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

Variable Area Flow Meter/Monitor

glass cone with threaded connection

KOBOLD

measuring • monitoring • analysing

URM

- Measuring range:
  Water: 0.25 … 2.5 – 2 500 … 25 000 l/h
  Air: 0.0032 … 0.032 – 32 … 320 Nm³/h
- Accuracy: ±2 % q_G = 50 %
  (2,5 % for gases)
- p_{max}: 16 bar; t_{max}: 100 °C (65 °C for PVC)
- Connection: G ⅜ ... 3 male,
  G ¼ ... 1½ female
- Material: stainless steel 1.4301, 1.4404

S2

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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

Description

The KOBOLD URM model flow meter/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.

Technical Details

Installation position:	vertical
Accuracy:	±2 % q_G = 50 % (2.5 % for gases) acc. VDE/VDI 3513 page 2
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:	10 … 30 V_{DC}
Current consumption:	≤ 200 mA
Switching state:	LED, yellow
Cable:	2 m, PVC-insulated
Protective category:	IP 67

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

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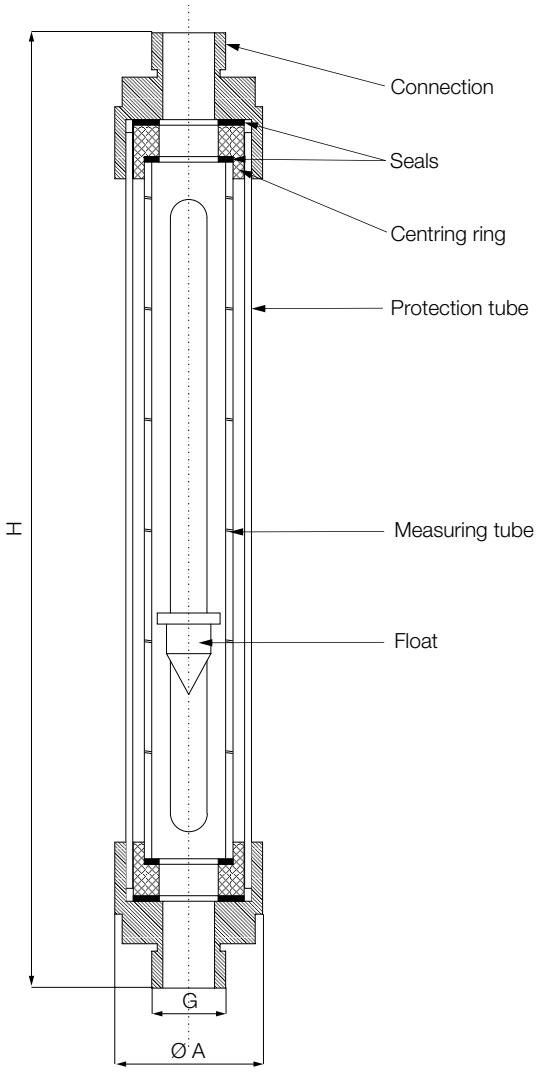
Order Details (Example: **URM- 33 01H I2 00**)

Model	Material combination	Instrument length	Measuring range water [l/h]	Measuring range air [Nm³/h]	Pressure loss [mbar]	Thread connection[3] female	Thread connection[3] male	Contacts[1]
URM-	33 55 99[2]	210 mm	**01H** = 0.25…2.5	**01L** = 0.0032…0.032	6	**I2** = G ¼ **I3** = G ⅜ **I4** = G ½	**G2** = G ¼ **G3** = G ⅜ **G4** = G ½	**00** = 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 ¼ **I3** = G ⅜	**G2** = G ¼ **G3** = G ⅜ **G4** = G ½	
			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 ⅜ **I4** = G ½	**G3** = G ⅜ **G4** = G ½ **G5** = G ¾	**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 ½ **I5** = G ¾	**G4** = G ½ **G5** = G ¾ **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 ¾ **I6** = G 1 **I7** = G 1 ¼	**G5** = G ¾ **G6** = G 1 **G7** = G 1 ¼ **G8** = G 1 ½	
			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 ¼ **I8** = G 1 ½ **I9** = G 2	**G6** = G 1 **G7** = G 1 ¼ **G8** = G 1 ½ **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 ½ **I9** = G 2 **IA** = G 2 ½ **IB** = G 3	**G8** = G 1 ½ **G9** = G 2 **GA** = G 2 ½ **GB** = G 3	
			65H = 2500…25000		102			
		on request	**YYY** = others		on request			

[1] Monostable switch. Other switching functions on request
[2] Customer specification on request
[3] 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	F/M	-	-	-	-	-	-	-
URM-xx 1...	360		F/M	F/M	-/M	-	-	-	-	-	-	-
URM-xx 2...		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

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