



MASTERPIECES  
MADE IN GERMANY

## Flow Monitor & Flow Indicator

# RVO/U-L1



## OVERVIEW

### Operation

- Float measuring principle

### Application

- Cooling systems and cooling circuits
- Mechanical engineering
- Medical engineering
- Pharmaceutical industry
- Chemical industry
- Research & Development

### Features

- Universal orientation
- High reliability
- High switch accuracy
- Infinitely variable switch point adjustment by operator
- EX-version according to ATEX directive available
- UL Recognized version available
- Scales are burned onto the sight glass
- Threaded connection, special thread on request

### Installation information

- The operating instructions for RVO/U-L1 Module BASICS / ...ATEX must be observed!
- **Download: [www.meister-flow.com](http://www.meister-flow.com)**

## OPERATING DATA

<b>Operating pressure, max.</b>	10 bar
<b>Pressure drop</b>	0,02 – 0,4 bar
<b>Temperature, max.</b>	100 °C (optional 160 °C)
<b>Measuring accuracy</b>	±10 % of full scale

Changed operating data apply to the device in explosion-proof design according to ATEX directive. Refer to the Operating Instructions for RVO/U-L1 Module ATEX.

For UL Recognized devices, changed operating data apply. Refer to the Operating Instructions for RVO/U-L1 Module BASICS.

Download: [www.meister-flow.com](http://www.meister-flow.com)

## MEASURING RANGES

Type	Switch range for air at 1 bar abs. & 20 °C <sup>(1)</sup>		
	NI/min	SCFH	SCFM
RVO/U-L10080	22,5 – 80	48 – 170	
RVO/U-L10130	50 – 130	105 – 275	
RVO/U-L10420	130 – 420		4,6 – 14,8
RVO/U-L10625	200 – 625		7 – 22

<sup>(1)</sup> The specified measuring- / switch ranges are valid for air having a density of 1.205 kg/m<sup>3</sup>, 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 air at 20 °C and 1.013 bar (absolute value): 1.205 kg/m<sup>3</sup>

Standard density for air (at 0 °C and 1.013 bar (absolute value): 1.293 kg/m<sup>3</sup>

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- /switch ranges are available upon request.

## MATERIALS

### Brass version, wetted parts

Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	NBR (optional FKM, EPDM) <sup>(2)</sup>
Magnets:	Hard ferrite
all other wetted parts:	Brass, nickel-plated

### Brass version, non-wetted parts

Device housing:	Aluminium, anodized
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### Stainless steel version, wetted parts

Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	FKM (optional NBR, EPDM) <sup>(2)</sup>
Magnets:	Hard ferrite
all other wetted parts:	1.4571

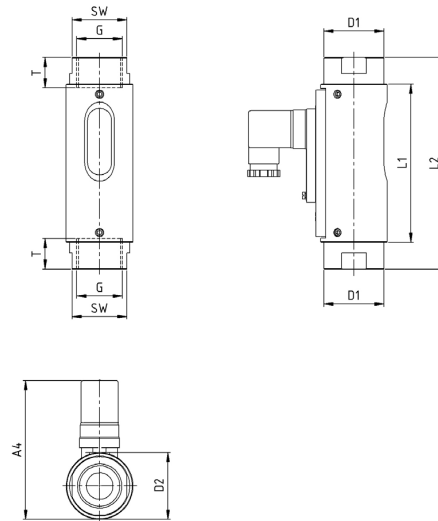
### Stainless steel version, non-wetted parts

Device housing:	Aluminium, anodized
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<sup>(2)</sup> Other gasket materials on request



■ TECHNICAL DRAWING



■ SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx. [g]
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	
RVO/U-L10080	3/4"	20	41	118,5	138,5	15	45	50	-	-	-	~104	850
	1"	25	41	118,5	158,5	17	45	50	-	-	-	~104	900
RVO/U-L10130	3/4"	20	41	118,5	138,5	15	45	50	-	-	-	~104	850
	1"	25	41	118,5	158,5	17	45	50	-	-	-	~104	900
RVO/U-L10420	3/4"	20	41	118,5	138,5	15	45	50	-	-	-	~104	850
	1"	25	41	118,5	158,5	17	45	50	-	-	-	~104	900
RVO/U-L10625	3/4"	20	41	118,5	138,5	15	45	50	-	-	-	~104	850
	1"	25	41	118,5	158,5	17	45	50	-	-	-	~104	900

RVO/U-L1 3 0002 10-20 E/M

## ELECTRICAL DATA

<b>Change over (COC)</b>	250V · 1,5A · 50VA <sup>(3)</sup>
<b>Normally open (NOC)</b>	250V · 3A · 100VA
<b>Change over M12x1 (-20 °C – 85 °C)</b>	250V · 1,5A · 50VA <sup>(3)</sup>
<b>Normally open M12x1 (-20 °C – 85 °C)</b>	250V · 3A · 100VA
<b>Change over PLC</b>	250V · 1A · 60VA

### EX-version in compliance with ATEX directive

<b>ATEX II 2 G Ex mb IIC T6 Gb &amp; ATEX II 2 D Ex tb IIIC T80 °C Db</b>	
<b>ATEX II 2 G Ex mb IIC T5 Gb &amp; ATEX II 2 D Ex tb IIIC T100 °C Db</b>	
<b>Change over</b>	250V · 1A · 30VA <sup>(3)</sup>
<b>Normally open</b>	250V · 2A · 60VA

### UL Recognized switch contacts

<b>Change over</b>	240V · 1,5A · 50VA <sup>(3)</sup>
<b>Normally open</b>	250V · 3A · 100VA

<sup>(3)</sup> Minimum load 3VA

## 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.

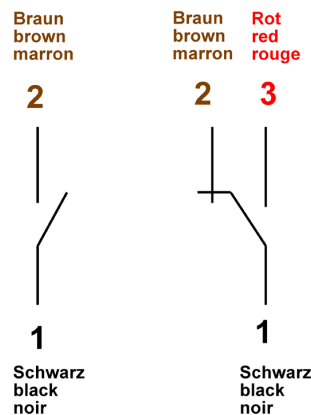
### Power supply

Not required (potential-free reed contacts)

### Connector types

Other connector types or cable lengths on request

## CONNECTION DIAGRAM



RVO/U-L 1 4 0003 05-19 E M