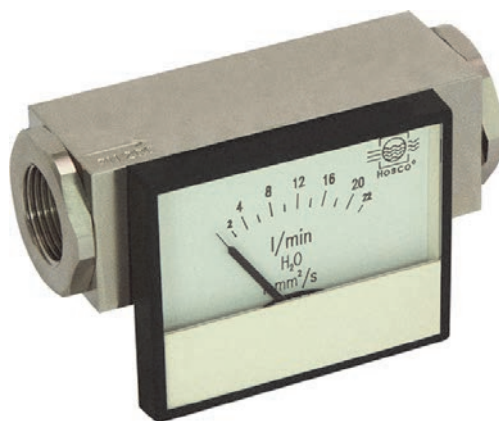


H1O1/H2O1, H1VO1, H1O/H2O, H1VO, H1Z1/H2Z1, H1VZ1, H1Z/H2Z

Датчики протока поршневого типа

GHM MESSTECHNIK



Технические характеристики

| | | | | |
|-----------------------------|----------------------------|---------------------------------|--------------------------------|---------------------------|
| Архангельск (8182)63-90-72 | Иваново (4932)77-34-06 | Липецк (4742)52-20-81 | Пенза (8412)22-31-16 | Ставрополь (8652)20-65-13 |
| Астана (7172)727-132 | Ижевск (3412)26-03-58 | Магнитогорск (3519)55-03-13 | Пермь (342)205-81-47 | Сургут (3462)77-98-35 |
| Астрахань (8512)99-46-04 | Иркутск (395)279-98-46 | Москва (495)268-04-70 | Ростов-на-Дону (863)308-18-15 | Тверь (4822)63-31-35 |
| Барнаул (3852)73-04-60 | Казань (843)206-01-48 | Мурманск (8152)59-64-93 | Рязань (4912)46-61-64 | Томск (3822)98-41-53 |
| Белгород (4722)40-23-64 | Калининград (4012)72-03-81 | Набережные Челны (8552)20-53-41 | Самара (846)206-03-16 | Тула (4872)74-02-29 |
| Брянск (4832)59-03-52 | Калуга (4842)92-23-67 | Нижний Новгород (831)429-08-12 | Санкт-Петербург (812)309-46-40 | Тюмень (3452)66-21-18 |
| Владивосток (423)249-28-31 | Кемерово (3842)65-04-62 | Новокузнецк (3843)20-46-81 | Саратов (845)249-38-78 | Ульяновск (8422)24-23-59 |
| Волгоград (844)278-03-48 | Киров (8332)68-02-04 | Новосибирск (383)227-86-73 | Севастополь (8692)22-31-93 | Уфа (347)229-48-12 |
| Вологда (8172)26-41-59 | Краснодар (861)203-40-90 | Омск (3812)21-46-40 | Симферополь (3652)67-13-56 | Хабаровск (4212)92-98-04 |
| Воронеж (473)204-51-73 | Красноярск (391)204-63-61 | Орел (4862)44-53-42 | Смоленск (4812)29-41-54 | Челябинск (351)202-03-61 |
| Екатеринбург (343)384-55-89 | Курск (4712)77-13-04 | Оренбург (3532)37-68-04 | Сочи (862)225-72-31 | Череповец (8202)49-02-64 |

Киргизия (996)312-96-26-47 Казахстан (772)734-952-31 Таджикистан (992)427-82-92-69

<http://ghm.nt-rt.ru> || gmg@nt-rt.ru

Flow Display H101 / H201



- 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 | |
| Connection type | female thread G 1/4..G 1 (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 _{max.} | |
| Q_{max.} | to 100 l/min | |
| Tolerance | ±5 % of full scale value | |
| Pressure resistance | PN 200 bar optionally PN 500 bar | |
| Media temperature | -20..+120 °C | |
| Ambient temperature | -20..+70 °C | |
| Media | water, oils (gases and aggressive media available on request) | |
| Electrical data | none | |
| Materials media-contact | <i>Brass construction:</i> CW614N nickelled, CW614N, 1.4310, hard ferrite, NBR | <i>Stainless steel construction:</i> 1.4571, 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 H101

| Display range l/min H ₂ O | Q _{max.} recommended | Pressure loss bar at Q _{max.} H ₂ 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.

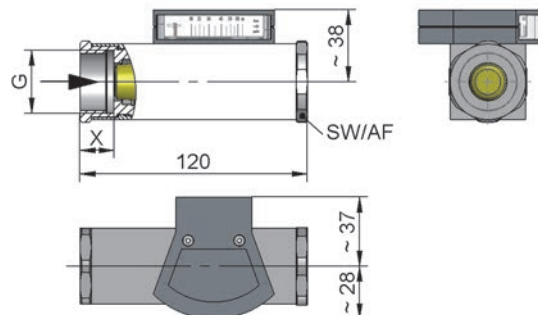
Viscosity compensated type H201

| Display range l/min oil 30..330 mm ² /s | Q _{max.} recommended | Pressure loss bar at Q _{max.} oil mm ² /s | | | | | Viscosity stability ±8 %, min. |
|---|----------------------------------|---|-----|-----|-----|-----|--------------------------------------|
| | | 30 | 60 | 100 | 205 | 330 | |
| 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 /min |

Special ranges are available.

Dimensions and weights

| | G | Types | SW | X | Weight kg |
|------------------------|-------|------------|----|----|--------------|
| Brass | G 1/4 | H.O1-008GM | 40 | 15 | 1.3 |
| | G 3/8 | H.O1-010GM | | | |
| | G 1/2 | H.O1-015GM | | 18 | 1.2 |
| | G 3/4 | H.O1-020GM | | | |
| | G 1 | H.O1-025GM | | | |
| Stainless steel | G 1/4 | H.O1-008GK | 41 | 15 | 1.3 |
| | G 3/8 | H.O1-010GK | | | |
| | G 1/2 | H.O1-015GK | | 18 | 1.2 |
| | G 3/4 | H.O1-020GK | | | |
| | G 1 | H.O1-025GK | | | |



Product Information

Sensors and Instrumentation

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 O1 - G

| 1. Construction | | |
|---|-------------------------------------|---|
| 1 | standard | |
| 2 | viscosity compensated | |
| 2. Display | | |
| O1 | with measurement display at side O1 | |
| 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 ₂ 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 ² /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)

Flow Indicator H1O / H2O



- 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 (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 _{max.} | |
| Q_{max.} | To 100 l/min | |
| Tolerance | ±5 % of full scale value | |
| Pressure resistance | PN 200 bar optionally PN 500 bar | |
| Media temperature | -20..+120 °C | |
| Ambient temperature | -20..+70 °C | |
| Media | water, oil (gases and aggressive media available on request) | |
| Electrical data | none | |
| Materials medium-contact | <i>Brass construction:</i> CW614N nickelled, CW614N, 1.4310, hard ferrite, NBR | <i>Stainless steel construction:</i> 1.4571, 1.4404, 1.4310, hard ferrite PTFE-coated, FKM |
| Non-medium-contact materials | CW614N nickelled, PC | |
| 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 H1O

| Display range l/min H ₂ O | Q _{max.} recommended | Pressure loss bar at Q _{max.} H ₂ 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.

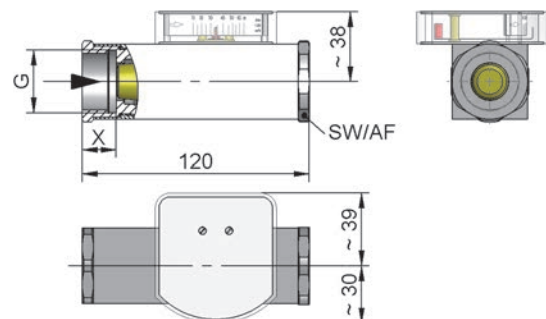
Viscosity compensated type H2O

| Display range l/min oil 30..330 mm ² /s | Q _{max.} recomm ended | Pressure loss bar at Q _{max.} oil mm ² /s | | | | | Viscosity stability ±8 %, min. |
|---|--------------------------------------|---|-----|-----|---------|-----|--------------------------------------|
| | | 30 | 60 | 100 | 20 5 | 330 | |
| 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 kg |
|------------------------|-------|-----------|----|----|--------------|
| Brass | G 1/4 | H.O-008GM | 40 | 15 | 1.4 |
| | G 3/8 | H.O-010GM | | | |
| | G 1/2 | H.O-015GM | | 18 | 1.3 |
| | G 3/4 | H.O-020GM | | | |
| | G 1 | H.O-025GM | | | |
| Stainless steel | G 1/4 | H.O-008GK | 41 | 15 | 1.3 |
| | G 3/8 | H.O-010GK | | | |
| | G 1/2 | H.O-015GK | | 18 | 1.2 |
| | G 3/4 | H.O-020GK | | | |
| | G 1 | H.O-025GK | | | |



Product Information

Sensors and Instrumentation

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

H -

| | | |
|--|------------------------------------|---|
| 1. Construction | | |
| 1 | standard | |
| 2 | viscosity compensated | |
| 2. Display | | |
| O | with measurement display at side O | |
| 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 H₂O 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 mm²/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 | ● |

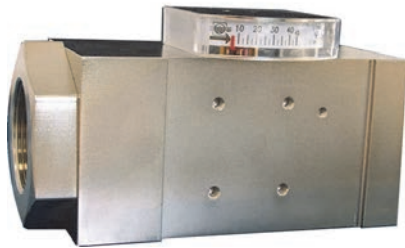
Options

- 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, specify pressure (relative or absolute), temperature and medium (e.g. air) (enquire about display range).

Flow Indicator H1VO



- Viscosity stabilised from 30 to 200 mm²/s
- No electrical supply required
- Individually calibrated display

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 32..50 | |
| Process connection | femalethread G 1 ¹ / ₄ ..G 2 (further process connections available on request) | |
| Display range | 2..220 l/min | for details see table "Ranges" |
| Q_{max.} | to 250 l/min | |
| Tolerance | ±5 % of the full scale value plus viscosity variation | |
| Pressure resistance | PN 200 bar | |
| Media temperature | -20..+120 °C | |
| Ambient temperature | -20..+70 °C | |
| Media | water, oils (gases and aggressive media available on request) | |
| Electrical data | none | |
| Materials medium-contact | <i>Brass construction:</i> CW614N nickelled, CW614N, 1.4310, hard ferrite DN 32..40: NBR | <i>Stainless steel construction:</i> 1.4571, 1.4404, 1.4310, hard ferrite PTFE-coated, DN 32..40: FKM |
| Non-medium-contact materials | CW614N nickelled, PC | |
| 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

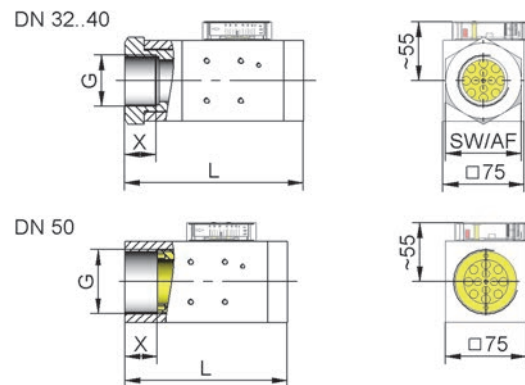
Details in the table correspond to horizontal inwards flow with increasing flow rate.

| Display range l/min H ₂ O or oil 30..200 mm ² /s | Q _{max.} recommended |
|--|----------------------------------|
| 2 - 15 | 50 |
| 5 - 25 | 60 |
| 10 - 45 | 100 |
| 20 - 65 | 150 |
| 30 - 110 | 200 |
| 50 - 160 | 230 |
| 100 - 220 | 250 |

Special ranges are available.

Dimensions and weights

| DN | G | Types | L | SW | X | Weight kg |
|----|---------------------------------|------------|-----|----|----|--------------|
| 32 | G 1 ¹ / ₄ | H1VO-032G. | 165 | 70 | 29 | 5.8 |
| 40 | G 1 ¹ / ₂ | H1VO-040G. | | | | 5.5 |
| 50 | G 2 | H1VO-050G. | 150 | - | 26 | 5.0 |



Product Information

Sensors and Instrumentation

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

H1V 1. 2. 3. 4. 5.
 O - G

○=Option

| | | |
|--|----------------------------|--|
| 1. Display | <input type="checkbox"/> O | with measurement display at side O |
| 2. Nominal width | 032 | DN 32 - G 1 ¹ / ₄ |
| | 040 | DN 40 - G 1 ¹ / ₂ |
| | 050 | DN 50 - G 2 |
| 3. Process connection | G | female thread |
| 4. Connection material | M | brass |
| | K | <input type="checkbox"/> stainless steel |
| 5. Display range H₂O or oil 30..330 mm²/s for horizontal inwards flow | 012 | 2 - 15 l/min |
| | 025 | 5 - 25 l/min |
| | 040 | 10 - 45 l/min |
| | 060 | 20 - 65 l/min |
| | 100 | 30 - 110 l/min |
| | 150 | 50 - 160 l/min |
| | 200 | 100 - 220 l/min |

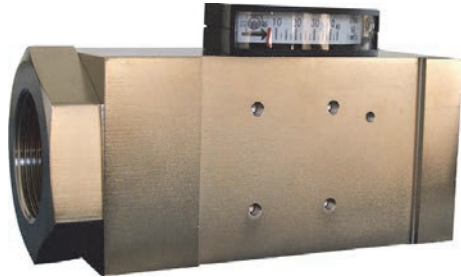
Options

- Special ranges/special scaling
- Temperature display 0..120 °C

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)

Flow Display H1VO1



- Viscosity stabilised from 30 to 200 mm²/s
- No electrical supply required
- Individually calibrated display

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 32..50 | |
| Process connection | female thread G 1 ¹ / ₄ ..G 2 (further process connections available on request) | |
| Display range | 2..220 l/min | for details see table "Ranges" |
| Q_{max.} | to 250 l/min | |
| Tolerance | ±5 % of the full scale value plus viscosity variation | |
| Pressure resistance | PN 200 bar | |
| Media temperature | -20..+120 °C | |
| Ambient temperature | -20..+70 °C | |
| Media | water, oils (gases and aggressive media available on request) | |
| Electrical data | none | |
| Materials medium-contact | <i>Brass construction:</i> CW614N nickelled, CW614N, 1.4310, hard ferrite <i>DN 32..40:</i> NBR | <i>Stainless steel construction:</i> 1.4571, 1.4404, 1.4310, hard ferrite PTFE-coated, <i>DN 32..40:</i> 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.

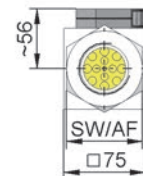
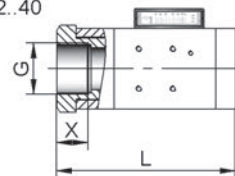
| Display range l/min H ₂ O or oil 30..200 mm ² /s | Q _{max.} recommended |
|--|----------------------------------|
| 2 - 15 | 50 |
| 5 - 25 | 60 |
| 10 - 45 | 100 |
| 20 - 65 | 150 |
| 30 - 110 | 200 |
| 50 - 160 | 230 |
| 100 - 220 | 250 |

Special ranges are available.

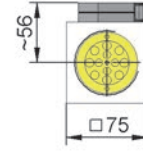
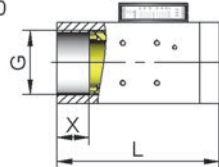
Dimensions and weights

| DN | G | Types | L | SW | X | Weight kg |
|----|---------------------------------|-------------|-----|----|----|--------------|
| 32 | G 1 ¹ / ₄ | H1VO1-032G. | 165 | 70 | 29 | 5.8 |
| 40 | G 1 ¹ / ₂ | H1VO1-040G. | | | | 5.5 |
| 50 | G 2 | H1VO1-050G. | 150 | - | 26 | 5.0 |

DN 32..40



DN 50



Product Information

Sensors and Instrumentation

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

H1V -

○=Option

| | | |
|--|-----|---|
| 1. Display | O1 | with measurement display at side O1 |
| 2. Nominal width | 032 | DN 32 - G 1 ¹ / ₄ |
| | 040 | DN 40 - G 1 ¹ / ₂ |
| | 050 | DN 50 - G 2 |
| 3. Process connection | G | female thread |
| 4. Connection material | M | brass |
| | K | ○ stainless steel |
| 5. Display range H₂O or oil 30..330 mm²/s for horizontal inwards flow | 012 | 2 - 15 l/min |
| | 025 | 5 - 25 l/min |
| | 040 | 10 - 45 l/min |
| | 060 | 20 - 65 l/min |
| | 100 | 30 - 110 l/min |
| | 150 | 50 - 160 l/min |
| | 200 | 100 - 220 l/min |

Options

- Special ranges/special scaling
- Temperature display 0..120 °C

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)

Flow Indicator H1VZ1



- Viscosity stabilised from 30 to 200 mm²/s
- No electrical supply required
- Individually calibrated display

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 32..50 | |
| Process connection | female thread G 1 ¹ / ₄ ..G 2 (further process connections available on request) | |
| Display range | 2..220 l/min | for details see table "Ranges" |
| Q_{max.} | to 250 l/min | |
| Tolerance | ±5 % of the full scale value plus viscosity variation | |
| Pressure resistance | PN 200 bar | |
| Media temperature | -20..+120 °C | |
| Ambient temperature | -20..+70 °C | |
| Media | water, oils (gases and aggressive media available on request) | |
| Electrical data | none | |
| Materials medium-contact | <i>Brass construction:</i> CW614N nickelled, CW614N, 1.4310, hard ferrite DN 32..40: NBR | <i>Stainless steel construction:</i> 1.4571, 1.4404, 1.4310, hard ferrite PTFE-coated, DN 32..40: 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.

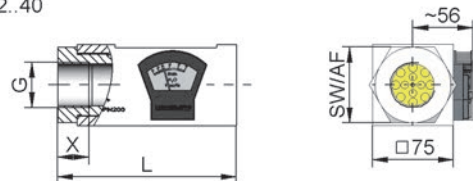
| Display range l/min H ₂ O or oil 30..200 mm ² /s | Q _{max.} recommended |
|--|----------------------------------|
| 2 - 15 | 50 |
| 5 - 25 | 60 |
| 10 - 45 | 100 |
| 20 - 65 | 150 |
| 30 - 110 | 200 |
| 50 - 160 | 230 |
| 100 - 220 | 250 |

Special ranges are available.

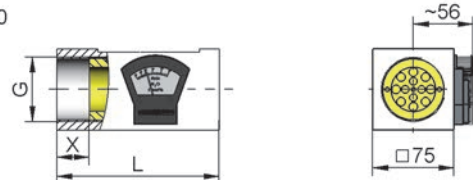
Dimensions and weights

| DN | G | Types | L | SW | X | Weight kg |
|----|---------------------------------|-------------|-----|----|----|--------------|
| 32 | G 1 ¹ / ₄ | H1VZ1-032G. | 165 | 70 | 29 | 5.8 |
| 40 | G 1 ¹ / ₂ | H1VZ1-040G. | | | | 5.5 |
| 50 | G 2 | H1VZ1-050G. | 150 | - | 26 | 5.0 |

DN 32..40



DN 50



Product Information

Sensors and Instrumentation

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

H1V -

○=Option

| | | |
|--|-----|---|
| 1. Display | Z1 | with frontal measurement display Z1 |
| 2. Nominal width | 032 | DN 32 - G 1 ¹ / ₄ |
| | 040 | DN 40 - G 1 ¹ / ₂ |
| | 050 | DN 50 - G 2 |
| 3. Process connection | G | female thread |
| 4. Connection material | M | brass |
| | K | ○ stainless steel |
| 5. Display range H₂O or oil 30..330 mm²/s for horizontal inwards flow | 012 | 2 - 15 l/min |
| | 025 | 5 - 25 l/min |
| | 040 | 10 - 45 l/min |
| | 060 | 20 - 65 l/min |
| | 100 | 30 - 110 l/min |
| | 150 | 50 - 160 l/min |
| | 200 | 100 - 220 l/min |

Options

- Special ranges/special scaling
- Temperature display 0..120 °C

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)

Flow indicator H1Z1 / H2Z1



- 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 (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 _{max.} | |
| Q_{max.} | to 100 l/min | |
| Tolerance | ±5 % of full scale value | |
| Pressure resistance | PN 200 bar optionally PN 500 bar | |
| Media temperature | -20..+120 °C | |
| Ambient temperature | -20..+70 °C | |
| Media | water, oil (gases and aggressive media available on request) | |
| Electrical data | none | |
| Materials medium-contact | <i>Brass construction:</i> CW614N nickelled, CW614N, 1.4310, hard ferrite, NBR | <i>Stainless steel construction:</i> 1.4571, 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 H1Z1

| Display range l/min H ₂ O | Q _{max.} recommended | Pressure loss bar at Q _{max.} H ₂ 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.

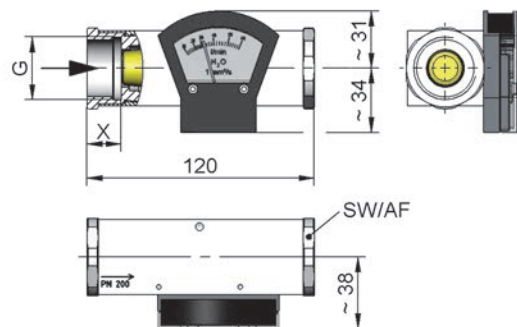
Viscosity compensated type H2Z1

| Display range l/min oil 30..330 mm ³ /s | Q _{max.} recommende d | Pressure loss bar at Q _{max.} oil mm ² /s | | | | | Viscosity stability ±8 %, min. |
|---|--------------------------------------|---|-----|-----|-----|-----|--------------------------------------|
| | | 30 | 60 | 100 | 205 | 330 | |
| 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 kg |
|------------------------|-------|------------|----|----|--------------|
| Brass | G 1/4 | H.Z1-008GM | 40 | 15 | 1.3 |
| | G 3/8 | H.Z1-010GM | | | |
| | G 1/2 | H.Z1-015GM | | | |
| | G 3/4 | H.Z1-020GM | | | |
| | G 1 | H.Z1-025GM | | | |
| Stainless steel | G 1/4 | H.Z1-008GK | 41 | 15 | 1.3 |
| | G 3/8 | H.Z1-010GK | | | |
| | G 1/2 | H.Z1-015GK | | | |
| | G 3/4 | H.Z1-020GK | | | |
| | G 1 | H.Z1-025GK | | | |



Product Information

Sensors and Instrumentation

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 Z1 - G

| 1. Construction | | |
|---|-------------------------------------|---|
| 1 | standard | |
| 2 | viscosity compensated | |
| 2. Display | | |
| Z1 | with frontal measurement display Z1 | |
| 3. Nominal width | | |
| 008 | DN 8 - G $\frac{1}{4}$ | |
| 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 | |
| 4. Process connection | | |
| G | female thread | |
| 5. Connection material | | |
| M | brass | |
| K | stainless steel | |
| 6. H1 - Display range H ₂ 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 ² /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)

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 (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 _{max.} | |
| Q_{max.} | 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 | <i>Brass construction:</i> CW614N nickelled, CW614N, 1.4310, hard ferrite, NBR | <i>Stainless steel construction:</i> 1.4571, 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 l/min H ₂ O | Q _{max.} recommended | Pressure loss bar at Q _{max.} H ₂ 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.

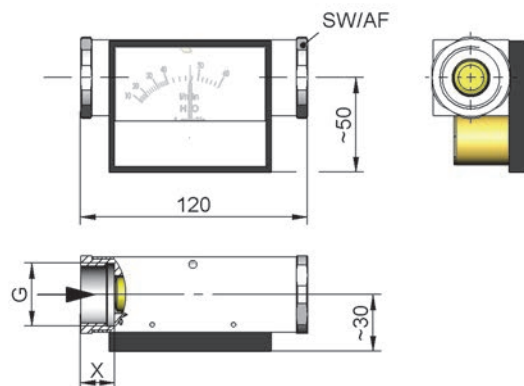
Viscosity compensated H2Z

| Display range l/min oil | Q _{max.} recommended | Pressure loss bar at Q _{max.} oil mm ² /s | | | | | Viscosity stability |
|-------------------------------|----------------------------------|--|-----|-----|-----|-----|------------------------|
| | | 30 | 60 | 100 | 205 | 330 | |
| 30..330 mm ² /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 kg |
|------------------------|-------|-----------|----|----|--------------|
| Brass | 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 | 1.2 |
| | G 3/4 | H.Z-020GM | | | 1.2 |
| | G 1 | H.Z-025GM | | | 1.2 |
| Stainless steel | G 1/4 | H.Z-008GK | 41 | 15 | 1.3 |
| | G 3/8 | H.Z-010GK | | | 1.3 |
| | G 1/2 | H.Z-015GK | | 18 | 1.2 |
| | G 3/4 | H.Z-020GK | | | 1.2 |
| | G 1 | H.Z-025GK | | | 1.1 |



Product Information

Sensors and Instrumentation

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

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

| 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 ₂ 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 ² /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)

| | | | | |
|-----------------------------|----------------------------|---------------------------------|--------------------------------|---------------------------|
| Архангельск (8182)63-90-72 | Иваново (4932)77-34-06 | Липецк (4742)52-20-81 | Пенза (8412)22-31-16 | Ставрополь (8652)20-65-13 |
| Астана (7172)727-132 | Ижевск (3412)26-03-58 | Магнитогорск (3519)55-03-13 | Пермь (342)205-81-47 | Сургут (3462)77-98-35 |
| Астрахань (8512)99-46-04 | Иркутск (395)279-98-46 | Москва (495)268-04-70 | Ростов-на-Дону (863)308-18-15 | Тверь (4822)63-31-35 |
| Барнаул (3852)73-04-60 | Казань (843)206-01-48 | Мурманск (8152)59-64-93 | Рязань (4912)46-61-64 | Томск (3822)98-41-53 |
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| Екатеринбург (343)384-55-89 | Курск (4712)77-13-04 | Оренбург (3532)37-68-04 | Сочи (862)225-72-31 | Череповец (8202)49-02-64 |
| | | | | Ярославль (4852)69-52-93 |

Киргизия (996)312-96-26-47 Казахстан (772)734-952-31 Таджикистан (992)427-82-92-69