



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

## Variable Area Flowmeter/monitor

glass cone with threaded connection



measuring  
•  
monitoring  
•  
analysing

URM



- Measuring range:  
Water: 0.25 ... 2.5 – 2 500 ... 25 000 l/h  
Air: 0.0032 ... 0.032 – 32 ... 320 Nm<sup>3</sup>/h
- Accuracy:  $\pm 2\%$   $q_G = 50\%$   
(2,5% for gases)
- $p_{\max}$ : 16 bar;  $t_{\max}$ : 100 °C (65 °C for PVC)
- Connection: G  $\frac{3}{8}$  ... 3 male,  
G  $\frac{1}{4}$  ... 1 $\frac{1}{2}$  female
- Material: stainless steel 1.4301, 1.4404

S2



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KOBOLD Messring GmbH  
Nordring 22-24  
D-65719 Hofheim/Ts.  
☎ Head Office:  
+49(0)6192 299-0  
+49(0)6192 23398  
info.de@kobold.com  
www.kobold.com



**Description**

The KOBOLD URM model flowmeter/monitor works on the basis of the suspended float principle. It is used for measuring the flow rates in closed pipe line systems.

The medium flows from below through a glass measuring cone that gets wider on top. Thus, the float is raised and indicates the respective flow rate on the scale provided on the measuring cone. To monitor flow rate limits, the URM meters can be optionally furnished with "open collector" proximity switches. By its special design, this model is particularly suitable for applications where only very small operating pressures are available. Another advantage is offered by the very large sight glass which optically allows direct flow observation.

**Applications**

- Domestic engineering
- Cooling circuits
- Plant engineering
- Water treatment
- Heating
- Machine tools
- Solar systems
- Welding machines
- Paper machines
- Glass melting pots
- Extrusion machines
- Induction furnaces

**Technical Details**

Installation position: vertical  
 Accuracy:  $\pm 2\% q_G = 50\%$  (2.5% for gases)  
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 Max. temperature: 100 °C (65 °C for PVC)  
 Max. pressure: 01H...37H 16 bar  
 43H...57H 12 bar  
 63H...65H 8 bar  
 01L...37L 16 bar  
 43L...55L 10 bar  
 63L...65L 6 bar  
 Calibration conditions: water: 20 °C, air: 20 °C,  
 air pressure: 1.013 bar abs.  
**Contact (optional)**  
 Proximity switch: PNP open collector, n. o. contact  
 (monostable)  
 Ambient temperature: -25...+70 °C  
 Supply voltage: 12...24 V<sub>DC</sub>  
 Current consumption: max. 10 mA  
 Cable: 2 m, PVC-insulated  
 Protective category: IP67

**Materials**

**Material combination URM**

Ordering code	Connection	Float	Seal	Centring ring	Protection tube	Measuring tube
33	1.4301	1.4301	NBR	PVC	st. steel 1.4301	borosilicate glass
55	1.4404	1.4404	FPM	PTFE		
99*	1.4301 1.4404	1.4301 1.4404 aluminium PTFE PVC PP	NBR EPDM FPM PTFE	PVC PTFE 1.4301		

\* Customer specification on request



Order Details (Example: URM- 33 01H I2 0)

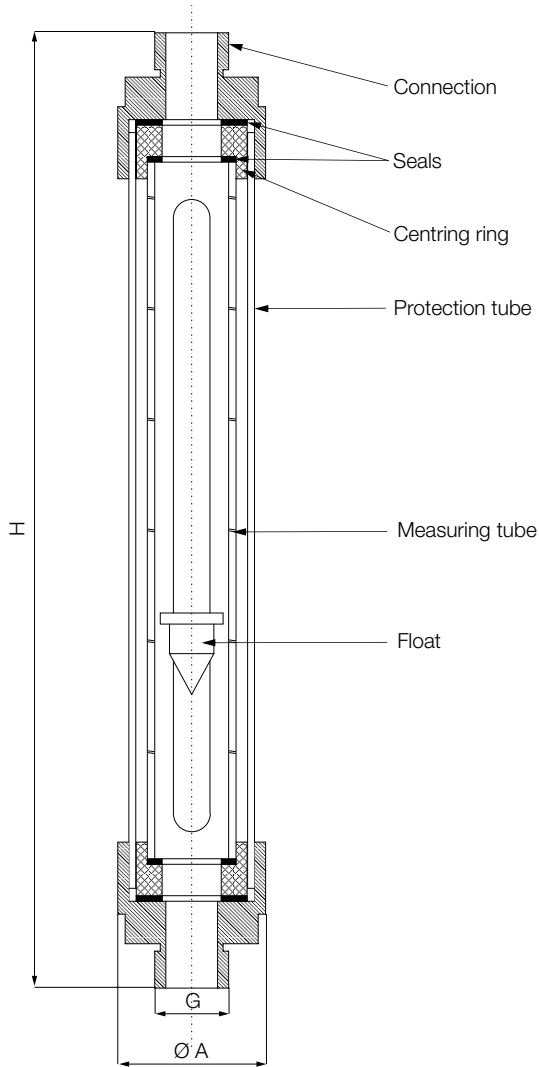
Model	Material combination	Instrument length	Measuring range		Pressure loss [mbar]	Thread connection <sup>3)</sup>		Contacts <sup>1)</sup>	
			water [l/h]	air [Nm <sup>3</sup> /h]		female	male		
URM-	33 55 99 <sup>2)</sup>	210 mm	01H = 0.25...2.5	01L = 0.0032...0.032	6	I2 = G 1/4 I3 = G 3/8	G2 = G 1/4 G3 = G 3/8	0 = no contact	
			03H = 0.4...4	03L = 0.008...0.08	6				
			05H = 0.63...6.3	05L = 0.02...0.2	8				
			07H = 1...10	07L = 0.032...0.32	10				
			09H = 1.6...16	09L = 0.05...0.5	10				
		360 mm		11L = 0.02...0.2	10	I2 = G 1/4 I3 = G 3/8	G2 = G 1/4 G3 = G 3/8 G4 = G 1/2		
			13H = 1...10	13L = 0.032...0.32	10				
			15H = 1.6...16	15L = 0.05...0.5	10				
			17H = 2.5...25	17L = 0.08...0.8	12				
			19H = 4.0...40	19L = 0.13...1.3	12				
		360 mm	22H = 6.3...63	22L = 0.2...2.0	17	I3 = G 3/8 I4 = G 1/2	G3 = G 3/8 G4 = G 1/2 G5 = G 3/4		00 = none 1A = 1x N/O, PNP 2A = 2x N/O, PNP
			24H = 10...100	24L = 0.32...3.2	24				
			26H = 16...160	26L = 0.5...5.0	28				
			28H = 25...250	28L = 0.8...8.0	25				
		360 mm	33H = 40...400	33L = 1.3...13	36	I4 = G 1/2 I5 = G 3/4	G4 = G 1/2 G5 = G 3/4 G6 = G 1		00 = none 1B = 1x N/O, PNP 2B = 2x N/O, PNP
			35H = 63...630	35L = 2.0...20	34				
			37H = 100...1000	37L = 3.2...32	43				
		440 mm	43H = 100...1000	43L = 3.2...32	43	I5 = G 3/4 I6 = G 1 I7 = G 1 1/4	G5 = G 3/4 G6 = G 1 G7 = G 1 1/4 G8 = G 1 1/2		
			45H = 160...1600	45L = 5.0...50	48				
			47H = 250...2500	47L = 8.0...80	51				
		440 mm	53H = 400...4000	53L = 13...130	51	I6 = G 1 I7 = G 1 1/4 I8 = G 1 1/2 I9 = G 2	G6 = G 1 G7 = G 1 1/4 G8 = G 1 1/2 G9 = G 2		00 = none 1C = 1x N/O, PNP 2C = 2x N/O, PNP
			55H = 630...6300	55L = 20...200	57				
			57H = 1000...10000		70				
		600 mm	63H = 1600...16000	63L = 32...320	93	I8 = G 1 1/2 I9 = G 2 IA = G 2 1/2 IB = G 3	G8 = G 1 1/2 G9 = G 2 GA = G 2 1/2 GB = G 3		
65H = 2500...25000			102						
		on request	YYY = others		on request				

<sup>1)</sup> Monostable switch. Other switching functions on request

<sup>2)</sup> Customer specification on request

<sup>3)</sup> For NPT-threads, please replace »Ix« with »Mx« and »Gx« with »Nx«.

Dimensions



URM with female/male thread (F = female/M = male)												
Model	H [mm]	A [mm]	¼"	⅜"	½"	¾"	1"	1 ¼"	1 ½"	2"	2 ½"	3"
URM-xx 0...	210	29,5	F/M	F/M	-	-	-	-	-	-	-	-
URM-xx 1...			F/M	F/M	-/M	-	-	-	-	-	-	-
URM-xx 2...	360	40,0	-	F/M	F/M	-/M	-	-	-	-	-	-
URM-xx 3...		49,5	-	-	F/M	F/M	-/M	-	-	-	-	-
URM-xx 4...	440	62,0	-	-	-	F/M	F/M	F/M	-/M	-	-	-
URM-xx 5...		82,0	-	-	-	-	F/M	F/M	F/M	F/M	-	-
URM-xx 6...	600	122,0	-	-	-	-	-	-	F/M	F/M	F/M	F/M