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

Variable Area Flowmeter

Glass Cone

measuring • monitoring • analysing

UMR / UXR / URA

- Measuring range:
  Water: 1 - 10 l/h ... 13 - 130 l/h
  Air: 0.01 - 0.1 ... 0.25 - 2.5 Nm³/h
- Accuracy class: 4 acc. to VDI/VDE
- p_{max}: 16 bar; t_{max}: 100 °C (65 °C for PVC float)
- Connection: ¼" NPT female or G ¼ male
- Material: stainless steel or POM-C

S1

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Description

The flow meters and switches for low flows model UMR and UXR 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 for economical measuring systems. The float for UMR is a ball, whereby the indication point is the middle of the ball. The float for UXR is a bomb form float, whereby the indication point is the top of the float. The instruments are available with or without needle valve as well.

The models UMR and URA are similar with one difference: model URA is a footed structure used mainly in schools and laboratories where they are fitted on top of desks.

Technical Details

Installation position:	vertical, flow from bottom
Accuracy class:	4 acc. to VDI/VDE 3513
Max. pressure:	16 bar
Process temperature:	0 ... +100 °C 0 ... +70 °C with contact 0 ... +65 °C (PVC float)
Ambient temperature:	0 ... +100 °C 0 ... +70 °C with contact
Protective category:	IP 65
Connections:	¼" NPT, G ¼ (female backward) Option: Ø 6, Ø 10, Ø 13 hose coupling
Weight:	approx. 0.45 kg

Materials

Fitting:	stainless steel (1.4401, 1.4301) or POM-C
Measuring tube:	borosilicate glass
Float stop:	PTFE
Float:	stainless steel (1.4401,1.4301), PVC, PTFE
Gasket:	F , M, EPDM, NBR
Valve:	stainless steel (1.4401, 1.4301)

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. or Max. contact).

Material Combinations

Code	Housing	Connection	Valve	Float	Gaskets	Tube
0	POM-C	POM-C (for I2) nickel plated brass (for H2, H3, H4)	1.4301	aluminum PVC PP 1.4301 1.4404	FKM NBR EPDM Silicone	borosilicate glass
3	1.4301	1.4301	1.4301	1.4301	FKM	
5	1.4404	1.4404	1.4404	1.4404	FKM	
9*	POM-C 1.4301 1.4404	POM-C (for I2) nickel plated brass (for H2, H3, H4) 1.4301 1.4404	1.4301 1.4404	aluminum PVC PP 1.4301 1.4404	FKM NBR EPDM silicone	

* on request of the customer

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Order Details Liquids (Example: **UMR-0 S 10H 0 I2 0**)

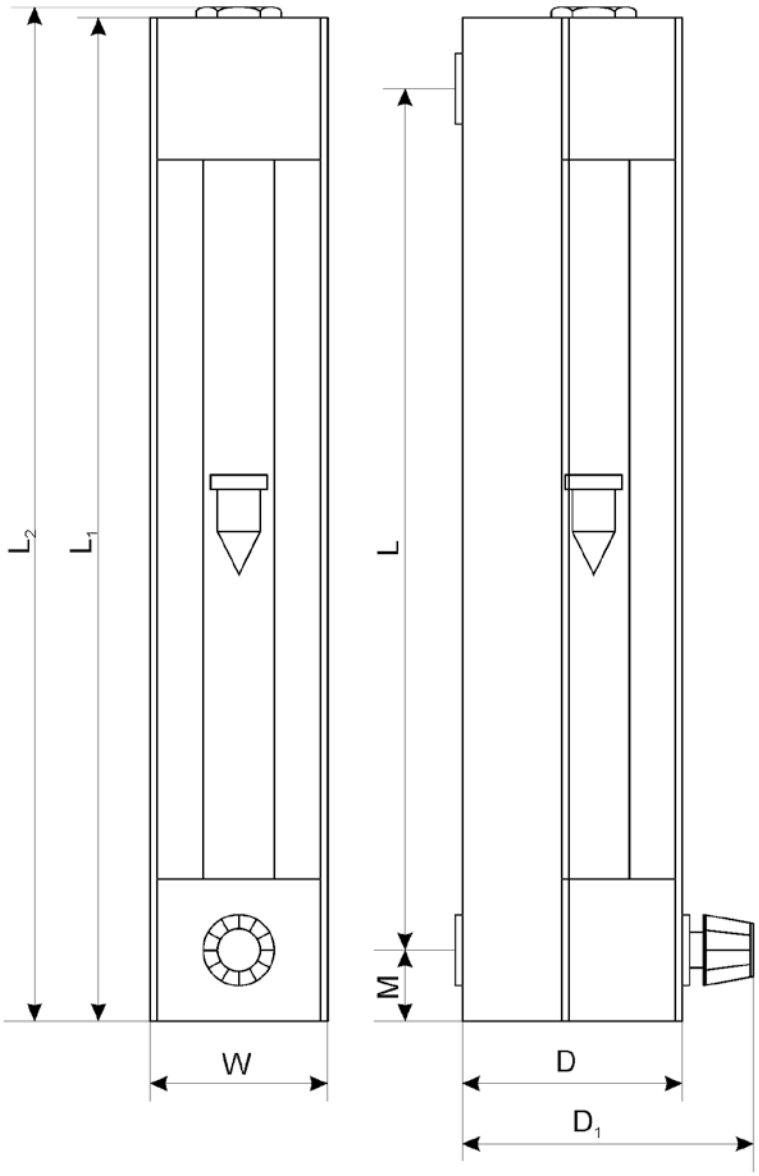
Model	Length	Measuring ranges water [l/h]	Needle valve	Connection	Switch	Others
UMR-0 **UMR-3** **UMR-5** **UMR-9**	**S** = 90 mm* **L** = 127 mm	**10H** = 1 ... 10	**0** = without **1** = with valve	**I2** = G ¼ **N2** = ¼" NPT **H2** = Ø 6 hose coupling **H3** = Ø 10 hose coupling	**0** = none	**Y** = special options, please specify in writing
		12H = 1.6 ... 16				
		14H = 2.5 ... 25				
		16H = 4 ... 40				
UXR-0 **UXR-3** **UXR-5** **UXR-9**	**S** = 190 mm **L** = 250 mm	**10H** = 1 ... 10			**0** = none **P** = 1 PNP	
		12H = 1.6 ... 16				
		14H = 2.5 ... 25				
		16H = 4 ... 40				
		18H = 6.3 ... 63				
		20H = 10 ... 100				
		21H = 13 ... 130				
URA-0 **URA-3** **URA-5** **URA-9**	**S** = 190 mm **L** = 250 mm	**10H** = 1 ... 10				
		12H = 1.6 ... 16				
		14H = 2.5 ... 25				
		16H = 4 ... 40				
		18H = 6.3 ... 63				
		20H = 10 ... 100				

Order Details Gases (Example: **UMR-0 S 10L 0 I2 0**)

Model	Length	Measuring ranges air [Nm³/h]	Needle valve	Connection	Switch	Others
UMR-0 **UMR-3** **UMR-5** **UMR-9**	**S** = 90 mm* **L** = 127 mm	**10L** = 0.01 ... 0.1	**0** = without **1** = with valve	**I2** = G ¼ **N2** = ¼" NPT **H2** = Ø 6 hose coupling **H3** = Ø 10 hose coupling	**0** = none	**Y** = special options, please specify in writing
		12L = 0.016 ... 0.16				
		14L = 0.025 ... 0.25				
		16L = 0.04 ... 0.40				
		18L = 0.063 ... 0.63				
		20L = 0.1 ... 1.0				
		22L = 0.16 ... 1.6				
		23L = 0.2 ... 2.0				
UXR-0 **UXR-3** **UXR-5** **UXR-9**	**S** = 190 mm **L** = 250 mm	**10L** = 0.01 ... 0.1			**0** = none **P** = 1 PNP	
		12L = 0.016 ... 0.16				
		14L = 0.025 ... 0.25				
		16L = 0.04 ... 0.40				
		18L = 0.063 ... 0.63				
		20L = 0.1 ... 1.0				
		22L = 0.16 ... 1.6				
		24L = 0.25 ... 2.5				
URA-0 **URA-3** **URA-5** **URA-9**	**S** = 190 mm **L** = 250 mm	**10L** = 0.01 ... 0.1				
		12L = 0.016 ... 0.16				
		14L = 0.025 ... 0.25				
		16L = 0.04 ... 0.40				
		18L = 0.063 ... 0.63				
		20L = 0.1 ... 1.0				
		22L = 0.16 ... 1.6				
		24L = 0.25 ... 2.5				

* just made of stainless steel

Dimensions [mm]



Model	L	L_1	L_2	M	W	D	D_1
UMR-xS	90	114.5	119	11	30	40	75 - 83
UMR-xL	127	151.5	156	11	30	40	75 - 83
UXR-xS	190	218.0	222.5	14	40	43	78 - 86
UXR-xL	250	278.0	282.5	14	40	43	78 - 86
URA-xS	190	218.0	222.5	14	40	43	78 - 86
URA-xL	250	278.0	282.5	14	40	43	78 - 86

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