   | UM3K-015GM | 88  | 50 | 10 | 0.40      |
|                                 | UM3K-015GK |     |    |    | 0.45      |
| G <sup>3</sup> / <sub>4</sub>   | UM3K-020GM | 92  | 50 | 12 | 0.50      |
|                                 | UM3K-020GK |     |    |    |           |
| G 1                             | UM3K-025GM | 96  | 50 | 12 | 0.60      |
|                                 | UM3K-025GK |     |    |    |           |
| G 1 <sup>1</sup> / <sub>4</sub> | UM3K-032GM | 99  | 50 | 12 | 0.75      |
|                                 | UM3K-032GK |     |    |    |           |
| G 1 <sup>1</sup> / <sub>2</sub> | UM3K-040GM | 108 | 50 | 12 | 0.85      |
|                                 | UM3K-040GK |     |    |    |           |
| G 2                             | UM3K-050GM | 108 | 50 | 12 | 1.05      |
|                                 | UM3K-050GK |     |    |    |           |



## Handling and operation

### Note

- Include straight calming section of 5 x DN in inlet and outlet
- When tightening the union nut, the connection piece must be countered using an open-ended spanner (SW 19).
- 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 and inductive loads must be operated using a protective circuit.

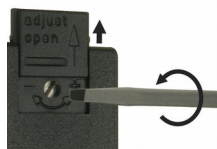
### Adjustment

To adjust, open the slider. Adjustment is made using the adjustment screw with a lengthways slot; this is located under the valve.

Turn clockwise for a lower switching point; turn anticlockwise for a higher switching point.

After adjustment, close the slider again.

Example: The adjustment range 20 to 27 l/min corresponds to 7 l/min Adjustment option in 7 revolutions. Adjustment is therefore 1 l/min for each revolution.



## Ordering code

UM3K -  1.  2.  3.  4.

| 1. Nominal width  |                          |
|---|--------------------------|
| 010   | DN 10 - G $\frac{3}{8}$  |
| 015   | DN 15 - G $\frac{1}{2}$  |
| 020   | DN 20 - G $\frac{3}{4}$  |
| 025   | DN 25 - G 1              |
| 032   | DN 32 - G $1\frac{1}{4}$ |
| 040   | DN 40 - G $1\frac{1}{2}$ |
| 050   | DN 50 - G 2              |
| 2. Process connection   |                          |
| G   | female thread            |
| 3. Connection material  |                          |
| M   | brass                    |
| K   | stainless steel          |
| 4. Switching range H <sub>2</sub> O for horizontal inwards flow |                          |
| 055   | 4.0 - 5.5 l/min          |
| 070   | 5.5 - 7.0 l/min          |
| 100   | 7.5 - 10.0 l/min         |
| 180   | 14.0 - 18.0 l/min        |
| 300   | 22.0 - 30.0 l/min        |
| 500   | 37.0 - 50.0 l/min        |
| 930   | 67.0 - 93.0 l/min        |

## Options

- Connection for round plug-in connector
- Signal lamp red or red/green in the plug DIN 43650-A
- Gold contact 125 V AC / 30 V DC, 100 mA
- Protective bellows
- Switching ranges for oil or gas
- Special values
- Soldered copper fitting
- Adhesive PVC fitting
- Male thread G  $\frac{1}{2}$  A - brass

## 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).
- For gases, state pressure (relative or absolute), temperature and medium (e.g. air) (enquire about range).