

## Flow Monitor & Flow Indicator

# RVO/U-2



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

### Installation information

- The operating instructions for RVO/U-2 Module BASICS / ...ATEX must be observed!
- **Download: [www.meister-flow.com](http://www.meister-flow.com)**

## OPERATING DATA

<b>Operating pressure, max.</b>	16 bar
<b>Pressure drop</b>	0,02 – 0,3 bar
<b>Temperature, max.</b>	100 °C (optional 160 °C)
<b>Measuring accuracy</b>	±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-2 Module ATEX.

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

## MEASURING RANGES

Type	Switch range for H <sub>2</sub> O at 20 °C <sup>(1)</sup>		
	l/min	gph	gpm
RVO/U-2/05	0,2 – 0,5	3,2 – 8	
RVO/U-2/1	0,3 – 1	4,8 – 16	
RVO/U-2/2	0,7 – 2	11 – 32	
RVO/U-2/4	1,6 – 4		0,4 – 1,05
RVO/U-2/8	3 – 8		0,8 – 2,15
RVO/U-2/12	4,5 – 12		1,2 – 3,15
RVO/U-2/15	6 – 15		1,6 – 4
RVO/U-2/20	8 – 20		2,1 – 5,3
RVO/U-2/24	9,5 – 24		2,5 – 6,3
RVO/U-2/28	12 – 28		3,2 – 7,4

<sup>(1)</sup> The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm<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 water at 20 °C and 1.013 bar (absolute value): 1.00 kg/dm<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

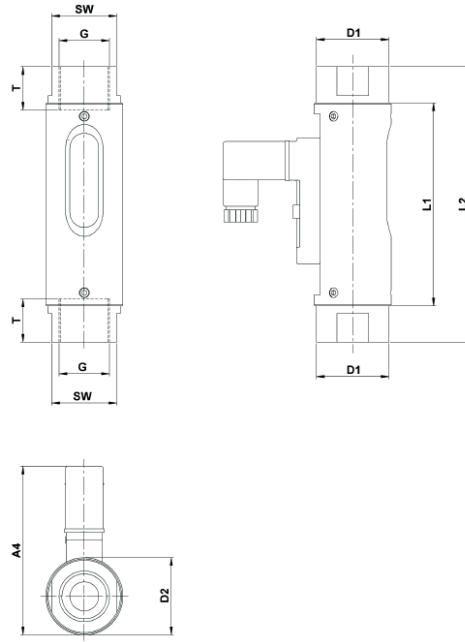
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	FKM (optional NBR, EPDM) <sup>(2)</sup>
Magnets:	Hard ferrite
all other wetted parts:	1.4571

### 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-2/05													
RVO/U-2/1													
RVO/U-2/2													
RVO/U-2/4													
RVO/U-2/8	1/2"	15	27	84	114	14	30	32	-	-	-	~70	300
RVO/U-2/12													
RVO/U-2/15													
RVO/U-2/20													
RVO/U-2/24													
RVO/U-2/28													

## ELECTRICAL DATA

### For devices with switch contact 15x50

<b>Change over (COC)</b>	250V · 1,5A · 50VA <sup>(3)</sup>
<b>Normally open (NOC)</b>	230V · 3A · 60VA
<b>Change over M12x1 (-20 °C – 85 °C)</b>	125V · 1,5A · 50VA <sup>(3)</sup>
<b>Normally open M12x1 (-20 °C – 85 °C)</b>	125V · 3A · 60VA
<b>Change over PLC</b>	250V · 1A · 60VA

### EX-version in compliance with ATEX directive

#### EC-Type examination

EPS 13 ATEX 1 596 U

### Connection to certified intrinsically safe circuits

Li = 0

Ci = 0



Gas			Dust		
Ui	Ii	Pi	Ui	Ii	Pi
< 12,1 V	1,0 A	3,0 W	< 12,1 V	0,25 A	0,75 W
< 20 V	0,309 A	1,55 W	< 20 V	0,25 A	0,75 W
< 25 V	0,158 A	0,99 W	< 25 V	0,25 A	0,75 W
< 30 V	0,101 A	0,76 W	< 30 V	0,25 A	0,75 W

#### Operating temperature

$-5\text{ °C} < T_{\text{Service}} < 45\text{ °C}$

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

#### Marking

 II 2G Ex ib IIC  
 II 2D Ex ib IIIC

## ELECTRICAL CONNECTION

### For devices with switch contact 15x50

- Connector in compliance with EN 175301-803, Form C (DIN 43650, Form C)
- Connector M12x1
- Cable (1 m) <sup>(4)</sup>

### EX-version in compliance with ATEX directive

- Connector in compliance with EN 175301-803, Form C (DIN 43650, Form C)
- Connector M12x1
- Cable (1 m) <sup>(4)</sup>

### Ingress Protection

IP65: Connector in compliance with EN 175301-803, Form C or Connector M12x1

IP67: Cable

### 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

<sup>(4)</sup> Available as Normally Open Contact (NOC) only

## CONNECTION DIAGRAM

