

## Series 1007

Flow Monitors:  
Flow Monitors

RV, DU, DW, DK  
Product Types

1/4" and up  
NPT, BSP

0-2000 psig  
Operating Pressure



### ABOUT SERIES 1007 Flow Monitors

Monitoring of liquid and gaseous media in refrigeration systems, welding machines, laser and piping systems, pumps, compressors and hydraulic systems. The switching point can be continuously adjusted within the switching range.

#### Unique Series Features

- Independent in positioning
- Float principle
- Air intake flap measurement principle
- Durable building method
- Visual indication without power supply
- Normally open and change over contacts
- Process current output 4-20mA
- For liquids, water, oil, and air

#### Material Options:

- Stainless Steel
- Brass nickled
- Steel
- Steel coated

#### Approvals:

- ✓ ATEX 94/9/EG

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## Description and function

Flow units work on the suspended body measurement principle. The suspended body is introduced into a cylindrical slotted nozzle. Depending on the model, the installation of the flow monitor is either dependent of position (only with suspended bodies) or independent of position (suspended bodies with spring). A reed switch is connected external to the flow circuit. The reed switch is sealed into a freely-adjustable housing (switch housing) and is thereby protected from external influences. The incoming medium moves the suspended body in the direction of flow. If the suspended body, with its integrated magnets, reaches the position of the reed switch, the contact studs close. If the rate of flow becomes greater, the suspended body will move further in the direction of flow, with the maximum movement limited by a stop, which prevents the suspended body moving beyond the switching area of the reed switch (bistable action).

## Application

Monitoring of liquid and gaseous media, for example, in refrigeration systems and refrigeration circuits of welding machines, laser and piping systems, pumps, compressors, hydraulic systems and many more.

### Switching point and switching range

The switching point can be continuously adjusted within the switching range. At the maximum scale setting, the flow-rate can be significantly higher than shown.

## Assembly notices:

### 1. Units dependent of position

The flow monitor must be installed vertically in the system.

The flow must be from the bottom to the top.

### 2. Units independent of position

The flow monitor can be installed in the system in any position.

The direction of flow must be such that an increase in the flow produces a corresponding positive movement on the scale.

### 3. Viscosity compensated units

The flow monitor can be installed in the system in any position.

The direction of flow must be such that an increase in the flow produces a corresponding positive movement on the scale.

### 4. The medium must not carry any solid bodies

with it. We recommend the installation of a dirt trap of type SF, SFD or SFM.

### Switching hysteresis

This refers to the distance travelled by the suspended body between the switch-on and switch-off quantities. The typical hysteresis of the suspended body tube is attained by selecting reed switches with lower differences between the pick-up and drop-off activation levels (dose differential).

### Position dependence

The unit must be installed vertically, e.g. the flow must be from the bottom to the top.

### Installation in any position

By installing a spring which moves the suspended body into its initial position, any installation orientation can be used. Re-adjustment is not required, as the springs have already been artificially aged and pre-tensioned.

### Viscosity compensation

This is achieved by installing a spring connected to a perforated plate. As the spring has already been artificially aged, no readjusting is necessary.

### Maintenance

Due to its design, the flow unit requires no maintenance. Cleaning at regular intervals should only be carried out in the case of media that contains magnetic particles. These cleaning intervals can be correspondingly extended by the use of a filter with a magnetic separator.

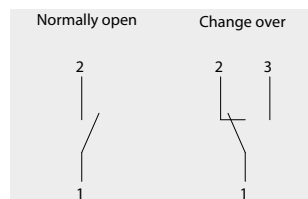
### 5. The unit with the contact device

must not be located within an induction field.

### 6. Always observe the maximum electrical values of the reed switch.

### 7. Setting the switching point:

Set the arrow on the switch housing to the desired switch-off quantity on the scale of the unit housing.



## Approvals

As an innovative manufacturer of instruments for level control, we can offer to our customers systems according to different directives. The types of approval, applications and limits of use can be taken from the following specifications.

### Approvals

#### Ex

A large number of flow monitors from our standard range, or to customer requests, can be built according to the EU-Directive 94/9/EG with the protection types EEx ia IIC T6 or EEx d T6. By the combination of the instruments with the type key, the catalogue shows with the Ex hexagonal logo which components can be used for Ex-instruments.

#### Temperature of media:

##### EEx ia-instruments

T6                      75 °C

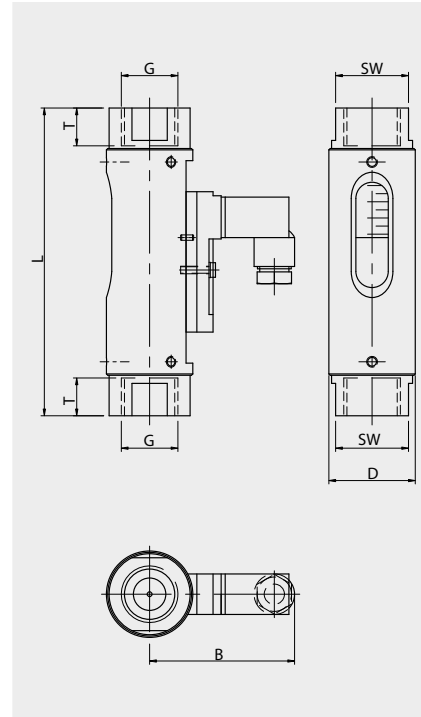
##### EEx m-instruments

T6                      75 °C

## RVO/U for water, independent of position

| Technical data          |  |
|-------------------------|--|
| Material:               | Stainless steel<br>Brass nickel-plated           |
| Operating pressure:     | PN 10 - 16                                       |
| Operating temperature:  | 100 °C (standard)<br>160 °C (optional)           |
| Contacts:               | Normally open<br>Change over see contacts p.144  |
| Ex - design:            | EExia IIC T6<br>EExm II T6                       |
| Electrical connections: | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| Measuring accuracy:     | ±10 % of final value                             |
| Pressure drop:          | 0.02 ... 0.4 bar                                 |
| Mounting position:      | Independent of position                          |
| Display:                | Glass  |
| Connection:             | Thread female BSP                                |
| Gaskets:                | Perbunan<br>Optional Viton, EPDM                 |

Stainless steel / Brass nickel-plated



| Type        | l/min        | G        | SW[mm] | D[mm] | B[mm] | T[mm] | L[mm] | Weight [g] |     |     |
|-------------|--------------|----------|--------|-------|-------|-------|-------|------------|-----|-----|
| RVO/U-4/01  | 0.005 - 0.06 | ¼"       | 17     | 20    | 49    | 10    | 90    | 140        |     |     |
| RVO/U-4/02  | 0.025 - 0.13 |          |        |       |       |       |       |            |     |     |
| RVO/U-4/06  | 0.1 - 0.6    |          |        |       |       |       |       |            |     |     |
| RVO/U-4/1   | 0.2 - 1.2    |          |        |       |       |       |       |            |     |     |
| RVO/U-4/2   | 0.4 - 2.0    |          |        |       |       |       |       |            |     |     |
| RVO/U-4/3   | 0.5 - 3.0    |          |        |       |       |       |       |            |     |     |
| RVO/U-4/5   | 1.0 - 5.0    |          |        |       |       |       |       |            |     |     |
| RVO/U-2/05  | 0.1 - 0.5    | ½"       | 27     | 32    | 53    | 14    | 114   | 300        |     |     |
| RVO/U-2/1   | 0.2 - 1      |          |        |       |       |       |       |            |     |     |
| RVO/U-2/2   | 0.4 - 1.6    |          |        |       |       |       |       |            |     |     |
| RVO/U-2/4   | 1 - 4        |          |        |       |       |       |       |            |     |     |
| RVO/U-2/8   | 2 - 8        |          |        |       |       |       |       |            |     |     |
| RVO/U-2/15  | 4 - 15       |          |        |       |       |       |       |            |     |     |
| RVO/U-2/20  | 5 - 22       |          |        |       |       |       |       |            |     |     |
| RVO/U-2/28  | 6 - 28       |          |        |       |       |       |       |            |     |     |
| RVO/U-1/30  | 8 - 30       | ¾"<br>1" | 41     | 50    | 77    | 18    | 139   | 800        |     |     |
| RVO/U-1/45  | 15 - 45      |          |        |       |       | 21    |       |            | 158 | 900 |
| RVO/U-1/90  | 30 - 90      |          |        |       |       | 17    |       |            |     |     |
| RVO/U-1/150 | 60 - 150     | 1"       | 41     | 50    | 77    | 25    | 158   | 900        |     |     |

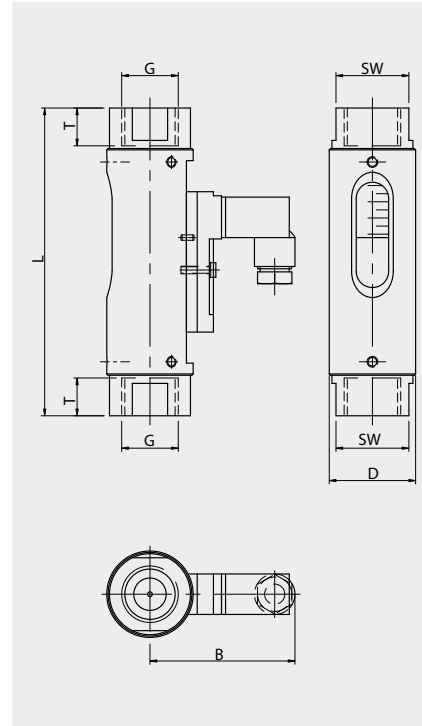
Type combination see type key Flow Monitors

## RVO/U-L for air, independent of position

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | PN 10 - 16                                       |
| <b>Operating temperature:</b>  | 100 °C (standard)<br>160 °C (optional)           |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                       |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | ± 10 % of final value                            |
| <b>Pressure drop:</b>          | 0.02 ... 0.4 bar                                 |
| <b>Mounting position:</b>      | Independent of position                          |
| <b>Display:</b>                | Glass  |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

Stainless steel / Brass nickel-plated



| Type         | NI/min    | G  | SW[mm] | D[mm] | B[mm] | T[mm] | L[mm] | Weight [g] |
|--------------|-----------|----|--------|-------|-------|-------|-------|------------|
| RVO/U-L40001 | 0.2 - 1.3 | ¼" | 17     | 20    | 49    | 10    | 90    | 140        |
| RVO/U-L40002 | 0.5 - 2   |    |        |       |       |       |       |            |
| RVO/U-L40003 | 0.8 - 3   |    |        |       |       |       |       |            |
| RVO/U-L40005 | 1.5 - 5   |    |        |       |       |       |       |            |
| RVO/U-L40008 | 2 - 8     |    |        |       |       |       |       |            |
| RVO/U-L40012 | 3 - 12    |    |        |       |       |       |       |            |
| RVO/U-L40014 | 3.5 - 14  |    |        |       |       |       |       |            |
| RVO/U-L40020 | 5.5 - 20  |    |        |       |       |       |       |            |
| RVO/U-L40024 | 7 - 24    |    |        |       |       |       |       |            |
| RVO/U-L40035 | 10 - 35   |    |        |       |       |       |       |            |
| RVO/U-L40042 | 10 - 42   |    |        |       |       |       |       |            |

other switching ranges on request / other media on request / other connection sizes on request

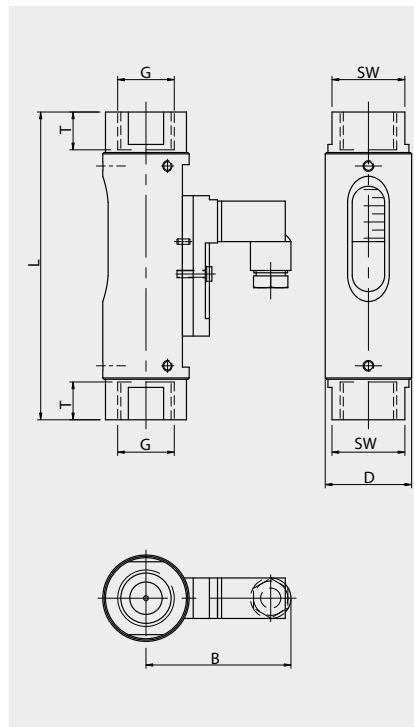
Type combination see type key Flow Monitors

## RVO/U-L for air, independent of position

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | PN 10 - 16                                       |
| <b>Operating temperature:</b>  | 100 °C (standard)<br>160 °C (optional)           |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                       |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | ± 10 % of final value                            |
| <b>Pressure drop:</b>          | 0.02 ... 0.4 bar                                 |
| <b>Mounting position:</b>      | Independent of position                          |
| <b>Display:</b>                | Glass  |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

Stainless steel / Brass nickel-plated



| Type         | NI/min    | G        | SW[mm] | D[mm] | B[mm] | T[mm]    | L[mm]      | Weight [g] |
|--------------|-----------|----------|--------|-------|-------|----------|------------|------------|
| RVO/U-L20012 | 3 - 12    | ½"       | 27     | 32    | 53    | 14       | 114        | 300        |
| RVO/U-L20030 | 7 - 30    |          |        |       |       |          |            |            |
| RVO/U-L20040 | 12 - 40   |          |        |       |       |          |            |            |
| RVO/U-L20125 | 28 - 125  |          |        |       |       |          |            |            |
| RVO/U-L20200 | 20 - 200  |          |        |       |       |          |            |            |
| RVO/U-2/15L  | 100 - 420 |          |        |       |       |          |            |            |
| RVO/U-2/20L  | 120 - 480 | ¾"<br>1" | 41     | 50    | 77    | 21<br>17 | 139<br>158 | 800<br>900 |
| RVO/U-L10080 | 22.5 - 80 |          |        |       |       |          |            |            |
| RVO/U-L10130 | 50 - 130  |          |        |       |       |          |            |            |
| RVO/U-L10420 | 110 - 420 |          |        |       |       |          |            |            |
| RVO/U-L10625 | 200 - 625 |          |        |       |       |          |            |            |

other switching ranges on request / other media on request / other connection sizes on request

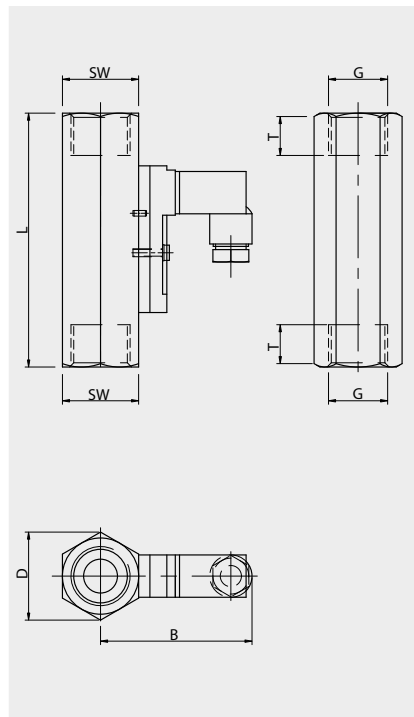
Type combination see type key Flow Monitors

## RVM/U for water, independent of position

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated               |
| <b>Operating pressure:</b>     | Stainless steel 300 - 350 bar<br>Brass 250 - 300 bar |
| <b>Operating temperature:</b>  | 100 °C (standard)<br>160 °C (optional)               |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144      |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                           |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67     |
| <b>Measuring accuracy:</b>     | ± 10 % of final value                                |
| <b>Pressure drop:</b>          | 0.02 ... 0.4 bar                                     |
| <b>Mounting position:</b>      | Independent of position                              |
| <b>Display:</b>                | Without  |
| <b>Connection:</b>             | Thread female BSP                                    |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                     |

### Stainless steel / Brass nickel-plated



| Type        | l/min        | G        | SW[mm] | D[mm] | B[mm] | T[mm]    | L[mm]      | Weight [g]   |
|-------------|--------------|----------|--------|-------|-------|----------|------------|--------------|
| RVM/U-4/01  | 0.005 - 0.06 | ¼"       | 17     | 17    | 47    | 10       | 65         | 140          |
| RVM/U-4/04  | 0.04 - 0.13  |          |        |       |       |          |            |              |
| RVM/U-4/06  | 0.1 - 0.6    |          |        |       |       |          |            |              |
| RVM/U-4/1   | 0.2 - 1.2    |          |        |       |       |          |            |              |
| RVM/U-4/2   | 0.4 - 2.0    |          |        |       |       |          |            |              |
| RVM/U-4/3   | 0.5 - 3.0    | ½"       | 27     | 31    | 52    | 14       | 90         | 350          |
| RVM/U-4/5   | 1.0 - 5.0    |          |        |       |       |          |            |              |
| RVM/U-2/02  | 0.02 - 0.2   |          |        |       |       |          |            |              |
| RVM/U-2/06  | 0.1 - 0.6    |          |        |       |       |          |            |              |
| RVM/U-2/1   | 0.4 - 1.8    |          |        |       |       |          |            |              |
| RVM/U-2/3   | 0.8 - 3.2    | ¾"<br>1" | 41     | 47    | 76    | 21<br>17 | 152<br>130 | 1200<br>1050 |
| RVM/U-2/7   | 2 - 7        |          |        |       |       |          |            |              |
| RVM/U-2/13  | 3 - 13       |          |        |       |       |          |            |              |
| RVM/U-2/20  | 4 - 20       |          |        |       |       |          |            |              |
| RVM/U-2/30  | 8 - 30       |          |        |       |       |          |            |              |
| RVM/U-1/45  | 15 - 45      | ¾"<br>1" | 41     | 47    | 76    | 21<br>17 | 152<br>130 | 1200<br>1050 |
| RVM/U-1/90  | 30 - 90      |          |        |       |       |          |            |              |
| RVM/U-1/150 | 60 - 150     |          |        |       |       |          |            |              |

other switching ranges on request / other media on request / other connection sizes on request

Type combination see type key Flow Monitors

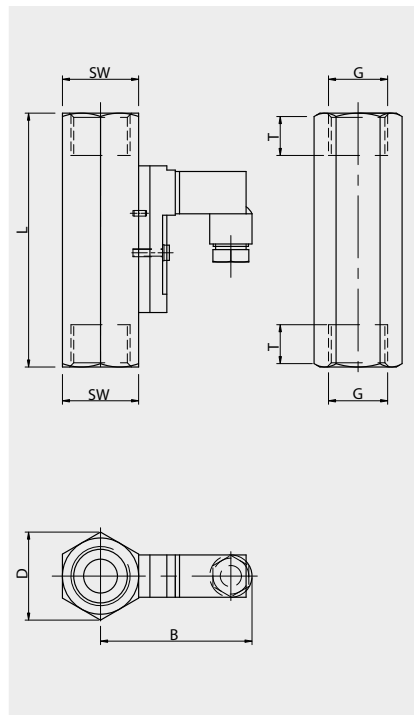


## RVM/U-L for air, independent of position

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated               |
| <b>Operating pressure:</b>     | Stainless steel 300 - 350 bar<br>Brass 250 - 300 bar |
| <b>Operating temperature:</b>  | 120 °C (standard)<br>160 °C (optional)               |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144      |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                           |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67     |
| <b>Measuring accuracy:</b>     | ± 10 % of final value                                |
| <b>Pressure drop:</b>          | 0.02 ... 0.4 bar                                     |
| <b>Mounting position:</b>      | Independent of position                              |
| <b>Display:</b>                | Without  |
| <b>Connection:</b>             | Thread female BSP                                    |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                     |

### Stainless steel / Brass nickel-plated



| Type         | NI/min    | G    | SW[mm] | D[mm] | B[mm] | T[mm] | L[mm] | Weight [g] |
|--------------|-----------|------|--------|-------|-------|-------|-------|------------|
| RVM/U-L40002 | 0.6 - 2.2 | 1/4" | 17     | 17    | 47    | 10    | 65    | 140        |
| RVM/U-L40006 | 1.7 - 6   |      |        |       |       |       |       |            |
| RVM/U-L40008 | 2.5 - 8   |      |        |       |       |       |       |            |
| RVM/U-L40012 | 3 - 12    |      |        |       |       |       |       |            |
| RVM/U-4/06L  | 3 - 22    |      |        |       |       |       |       |            |
| RVM/U-L40024 | 7 - 24    |      |        |       |       |       |       |            |
| RVM/U-L40034 | 12 - 34   |      |        |       |       |       |       |            |
| RVM/U-4/2L   | 16 - 56   |      |        |       |       |       |       |            |
| RVM/U-4/3L   | 20 - 80   |      |        |       |       |       |       |            |
| RVM/U-L20010 | 2.5 - 10  |      |        |       |       |       |       |            |
| RVM/U-L20020 | 5.5 - 20  |      |        |       |       |       |       |            |
| RVM/U-L20030 | 8 - 30    |      |        |       |       |       |       |            |
| RVM/U-L20035 | 10 - 35   |      |        |       |       |       |       |            |
| RVM/U-2/3L   | 24 - 90   |      |        |       |       |       |       |            |
| RVM/U-L20220 | 55 - 220  |      |        |       |       |       |       |            |
| RVM/U-L20240 | 65 - 240  |      |        |       |       |       |       |            |
| RVM/U-L20300 | 80 - 300  |      |        |       |       |       |       |            |
| RVM/U-2/20L  | 140 - 525 |      |        |       |       |       |       |            |

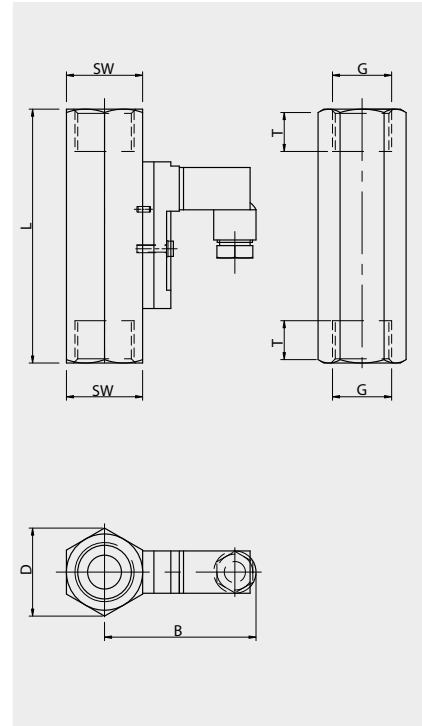
other switching ranges on request / other media on request / other connection sizes on request

Type combination see type key Flow Monitors

## RVM/U-L for air, independent of position

| Technical data                 |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated               |
| <b>Operating pressure:</b>     | Stainless steel 300 - 350 bar<br>Brass 250 - 300 bar |
| <b>Operating temperature:</b>  | 120 °C (standard)<br>160 °C (optional)               |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144      |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                           |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67     |
| <b>Measuring accuracy:</b>     | ± 10 % of final value                                |
| <b>Pressure drop:</b>          | 0.02 ... 0.4 bar                                     |
| <b>Mounting position:</b>      | Independent of position                              |
| <b>Display:</b>                | Without  |
| <b>Connection:</b>             | Thread female BSP                                    |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                     |

Stainless steel / Brass nickel-plated



| Type         | NI/min    | G  | SW[mm] | D[mm] | B[mm] | T[mm]    | L[mm]      | Weight [g]   |
|--------------|-----------|----|--------|-------|-------|----------|------------|--------------|
| RVM/U-L10180 | 60 - 180  | 1" | 41     | 47    | 76    | 21<br>17 | 152<br>130 | 1100<br>1200 |
| RVM/U-L10300 | 100 - 300 |    |        |       |       |          |            |              |
| RVM/U-L10650 | 200 - 650 |    |        |       |       |          |            |              |

other switching ranges on request / other media on request / other connection sizes on request

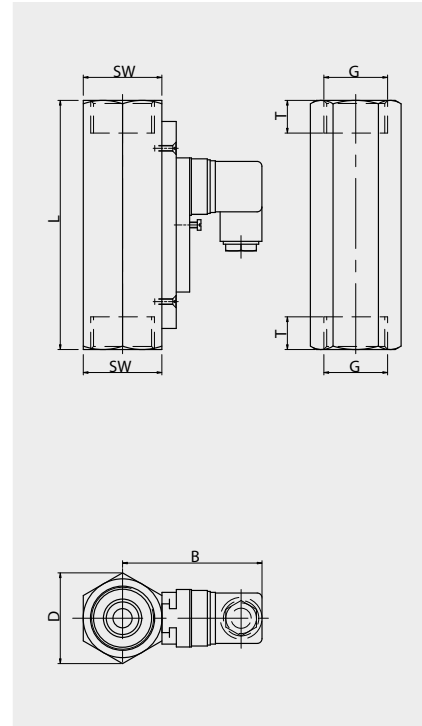
Type combination see type key Flow Monitors

## RVM/UM for water, independent of position

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | Stainless steel to 250 bar<br>Brass to 250 bar   |
| <b>Operating temperature:</b>  | 120 °C (standard)<br>160 °C (optional)           |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                       |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | ± 5 % of final value                             |
| <b>Pressure drop:</b>          | 0.1 ... 0.8 bar                                  |
| <b>Mounting position:</b>      | Independent of position                          |
| <b>Display:</b>                | Without  |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

### Stainless steel / Brass nickel-plated



| Type   | l/min    | G  | SW[mm] | D[mm] | B[mm] | T[mm] | L[mm] | Weight [g] |
|--------|----------|----|--------|-------|-------|-------|-------|------------|
| RVM/UM | 0.1 - 60 | 1" | 41     | 47    | 72    | 20    | 130   | 1000       |

Attention: switching point ( ... l/min ) has to be mentioned in case of an order!

other switching ranges on request / other media on request / other connection sizes on request

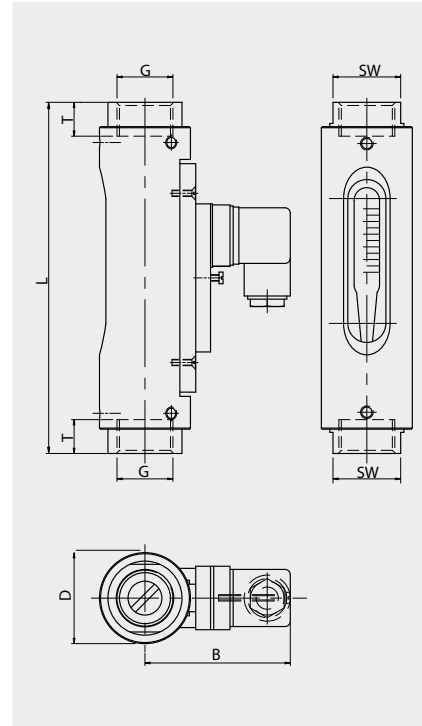
Type combination see type key Flow Monitors

## DUG for water, independent of position

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | Stainless steel to 10 bar<br>Brass to 10 bar     |
| <b>Operating temperature:</b>  | 100 °C (standard)<br>160 °C (optional)           |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                       |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | ± 5 % of final value                             |
| <b>Pressure drop:</b>          | 0.02 ... 0.8 bar                                 |
| <b>Mounting position:</b>      | Independent of position                          |
| <b>Display:</b>                | Glass  |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

### Stainless steel / Brass nickel-plated



| Type      | l/min    | G              | SW[mm] | D[mm] | B[mm] | T[mm] | L[mm] | Weight [g] |
|-----------|----------|----------------|--------|-------|-------|-------|-------|------------|
| DUG - 4   | 0.2 - 4  | ¼"<br>⅜"<br>½" | 32     | 43    | 73    | 14    | 132   | 625        |
| DUG - 6   | 0.4 - 6  |                |        |       |       | 14    | 132   |            |
| DUG - 8   | 0.5 - 8  |                |        |       |       | 15    | 135   |            |
| DUG - 14  | 1 - 14   | ½"             | 32     | 43    | 73    | 15    | 135   | 650        |
| DUG - 22  | 2 - 22   |                |        |       |       | 15    | 135   |            |
| DUG - 28  | 1 - 28   |                |        |       |       | 15    | 135   |            |
| DUG - 45  | 2.5 - 45 | ¾"             | 32     | 43    | 73    | 18    | 167   | 850        |
| DUG - 80  | 2 - 80   | ¾"<br>1"       | 41     | 50    | 76    | 18    | 164   | 1000       |
| DUG - 90  | 6 - 90   |                |        |       |       | 19    | 184   |            |
| DUG - 110 | 6 - 110  | 1"             | 41     | 50    | 76    | 19    | 184   | 1000       |
| DUG - 150 | 15 - 150 | 1¼"            | 50     | 55    | 79    | 21    | 216   | 1300       |
| DUG - 220 | 30 - 220 | 1¼"            | 50     | 60    | 81    | 21    | 210   | 1700       |
| DUG - 250 | 30 - 250 | 1¼"            | 50     | 55    | 79    | 21    | 222   | 1400       |

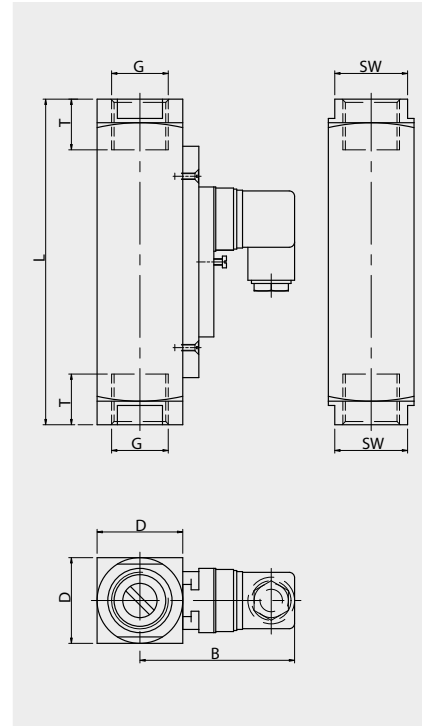
other switching ranges on request / other media on request / other connection sizes on request

Type combination see type key Flow Monitors

## DUM for water, independent of position

| Technical data          |  |
|-------------------------|--|
| Material:               | Stainless steel<br>Brass nickel-plated           |
| Operating pressure:     | Stainless steel to 300 bar<br>Brass to 200 bar   |
| Operating temperature:  | 100 °C (standard)<br>160 °C (optional)           |
| Contacts:               | Normally open<br>Change over see contacts p.144  |
| Ex - design:            | EExia IIC T6<br>EExm II T6                       |
| Electrical connections: | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| Measuring accuracy:     | ± 5 % of final value                             |
| Pressure drop:          | 0.02 ... 0.8 bar                                 |
| Mounting position:      | Independent of position                          |
| Display:                | Without  |
| Connection:             | Thread female BSP                                |
| Gaskets:                | Perbunan<br>Optional Viton, EPDM                 |

Stainless steel / Brass nickel-plated



| Type      | l/min    | G                    | SW[mm]   | D[mm]    | B[mm]    | T[mm]    | L[mm]      | Weight [g]   |
|-----------|----------|----------------------|----------|----------|----------|----------|------------|--------------|
| DUM - 4   | 0.2 - 4  | 1/4"<br>3/8"<br>1/2" | 27       | 30       | 71       | 14       | 130        | 850          |
| DUM - 5   | 0.6 - 5  |                      |          |          |          |          |            |              |
| DUM - 8   | 0.5 - 8  |                      |          |          |          |          |            |              |
| DUM - 14  | 1 - 14   |                      |          |          |          |          |            |              |
| DUM - 28  | 1 - 28   |                      |          |          |          |          |            |              |
| DUM - 40  | 2 - 40   | 1/2"<br>3/4"         | 27       | 30       | 71       | 14<br>16 | 148        | 900          |
| DUM - 55  | 4 - 55   |                      |          |          |          |          |            |              |
| DUM - 70  | 1 - 70   | 3/4"<br>1"           | 34<br>40 | 40<br>40 | 76<br>76 | 18<br>19 | 152<br>156 | 1400<br>1100 |
| DUM - 90  | 8 - 90   |                      |          |          |          |          |            |              |
| DUM - 110 | 5 - 110  |                      |          |          |          |          |            |              |
| DUM - 150 | 15 - 150 | 1"                   | 40       | 40       | 76       | 21       | 200        | 2750         |
| DUM - 220 | 35 - 220 | 1 1/4"<br>1 1/2"     | 50<br>60 | 50<br>60 | 81<br>82 | 21<br>24 | 200<br>200 | 3000<br>3800 |
| DUM - 250 | 35 - 250 |                      |          |          |          |          |            |              |

other switching ranges on request / other media on request / other connection sizes on request

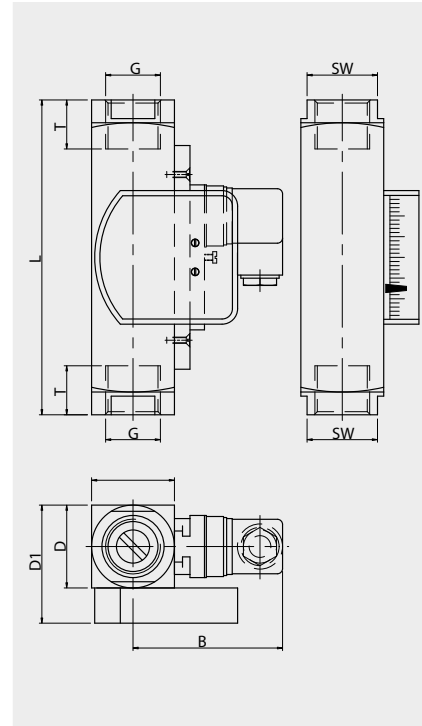
Type combination see type key Flow Monitors

## DUM/A for water, independent of position

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | Stainless steel to 300 bar<br>Brass to 200 bar   |
| <b>Operating temperature:</b>  | 100 °C (standard)<br>160 °C (optional)           |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                       |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | ± 5 % of final value                             |
| <b>Pressure drop:</b>          | 0.02 ... 0.8 bar                                 |
| <b>Mounting position:</b>      | Independent of position                          |
| <b>Display:</b>                | Display instrument macrolon                      |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

### Stainless steel / Brass nickel-plated



| Type        | l/min    | G                    | SW[mm]   | D[mm]    | D1[mm]   | B[mm]    | T[mm]    | L[mm]      | Weight [g]   |
|-------------|----------|----------------------|----------|----------|----------|----------|----------|------------|--------------|
| DUM/A - 4   | 0.2 - 4  | 1/4"<br>3/8"<br>1/2" | 27       | 30       | 47       | 71       | 14       | 130        | 900          |
| DUM/A - 5   | 0.6 - 5  |                      |          |          |          |          |          |            |              |
| DUM/A - 8   | 0.5 - 8  |                      |          |          |          |          |          |            |              |
| DUM/A - 14  | 1 - 14   |                      |          |          |          |          |          |            |              |
| DUM/A - 28  | 1 - 28   | 1/2"<br>3/4"         | 27       | 30       | 47       | 71       | 14<br>16 | 148        | 950          |
| DUM/A - 40  | 2 - 40   |                      |          |          |          |          |          |            |              |
| DUM/A - 55  | 4 - 55   | 3/4"<br>1"           | 34<br>40 | 40<br>40 | 57<br>57 | 76<br>76 | 18<br>19 | 152<br>156 | 1450<br>1150 |
| DUM/A - 70  | 1 - 70   |                      |          |          |          |          |          |            |              |
| DUM/A - 90  | 8 - 90   |                      |          |          |          |          |          |            |              |
| DUM/A - 110 | 5 - 110  | 1 1/4"               | 40       | 40       | 57       | 76       | 21       | 200        | 2800         |
| DUM/A - 150 | 15 - 150 |                      |          |          |          |          |          |            |              |
| DUM/A - 220 | 35 - 220 | 1 1/4"<br>1 1/2"     | 50<br>60 | 50<br>60 | 67<br>71 | 81<br>82 | 21<br>24 | 200<br>200 | 3050<br>3850 |
| DUM/A - 250 | 35 - 250 |                      |          |          |          |          |          |            |              |

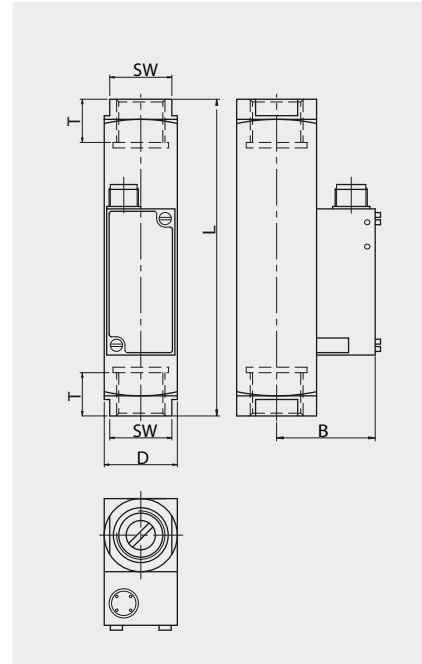
other switching ranges on request / other media on request / other connection sizes on request

Type combination see type key Flow Monitors

## DUM/TA for water, independent of position

| Technical data          |  |
|-------------------------|--|
| Material:               | Stainless steel<br>Brass nickel-plated         |
| Operating pressure:     | Stainless steel to 300 bar<br>Brass to 200 bar |
| Operating temperature:  | -20 °C ... +70 °C                              |
| Measuring output:       | 4-20 mA / 15 ... 30 V DC<br>4-Leiter           |
| Ex - design:            | -  |
| Electrical connections: | Patch plug, M12 x 1                            |
| Linearity deviation:    | ± 10% of final value                           |
| Pressure drop:          | 0.02 ... 0.8 bar                               |
| Mounting position:      | Independent of position                        |
| Display:                | Without  |
| Connection:             | Thread female BSP                              |
| Gaskets:                | Perbunan<br>Optional Viton, EPDM               |

Stainless steel / Brass nickel-plated



| Type        | l/min   | G                    | SW | D[mm] | B[mm] | T[mm]    | L[mm] | Weight g |
|-------------|---------|----------------------|----|-------|-------|----------|-------|----------|
| DUM/TA - 4  | 0.2 - 4 | 1/4"<br>3/8"<br>1/2" | 27 | 30    | 37    | 14       | 130   | 850      |
| DUM/TA - 5  | 0.6 - 5 |                      |    |       |       |          |       |          |
| DUM/TA - 8  | 0.5 - 8 |                      |    |       |       |          |       |          |
| DUM/TA - 14 | 1 - 14  |                      |    |       |       |          |       |          |
| DUM/TA - 28 | 1 - 28  | 1/2"<br>3/4"         | 27 | 30    | 37    | 14<br>16 | 148   | 900      |
| DUM/TA - 40 | 1 - 40  |                      |    |       |       |          |       |          |
| DUM/TA - 55 | 4 - 55  |                      |    |       |       |          |       |          |

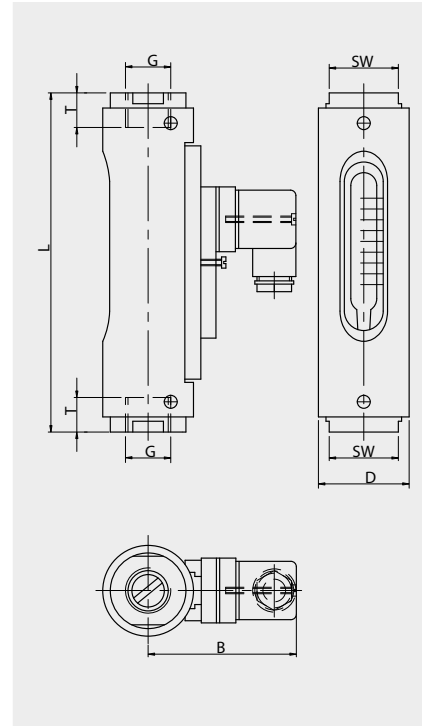
other switching ranges on request / other media on request / other connection sizes on request

Type combination see type key Flow Monitors

## DWG for water, dependent of position / vertical

| Technical data                 |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | PN 10 bar  |
| <b>Operating temperature:</b>  | 100 °C (standard)<br>160 °C (optional)           |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                       |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | ± 5 % of final value                             |
| <b>Pressure drop:</b>          | 0.01 ... 0.2 bar                                 |
| <b>Mounting position:</b>      | Dependent of position / vertical                 |
| <b>Display:</b>                | Glass  |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

Stainless steel / Brass nickel-plated



| Type      | l/min     | G                    | SW[mm] | D[mm] | B[mm] | T[mm] | L[mm] | Weight [g] |
|-----------|-----------|----------------------|--------|-------|-------|-------|-------|------------|
| DWG - 1.5 | 0.1 - 1.5 | 1/4"<br>3/8"<br>1/2" | 32     | 43    | 73    | 14    | 132   | 625        |
| DWG - 3   | 0.2 - 3.0 |                      |        |       |       | 14    | 135   |            |
| DWG - 8   | 0.3 - 8.0 |                      |        |       |       | 15    | 135   |            |
| DWG - 12  | 1 - 12    | 1/2"<br>3/4"         | 32     | 43    | 73    | 15    | 163   | 650        |
| DWG - 18  | 2 - 18    |                      |        |       |       | 16    | 167   |            |
| DWG - 35  | 3 - 35    | 3/4"<br>1"           | 41     | 50    | 76    | 18    | 164   | 850        |
| DWG - 50  | 4 - 50    |                      |        |       |       | 19    | 184   |            |

other switching ranges on request / other media on request / other connection sizes on request

Type combination see type key Flow Monitors

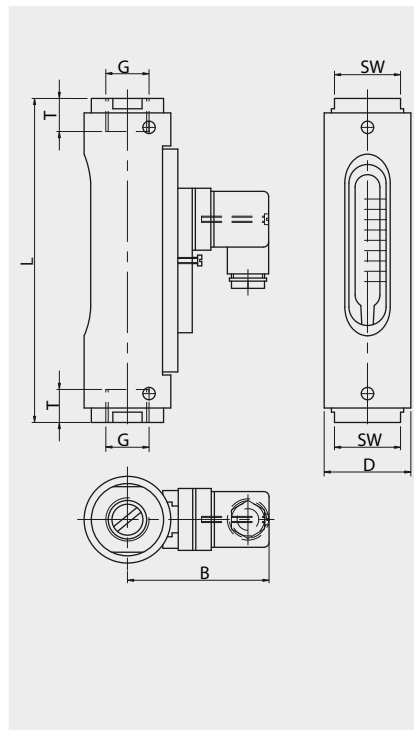


## DWG-L for air, dependent of position / vertical

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | PN 10 bar  |
| <b>Operating temperature:</b>  | max. 80 °C                                       |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                       |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | ± 10% of final value                             |
| <b>Pressure drop:</b>          | 0.01 ... 0.8 bar                                 |
| <b>Mounting position:</b>      | Dependent of position / vertical                 |
| <b>Display:</b>                | Glass  |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

### Stainless steel / Brass nickel-plated



| Type     | L/min      | G                    | SW | D[mm] | B[mm] | T[mm]    | L[mm]      | Weight g    |
|----------|------------|----------------------|----|-------|-------|----------|------------|-------------|
| DWG-L1.5 | 3 - 30     | 1/4"<br>3/8"<br>1/2" | 32 | 43    | 73    | 14       | 132        | 625         |
| DWG-L3   | 6 - 60     |                      |    |       |       |          |            |             |
| DWG-L8   | 6 - 160    |                      |    |       |       |          |            |             |
| DWG-L12  | 20 - 220   |                      |    |       |       |          |            |             |
| DWG-L18  | 40 - 360   | 1/2"<br>1/4"         | 32 | 43    | 73    | 15<br>16 | 163<br>167 | 650         |
| DWG-L35  | 60 - 700   | 3/4"<br>1"           | 41 | 50    | 76    | 18<br>19 | 164<br>184 | 850<br>1000 |
| DWG-L50  | 60 - 825   |                      |    |       |       |          |            |             |
| DWG-L100 | 200 - 1600 |                      |    |       |       |          |            |             |

other switching ranges on request / other media on request / other connection sizes on request

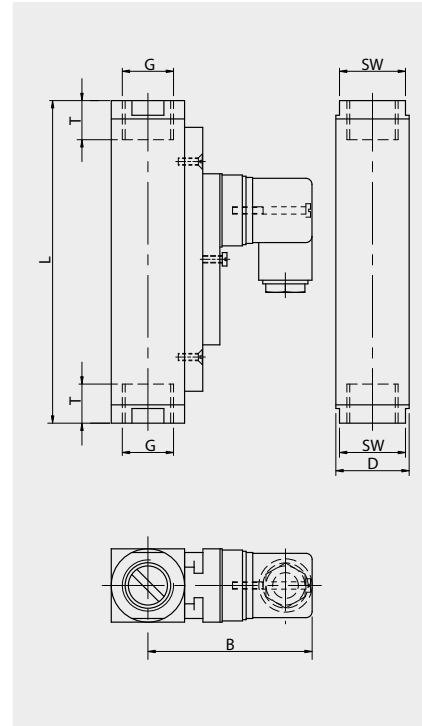
Type combination see type key Flow Monitors

## DWM for water, dependent of position / vertical

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | Stainless steel to 300 bar<br>Brass to 200 bar   |
| <b>Operating temperature:</b>  | 120 °C (standard)<br>160 °C (optional)           |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                       |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | ± 5 % of final value                             |
| <b>Pressure drop:</b>          | 0.02 ... 0.4 bar                                 |
| <b>Mounting position:</b>      | Dependent of position / vertical                 |
| <b>Display:</b>                | Without  |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

### Stainless steel / Brass nickel-plated



| Type      | l/min     | G                    | SW[mm] | D[mm] | B[mm] | T[mm]    | L[mm]      | Weight [g] |
|-----------|-----------|----------------------|--------|-------|-------|----------|------------|------------|
| DWM - 1.5 | 0.1 - 1.5 | 1/4"<br>3/8"<br>1/2" | 27     | 30    | 71    | 14       | 130        | 800        |
| DWM - 3   | 0.2 - 3   |                      |        |       |       | 19       |            |            |
| DWM - 8   | 0.3 - 8   |                      |        |       |       | 19       |            |            |
| DWM - 12  | 1 - 12    |                      |        |       |       |          |            |            |
| DWM - 18  | 2 - 18    | 1/2"<br>3/4"         | 27     | 30    | 71    | 19<br>17 | 148<br>174 | 850<br>960 |
| DWM - 35  | 3 - 35    | 3/4"<br>1"           | 34     | 40    | 76    | 18       | 152        | 1350       |
| DWM - 50  | 4 - 50    |                      | 19     |       |       | 156      | 1550       |            |
| DWM - 100 | 10 - 100  | 1"                   | 50     | 50    | 81    | 20       | 200        | 2750       |
| DWM - 150 | 10 - 150  | 1 1/4"               | 50     | 50    | 81    | 21       | 200        | 2950       |

other switching ranges on request / other media on request / other connection sizes on request

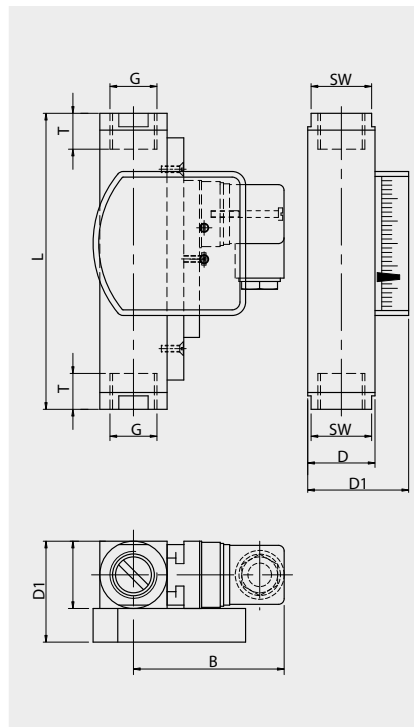
Type combination see type key Flow Monitors

## DWM/A for water, dependent of position / vertical

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | Stainless steel to 300 bar<br>Brass to 200 bar   |
| <b>Operating temperature:</b>  | 100 °C (standard)<br>160 °C (optional)           |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                       |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | ± 5 % of final value                             |
| <b>Pressure drop:</b>          | 0.02 ... 0.2 bar                                 |
| <b>Mounting position:</b>      | Dependent of position / vertical                 |
| <b>Display:</b>                | Display instrument macrolon                      |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

### Stainless steel / Brass nickel-plated



| Type        | l/min     | G                    | SW[mm]   | D[mm] | D1[mm] | B[mm] | T[mm] | L[mm]      | Weight [g]   |
|-------------|-----------|----------------------|----------|-------|--------|-------|-------|------------|--------------|
| DWM/A - 1.5 | 0.1 - 1.5 | 1/4"<br>3/8"<br>1/2" | 27       | 30    | 47     | 71    | 14    | 131        | 850          |
| DWM/A - 3   | 0.2 - 3   |                      |          |       |        |       | 19    |            |              |
| DWM/A - 8   | 0.3 - 8   |                      |          |       |        |       | 19    |            |              |
| DWM/A - 12  | 1 - 12    | 1/2"<br>3/4"         | 27<br>32 | 30    | 47     | 71    | 19    | 148<br>174 | 850<br>1010  |
| DWM/A - 18  | 2 - 18    |                      |          |       |        |       | 17    |            |              |
| DWM/A - 35  | 3 - 35    | 3/4"<br>1"           | 34<br>40 | 40    | 57     | 76    | 18    | 152<br>156 | 1500<br>1500 |
| DWM/A - 50  | 4 - 50    |                      |          |       |        |       | 19    |            |              |

other switching ranges on request / other media on request / other connection sizes on request

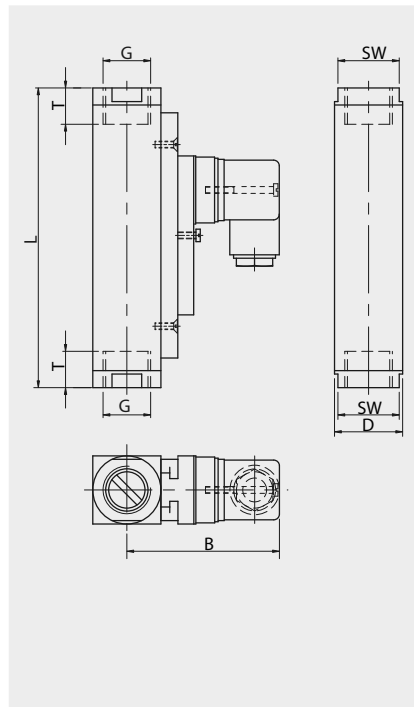
Type combination see type key Flow Monitors

## DWM-L for air, dependent of position / vertical

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | Stainless steel to 300 bar<br>Brass to 200 bar   |
| <b>Operating temperature:</b>  | max. 80 °C                                       |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | Ex II 2 D<br>EExm II T6                          |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | ± 10% of final value                             |
| <b>Pressure drop:</b>          | 0.02 ... 0.4 bar                                 |
| <b>Mounting position:</b>      | Dependent of position / vertical                 |
| <b>Display:</b>                | Without  |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

### Stainless steel / Brass nickel-plated



| Type       | L/min      | G                    | SW       | D[mm] | B[mm] | T[mm]          | L[mm]      | Weight g     |
|------------|------------|----------------------|----------|-------|-------|----------------|------------|--------------|
| DWM - L1.5 | 1 - 28     | 1/4"<br>3/8"<br>1/2" | 27       | 30    | 71    | 14<br>19<br>19 | 130        | 800          |
| DWM - L3   | 4 - 60     |                      |          |       |       |                |            |              |
| DWM - L8   | 6 - 160    |                      |          |       |       |                |            |              |
| DWM - L12  | 20 - 240   | 1/2"<br>3/4"         | 27       | 30    | 71    | 19<br>17       | 148<br>174 | 850<br>960   |
| DWM - L18  | 40 - 360   |                      |          |       |       |                |            |              |
| DWM - L50  | 60 - 700   | 1/2"<br>3/4"         | 34<br>40 | 40    | 76    | 18<br>19       | 152<br>156 | 1350<br>1050 |
| DWM - L100 | 200 - 1450 | 1"                   | 50       | 50    | 81    | 20             | 200        | 2750         |

other switching ranges on request / other media on request / other connection sizes on request

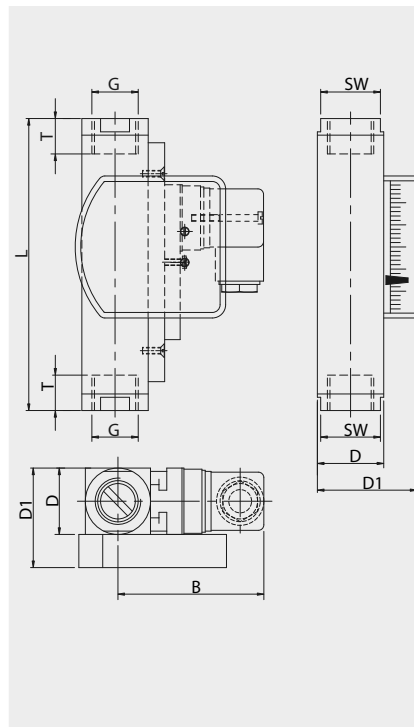
Type combination see type key Flow Monitors

## DWM/A-L for air, dependent of position / vertical

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | Stainless steel to 300 bar<br>Brass to 200 bar   |
| <b>Operating temperature:</b>  | max. 80 °C                                       |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p. 144 |
| <b>Ex - design:</b>            | Ex II 2 D<br>EExm II T6                          |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | ± 10% of final value                             |
| <b>Pressure drop:</b>          | 0.02 ... 0.4 bar                                 |
| <b>Mounting position:</b>      | Dependent of position / vertical                 |
| <b>Display:</b>                | Display instrument macrolon                      |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

### Stainless steel / Brass nickel-plated



| Type         | L/min      | G                    | SW       | D[mm] | B[mm] | T[mm]          | L[mm]      | Weight g     |
|--------------|------------|----------------------|----------|-------|-------|----------------|------------|--------------|
| DWM/A - L1.5 | 1 - 28     | 1/4"<br>3/8"<br>1/2" | 27       | 30    | 71    | 14<br>19<br>19 | 130        | 850          |
| DWM/A - L3   | 4 - 60     |                      |          |       |       |                |            |              |
| DWM/A - L8   | 6 - 160    |                      |          |       |       |                |            |              |
| DWM/A - L12  | 20 - 240   | 1/2"<br>3/4"         | 27       | 30    | 71    | 19<br>17       | 148        | 900<br>1010  |
| DWM/A - L18  | 40 - 360   |                      |          |       |       |                |            |              |
| DWM/A - L50  | 60 - 700   | 1/2"<br>3/4"         | 34<br>40 | 40    | 76    | 18<br>19       | 152<br>156 | 1400<br>1100 |
| DWM/A - L100 | 200 - 1450 | 1"                   | 50       | 50    | 81    | 20             | 200        | 2800         |

other switching ranges on request / other media on request / other connection sizes on request

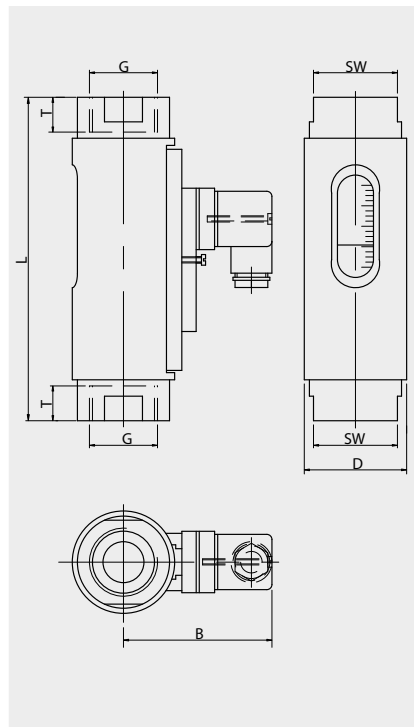
Type combination see type key Flow Monitors

## DKG viscosity compensated to 600 mm<sup>2</sup>/s independent of position

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | PN 10 ... 16 bar                                 |
| <b>Operating temperature:</b>  | 120 °C (standard)<br>160 °C (optional)           |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                       |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | 10 % of final value                              |
| <b>Pressure drop:</b>          | 0.02 ... 0.4 bar                                 |
| <b>Mounting position:</b>      | Independent of position                          |
| <b>Display:</b>                | Glass  |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

Stainless steel / Brass nickel-plated



| Type       | l/min     | G                    | SW[mm] | D[mm] | B[mm] | T[mm] | L[mm]                    | Weight [g] |
|------------|-----------|----------------------|--------|-------|-------|-------|--------------------------|------------|
| DKG - 2/08 | 0.1 - 0.8 | ½"                   | 27     | 32    | 53    | 14    | 114                      | 300        |
| DKG - 2/1  | 0.2 - 1   |                      |        |       |       |       |                          |            |
| DKG - 2/2  | 0.5 - 1.7 |                      |        |       |       |       |                          |            |
| DKG - 2/4  | 1.3 - 4   |                      |        |       |       |       |                          |            |
| DKG - 2/8  | 2.5 - 8   |                      |        |       |       |       |                          |            |
| DKG - 1/1  | 0.1 - 0.8 | ¼"<br>½"<br>¾"<br>1" | 41     | 50    | 77    | 17    | 145<br>145<br>139<br>158 | 850        |
| DKG - 1/2  | 0.5 - 1.5 |                      |        |       |       |       |                          |            |
| DKG - 1/4  | 1 - 4     |                      |        |       |       |       |                          |            |
| DKG - 1/8  | 2 - 8     |                      |        |       |       |       |                          |            |
| DKG - 1/10 | 3 - 10    | ½"<br>¾"<br>1"       | 41     | 50    | 77    | 17    | 145<br>139<br>158        | 850        |
| DKG - 1/15 | 5 - 15    |                      |        |       |       |       |                          |            |
| DKG - 1/24 | 8 - 24    |                      |        |       |       |       |                          |            |
| DKG - 1/30 | 10 - 30   | ¾"<br>1"             | 41     | 50    | 77    | 17    | 139<br>158               | 850        |
| DKG - 1/45 | 15 - 45   |                      |        |       |       |       |                          |            |
| DKG - 1/60 | 20 - 60   |                      |        |       |       |       |                          |            |
| DKG - 1/90 | 30 - 90   |                      |        |       |       |       |                          |            |

other switching ranges on request / other media on request / other connection sizes on request

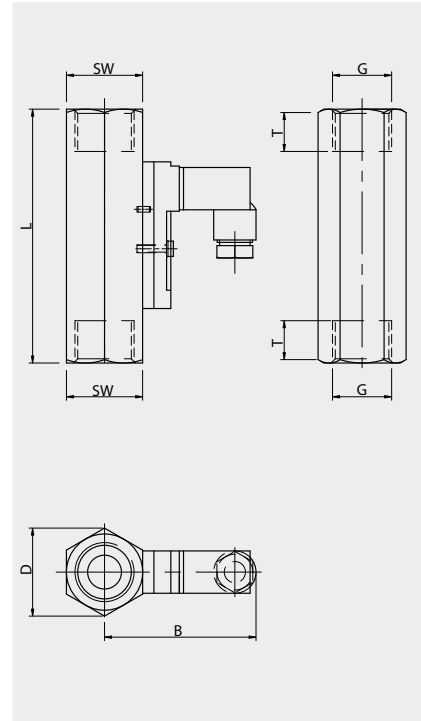
Type combination see type key Flow Monitors

### DKM viscosity compensated to 600 mm<sup>2</sup>/s independent of position

#### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | Stainless steel to 300 bar<br>Brass to 200 bar   |
| <b>Operating temperature:</b>  | 120 °C (standard)<br>160 °C (optional)           |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                       |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | 10 % of final value                              |
| <b>Pressure drop:</b>          | 0.02 ... 0.4 bar                                 |
| <b>Mounting position:</b>      | Independent of position                          |
| <b>Display:</b>                | Without  |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

#### Stainless steel / Brass nickel-plated



| Type        | l/min     | G    | SW[mm] | D[mm] | B[mm] | T[mm] | L[mm] | Weight [g] |
|-------------|-----------|------|--------|-------|-------|-------|-------|------------|
| DKM - 2/1   | 0.1 - 0.8 | 1/4" | 24     |       |       |       | 98    | 400        |
| DKM - 2/2   | 0.5 - 1.6 | 3/8" | 24     | 31    | 52    | 14    | 108   | 450        |
|             |           | 1/2" | 27     |       |       |       | 90    | 350        |
| DKM - 2/3   | 0.8 - 3   | 1/2" | 27     | 31    | 52    | 14    | 90    | 350        |
| DKM - 2/7   | 2 - 7     |      |        |       |       |       |       |            |
| DKM - 1/1   | 0.1 - 0.8 | 1/4" | 34     |       |       |       | 152   | 1500       |
| DKM - 1/2   | 0.5 - 1.5 | 1/2" | 34     | 40    | 76    | 21    | 152   | 1425       |
|             |           | 3/4" | 34     |       |       | 21    | 152   | 1340       |
|             |           | 1"   | 40     |       |       | 17    | 130   | 1160       |
| DKM - 1/4   | 1 - 4     |      |        |       |       |       |       |            |
| DKM - 1/8   | 2 - 8     | 1/2" | 34     | 40    | 76    | 21    | 152   | 1425       |
| DKM - 1/10  | 3 - 10    |      |        |       |       |       |       |            |
| DKM - 1/15  | 5 - 15    |      |        |       |       |       |       |            |
| DKM - 1/24  | 8 - 24    | 3/4" | 34     |       |       |       |       |            |
| DKM - 1/30  | 10 - 30   | 1"   | 40     |       |       |       |       |            |
| DKM - 1/45  | 15 - 45   | 3/4" | 34     | 40    | 76    | 21    | 152   | 1340       |
| DKM - 1/60  | 20 - 60   |      |        |       |       |       |       |            |
| DKM - 1/90  | 30 - 90   | 1"   | 40     | 40    | 76    | 17    | 130   | 1160       |
| DKM - 1/100 | 35 - 110  |      |        |       |       |       |       |            |

other switching ranges on request / other media on request / other connection sizes on request

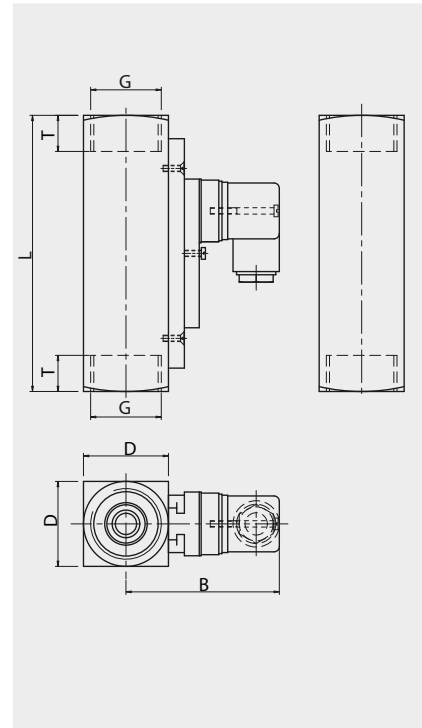
#### Type combination see type key Flow Monitors

## DKME viscosity compensated to 600mm<sup>2</sup>/s independent of position

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | Stainless steel to 300 bar<br>Brass to 200 bar   |
| <b>Operating temperature:</b>  | 120 °C (standard)<br>160 °C (optional)           |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                       |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | ± 10% of final value                             |
| <b>Pressure drop:</b>          | 0.02 ... 0.4 bar                                 |
| <b>Mounting position:</b>      | Independent of position                          |
| <b>Display:</b>                | Without  |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

Stainless steel / Brass nickel-plated



| Type        | L/min   | G  | SW | D[mm] | B[mm] | T[mm] | L[mm] | Weight g |
|-------------|---------|----|----|-------|-------|-------|-------|----------|
| DKME - 1/20 | 1 - 20  | ½" | 34 | 40    | 76    | 21    | 152   | 1425     |
|             |         | ¾" | 34 |       |       | 21    | 152   | 1340     |
| DKME - 1/40 | 4 - 40  | 1" | 40 | 40    | 76    | 17    | 130   | 1160     |
|             |         | ¾" | 34 |       |       | 21    | 152   | 1340     |
| DKME - 1/50 | 5 - 50  | ¾" | 34 | 40    | 76    | 17    | 130   | 1160     |
| DKME - 1/60 | 8 - 60  | 1" | 40 | 40    | 76    | 17    | 130   | 1160     |
| DKME - 1/70 | 12 - 70 | 1" | 40 | 76    | 76    | 17    | 130   | 1160     |
| DKME - 1/80 | 15 - 80 |    |    |       |       |       |       |          |

other switching ranges on request / other media on request / other connection sizes on request

Type combination see type key Flow Monitors

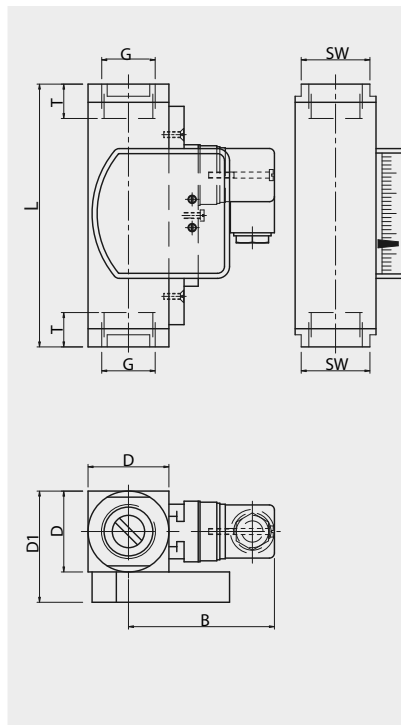


## DKME/A viscosity compensated to 600mm<sup>2</sup>/s independent of position

### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | Stainless steel to 300 bar<br>Brass to 200 bar   |
| <b>Operating temperature:</b>  | 120 °C (standard)<br>160 °C (optional)           |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                       |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | ± 10% of final value                             |
| <b>Pressure drop:</b>          | 0.02 ... 0.4 bar                                 |
| <b>Mounting position:</b>      | Independent of position                          |
| <b>Display:</b>                | Display instrument macrolon                      |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

Stainless steel / Brass nickel-plated



| Type          | L/min   | G    | SW | D[mm] | B[mm] | T[mm] | L[mm] | Weight g |
|---------------|---------|------|----|-------|-------|-------|-------|----------|
| DKME/A - 1/20 | 1 - 20  | 1/2" | 34 |       |       | 21    | 152   | 1510     |
| DKME/A - 1/40 | 4 - 40  | 3/4" | 34 | 40    | 76    | 21    | 152   | 1425     |
|               |         | 1"   | 40 |       |       | 17    | 130   | 1250     |
| DKME/A - 1/50 | 5 - 50  | 3/4" | 34 | 40    | 76    | 21    | 152   | 1425     |
| DKME/A - 1/60 | 8 - 60  | 1"   | 40 |       |       | 17    | 130   | 1245     |
| DKME/A - 1/70 | 12 - 70 | 1"   | 40 | 40    | 76    | 17    | 130   | 1245     |
| DKME/A - 1/80 | 15 - 80 |      |    |       |       |       |       |          |

other switching ranges on request / other media on request / other connection sizes on request

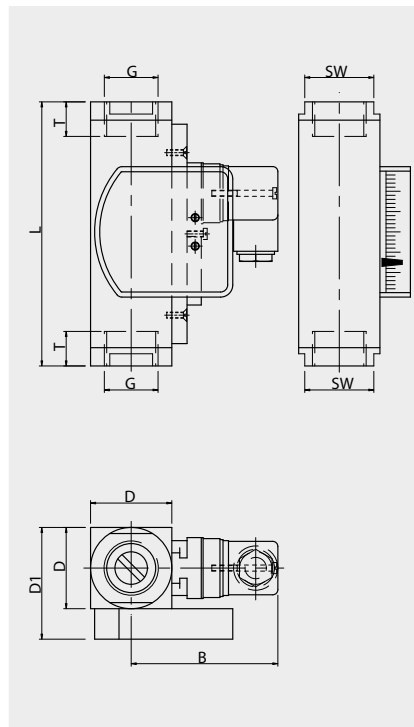
Type combination see type key Flow Monitors

### DKM/A viscosity compensated to 600mm<sup>2</sup>/s independent of position

#### Technical data

|                                |  |
|--------------------------------|--|
| <b>Material:</b>               | Stainless steel<br>Brass nickel-plated           |
| <b>Operating pressure:</b>     | Stainless steel to 300 bar<br>Brass to 250 bar   |
| <b>Operating temperature:</b>  | 120 °C (standard)<br>160 °C (optional)           |
| <b>Contacts:</b>               | Normally open<br>Change over see contacts p.144  |
| <b>Ex - design:</b>            | EExia IIC T6<br>EExm II T6                       |
| <b>Electrical connections:</b> | Plug DIN 43650 / IP65<br>Connection cable / IP67 |
| <b>Measuring accuracy:</b>     | ± 10 % of final value                            |
| <b>Pressure drop:</b>          | 0.02 ... 0.4 bar                                 |
| <b>Mounting position:</b>      | Independent of position                          |
| <b>Display:</b>                | Display instrument macrolon                      |
| <b>Connection:</b>             | Thread female BSP                                |
| <b>Gaskets:</b>                | Perbunan<br>Optional Viton, EPDM                 |

Stainless steel / Brass nickel-plated



| Type          | l/min     | G                          | SW[mm] | D[mm] | D1[mm] | B[mm] | T[mm] | L[mm] | Weight [g] |
|---------------|-----------|----------------------------|--------|-------|--------|-------|-------|-------|------------|
| DKM/A - 1/1   | 0.1 - 0.8 | 1/4"<br>1/2"<br>3/4"<br>1" | 34     | 40    | 57     | 76    | 21    | 152   | 1590       |
| DKM/A - 1/2   | 0.5 - 1.5 |                            | 34     |       |        |       | 21    | 152   | 1515       |
| DKM/A - 1/4   | 1 - 4     |                            | 34     |       |        |       | 21    | 152   | 1430       |
|               |           |                            | 40     |       |        |       | 17    | 130   | 1250       |
| DKM/A - 1/8   | 2 - 8     | 1/2"<br>3/4"<br>1"         | 34     | 40    | 57     | 76    | 21    | 152   | 1515       |
| DKM/A - 1/10  | 3 - 10    |                            | 34     |       |        |       | 21    | 152   | 1430       |
| DKM/A - 1/15  | 5 - 15    |                            | 40     |       |        |       | 17    | 130   | 1250       |
| DKM/A - 1/24  | 8 - 24    |                            | 34     |       |        |       | 21    | 152   | 1430       |
| DKM/A - 1/30  | 10 - 30   | 40                         | 17     | 130   | 1250   |       |       |       |            |
| DKM/A - 1/45  | 15 - 45   | 34                         | 21     | 152   | 1430   |       |       |       |            |
| DKM/A - 1/60  | 20 - 60   | 40                         |        |       |        | 17    | 130   | 1250  |            |
| DKM/A - 1/90  | 30 - 90   | 1"                         | 40     | 40    | 57     | 76    | 17    | 130   | 1250       |
| DKM/A - 1/110 | 35 - 110  |                            | 40     |       |        |       | 17    | 130   | 1250       |

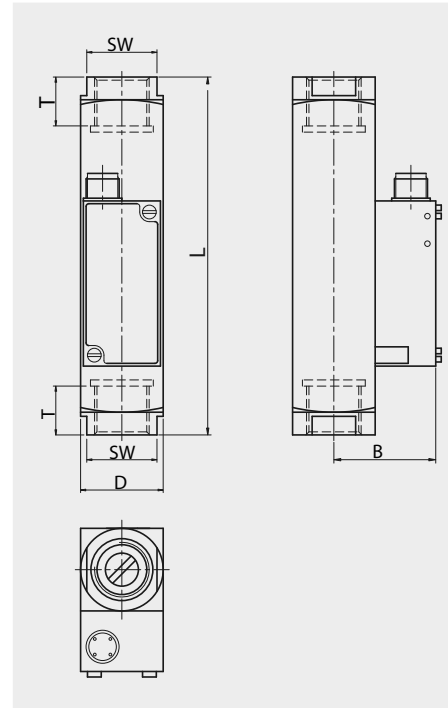
other switching ranges on request / other media on request / other connection sizes on request

Type combination see type key Flow Monitors

### DKM/TA viscosity compensated to 600mm<sup>2</sup>/s independent of position

| Technical data          |  |
|-------------------------|--|
| Material:               | Stainless steel<br>Brass nickel-plated         |
| Operating pressure:     | Stainless steel to 300 bar<br>Brass to 200 bar |
| Operating temperature:  | -20 °C ... +70 °C                              |
| Measuring output:       | 4-20 mA / 15-30 V DC<br>4-Leiter               |
| Ex - design:            | -  |
| Electrical connections: | Patch plug, M12 x 1                            |
| Linearity deviation:    | ± 10% of final value                           |
| Pressure drop:          | 0.02 ... 0.4 bar                               |
| Mounting position:      | Independent of position                        |
| Display:                | Without  |
| Connection:             | Thread female BSP                              |
| Gaskets:                | Perbunan<br>Optional Viton, EPDM               |

Stainless steel / Brass nickel-plated



| Type           | l/min     | G    | SW | D[mm] | B[mm] | T[mm] | L[mm] | Weight g |
|----------------|-----------|------|----|-------|-------|-------|-------|----------|
| DKM/TA - 1/1   | 0.1 - 0.8 | 1/4" | 34 | 40    | 42    | 21    | 152   | 1500     |
| DKM/TA - 1/2   | 0.5 - 1.5 | 1/2" | 34 |       |       | 21    | 152   | 1425     |
|                |           | 3/4" | 34 |       |       | 21    | 152   | 1340     |
| DKM/TA - 1/4   | 1 - 4     | 1"   | 40 | 40    | 42    | 17    | 130   | 1160     |
| DKM/TA - 1/8   | 2 - 8     |      |    |       |       | 21    | 152   | 1425     |
| DKM/TA - 1/10  | 3 - 10    | 1/2" | 34 |       |       | 21    | 152   | 1340     |
| DKM/TA - 1/15  | 5 - 15    | 3/4" | 34 | 40    | 42    | 17    | 130   | 1160     |
| DKM/TA - 1/24  | 8 - 24    | 1"   | 40 |       |       | 21    | 152   | 1340     |
| DKM/TA - 1/30  | 10 - 30   |      |    |       |       | 17    | 130   | 1160     |
| DKM/TA - 1/45  | 15 - 45   | 3/4" | 34 | 40    | 42    | 21    | 152   | 1340     |
| DKM/TA - 1/60  | 20 - 60   | 1"   | 40 |       |       | 17    | 130   | 1160     |
| DKM/TA - 1/90  | 30 - 90   |      |    |       |       |       |       |          |
| DKM/TA - 1/110 | 35 - 110  | 1"   | 40 | 40    | 42    | 17    | 130   | 1160     |

other switching ranges on request / other media on request / other connection sizes on request

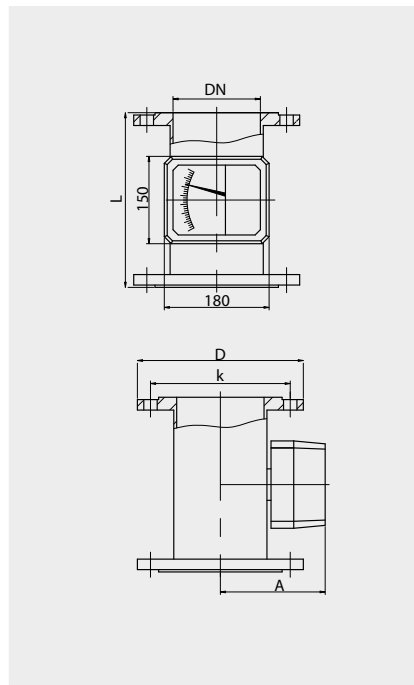
Type combination see type key Flow Monitors

## SC for air, dependent of position / vertical

### Technical data

|                                |   |
|--------------------------------|---|
| <b>Material:</b>               | Stainless steel<br>Steel  |
| <b>Operating pressure:</b>     | Stainless steel to 40 bar<br>Steel to 40 bar                            |
| <b>Operating temperature:</b>  | -20 °C ... +200 °C  |
| <b>Contacts:</b>               | Change over 250 V / AC / 6 A  |
| <b>Control unit:</b>           | TEH 4-wire<br>24 V DC / 4-20 mA<br>TK 2-wire<br>24 V DC / 4-20 mA EExib |
| <b>Electrical connections:</b> | Terminal box aluminium  |
| <b>Measuring accuracy:</b>     | ± 2.5 % of final value  |
| <b>Pressure drop:</b>          | 0.04 ... 0.22 bar   |
| <b>Mounting position:</b>      | Dependent of position   |
| <b>Display:</b>                | Display instrument 150x180 mm   |
| <b>Connection:</b>             | Flange PN40   |
| <b>Gaskets:</b>                | Viton, EPDM or Perbunan   |
| <b>Protection rating:</b>      | IP65  |

### Stainless steel / Steel



| Type    | Nm <sup>3</sup> /h air  | DN | PN | D[mm] | L[mm] | k[mm] | A[mm] | Weight [kg] |
|---------|---|----|----|-------|-------|-------|-------|-------------|
| SC - 15 | 0.07 - 0.7<br>0.12 - 1.2<br>0.18 - 1.8<br>0.3 - 3<br>0.5 - 5<br>0.7 - 7.5<br>1.2 - 12<br>1.8 - 18 | 15 | 40 | 95    | 250   | 65    | 114   | 3.5         |
| SC - 25 | 3 - 30<br>5 - 50<br>7 - 75<br>12 - 120  | 25 | 40 | 115   | 250   | 85    | 120   | 4.5         |
| SC - 40 | 12 - 120<br>15 - 180<br>24 - 240  | 40 | 40 | 150   | 250   | 110   | 128   | 7.3         |
| SC - 50 | 24 - 240<br>30 - 300<br>45 - 450  | 50 | 40 | 165   | 250   | 125   | 130   | 8.3         |

other switching ranges on request / other media on request / other connection sizes on request

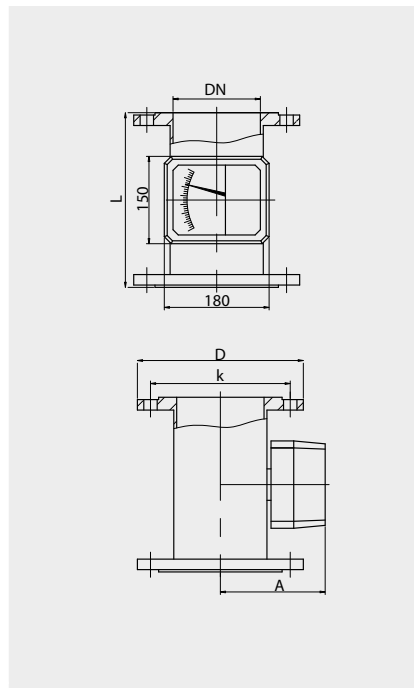
Type combination see type key Flow Monitors

## SC for air, dependent of position / vertical

### Technical data

|                                |   |
|--------------------------------|---|
| <b>Material:</b>               | Stainless steel<br>Steel  |
| <b>Operating pressure:</b>     | Stainless steel to 40 bar<br>Steel to 40 bar                            |
| <b>Operating temperature:</b>  | -20 °C ... +200 °C  |
| <b>Contacts:</b>               | Change over 250 V / AC / 6 A  |
| <b>Control unit:</b>           | TEH 4-wire<br>24 V DC / 4-20 mA<br>TK 2-wire<br>24 V DC / 4-20 mA EExib |
| <b>Electrical connections:</b> | Terminal box aluminium  |
| <b>Measuring accuracy:</b>     | ± 2.5 % of final value  |
| <b>Pressure drop:</b>          | 0.04 ... 0.22 bar   |
| <b>Mounting position:</b>      | Dependent of position   |
| <b>Display:</b>                | Display instrument 150x180 mm   |
| <b>Connection:</b>             | Flange PN40   |
| <b>Gaskets:</b>                | Viton, EPDM or Perbunan   |
| <b>Protection rating:</b>      | IP65  |

### Stainless steel / Steel



| Type     | Nm <sup>3</sup> /h air                 | DN  | PN | D[mm] | L[mm] | k[mm] | A[mm] | Weight [kg] |
|----------|--|-----|----|-------|-------|-------|-------|-------------|
| SC - 65  | 45 - 450<br>60 - 600                   | 65  | 16 | 185   | 250   | 145   | 130   | 10          |
| SC - 80  | 60 - 600<br>75 - 750<br>90 - 900       | 80  | 16 | 200   | 250   | 160   | 142   | 12          |
| SC - 100 | 120 - 1200<br>150 - 1500<br>180 - 1800 | 100 | 16 | 220   | 250   | 180   | 150   | 15          |
| SC - 125 | 240 - 2400<br>300 - 3000<br>360 - 3600 | 125 | 16 | 250   | 250   | 210   | 162   | 20          |
| SC - 150 | 450 - 4500<br>500 - 5400               | 150 | 10 | 285   | 300   | 240   | 10    | 32          |

other switching ranges on request / other media on request / other connection sizes on request

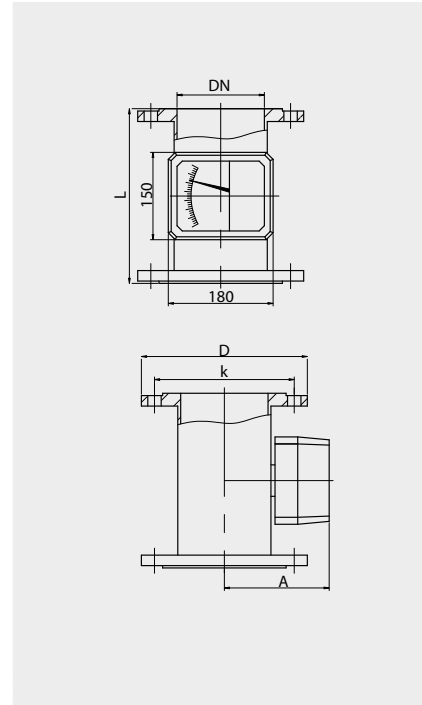
Type combination see type key Flow Monitors

## SC for water, dependent of position / vertical

### Technical data

|                                |   |
|--------------------------------|---|
| <b>Material:</b>               | Stainless steel<br>Steel  |
| <b>Operating pressure:</b>     | Stainless steel to 40 bar<br>Steel to 40 bar                            |
| <b>Operating temperature:</b>  | -20 °C ... +200 °C  |
| <b>Contacts:</b>               | Change over 250 V / AC / 6 A  |
| <b>Control unit:</b>           | TEH 4-wire<br>24 V DC / 4-20 mA<br>TK 2-wire<br>24 V DC / 4-20 mA EExib |
| <b>Electrical connections:</b> | Terminal box aluminium  |
| <b>Measuring accuracy:</b>     | ± 2.5 % of final value  |
| <b>Pressure drop:</b>          | 0.04 ... 0.22 bar   |
| <b>Mounting position:</b>      | Dependent of position   |
| <b>Display:</b>                | Display instrument 150x180 mm   |
| <b>Connection:</b>             | Flange PN40   |
| <b>Gaskets:</b>                | Viton, EPDM or Perbunan   |
| <b>Protection rating:</b>      | IP65  |

### Stainless steel / Steel



| Type    | l/h  | DN | PN | D[mm] | L[mm] | k[mm] | A[mm] | Weight [kg] |
|---------|--|----|----|-------|-------|-------|-------|-------------|
| SC - 15 | 2.5 - 25<br>4 - 40<br>6 - 60<br>10 - 100<br>16 - 160<br>25 - 250<br>40 - 400<br>60 - 600 | 15 | 40 | 95    | 250   | 65    | 114   | 3.5         |
| SC - 25 | 100 - 1000<br>160 - 1600<br>250 - 2500<br>400 - 4000                                     | 25 | 40 | 115   | 250   | 85    | 120   | 4.5         |
| SC - 40 | 400 - 4000<br>500 - 6300<br>800 - 8000   | 40 | 40 | 150   | 250   | 110   | 128   | 7.3         |
| SC - 50 | 0.8 - 8m³/h<br>1 - 10m³/h<br>1.5 - 15m³/h  | 50 | 40 | 165   | 250   | 125   | 130   | 8.3         |

other switching ranges on request / other media on request / other connection sizes on request

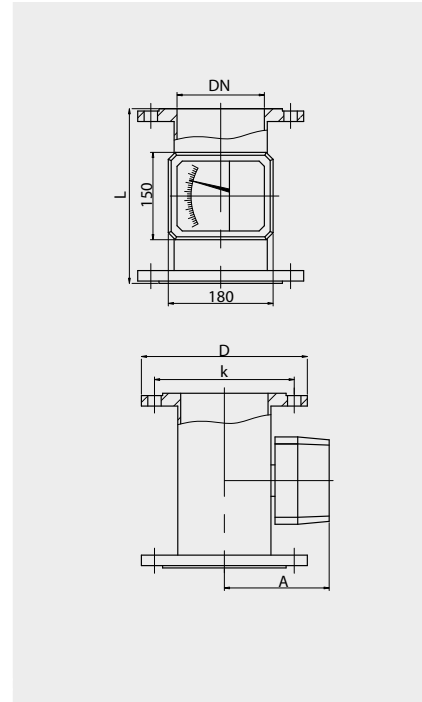
**Type combination see type key Flow Monitors**

## SC for water, dependent of position / vertical

### Technical data

|                                |   |
|--------------------------------|---|
| <b>Material:</b>               | Stainless steel<br>Steel  |
| <b>Operating pressure:</b>     | Stainless steel to 40 bar<br>Steel to 40 bar                            |
| <b>Operating temperature:</b>  | -20 °C ... +200 °C  |
| <b>Contacts:</b>               | Change over 250 V / AC / 6 A  |
| <b>Control unit:</b>           | TEH 4-wire<br>24 V DC / 4-20 mA<br>TK 2-wire<br>24 V DC / 4-20 mA EExib |
| <b>Electrical connections:</b> | Terminal box aluminium  |
| <b>Measuring accuracy:</b>     | ± 2.5 % of final value  |
| <b>Pressure drop:</b>          | 0.04 ... 0.22 bar   |
| <b>Mounting position:</b>      | Dependent of position   |
| <b>Display:</b>                | Display instrument 150x180 mm   |
| <b>Connection:</b>             | Flange PN40   |
| <b>Gaskets:</b>                | Viton, EPDM or Perbunan   |
| <b>Protection rating:</b>      | IP65  |

### Stainless steel / Steel



| Type     | m³/h                           | DN  | PN | D[mm] | L[mm] | k[mm] | A[mm] | Weight [kg] |
|----------|--------------------------------|-----|----|-------|-------|-------|-------|-------------|
| SC - 65  | 1.5 - 15<br>2 - 20             | 65  | 16 | 185   | 250   | 145   | 130   | 10          |
| SC - 80  | 2 - 20<br>2.5 - 25<br>3 - 30   | 80  | 16 | 200   | 250   | 160   | 142   | 12          |
| SC - 100 | 4 - 40<br>5 - 50<br>6 - 60     | 100 | 16 | 220   | 250   | 180   | 150   | 15          |
| SC - 125 | 8 - 80<br>10 - 100<br>12 - 120 | 125 | 16 | 250   | 250   | 210   | 162   | 20          |
| SC - 150 | 15 - 150<br>18 - 180           | 150 | 10 | 285   | 300   | 240   | 10    | 32          |

other switching ranges on request / other media on request / other connection sizes on request

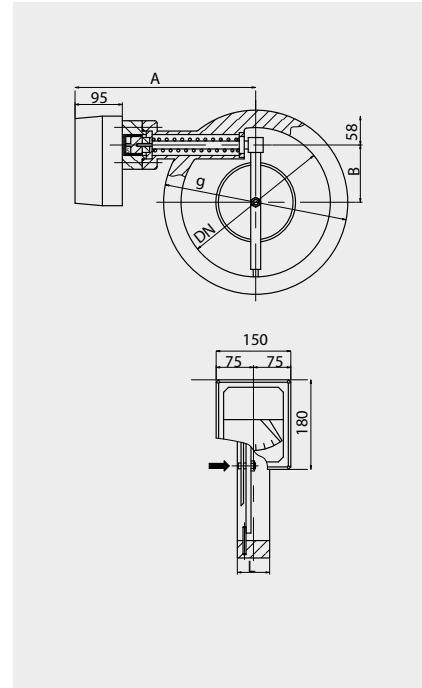
Type combination see type key Flow Monitors

## DP for water, dependent of position / vertical / horizontal

### Technical data

|                                |   |
|--------------------------------|---|
| <b>Material:</b>               | Stainless steel<br>Plastic coated steel                                 |
| <b>Operating pressure:</b>     | Stainless steel to 40 bar<br>Steel to 40 bar                            |
| <b>Operating temperature:</b>  | Stainless steel -20 °C ... +180 °C<br>Steel coated -20 °C ... +130 °C   |
| <b>Contacts:</b>               | Change over 250 V / AC / 6 A  |
| <b>Control unit:</b>           | TEH 4-wire<br>24 V DC / 4-20 mA<br>TK 2-wire<br>24 V DC / 4-20 mA EExib |
| <b>Electrical connections:</b> | Terminal box aluminium  |
| <b>Measuring accuracy:</b>     | ± 2.5 % of final value  |
| <b>Pressure drop:</b>          | 0.15 ... 0.22 bar   |
| <b>Mounting position:</b>      | Horizontal or vertical  |
| <b>Display:</b>                | Display instrument 150x180 mm   |
| <b>Connection:</b>             | Flange PN40   |
| <b>Gaskets:</b>                | Viton, EPDM or Perbunan   |
| <b>Protection rating:</b>      | IP65  |

### Stainless steel / Steel coated



| Type     | m <sup>3</sup> /h              | DN  | PN | A[mm] | B[mm] | L[mm] | g[mm] | Weight [kg] |
|----------|--------------------------------|-----|----|-------|-------|-------|-------|-------------|
| DP - 50  | 0.8 - 6<br>2 - 10<br>3 - 15    | 50  | 40 | 250   | 33    | 65    | 102   | 6           |
| DP - 65  | 2 - 10<br>3 - 16<br>3 - 25     | 65  | 40 | 250   | 40    | 65    | 122   | 7           |
| DP - 80  | 2 - 16<br>3 - 25<br>5 - 40     | 80  | 40 | 250   | 50    | 65    | 138   | 8           |
| DP - 100 | 5 - 40<br>8 - 60<br>10 - 80    | 100 | 16 | 250   | 60    | 65    | 158   | 10          |
| DP - 125 | 8 - 60<br>15 - 100<br>15 - 120 | 125 | 16 | 280   | 70    | 65    | 188   | 12          |

other switching ranges on request / other media on request / other connection sizes on request

Type combination see type key Flow Monitors

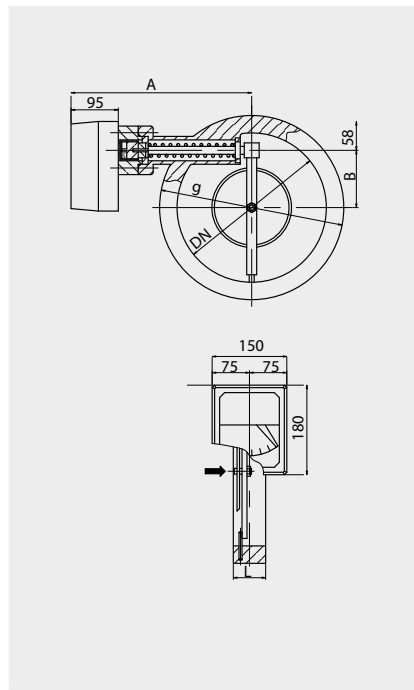


## DP for water, dependent of position / vertical / horizontal

### Technical data

|                                |   |
|--------------------------------|---|
| <b>Material:</b>               | Stainless steel<br>Plastic coated steel                                 |
| <b>Operating pressure:</b>     | Stainless steel to 40 bar<br>Steel to 40 bar                            |
| <b>Operating temperature:</b>  | Stainless steel -20 °C ... +180 °C<br>Steel coated -20 °C ... +130 °C   |
| <b>Contacts:</b>               | Change over 250 V / AC / 6 A  |
| <b>Control unit:</b>           | TEH 4-wire<br>24 V DC / 4-20 mA<br>TK 2-wire<br>24 V DC / 4-20 mA EExib |
| <b>Electrical connections:</b> | Terminal box aluminium  |
| <b>Measuring accuracy:</b>     | ± 2.5 % of final value  |
| <b>Pressure drop:</b>          | 0.15 .. 0.22 bar  |
| <b>Mounting position:</b>      | Horizontal or vertical  |
| <b>Display:</b>                | Display instrument 150x180 mm   |
| <b>Connection:</b>             | Flange PN40   |
| <b>Gaskets:</b>                | Viton, EPDM or Perbunan   |
| <b>Protection rating:</b>      | IP65  |

### Stainless steel / Steel coated



| Type     | m³/h                             | DN  | PN | A[mm] | B[mm] | L[mm] | g[mm] | Weight [kg] |
|----------|----------------------------------|-----|----|-------|-------|-------|-------|-------------|
| DP - 150 | 15 - 100<br>20 - 160<br>25 - 200 | 150 | 16 | 280   | 78    | 65    | 212   | 14          |
| DP - 200 | 20 - 160<br>30 - 250<br>40 - 350 | 200 | 16 | 320   | 102   | 65    | 268   | 20          |
| DP - 250 | 25 - 200<br>50 - 400<br>60 - 500 | 250 | 10 | 350   | 109   | 65    | 320   | 29          |
| DP - 300 | 30 - 250<br>50 - 400<br>80 - 600 | 300 | 10 | 370   | 115   | 65    | 370   | 35          |

other switching ranges on request / other media on request / other connection sizes on request

Type combination see type key Flow Monitors

## Electrical switching capacity of the contacts

| Type            | Normally open         | Change over             | EEx ia IIC T6                             | EEx m II T6   |
|-----------------|-----------------------|-------------------------|---|---|
| RVO/U-1         | max. 250 V/3 A/100 VA | max. 500 V/1.5 A/50 VA  | Chang.over 45 V/1 A                       | Chang.over 250 V/1 A/30 VA                              |
|                 |                       |                         | Norm.open 45 V/1 A                        | Norm.open 250 V/2 A/60 VA                               |
| RVO/U-2         | max. 230 V/3 A/60 VA  | max. 250 V/1.5 A/50 VA  | -   | -   |
| RVO/U-4         | max. 200 V/1A/20VA    | max. 200 V/1 A/20 VA    | -   | -   |
| RVM/U-1         | max. 250 V/3 A/100 VA | max. 500 V/1.5 A/50 VA  | Chang.over 45 V/1 A                       | Chang.over 250 V/1 A/30 VA                              |
|                 |                       |                         | Norm.open 45 V/1 A                        | Norm.open 250 V/2 A/60 VA                               |
| RVM/U-2         | max. 230 V/3 A/60 VA  | max. 250 V/1.5 A/50 VA  | -   | -   |
| RVM/U-4         | max. 200 V/1 A/20 VA  | max. 200 V/1 A/20 VA    | -   | -   |
| RVM/UM          | max. 250 V/3 A/100 VA | max. 500 V/1.5 A/50 VA  | Chang.over 45 V/1 A<br>Norm.open 45 V/1 A | Chang.over 250 V/1 A/30 VA<br>Norm.open 250 V/2 A/60 VA |
| DUG             | max. 250 V/3 A/100 VA | max. 500 V/1.5 A/50 VA  | Chang.over 45 V/1 A<br>Norm.open 45 V/1 A | Chang.over 250 V/1 A/30 VA<br>Norm.open 250 V/2 A/60 VA |
| DUM             | max. 400 V/3 A/100 VA | max. 500 V/1.5 A/50 VA  | Chang.over 45 V/1 A<br>Norm.open 45 V/1 A | Chang.over 250 V/1 A/30 VA<br>Norm.open 250 V/2 A/60 VA |
| DUM/A           | max. 250 V/3 A/100 VA | max. 500 V/1.5 A/50 VA  | Chang.over 45 V/1 A<br>Norm.open 45 V/1 A | Chang.over 250 V/1 A/30 VA<br>Norm.open 250 V/2 A/60 VA |
| DWG             | max. 250 V/3 A/100 VA | max. 500 V/1.5 A/50 VA  | Chang.over 45 V/1 A<br>Norm.open 45V/1A   | Chang.over 250 V/1 A/30 VA<br>Norm.open 250 V/2 A/60 VA |
| DWM             | max. 250 V/3 A/100 VA | max. 500 V/1.5 A/50 VA  | Chang.over 45 V/1 A<br>Norm.open 45 V/1 A | Chang.over 250 V/1 A/30 VA<br>Norm.open 250 V/2 A/60 VA |
| DWM/A           | max. 250V/3A/100VA    | max. 500 V/1.5 A/50 VA  | Chang.over 45 V/1 A<br>Norm.open 45 V/1 A | Chang.over 250 V/1 A/30 VA<br>Norm.open 250 V/2 A/60 VA |
| DKG-1           | max. 250 V/3 A/100 VA | max. 500 V/1.5 A/50 VA  | Chang.over 45 V/1 A                       | Chang.over 250 V/1 A/30 VA                              |
|                 |                       |                         | Norm.open 45 V/1 A                        | Norm.open 250 V/2 A/60 VA                               |
| DKG-2           | max. 230 V/3 A/60 VA  | max. 250 V/1.5 A/50 VA  | -   | -   |
| DKM-1           | max. 250 V/3 A/100 VA | max. 500 V/1.5 A/50 VA  | Chang.over 45 V/1 A                       | Chang.over 250 V/1 A/30 VA                              |
|                 |                       |                         | Norm.open 45 V/1 A                        | Norm.open 250 V/2 A/60 VA                               |
| DKM-2<br>DKME   | max. 230 V/3 A/60 VA  | max. 250 V/1.5 A/50 VA  | -   | -   |
|                 |                       |                         | -   | -   |
| DKM-A<br>DKME/A | max. 250 V/3 A/100 VA | max. 250 V/1.5 A/50 VA  | Chang.over 45 V/1 A                       | Chang.over 250 V/1 A/30 VA                              |
|                 |                       |                         | Norm.open 45 V/1 A                        | Norm.open 250 V/2 A/60 VA                               |
| SC              | -                     | max. 230 V AC/6 A/50 VA | Acc.to approval                           | -   |
| DP              | -                     | max. 230 V AC/6 A/50 VA | Acc.to approval                           | -   |

## Type key

| Code 1 | Key 1              | Type of flow monitor                         | ATEX |
|--------|--------------------|--|------|
|        | RVO/U - .. / .. -  | Type of flow monitor with sight glass        | Ex   |
|        | RVM/U - .. / .. -  | Type of flow monitor without sight glass     | Ex   |
|        | RVM/UM - .. / .. - | Type of flow monitor without sight glass     | Ex   |
|        | DUG - .. -         | Type of flow monitor with sight glass        | Ex   |
|        | DUM - .. -         | Type of flow monitor without sight glass     | Ex   |
|        | DUM/A - .. -       | Type of flow monitor with display instrument | Ex   |
|        | DUM/TA - .. -      | Type of flow monitor with analog exit        |      |
|        | DWG - .. -         | Type of flow monitor with sight glass        | Ex   |
|        | DWG/L - .. -       | Type of flow monitor with sight glass        | Ex   |
|        | DWM - .. -         | Type of flow monitor without sight glass     | Ex   |
|        | DWM/A - .. -       | Type of flow monitor with display instrument | Ex   |
|        | DWM/L - .. -       | Type of flow monitor without sight glass     | Ex   |
|        | DWM/A-L - .. -     | Type of flow monitor with display instrument | Ex   |
|        | DKG - .. -         | Type of flow monitor with sight glass        | Ex   |
|        | DKM - .. -         | Type of flow monitor without sight glass     | Ex   |
|        | DKME - .. -        | Type of flow monitor without sight glass     | Ex   |
|        | DKME/A - .. -      | Type of flow monitor with display instrument | Ex   |
|        | DKM/A - .. -       | Type of flow monitor with display instrument | Ex   |
|        | DKM/TA - .. -      | Type of flow monitor with analog exit        |      |
|        | SC - .. -          | Flow meter with display instrument           | Ex   |
|        | DP - .. -          | Flow meter with display instrument           | Ex   |
| Code 2 | Key 1              | Design of process connection                 | ATEX |
|        | 1 -                | ¼" Thread female BSP                         | Ex   |
|        | 2 -                | ⅜" Thread female BSP                         | Ex   |
|        | 3 -                | ½" Thread female BSP                         | Ex   |
|        | 4 -                | ¾" Thread female BSP                         | Ex   |
|        | 5 -                | 1" Thread female BSP                         | Ex   |
|        | 6 -                | 1¼" Thread female BSP                        | Ex   |
|        | 7 -                | 1½" Thread female BSP                        | Ex   |
|        | 8 -                | 1¾" Thread female BSP                        | Ex   |
|        | 9 -                | 2" Thread female BSP                         | Ex   |
|        | X -                | Various                                      | Ex   |
| Code 3 | Key 1              | Material                                     | ATEX |
|        | V -                | Stainless steel                              | Ex   |
|        | VK -               | Steel plastic coated                         | Ex   |
|        | M -                | Brass nickel-plated                          | Ex   |
|        | S -                | Steel  | Ex   |
|        | X -                | Various                                      | Ex   |

### Type combination

| Code    | 1       | 2   | 3   | 4     | 5      | 6     | 7     |
|---------|---------|-----|-----|-------|--------|-------|-------|
| Key     | 1       | 1   | 1   | 1     | 1/2    | 1     | 1     |
| Example | DUG-8 - | 3 - | V - | SGW - | S/ST - | 120 - | EExia |

## Type key

|               |              |  |             |
|---------------|--------------|--|-------------|
| <b>Code 4</b> | <b>Key 1</b> | <b>Sight glass / scale / scaling</b>                       | <b>ATEX</b> |
|               | SGW -        | Sight glass with water scaling L/min                       |             |
|               | SGL -        | Sight glass with air scaling NI/min                        |             |
|               | KW -         | With adhesive scaling for water L/min                      |             |
|               | KL -         | With adhesive scaling for air NI/min                       |             |
|               | X -          | Various  |             |
| <b>Code 5</b> | <b>Key 1</b> | <b>Switching function / contact - analog exit</b>          | <b>ATEX</b> |
|               | S / .. -     | Normally open contact                                      |             |
|               | S2 / .. -    | 2 normally open contacts                                   |             |
|               | U / .. -     | Change over contact  |             |
|               | U2 / .. -    | 2 change over contacts                                     |             |
|               | SE / .. -    | Normally open contact with increased switching capacity    |             |
|               | S2E / .. -   | 2 normally open contacts with increased switching capacity |             |
|               | UE / .. -    | Change over contact with increased switching capacity      |             |
|               | U2E / .. -   | 2 change over contacts with increased switching capacity   |             |
|               | AI / .. -    | analog exit mA   |             |
|               | AV / .. -    | analog exit V  |             |
|               | X / .. -     | Various  |             |
|               | <b>Key 2</b> | <b>Contact connection</b>                                  | <b>ATEX</b> |
|               | .. / ST-     | Hirschmann connection plug                                 |             |
|               | .. / KV-     | Cable connection compound-filled                           |             |
|               | .. / X-      | Various  |             |
| <b>Code 6</b> | <b>Key 1</b> | <b>Temperature indication</b>                              | <b>ATEX</b> |
|               | 120 -        | Up to 120 °C   |             |
|               | 130 -        | Up to 130 °C   |             |
|               | 160 -        | Up to 160 °C   |             |
|               | 180 -        | Up to 180 °C   |             |
|               | 200 -        | Up to 200 °C   |             |
|               | X -          | Various  |             |
| <b>Code 7</b> | <b>Key 1</b> | <b>Approvals</b>   | <b>ATEX</b> |
|               | EExia        | Only for intrinsically safe connection                     |             |
|               | EExm         | Explosion proof / cable compound-filled                    |             |
|               | X            | Various  |             |

## Type combination

| Code    | 1       | 2   | 3   | 4     | 5      | 6     | 7     |
|---------|---------|-----|-----|-------|--------|-------|-------|
| Key     | 1       | 1   | 1   | 1     | 1/2    | 1     | 1     |
| Example | DUG-8 - | 3 - | V - | SGW - | S/ST - | 120 - | EExia |