

# Flow switch HR2K2



- Low pressure loss
- Solid construction

## Characteristics

Mechanical flow switch for fluid media, with spring-supported piston and magnetic triggering of a reed switch. Robust construction in brass or stainless steel.

## Technical data

|                                 |                                                                                               |                                                                         |
|---------------------------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>Switch</b>                   | reed switch                                                                                   |                                                                         |
| <b>Nominal width</b>            | DN 32 / 40 / 50                                                                               |                                                                         |
| <b>Process connection</b>       | female thread G 1 $\frac{1}{4}$ ..G 2<br>(further process connections available on request)   |                                                                         |
| <b>Switching range</b>          | 15.. 80 l/min                                                                                 | for details see table "Ranges"                                          |
| <b>Pressure loss</b>            | ~ 1 bar at Q <sub>max</sub>                                                                   |                                                                         |
| <b>Q<sub>max</sub></b>          | up to 300 l/min                                                                               |                                                                         |
| <b>Tolerance</b>                | ±10 % of full scale value                                                                     |                                                                         |
| <b>Pressure resistance</b>      | PS 200 bar                                                                                    |                                                                         |
| <b>Media temperature</b>        | -20..+120 °C                                                                                  |                                                                         |
| <b>Ambient temperature</b>      | -20..+70 °C                                                                                   |                                                                         |
| <b>Media</b>                    | Water                                                                                         |                                                                         |
| <b>Wiring</b>                   | <p>No. 0.378</p> <p>normally open (n.o.)</p> <p>not used</p>                                  |                                                                         |
| <b>Switching voltage</b>        | max. 230 V AC                                                                                 |                                                                         |
| <b>Switching current</b>        | max. 0.5 A                                                                                    |                                                                         |
| <b>Switch performance</b>       | max. 50 VA                                                                                    |                                                                         |
| <b>Protection class</b>         | 2 - Safety insulation                                                                         |                                                                         |
| <b>Ingress protection</b>       | IP 67                                                                                         |                                                                         |
| <b>Electrical connection</b>    | for round plug connector M12x1, 4-pole                                                        |                                                                         |
| <b>Materials medium-contact</b> | <i>Brass construction:</i><br>CW614N nickelled,<br>CW614N,<br>1.4305, 1.4310,<br>hard ferrite | <i>Stainless steel construction:</i><br>1.4571, 1.4310,<br>hard ferrite |

|                                     |                                                                                                                                                              |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Non-medium-contact materials</b> | CW614N nickelled, PC, 1.4301,                                                                                                                                |
| <b>Weight</b>                       | see table "Dimensions and weights"                                                                                                                           |
| <b>Installation location</b>        | Standard: horizontal inwards flow from the left; other installation positions are possible; the installation position affects the switching point and range. |

## Ranges

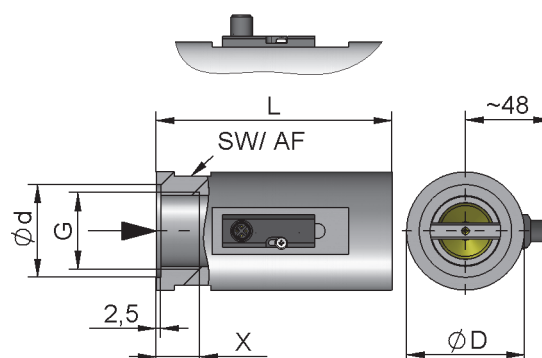
For switching ranges, the details in the table correspond to horizontal inwards flow and decreasing flow rate; for display ranges they correspond to horizontal inwards flow and increasing flow rate.

| <b>Switching range</b><br>l/min H <sub>2</sub> O | <b>Display range</b><br>l/min H <sub>2</sub> O | <b>Q<sub>max.</sub></b><br>recommended |
|--------------------------------------------------|------------------------------------------------|----------------------------------------|
| 15 - 30                                          | 10 - 60                                        | 300                                    |
| 20 - 40                                          | 15 -100                                        | 300                                    |
| 25 - 50                                          | 20 -200                                        | 300                                    |
| 30 - 80                                          | 30 -300                                        | 300                                    |

Special ranges are available.

## Dimensions and weights

| DN | G                               | Types       | L   | ØD | SW | Ød | X  | Weight<br>kg |
|----|---------------------------------|-------------|-----|----|----|----|----|--------------|
| 32 | G 1 <sup>1</sup> / <sub>4</sub> | HR2K2-032GM | 130 | 65 | 60 | 51 | 23 | 2.6          |
| 40 | G 1 <sup>1</sup> / <sub>2</sub> | HR2K2-040GM | 170 |    |    | 56 | 24 | 3.2          |
| 50 | G 2                             | HR2K2-050GM | 185 | 80 | 75 | 70 | 26 | 5.3          |



**additional weights for options**

|                 |         |
|-----------------|---------|
| Display O1 / Z1 | 0.05 kg |
|-----------------|---------|

## Product Information

HR2K2-032..050

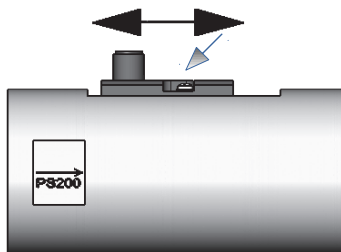
### Handling and Operation

#### 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

If it is necessary to adjust the switching value, the switching head can be adjusted lengthways. When the switching value is reached, the switching unit is fixed in place by a fastening bolt.



### Ordering code

HR2K2    1.    2.    3.    4.    5.  
                   **G**

| 1. Display options                                              |                                         |
|-----------------------------------------------------------------|-----------------------------------------|
| -                                                               | no mechanical display                   |
| O1-                                                             | with measurement display at side O1     |
| Z1-                                                             | with frontal measurement display Z1     |
| 2. Nominal width                                                |                                         |
| 032                                                             | DN 32 - G 1 <sup>1</sup> / <sub>4</sub> |
| 040                                                             | DN 40 - G 1 <sup>1</sup> / <sub>2</sub> |
| 050                                                             | DN 50 - G 2                             |
| 3. Process connection                                           |                                         |
| G                                                               | female thread                           |
| 4. Connection material                                          |                                         |
| M                                                               | brass                                   |
| K                                                               | stainless steel                         |
| 5. Switching range H <sub>2</sub> O for horizontal inwards flow |                                         |
| 030                                                             | 15 - 30 l/min                           |
| 040                                                             | 20 - 40 l/min                           |
| 050                                                             | 25 - 50 l/min                           |
| 080                                                             | 30 - 80 l/min                           |



HR2K201-



HR2K2Z1-

#### Options

- Special values
- two to four switching heads

#### Ordering information

- Specify direction of flow, medium, and switching range.