Zertifiziertes QM-System
DIN EN ISO 9001
Zertifikat-Nr. 01017

# Variable Area Flow Meter

glass cone

measuring • monitoring • analysing

## UVR / UTR

- Measuring range:
  water: 10 - 100 l/h ... 200 - 2000 l/h
  air: 0.1 - 1 ... 5 - 50 Nm³/h
- Accuracy class: 4 acc. to VDI/VDE
- $p_{max}$: 10 bar;
  $t_{max}$: 100 °C (65 °C for PVC)
- Connection: G ⅜, G ½, ⅜" NPT, ½" NPT or others with adapters
- Material: stainless steel or POM-C

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## Description

The flow meters and switches model UVR and UTR for liquids and air operate on the suspended float principle: that is, the installation position is vertical and the direction of flow is from bottom to top.

The instruments have been designed as simple and thus economical measuring systems. The float for UVR and UTR is a bomb form float, whereby the indication point is the top of the float. The appliance is available with or without needle valve as well.

## Applications

- Cooling water system
- Gas monitoring for burners
- Inert gas controlling

## Technical Details

| | |
|---|---|
| Installation position: | vertical, flow from bottom |
| Accuracy class: | 4 acc. to VDI/VDE 3513 |
| Max. pressure: | 10 bar |
| Process temperature: | 0 ... +100 °C<br>0 ... +70 °C with contact<br>0 ... +65 °C (PVC float) |
| Ambient temperature: | 0 ... +65 °C |
| Protection: | IP 65 |
| Connections: | G ⅜, G ½, ⅜" NPT, ½" NPT<br>Option: adapters (G ¼ , G ⅜, G ½)<br>pipe connections for plastic pipes<br>hose connections<br>push-on connections |

## Materials

| | |
|---|---|
| Fitting: | stainless steel (1.4404, 1.4301) or POM-C |
| Measuring tube: | borosilicate glass |
| Float stop: | PTFE or st. steel 1.4301, 1.4404 |
| Float: | stainless steel (1.4404,1.4301), PVC, aluminium, PP |
| Gasket: | FPM, EPDM, NBR |
| Valve: | stainless steel (1.4404, 1.4301) (not usable as shut-off valve) |

## Limit Switches (option)

The flow meters can be fitted with limit switches as an option. These limit switches are cylinder type proximity switches. The electrical connection is via 2m cable.

The following type is available: Monostable (preferably used as Min./Max. contact).

## Material Combinations*

| Code | Housing | Connection | Valve | Float | Gaskets | Tube |
|---|---|---|---|---|---|---|
| **0** | POM-C | POM-C | POM-C | PVC for gases<br>PTFE for liquids | EPDM | borosilicate glass |
| **3** | 1.4301 | 1.4301 | 1.4301 | 1.4301 | FPM | |
| **5** | 1.4404 | 1.4404 | 1.4404 | 1.4404 | FPM | |

* Special material combination on request



No responsibility taken for errors;
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### **Order Details Liquids** (Example: **UVR-0 20H 0 I3 00**)

| Model | Measuring ranges Water [l/h] | Needle valve | Connection | Switch [2] |
|---|---|---|---|---|
| **UVR-0**<br>**UVR-3**<br>**UVR-5** | **20H**[1] = 10 … 100 | **0** = without<br>**1** = with valve | **I3** = G⅜<br>**N3** = ⅜" NPT<br>**YY** = other | **00** = none<br>**1B** = 1x N/O, PNP<br>**2B** = 2x N/O, PNP |
| | **22H**[1] = 16 … 160 | | | |
| | **24H**[1] = 25 … 250 | | | |
| | **26H**[1] = 40 … 400 | | | |
| | **28H**[1] = 63 … 630 | | | |
| **UTR-0**<br>**UTR-3**<br>**UTR-5** | **26H** = 40 … 400 | | **I4** = G½<br>**N4** = ½" NPT<br>**YY** = other | |
| | **28H** = 63 … 630 | | | |
| | **30H** = 100 … 1000 | | | |
| | **32H** = 160 … 1600 | | | **00** = none<br>**1C** = 1x N/O, PNP<br>**2C** = 2x N/O, PNP |
| | **33H**[1] = 200 … 2000 | | | |

[1] Only with stainless steel float (UTR/UVR -3 and-5)
[2] Switch is available only with stainless steel float (UTR/UVR -3 and-5)

### **Order Details Gases** (Example: **UVR-0 20L 0 I3 00**)

| Model | Measuring ranges Air [Nm³/h] [3] | Needle valve | Connection | Switch [2] |
|---|---|---|---|---|
| **UVR-0**<br>**UVR-3**<br>**UVR-5** | **20L**[1] = 0.1 … 1.0 | **0** = without<br>**1** = with valve | **I3** = G⅜<br>**N3** = ⅜" NPT<br>**YY** = other | **00** = none<br>**1B** = 1x N/O, PNP<br>**2B** = 2x N/O, PNP |
| | **22L** = 0.16 … 1.6 | | | |
| | **24L** = 0.25 … 2.5 | | | |
| | **26L** = 0.4 … 4 | | | |
| | **28L** = 0.63 … 6.3 | | | |
| | **30L** = 1 … 10 | | | |
| | **32L**[1] = 1.6 … 16 | | | |
| | **33L**[1] = 2 … 20 | | | |
| **UTR-0**<br>**UTR-3**<br>**UTR-5** | **26L** = 0.4 … 4 | | **I4** = G½<br>**N4** = ½" NPT<br>**YY** = other | |
| | **28L** = 0.63 … 6.3 | | | |
| | **30L**[1] = 1 … 10 | | | |
| | **32L**[1] = 1.6 … 16 | | | **00** = none<br>**1C** = 1x N/O, PNP<br>**2C** = 2x N/O, PNP |
| | **34L**[1] = 2.5 … 25 | | | |
| | **36L**[1] = 4 … 40 | | | |
| | **37L**[1] = 5 … 50 | | | |

[1] Only with stainless steel float (UTR/UVR -3 and-5)
[2] Switch is available only with stainless steel float (UTR/UVR -3 and-5)
[3] @ 1.013 bar abs and 20 °C



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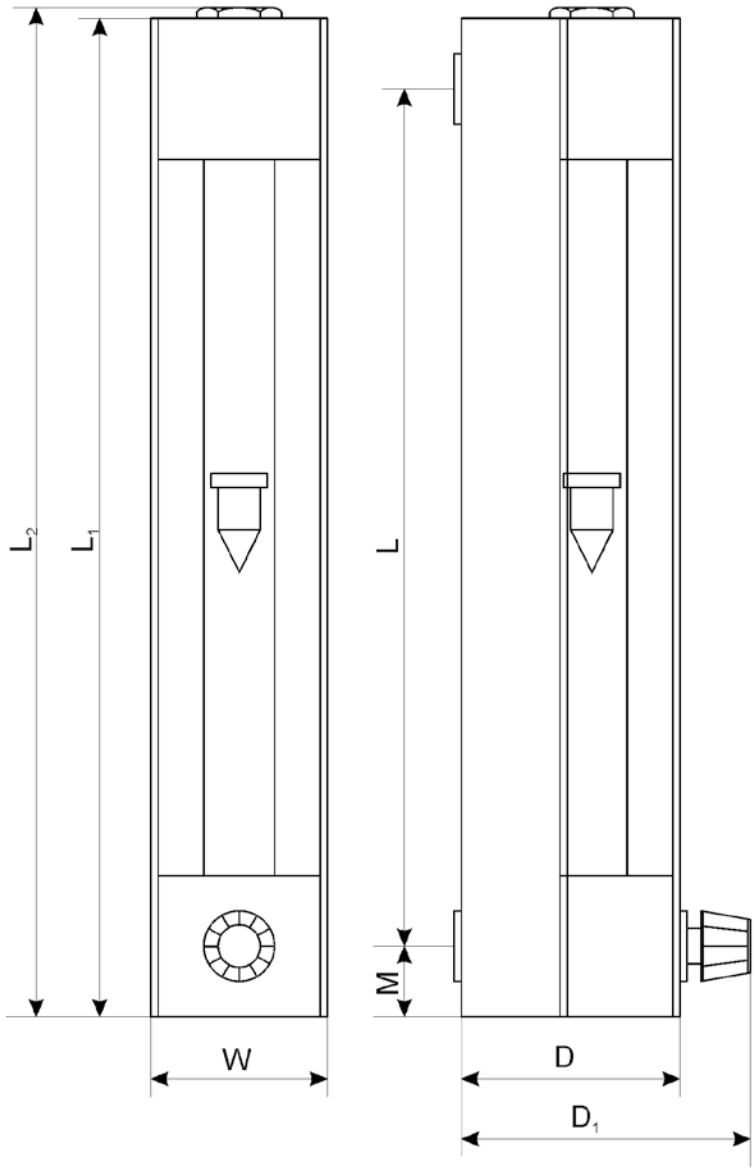
**Dimensions** [mm]




| Model | L | $L_1$ | $L_2$ | M | W | D | $D_1$ |
|---|---|---|---|---|---|---|---|
| **UVR-xM** | 240 | 283 | 287.5 | 21 | 50 | 62 | 100 - 108 |
| **UTR-xM** | 340 | 375 | 375.0 | 17 | 62 | 62 | 105 - 114 |



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