

Flow Monitor & Flow Indicator

RVO/U-L4



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
- Scales are burned onto the sight glass
- Threaded connection, special thread on request

Installation information

- The operating instructions for RVO/U-L4 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	16 bar
Pressure drop	0,02 – 0,2 bar
Temperature, max.	100 °C (optional 160 °C)
Measuring accuracy	±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-L4 Module ATEX.

Download: www.meister-flow.com

MEASURING RANGES

Type	Switch range for air at 1 bar abs. & 20 °C ⁽¹⁾		
	NI/min	SCFH	SCFM
RVO/U-L40001	0,2 – 1,3	0,4 – 2,75	
RVO/U-L40002	0,5 – 2	1,05 – 4,25	
RVO/U-L40003	0,8 – 3	1,7 – 6,4	
RVO/U-L40005	1,5 – 5	3,5 – 10,5	
RVO/U-L40008	2 – 8	4,5 – 17	
RVO/U-L40012	3 – 12	6,5 – 25	
RVO/U-L40014	3,5 – 14	7,5 – 29,5	
RVO/U-L40020	5,5 – 20	12 – 42	
RVO/U-L40024	7 – 24	15 – 50	
RVO/U-L40035	10 – 35	21 – 74	
RVO/U-L40042	10 – 42	21 – 89	

⁽¹⁾ The specified measuring- / switch ranges are valid for air having a density of 1.205 kg/m³, 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/m³

Standard density for air (at 0 °C and 1.013 bar (absolute value): 1.293 kg/m³

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) ⁽²⁾
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

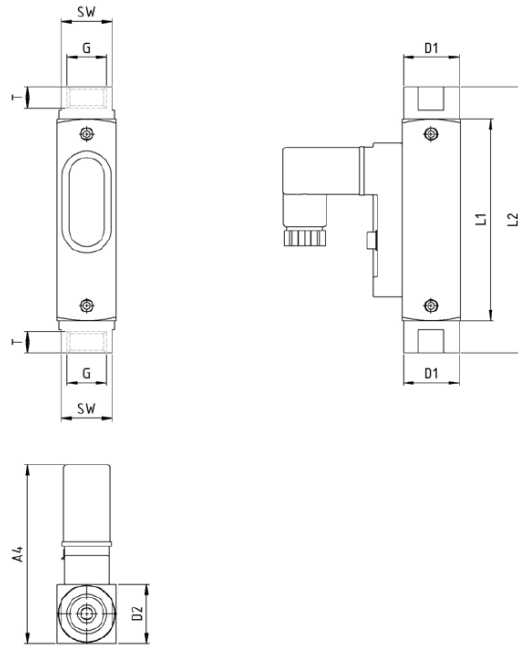
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	FKM (optional NBR, EPDM) ⁽²⁾
Magnets:	Hard ferrite
all other wetted parts:	1.4571

Stainless steel version, non-wetted parts

Device housing:	Aluminium, anodized
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⁽²⁾ Other gasket materials on request

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx. [g] ⁽⁴⁾
	G ⁽³⁾	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	
RVO/U-L40001													
RVO/U-L40002													
RVO/U-L40003													
RVO/U-L40005													
RVO/U-L40008													
RVO/U-L40012	1/4"	8	17	68	90	10	19	20	-	-	-	~60	140
RVO/U-L40014													
RVO/U-L40020													
RVO/U-L40024													
RVO/U-L40035													
RVO/U-L40042													

⁽³⁾ NPT thread on request

⁽⁴⁾ Connection cable weight, 2 m approx. 80 g

ELECTRICAL DATA

Change over (COC) ⁽⁶⁾	150V AC/DC · 1A · 20VA
Normally open (NOC)	140V AC · 0,7A · 20VA
	200V DC · 1A · 20VA
Change over M12x1 ⁽⁶⁾	125V AC/DC · 1A · 20VA
Normally open M12x1 ⁽⁶⁾	125V AC · 0,7A · 20VA
	125V DC · 1A · 20VA

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 °C < T_{Service} < 45 °C

⁽⁶⁾ Available with connector only

⁽⁶⁾ -20 °C – 85 °C

Marking

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

ELECTRICAL CONNECTION

- Connector in compliance with EN 175301-803, Form C (DIN 43650, Form C)
- Connector M12x1
- Cable (1 m) ⁽⁷⁾

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) ⁽⁷⁾

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

⁽⁷⁾ Available as Normally Open Contact (NOC) only

CONNECTION DIAGRAM

