



Flow Monitor / Flow Indicator RVO/U-1

Float measuring principle for liquids



D-EN-RVOU1-20200529

- Thread G 1/2" (G 3/4")
- High functional reliability
- High switch accuracy
- Ex-version according to ATEX



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Features

- Universal orientation
- High functional reliability
- High switch accuracy
- Infinitely variable switch point adjustment by operator
- Scales are burned-in on the sight glass
- Threaded connection, special threads on request
- Ex-version according to ATEX available

Areas of Application

- Mechanical engineering
- Medical technology
- Pharmaceutical industry
- Chemical industry
- Research and development
- Cooling systems and cooling circuits

Operating Data

Operating pressure max.

10 bar

Pressure drop

0,02 – 0,4bar

Maximum temperature

100 °C
(optional 160 °C)

Accuracy

±10 % of full scale

Changed operating data apply to the devices in explosion-proof design according to ATEX directive. Refer to the Operating Instructions for RVO/U-1 Module ATEX.

For UL Recognized devices, changed operating data apply. Refer to the Operating Instructions for RVO/U-1 Module BASICS

Material	Brass version	Stainless steel version
Sight glass	Duran® 50	Duran® 50
Spring	1.4571	1.4571
Gaskets (1):	NBR (optional FKM, EPDM) (1)	FKM (optional NBR, EPDM) (1)
Magnets	Hard ferrite	Hard ferrite
All other wetted parts	Brass nickel-plated	1.4571
Non wetted parts: housing	Aluminum, anodized	Aluminum, anodized

(1) Other gasket materials on request



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Measuring Ranges			
Type	Operating Range (for H ₂ O, 20 °C (2))		
	[l/min]	[gph]	[gpm]
RVO/U-1/30	8 - 30		2,1 – 8,0
RVO/U-1/45	15 - 45		4,0 – 12,0
RVO/U-1/90	30 - 90		8,0 – 24,0
RVO/U-1/150	60 - 150		16,0 – 40,0

(2) The specified measuring ranges / switch ranges are valid for water having a density of 1.00 kg/dm³, vertical installation of the device and flow direction from bottom to top.

Other installation positions or deviation from the operating densities will increase the measurement error specified in the data-sheet.

Operating density for water at 20 °C and 1.013 bar (absolute value): 1.00 kg/dm³.

Upon request, special scales for deviating media, different operating conditions and installation positions (only for devices which can be installed in any position) are available.

The specified switch values are switch-off points, i.e. switch values by decreasing flow.

Other measuring ranges / switch ranges are available on request.

Summary of Types													
Type	Overall dimensions (mm)												Weight (approx. g)
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	
RVO/U-1/30	3/4"	20	41	118,5	144,5	15	45	50	-	-	-	~104	850
	1"	25	41	118,5	158,5	17	45	50	-	-	-	~104	900
RVO/U-1/45	3/4"	20	41	118,5	144,5	15	45	50	-	-	-	~104	850
	1"	25	41	118,5	158,5	17	45	50	-	-	-	~104	900
RVO/U-1/90	3/4"	20	41	118,5	144,5	15	45	50	-	-	-	~104	850
	1"	25	41	118,5	158,5	17	45	50	-	-	-	~104	900
RVO/U-1/150	1"	25	41	118,5	158,5	17	45	50	-	-	-	~104	900

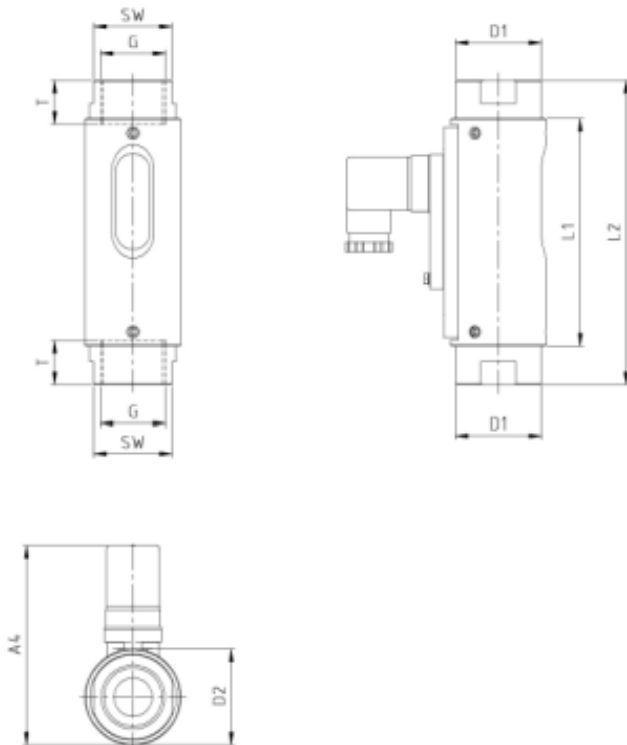
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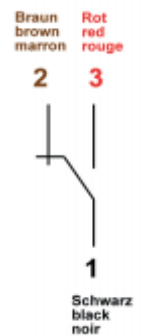
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Technical drawing



Connector in compliance with EN 175301-803 Form A and cable

Change over (COC)

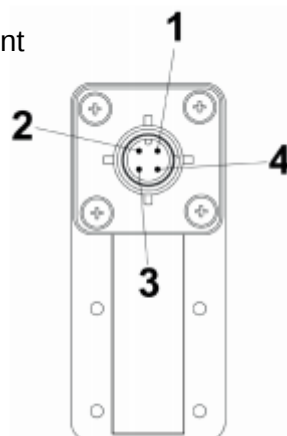


Normally open (NOC)



M12x1

Pin assignment



Change over (COC)



Normally open (NOC)





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Electrical Data	
Change over (COC)	250 V • 1,5A • 50 VA ⁽³⁾
Normally open (NOC)	250 V • 3A • 100 VA
Change over M 12x1 (-20 °C – 85 °C)	250 V • 1,5A • 50 VA ⁽³⁾
Normally open M 12x1 (-20 °C – 85 °C)	250 V • 3A • 100 VA
EX-version in compliance with ATEX directive	
ATEX II 2G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db	
ATEX II 2G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db	
Change over	250 V • 1A • 30 VA
Normally open	250 V • 2A • 60 VA
UL recognized switch contacts	
Change over	240 V • 1,5A • 50 VA ⁽³⁾
Normally open	250 V • 3A • 100 VA
(3) Minimum load 3 VA	



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Electrical connection
• Connector in compliance with EN 175301-803, Form A (DIN 43650, Form A) • Connector M12x1 • Cable (1 m)
EX-version in compliance with ATEX directive
• Cable (2 m)
UL recognized switch contacts
• Connector in compliance with EN 175301-803, Form A • Cable (1 m)
Ingress protection:
IP65: Connector in compliance with EN 175301-803, Form A
IP67: cable or connector M12x1
Output signal
The contact opens / changes when the flow decreases below the set point.
Power supply
Not required (potential-free reed contacts)
Plug types
Other connector types or cable lengths on request

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Important instructions!

Technical changes and errors reserved.

Pictures can be similar.

The operating instructions belonging to this device must be observed! Download at www.schmidt-messtechnik.com.