

## Flow Indicator H1Z / H2Z



- No electrical supply required
- Individually calibrated display
- Compact design

### Characteristics

A piston fitted with a magnet is pushed through the medium against the force of a spring. This activates the pointer of the measuring device by means of a magnetic coupling. Because of the hermetic separation from the medium, the display unit cannot be soiled by the medium.

### Technical data

|                              |                                                                                                                                                  |                                                                                        |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Switch                       | without                                                                                                                                          |                                                                                        |
| Nominal width                | DN 8..25                                                                                                                                         |                                                                                        |
| Process connection           | female thread G 1/4..G 1<br>(further process connections available on request)                                                                   |                                                                                        |
| Display range                | 0.1..85 l/min                                                                                                                                    | for details see table "Ranges"                                                         |
| Pressure loss                | 0.4..3.5 bar at Q <sub>max</sub> .                                                                                                               |                                                                                        |
| Q <sub>max</sub> .           | to 100 l/min                                                                                                                                     |                                                                                        |
| Tolerance                    | ±5 % of full scale value                                                                                                                         |                                                                                        |
| Pressure resistance          | PN 200 bar optionally PN 500 bar                                                                                                                 |                                                                                        |
| Media temperature            | -20..+70 °C                                                                                                                                      |                                                                                        |
| Ambient temperature          | -20..+70 °C                                                                                                                                      |                                                                                        |
| Media                        | water, oil (gases and aggressive media available on request)                                                                                     |                                                                                        |
| Electrical data              | none                                                                                                                                             |                                                                                        |
| Materials medium-contact     | Brass construction:<br>CW614N nickelled,<br>CW614N, 1.4310,<br>hard ferrite, NBR                                                                 | Stainless steel construction: 1.4571,<br>1.4404, 1.4310, hard ferrite PTFE-coated, FKM |
| Non-medium-contact materials | PC, acrylic                                                                                                                                      |                                                                                        |
| Weight                       | see table "Dimensions and weights"                                                                                                               |                                                                                        |
| Installation location        | Standard: horizontal inwards flow from the left; other installation positions are possible; the installation position affects the display range. |                                                                                        |

### Ranges

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

#### Standard type H1Z

| Display range<br>l/min H <sub>2</sub> O | $Q_{max}$<br>recommended | Pressure loss<br>bar at $Q_{max}$ H <sub>2</sub> O |
|-----------------------------------------|--------------------------|----------------------------------------------------|
| 0.1 - 1.2                               | 6                        | 0.4                                                |
| 0.5 - 6.0                               | 10                       | 0.5                                                |
| 1.0 - 12.0                              | 20                       | 0.6                                                |
| 2.0 - 23.0                              | 30                       | 0.4                                                |
| 3.0 - 34.0                              | 40                       |                                                    |
| 4.0 - 45.0                              | 60                       | 0.8                                                |
| 6.0 - 65.0                              | 80                       | 1.4                                                |
| 20.0 - 85.0                             | 100                      | 1.6                                                |

Special ranges are available.

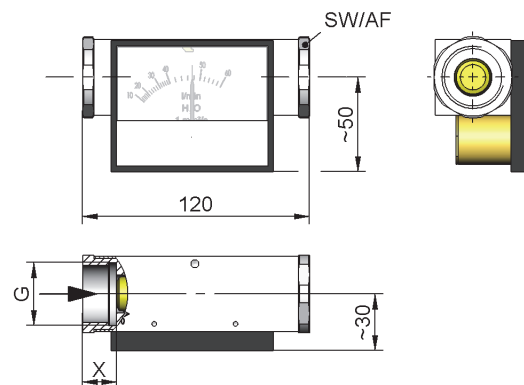
#### Viscosity compensated H2Z

| Display range<br>l/min oil    | $Q_{max}$<br>recom-<br>mended | Pressure loss<br>bar at<br>$Q_{max}$<br>oil mm <sup>2</sup> /s |     |     |     |     | Viscosity<br>stability |
|-------------------------------|-------------------------------|----------------------------------------------------------------|-----|-----|-----|-----|------------------------|
| 30..330<br>mm <sup>2</sup> /s |                               | 30                                                             | 60  | 100 | 205 | 330 | ±8 %, min.             |
| 0.5 - 10                      | 12                            | 1.1                                                            | 1.4 | 1.6 | 2.8 | 3.5 | ±0.3 l/min             |
| 1.5 - 20                      | 22                            | 2.2                                                            | 2.3 | 2.4 |     |     | ±0.5 l/min             |
| 2.5 - 30                      | 35                            | 1.9                                                            | 2.0 | 2.1 | 2.3 | 2.9 | ±0.8 l/min             |
| 6.0 - 45                      | 60                            |                                                                |     |     |     | 2.6 | ±2.7 l/min             |
| 12.0 - 65                     | 80                            | 2.1                                                            | 2.3 | 2.4 | 2.6 | 2.8 | ±3.0 l/min             |

Special ranges are available.

### Dimensions and weights

|                        | G     | Types     | SW | X  | Weight<br>kg |
|------------------------|-------|-----------|----|----|--------------|
| <b>Brass</b>           | G 1/4 | H.Z-008GM | 40 | 15 | 1.4          |
|                        | G 3/8 | H.Z-010GM |    |    | 1.3          |
|                        | G 1/2 | H.Z-015GM |    | 18 |              |
|                        | G 3/4 | H.Z-020GM |    |    | 1.2          |
|                        | G 1   | H.Z-025GM |    |    |              |
| <b>Stainless steel</b> | G 1/4 | H.Z-008GK | 41 | 15 | 1.3          |
|                        | G 3/8 | H.Z-010GK |    |    |              |
|                        | G 1/2 | H.Z-015GK |    | 18 | 1.2          |
|                        | G 3/4 | H.Z-020GK |    |    | 1.1          |
|                        | G 1   | H.Z-025GK |    |    |              |



## Handling and Operation

- 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)

## Ordering code

1. 2. 3. 4. 5. 6.  
H   Z -   G

| 1. Construction                                                               |                                    |
|-------------------------------------------------------------------------------|------------------------------------|
| 1                                                                             | standard                           |
| 2                                                                             | viscosity compensated              |
| 2. Display                                                                    |                                    |
| Z                                                                             | with frontal measurement display Z |
| 3. Nominal width                                                              |                                    |
| 008                                                                           | DN 8 - G 1/4                       |
| 010                                                                           | DN 10 - G 3/8                      |
| 015                                                                           | DN 15 - G 1/2                      |
| 020                                                                           | DN 20 - G 3/4                      |
| 025                                                                           | DN 25 - G 1                        |
| 4. Process connection                                                         |                                    |
| G                                                                             | female thread                      |
| 5. Connection material                                                        |                                    |
| M                                                                             | brass                              |
| K                                                                             | stainless steel                    |
| 6. H1 - Display range H <sub>2</sub> O for horizontal inwards flow            |                                    |
| 001                                                                           | 0.1 - 1.2 l/min                    |
| 005                                                                           | 0.5 - 6.0 l/min                    |
| 010                                                                           | 1.0 - 12.0 l/min                   |
| 020                                                                           | 2.0 - 23.0 l/min                   |
| 030                                                                           | 3.0 - 34.0 l/min                   |
| 040                                                                           | 4.0 - 45.0 l/min                   |
| 060                                                                           | 6.0 - 65.0 l/min                   |
| 080                                                                           | 20.0 - 85.0 l/min                  |
| H2 - display range oil 30..330 mm <sup>2</sup> /s for horizontal inwards flow |                                    |
| 008                                                                           | 0.5 - 10 l/min                     |
| 015                                                                           | 1.5 - 20 l/min                     |
| 025                                                                           | 2.5 - 30 l/min                     |
| 040                                                                           | 6.0 - 45 l/min                     |
| 060                                                                           | 12.0 - 65 l/min                    |

## Options

- Special ranges/special scaling
- Pressure resistance PN 500
- Temperature display 0..120 °C
- Reinforced piston

## Ordering information

- Specify direction of flow, medium, and display range.
- For oils. State viscosity, temperature and designation (e.g. ISO VG 68) (enquire about display range).
- For gases, state pressure (relative or absolute), temperature and medium (e.g. air) (request display range)