WITH RELIABLE PRODUCTS

For more than 35 years, **Meister Strömungstechnik®** develops, manufactures and markets flowmeters for industrial use to measure and control fluid- and gaseous media worldwide. Our products excel in quality, reliability and longevity, as well as challenging operational conditions and in almost every industry.

Our **modular product design** enables us with high flexibility and within shortest possible delivery time to configure and specify the equipment to match our customer's requirements and individual application.

Thousands of customers worldwide, representing an installed base of millions of units have confidence in our master pieces, Made in Germany from **Meister Strömungstechnik®.**

In our test laboratory we use in-house developed dedicated test systems to permanently monitor the quality of our products, based on our **quality standards and ruling industrial standards.** In addition, the test laboratory is important to ensure the achievement of set product development objectives.

FOR MORE THAN 35 YEARS MASTERPIECES MADE IN GERMANY

Since 2002, we are certified according to **DIN ISO 9001.** Of course we comply with all necessary standards and permissions, including UL/CSA (for most of the products).

Many of our products are in addition certified and permitted by ATEX directive for installation in locations with explosive atmosphere. **Customer benefit is on the top of Meister Strömungstechnik® objectives.**

We permanently invest in product improvements and -innovations, while investing selectively into the **qualification and performance of our employees.** Thus, we broaden and increase continuously our competence level in all areas that are relevant for our success and the benefit of our customers.

You need our advice or support? We are pleased to help you.

FLOW MONITORS AND INDICATORS FOR WATER AND OTHER LIQUIDS

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FLOW MONITORS AND INDICATORS FOR WATER AND OTHER LIQUIDS

TYPE SERIES	MEASURING RANGE (L/MIN)	PRESSURE MAX. (BAR)		TEMPERATURE (°C)	
	1 10 100 1000	from	to	from	to
DWG	0.1 – 50		10	-20	100
DUG	0.2 – 250		10	-20	100
RVO/U-1	8 – 150		10	-20	100
RVO/U-2	0.2 – 28		16	-20	100
RVO/U-4	0.005 – 5		16	-20	100
DWM	0.1 – 50	200	300	-20	100
DWM/A	0.1 – 50	200	300	-20	100
DUM	0.2 – 250	200	300	-20	100
DUM/A	0.2 – 250	200	300	-20	100
WBM-65	133 – 333	16	25	-20	100
WBMC	133 – 333		180	-20	100
RVM/U-1	10 – 150	250	300	-20	100
RVM/U-2	0.02 – 30	300	350	-20	100
RVM/U-4	0.005 – 5	300	350	-20	100
RVM/UA-1	10 – 150	250	300	-20	100
RVM/UA-2	0.02 – 30	300	350	-20	100
RVM/U-S4	0.005 – 5		16	-20	100
RVM/UM	0.1 – 120	250	300	-20	120
RMU-A	2.5 – 15.5		250	-20	120
RMU-B	0.4 – 15.5		250	-20	100
WY	2.5 – 100		10	-20	100

PROCESS-CONNECTION			MATERIAL			INDICATOR / OUTPUT				APPLICATIONS								
thread	flange	hose	metal	glass	plastic	display	switch contact	analog output	**IO-Link**	water treatment	power generation	machine building	plants	process engineering	process industry	universal orientation	ATEX	operating principle
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■ 🟥 standard ▨ optional

Operating Principle: 🟦 float ◆ paddle / target disc ● impeller / turbine ▲ magnetic inductive ★ volumetric

FLOW MONITORS AND INDICATORS FOR OIL

TYPE SERIES	MEASURING RANGE (L/MIN)	PRESSURE MAX. (BAR)		TEMPERATURE (°C)	
	1 10 100 1000	from	to	from	to
DKG-1	0.1 – 90		10	-20	120
DKG-2	0.5 – 8		16	-20	120
DKM-1	0.5 – 110	250	300	-20	120
DKM-2	0.5 – 7	300	350	-20	120
DKM/A-1	0.5 – 110	250	300	-20	120
DKM/A-2	0.5 – 7	300	350	-20	120
DKME-1	1 – 80	250	300	-20	120
DKME/A-1	1 – 80	250	300	-20	120

FLOW MONITORS AND INDICATORS FOR AIR AND OTHER GASES

TYPE SERIES	MEASURING RANGE (L/MIN)	PRESSURE MAX. (BAR)		TEMPERATURE (°C)	
		from	to	from	to
DWG-L	3 – 1,600		10	-20	80
RVO/U-L1	22.5 – 625		10	-20	100
RVO/U-L2	3 – 500		16	-20	100
RVO/U-L4	0.2 – 42		16	-20	100
DWM-L	1 – 1,450	200	300	-20	80
DWM/A-L	1 – 1,450	200	300	-20	80
RVM/U-L1	60 – 650	250	300	-20	120
RVM/U-L2	2.5 – 525	300	350	-20	120
RVM/U-L4	0.6 – 80	300	350	-20	120

OIL

PROCESS-CONNECTION			MATERIAL			INDICATOR / OUTPUT				APPLICATIONS								
thread	flange	hose	metal	glass	plastic	display	switch contact	analog output	IO-Link	water treatment	power generation	machine building	plants	process engineering	process industry	universal orientation	ATEX	operating principle
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AIR

GAS

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■ 🟥 standard ▨ optional

Operating Principle: 🟦 float ◆ paddle / target disc ● impeller / turbine ▲ magnetic inductive ★ volumetric

FLOW LIMITERS FOR WATER

TYPE SERIES	MEASURING RANGE (L/MIN)	PRESSURE MAX. (BAR)		TEMPERATURE (°C)	
	1 10 100 1000	from	to	from	to
BA	1 – 30		10	-20	200
BB	1 – 30		10	-20	200
BC	1 – 270		10	-20	200
BF	2 – 420		10	-20	200

MECHANICAL ACCESSORIES

BS-228		16	350	-20	160

INDUSTRY 4.0

SIGNAL 4.0 IO PRO®				0	70
SIGNAL 4.0				-20	70

ELECTRONIC ACCESSORIES

SG-15				-20	160
SG-30				-20	160

H_2O

PROCESS-CONNECTION			MATERIAL			INDICATOR / OUTPUT				APPLICATIONS								
thread	flange	hose	metal	glass	plastic	display	switch contact	analog output	**IO-Link**	water treatment	power generation	machine building	plants	process engineering	process industry	universal orientation	ATEX	operating principle
■			■							🟥	🟥	🟥	🟥	🟥	🟥	■		
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■ 🟥 standard ▨ optional

Operating Principle: □ float ◆ paddle / target disc ● impeller / turbine ▲ magnetic inductive ★ volumetric

MASTERPIECES
MADE IN GERMANY

MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

DWG

H_2O

OVERVIEW

Operation

- Float measuring principle

Application

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

Features

- High reliability
- High switch accuracy
- Wide switch range
- 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
  DWG Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	10 bar
Pressure drop	0,01 – 0,2 bar
Temperature, max.	100 °C (optional 160 °C)
Measuring accuracy	±5 % of full scale

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

For UL Recognized devices, changed operating data apply. Refer to the Operating Instructions for DWG Module BASICS.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C (1)**		
	l/min	**gph**	**gpm**
DWG-1,5	0,1 – 1,6	1,6 – 23,8	
DWG-3	0,2 – 3	3,2 – 47,5	
DWG-8	0,3 – 8	5 – 127	
DWG-12	1 – 12	16 – 190	
DWG-18	2 – 18	32 – 285	
DWG-35	3 – 35	48 – 550	
DWG-50	4 – 50	60 – 790	

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, 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^3.
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.

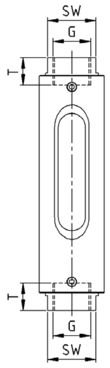
MATERIALS

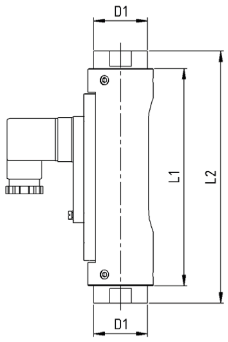
Brass version, wetted parts	
Float:	Brass, nickel-plated
Sight glass:	DURAN® 50
Gaskets:	NBR (optional FKM, EPDM) (2)
all other wetted parts:	Brass, nickel-plated
Brass version, non-wetted parts	
Device housing:	Aluminium, anodized

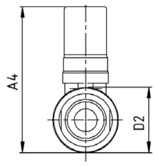
Stainless steel version, wetted parts	
Float:	1.4571
Sight glass:	DURAN® 50
Gaskets:	FKM (optional NBR, EPDM) (2)
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Device housing:	Aluminium, anodized

(2) Other gasket materials on request

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g]
DWG-1,5													800
DWG-3	1/4"	8	32	121	132	10	35	43	–	–	–	~96	800
	3/8"	10	32	121	135	15	35	43	–	–	–	~96	
DWG-8	1/2"	15	32	121	135	14	35	43	–	–	–	~96	800
DWG-12													800
DWG-18	1/2"	15	32	143	161	14	35	43	–	–	–	~96	800
	3/4"	20	32	143	166	15	35	43	–	–	–	~96	960
DWG-35	3/4"	20	41	143	163	15	45	50	–	–	–	~104	1450
	1"	25	41	143	181	17	45	50	–	–	–	~104	1450
DWG-50	3/4"	20	41	143	163	15	45	50	–	–	–	~104	1450
	1"	25	41	143	181	17	45	50	–	–	–	~104	1450

ELECTRICAL DATA

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

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db

Change over	250V · 1A · 30VA (3)
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (3)
Normally open	250V · 3A · 100VA

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(3) 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.

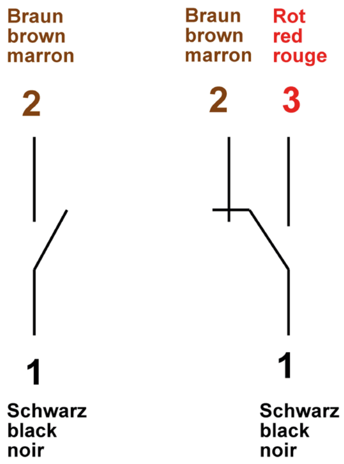
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

DUG

H_2O

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
- Wide switch range
- 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 DUG Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	10 bar
Pressure drop	0,02 – 0,8 bar
Temperature, max.	100 °C (optional 160 °C)
Measuring accuracy	±5 % of full scale

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

For UL Recognized devices, changed operating data apply. Refer to the Operating Instructions for DUG Module BASICS.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C (1)**		
	l/min	**gph**	**gpm**
DUG-4	0,2 – 4	3 – 63	
DUG-6	0,5 – 6	8 – 95	
DUG-8	0,5 – 8	8 – 127	
DUG-14	0,5 – 14	8 – 222	
DUG-22	2 – 22	32 – 350	
DUG-28	1 – 28	16 – 444	
DUG-45	1 – 45	15 – 710	
DUG-80	2 – 80		0,5 – 21
DUG-90	6 – 90		1,6 – 23,8
DUG-110	6 – 110		1,6 – 29
DUG-150	15 – 150		4 – 39,5
DUG-220	50 – 220		13 – 58
DUG-250	50 – 250		13 – 66

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, 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^3.
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.

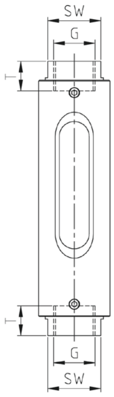
MATERIALS

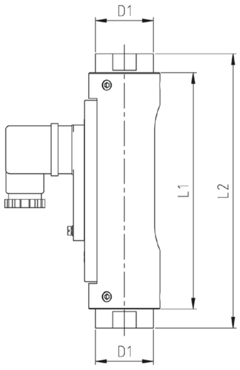
Brass version, wetted parts	
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	NBR (optional FKM, EPDM) (2)
all other wetted parts:	Brass, nickel-plated
Brass version, non-wetted parts	
Device housing:	Aluminium, anodized

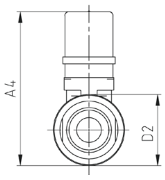
Stainless steel version, wetted parts	
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	FKM (optional NBR, EPDM) (2)
all other wetted parts	1.4571
Stainless steel version, non-wetted parts	
Device housing:	Aluminium, anodized

(2) Other gasket materials on request

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g]
DUG-4													625
DUG-6	1/4"	8	32	121	132	10	35	43	–	–	–	~96	625
	3/8"	10	32	121	135	11	35	43	–	–	–	~96	
DUG-8	1/2"	15	32	121	135	14	35	43	–	–	–	~96	625
DUG-14													625
DUG-22	1/2"	15	32	121	135	14	35	43	–	–	–	~96	650
DUG-28	1/2"	15	32	121	135	14	35	43	–	–	–	~96	650
DUG-45	1/2"	15	32	143	161	14	35	43	–	–	–	~96	850
	3/4"	20	32	143	166	15	35	43	–	–	–	~96	850
DUG-80	3/4"	20	41	143	163	15 (3)	45	50	–	–	–	~104	1000
	1"	25	41	143	181	17	45	50	–	–	–	~104	1000
DUG-90	3/4"	20	41	143	163	15	45	50	–	–	–	~104	1000
	1"	25	41	143	181	17	45	50	–	–	–	~104	1000
DUG-110	1"	25	41	143	181	17	45	50	–	–	–	~104	1000
DUG-150	1 1/4"	32	50	174	222	20	55	55	–	–	–	~109	1300
DUG-220	1 1/4"	32	55	159	209	20	60	60	–	–	–	~113	1700
DUG-250	1 1/4"	32	50	174	222	20	55	55	–	–	–	~109	1400

(3) 14 mm in NPT version

ELECTRICAL DATA

Change over (COC)	250V · 1,5A · 50VA (4)
Normally open (NOC)	250V · 3A · 100VA
Change over M12x1 (-20 °C – 85 °C)	250V · 1,5A · 50VA (4)
Normally open M12x1 (-20 °C – 85 °C)	250V · 3A · 100VA
Change over PLC	250V · 1A · 60VA

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D tb IIIC T80 °C Db

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D tb IIIC T100 °C Db

Change over	250V · 1A · 30VA (4)
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (4)
Normally open	250V · 3A · 100VA

(4) 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.

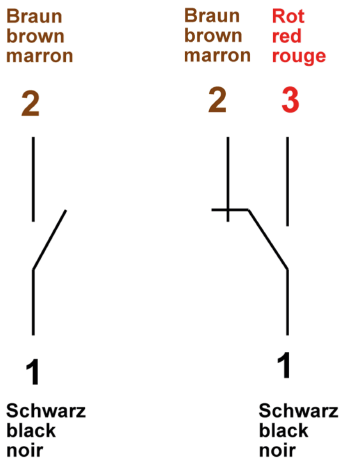
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



Flow Monitor & Flow Indicator

RVO/U-1

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-1 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	10 bar
Pressure drop	0,02 – 0,4 bar
Temperature, max.	100 °C (optional 160 °C)
Measuring 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. Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C** (1)		
	l/min	**gph**	**gpm**
RVO/U-1/30	8 – 30		2,1 – 8
RVO/U-1/45	15 – 45		4 – 12
RVO/U-1/90	30 – 90		8 – 24
RVO/U-1/150	60 – 150		16 – 40

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, 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^3.
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.

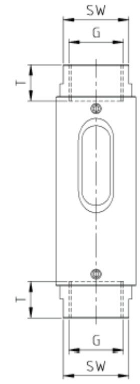
MATERIALS

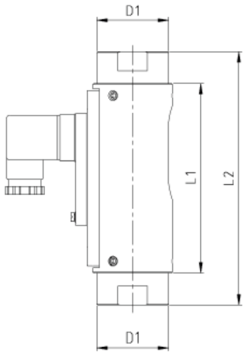
Brass version, wetted parts	
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	NBR (optional FKM, EPDM) (2)
Magnets:	Hard ferrite
all other wetted parts:	Brass, nickel-plated
Brass version, non-wetted parts	
Device housing:	Aluminium, anodized

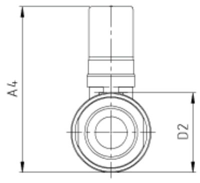
Stainless steel version, wetted parts	
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Device housing:	Aluminium, anodized

(2) Other gasket materials on request

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g]
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

ELECTRICAL DATA

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

EX-version in compliance with ATEX directive

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

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (3)
Normally open	250V · 3A · 100VA

(3) 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.

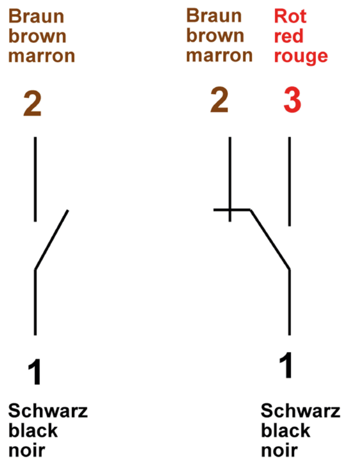
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

RVO/U-2

H2O

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**

OPERATING DATA

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

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C (1)**		
	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

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, 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^3.
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.

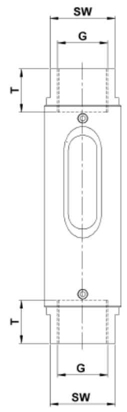
MATERIALS

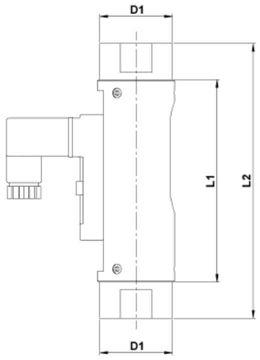
Brass version, wetted parts	
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	NBR (optional FKM, EPDM) (2)
Magnets:	Hard ferrite
all other wetted parts:	Brass, nickel-plated
Brass version, non-wetted parts	
Device housing:	Aluminium, anodized

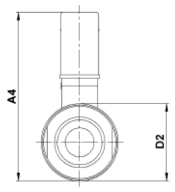
Stainless steel version, wetted parts	
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Device housing:	Aluminium, anodized

(2) Other gasket materials on request

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g]
RVO/U-2/05	1/2"	15	27	84	114	14	30	32	–	–	–	~70	300
RVO/U-2/1													
RVO/U-2/2													
RVO/U-2/4													
RVO/U-2/8													
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

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

$-5\ °C < T_{Service} < 45\ °C$

Marking

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

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(3) Minimum load 3VA

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) (4)

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) (4)

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

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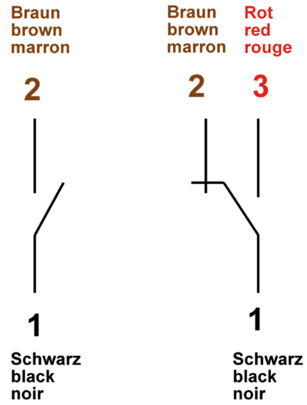
(4) Available as Normally Open Contact (NOC) only

CONNECTION DIAGRAM



RVO/U-2 4 0002 10-17 E M

meister®

MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

RVO/U-4

H_2O Ex

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-4 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 devices in explosion-proof design according to ATEX directive. Refer to the Operating Instructions for RVO/U-4 Module ATEX.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C** (1)		
	l/min	**gph**	**gpm**
RVO/U-4/01	0,005 – 0,06	0,08 – 0,95	
RVO/U-4/02	0,025 – 0,13	0,4 – 2	
RVO/U-4/03	0,06 – 0,3	1 – 4,8	
RVO/U-4/06	0,1 – 0,6	1,6 – 9,5	
RVO/U-4/1	0,2 – 1,2	3 – 19	
RVO/U-4/2	0,4 – 2		0,1 – 0,5
RVO/U-4/3	0,5 – 3		0,13 – 0,8
RVO/U-4/5	1 – 5		0,25 – 1,3

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, 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^3.
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.

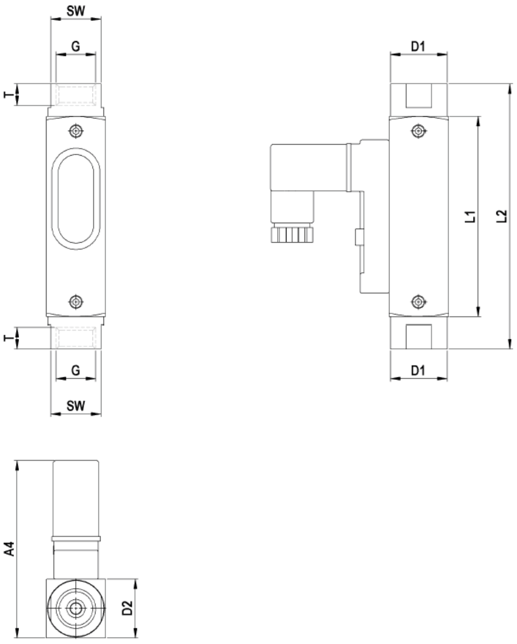
MATERIALS

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

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

(2) Other gasket materials on request

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	**Overall dimensions [mm]**												**Weight approx.**
	G	**DN**	**SW**	**L1**	**L2**	**T**	**D1**	**D2**	**A1**	**A2**	**A3**	**A4**	**[g]**
RVO/U-4/01	1/4"	8	17	68	90	10	19	20	–	–	–	~60	140
RVO/U-4/02													
RVO/U-4/03													
RVO/U-4/06													
RVO/U-4/1													
RVO/U-4/2													
RVO/U-4/3													
RVO/U-4/5													

ELECTRICAL DATA

Change over (COC) (3)	150V AC/DC · 1A · 20VA
Normally open (NOC)	140V AC · 0,7A · 20VA
	200V DC · 1A · 20VA
Change over M12x1 (4)	125V AC/DC · 1A · 20VA
Normally open M12x1 (4)	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

Marking

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

(3) Available with connector only

(4) -20 °C – 85 °C

ELECTRICAL CONNECTION

- Connector in compliance with EN 175301-803, Form C (DIN 43650, Form C)
- Connector M12x1
- Cable (1 m) (5)

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) (5)

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

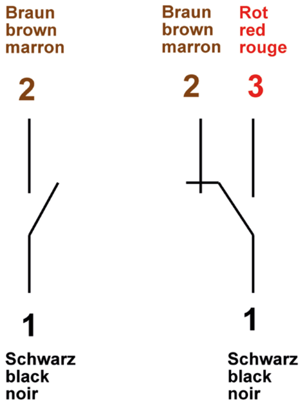
Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

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

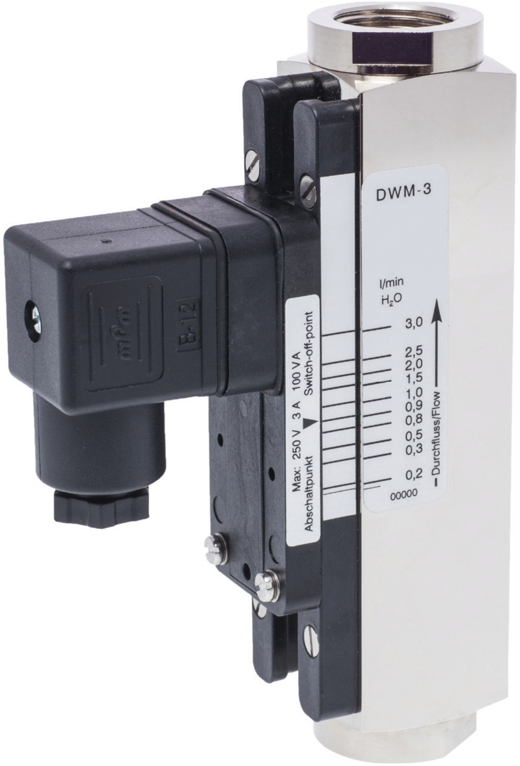
CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor

DWM



H2O c US Ex

OVERVIEW

Operation

- Float measuring principle

Application

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

Features

- High reliability
- High switch accuracy
- Wide switch range
- Infinitely variable switch point adjustment by operator
- EX-version according to ATEX directive available
- UL Recognized version available
- High pressure resistance
- Threaded connection, special thread on request

Installation information

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

OPERATING DATA

Operating pressure, max.	200 bar (Brass version)
	300 bar (Stainless steel version)
Pressure drop	0,02 – 0,2 bar
Temperature, max.	100 °C (optional 160 °C)
Measuring accuracy	±5 % of full scale

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

For UL Recognized devices, changed operating data apply. Refer to the Operating Instructions for DWM Module BASICS.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C [1]**		
	l/min	**gph**	**gpm**
DWM-1,5	0,1 – 1,5	1,5 – 23,8	
DWM-3	0,2 – 3	3 – 47,5	
DWM-8	0,3 – 8	5 – 127	
DWM-12	1 – 12	16 – 190	
DWM-18	2 – 18	32 – 285	
DWM-35	3 – 35	50 – 555	
DWM-50	4 – 50	65 – 790	

[1] The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, 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^3.
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.

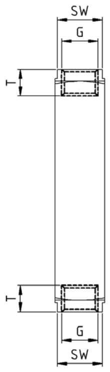
MATERIALS

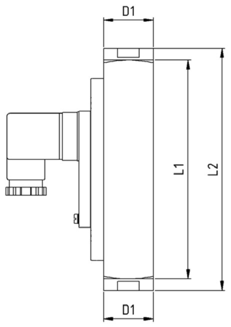
Brass version, wetted parts	
Float:	Brass, nickel-plated
Gaskets:	NBR (optional FKM, EPDM) [2]
Threaded rings:	
only DWM-35 (1“), DWM-50 (1“)	Brass
Centering disc:	
only DWM-35, DWM-50	Brass, nickel-plated
Process connections:	
not for DWM-35 (1“), DWM-50 (1“)	Brass, nickel-plated
all other wetted parts:	Brass, nickel-plated

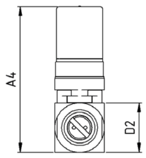
Stainless steel version, wetted parts	
Float:	1.4571
Gaskets:	FKM (optional NBR, EPDM) [2]
Threaded rings:	
only DWM-35 (1“), DWM-50 (1“)	1.4571
Centering disc:	
only DWM-35, DWM-50	1.4571
Process connections:	
not for DWM-35 (1“), DWM-50 (1“)	1.4571
all other wetted parts:	1.4571

[2] Other gasket materials on request

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g]
DWM-1,5													800
DWM-3	1/4"	8	27	117	131	10	30	30	–	–	–	~88	800
	3/8"	10	27	117	131	15	30	30	–	–	–	~88	
DWM-8	1/2"	15	27	117	131	14	30	30	–	–	–	~88	800
DWM-12													800
DWM-18	1/2"	15	27	132	146	14	30	30	–	–	–	~88	800
	3/4"	20	32	132	174	15	35	30	–	–	–	~88	960
DWM-35	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1450
	1"	25	40	156	156	17	40	40	–	–	–	~98	1450
DWM-50	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1450
	1"	25	40	156	156	17	40	40	–	–	–	~98	1450

ELECTRICAL DATA

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

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db

Change over	250V · 1A · 30VA (3)
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (3)
Normally open	250V · 3A · 100VA

---

(3) 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.

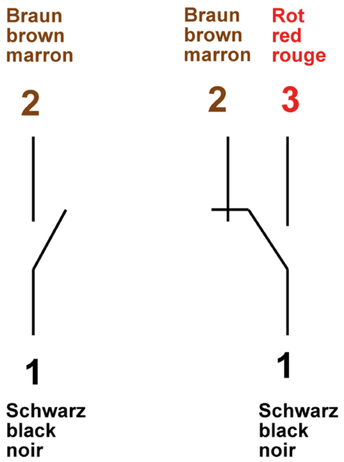
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



meister®

MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

DWM/A

H2O

OVERVIEW

Operation

- Float measuring principle

Application

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

Features

- High reliability
- High switch accuracy
- Wide switch range
- Infinitely variable switch point adjustment by operator
- EX-version according to ATEX directive available
- UL Recognized version available
- High pressure resistance
- Threaded connection, special thread on request

Installation information

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

OPERATING DATA

Operating pressure, max.	200 bar (Brass version)
	300 bar (Stainless steel version)
Pressure drop	0,02 – 0,2 bar
Temperature, max.	100 °C (optional 160 °C)
Measuring accuracy	±5 % of full scale

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

For UL Recognized devices, changed operating data apply. Refer to the Operating Instructions for DWM/A Module BASICS.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C (1)**		
	l/min	**gph**	**gpm**
DWM/A-1,5	0,1 – 1,5	1,5 – 23,8	
DWM/A-3	0,2 – 3	3 – 47,5	
DWM/A-8	0,3 – 8	5 – 127	
DWM/A-12	1 – 12	16 – 190	
DWM/A-18	2 – 18	32 – 285	
DWM/A-35	3 – 35	50 – 555	
DWM/A-50	4 – 50	65 – 790	

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, 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^3.
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.

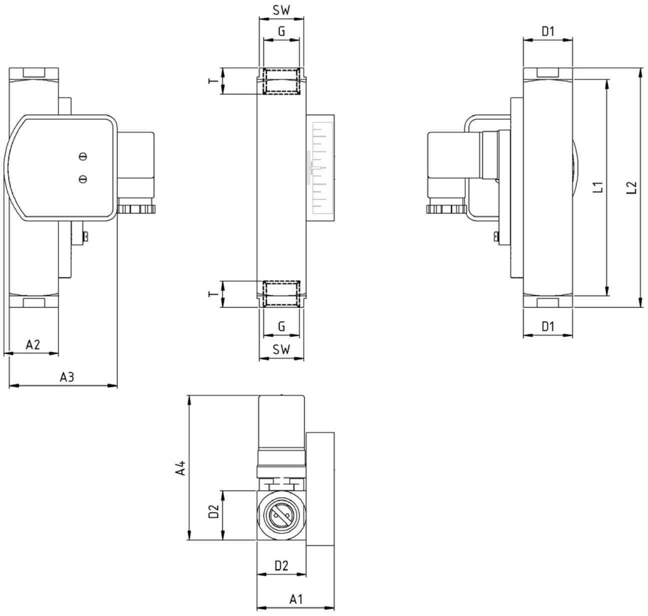
MATERIALS

Brass version, wetted parts	
Float:	Brass, nickel-plated
Gaskets:	NBR (optional FKM, EPDM) (2)
Threaded rings: only DWM/A-35 (1“), DWM/A-50 (1“)	Brass
Centering disc: only DWM/A-35, DWM/A-50	Brass, nickel-plated
Process connections: not for DWM/A-35 (1“), DWM/A-50 (1“)	Brass, nickel-plated
all other wetted parts:	Brass, nickel-plated
Brass version, non-wetted parts	
Indicator:	Makrolon® Brass, nickel-plated

Stainless steel version, wetted parts	
Float:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Threaded rings: only DWM/A-35 (1“), DWM/A-50 (1“)	1.4571
Centering disc: only DWM/A-35, DWM/A-50	1.4571
Process connections: not for DWM/A-35 (1“), DWM/A-50 (1“)	1.4571
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Indicator:	Makrolon® Brass, nickel-plated

(2) Other gasket materials on request

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g]
DWM/A-1,5													850
DWM/A-3	1/4"	8	27	117	131	10	30	30	47	33,5	65,5	~88	850
	3/8"	10	27	117	131	15	30	30	47	33,5	65,5		
DWM/A-8	1/2"	15	27	117	131	14	30	30	47	33,5	65,5	~88	850
DWM/A-12												~88	850
DWM/A-18	1/2"	15	27	132	146	14	30	30	47	33,5	65,5	~88	850
	3/4"	20	32	132	174	15	35	30	47	33,5	65,5	~88	1010
DWM/A-35	3/4"	20	34	130	152	15	40	40	57	–	70,5	~98	1500
	1"	25	40	156	156	17	40	40	57	–	70,5	~98	1500
DWM/A-50	3/4"	20	34	130	152	15	40	40	57	–	70,5	~98	1500
	1"	25	40	156	156	17	40	40	57	–	70,5	~98	1500

ELECTRICAL DATA

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

EX-version in compliance with ATEX directive

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

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (3)
Normally open	250V · 3A · 100VA

(3) 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.

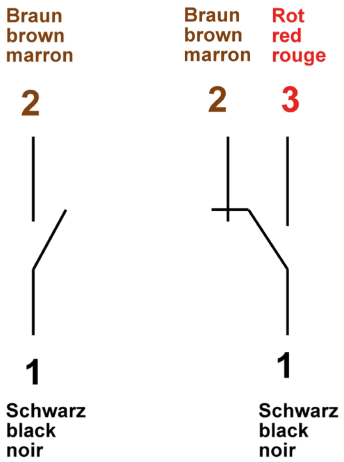
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor

DUM

H2O

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
- Wide switch range
- Infinitely variable switch point adjustment by operator
- EX-version according to ATEX directive available
- UL Recognized version available
- High pressure resistance
- Threaded connection, special thread on request

Installation information

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

OPERATING DATA

Operating pressure, max.	200 bar (Brass version) 300 bar (Stainless steel version)
Pressure drop	0,02 – 0,8 bar
Temperature, max.	100 °C (optional 160 °C)
Measuring accuracy	±5 % of full scale

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

For UL approved devices, changed operating data apply. Refer to the Operating Instructions for DUM Module BASICS.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C** (1)		
	l/min	**gph**	**gpm**
DUM-4	0,2 – 4	3,0 – 63,5	
DUM-5	0,6 – 5	9,5 – 79	
DUM-8	0,5 – 8	8 – 127	
DUM-14	1 – 14	15 – 222	
DUM-28	1 – 28	15 – 445	
DUM-40	2 – 40	30 – 635	
DUM-55	4 – 55	60 – 870	
DUM-70	1 – 70		0,3 – 18,5
DUM-90	8 – 90		2,1 – 23,8
DUM-110	5 – 110		1,3 – 29,0
DUM-150	10 – 150		2,6 – 39,5
DUM-220	35 – 220		9 – 58
DUM-250	35 – 250		9 – 66

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, 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^3.
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.

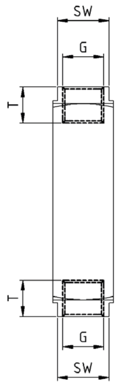
MATERIALS

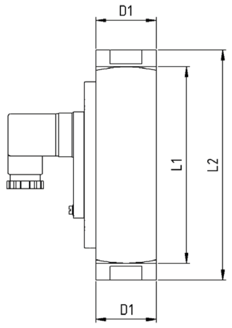
Brass version, wetted parts	
Spring:	1.4571
Gaskets:	NBR (optional FKM, EPDM) (2)
Threaded rings: only DUM-70 (1"), DUM-90 (1"), DUM-110 (1") DUM-150, DUM-220, DUM-250	Brass
Centering disc: only DUM-70, DUM-90, DUM-110	Brass, nickel-plated
all other wetted parts:	Brass, nickel-plated

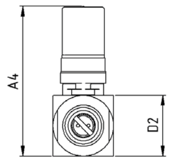
Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Threaded rings: only DUM-70 (1"), DUM-90 (1"), DUM-110 (1") DUM-150, DUM-220, DUM-250	1.4571
Centering disc: only DUM-70, DUM-90, DUM-110	1.4571
all other wetted parts:	1.4571

(2) Other gasket materials on request

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g]
DUM-4													
DUM-5	1/4"	8	27	117	131	10	30	30	–	–	–	~88	850
DUM-8	3/8"	10	27	117	131	15	30	30	–	–	–	~88	850
DUM-14	1/2"	15	27	117	131	14	30	30	–	–	–	~88	850
DUM-28												~88	
DUM-40	1/2"	15	27	132	146	14	30	30	–	–	–	~88	900
	3/4"	20	32	132	174	15	35 (3)	30 (3)	–	–	–	~88	900
DUM-55	1/2"	15	27	132	146	14	30	30	–	–	–	~88	900
	3/4"	20	32	132	174	15	35 (3)	30 (3)	–	–	–	~88	900
DUM-70	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1400
	1"	25	40 (4)	156 (4)	156	17	40	40	–	–	–	~98	1100
DUM-90	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1400
	1"	25	40 (4)	156 (4)	156	17	40	40	–	–	–	~98	1100
DUM-110	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1400
	1"	25	40 (4)	156 (4)	156	17	40	40	–	–	–	~98	1100
DUM-150	1 1/4"	32	50 (4)	200 (4)	200	20	50	50	–	–	–	~108	2750
DUM-220	1 1/4"	32	50 (4)	200 (4)	200	20	50	50	–	–	–	~108	3000
	1 1/2"	40	60 (4)	200 (4)	200	20	60	60	–	–	–	~116	3800
DUM-250	1 1/4"	32	50 (4)	200 (4)	200	20	50	50	–	–	–	~108	3000
	1 1/2"	40	60 (4)	200 (4)	200	20	60	60	–	–	–	~116	3800

(3) Device body is 30 mm, 4-sided, process connection D 35 mm

(4) no process connection

ELECTRICAL DATA

Change over (COC)	250V · 1,5A · 50VA (5)
Normally open (NOC)	250V · 3A · 100VA
Change over M12x1 (-20 °C – 85 °C)	250V · 1,5A · 50VA (5)
Normally open M12x1 (-20 °C – 85 °C)	250V · 3A · 100VA
Change over PLC	250V · 1A · 60VA (6)

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C

Change over	250V · 1A · 30VA (5)
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (5)
Normally open	250V · 3A · 100VA

(5) Minimum load 3VA

(6) Not available with DUM-150, DUM-220 und DUM-250

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.

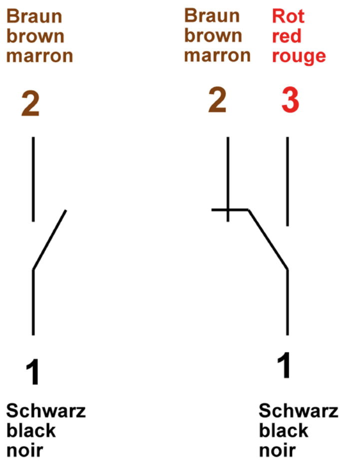
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

DUM/A

H_2O

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
- Wide measuring range
- Infinitely variable switch point adjustment by operator
- EX-version according to ATEX directive available
- UL Recognized version available
- High pressure resistance
- Threaded connection, special thread on request

Installation information

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

OPERATING DATA

Operating pressure, max.	200 bar (Brass version)
	300 bar (Stainless steel version)
Pressure drop	0,02 – 0,8 bar
Temperature, max.	100 °C (optional 160 °C)
Measuring accuracy	±5 % of full scale

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

For UL approved devices, changed operating data apply. Refer to the Operating Instructions for DUM/A Module BASICS.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C (1)**		
	l/min	**gph**	**gpm**
DUM/A-4	0,2 – 4	3,0 – 63,5	
DUM/A-5	0,6 – 5	9,5 – 79	
DUM/A-8	0,5 – 8	8 – 127	
DUM/A-14	1 – 14	15 – 222	
DUM/A-28	1 – 28	15 – 445	
DUM/A-40	2 – 40	30 – 635	
DUM/A-55	4 – 55	60 – 870	
DUM/A-70	1 – 70		0,3 – 18,5
DUM/A-90	8 – 90		2,1 – 23,8
DUM/A-110	5 – 110		1,3 – 29,0
DUM/A-150	10 – 150		2,6 – 39,5
DUM/A-220	35 – 220		9 – 58
DUM/A-250	35 – 250		9 – 66

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, 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^3.
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.

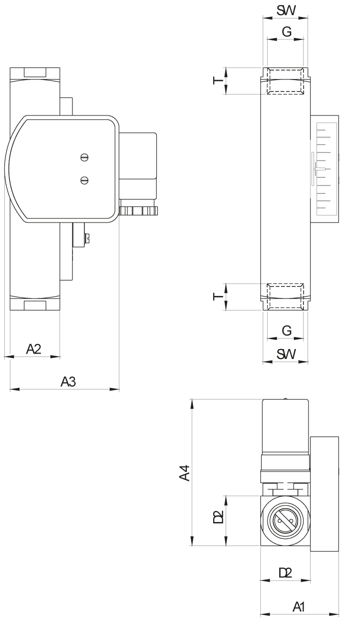
MATERIALS

Brass version, wetted parts	
Spring:	1.4571
Gaskets:	NBR (optional FKM, EPDM) (2)
Threaded rings: only DUM/A-70 (1"), DUM/A-90 (1"), DUM/A-110 (1") DUM/A-150, DUM/A-220, DUM/A-250	Brass
Centering disc: only DUM/A-70, DUM/A-90, DUM/A-110	Brass, nickel-plated
all other wetted parts:	Brass, nickel-plated
Brass version, non-wetted parts	
Display:	Makrolon® / Brass, nickel-plated

Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Threaded rings: only DUM/A-70 (1"), DUM/A-90 (1"), DUM/A-110 (1") DUM/A-150, DUM/A-220, DUM/A-250	1.4571
Centering disc: only DUM/A-70, DUM/A-90, DUM/A-110	1.4571
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Display:	Makrolon® / Brass, nickel-plated

(2) Other gasket materials on request

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g]
DUM/A-4													
DUM/A-5	1/4"	8	27	117	131	10	30	30	47	35,5	65,5	~88	900
DUM/A-8	3/8"	10	27	117	131	15	30	30	47	35,5	65,5	~88	900
DUM/A-14	1/2"	15	27	117	131	14	30	30	47	35,5	65,5	~88	900
DUM/A-28													
DUM/A-40	1/2"	15	27	132	146	14	30	30	47	35,5	65,5	~88	950
	3/4"	20	32	132	174	15	35 (3)	30 (3)	47	35,5	65,5	~88	950
DUM/A-55	1/2"	15	27	132	146	14	30	30	47	35,5	65,5	~88	950
	3/4"	20	32	132	174	15	35 (3)	30 (3)	47	35,5	65,5	~88	950
DUM/A-70	3/4"	20	34	130	152	15	40	40	57	–	70,5	~98	1450
	1"	25	40 (4)	156 (4)	156	17	40	40	57	–	70,5	~98	1150
DUM/A-90	3/4"	20	34	130	152	15	40	40	57	–	70,5	~98	1450
	1"	25	40 (4)	156 (4)	156	17	40	40	57	–	70,5	~98	1150
DUM/A-110	3/4"	20	34	152	152	15	40	40	57	–	70,5	~98	1450
	1"	25	40 (4)	156 (4)	156	17	40	40	57	–	70,5	~98	1150
DUM/A-150	1 1/4"	32	50 (4)	200 (4)	200	20	50	50	67	–	75,5	~108	2800
DUM/A-220	1 1/4"	32	50 (4)	200 (4)	200	20	50	50	67	–	75,5	~108	3050
	1 1/2"	40	60 (4)	200 (4)	200	20	60	60	70,8	–	80,5	~116	3850
DUM/A-250	1 1/4"	32	50 (4)	200 (4)	200	20	50	50	67	–	75,5	~108	3050
	1 1/2"	40	60 (4)	200 (4)	200	20	60	60	70,8	–	80,5	~116	3850

(3) Device body is 30 mm, 4-sided, process connection D 35 mm

(4) no process connection

ELECTRICAL DATA

Change over (COC)	250V · 1,5A · 50VA [5]
Normally open (NOC)	250V · 3A · 100VA
Change over M12x1 (-20 °C – 85 °C)	250V · 1,5A · 50VA [5]
Normally open M12x1 (-20 °C – 85 °C)	250V · 3A · 100VA
Change over PLC	250V · 1A · 60VA [6]

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C

Change over	250V · 1A · 30VA [5]
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA [5]
Normally open	250V · 3A · 100VA

[5] Minimum load 3VA

[6] Not available with DUM/A-150, DUM/A-220 und DUM/A-250

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.

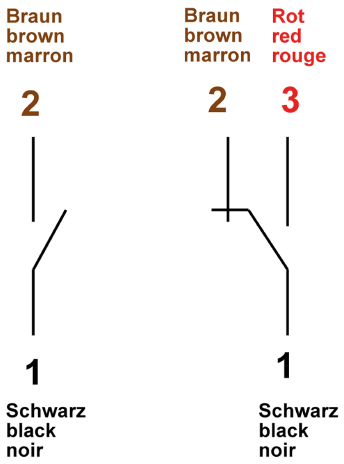
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor

WBM-65

H_2O

OVERVIEW

Operation

- Float measuring principle

Application

- Cooling systems and cooling circuits
- Mechanical engineering
- Plant construction
- Pharmaceutical industry
- Chemical industry

Features

- Universal orientation
- High reliability
- High flow rates
- Flange connection in compliance with DIN EN 1092-1
- Seal in compliance with DIN EN 1514-1

Installation information

- The operating instructions for WBM-65 Module BASICS must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	16 bar (optional: PN 25)
Pressure drop	0,3 bar
Temperature, max.	100 °C (optional 160 °C)
Measuring accuracy	±10 % of full scale

MEASURING RANGES

Type	**Switch point for H_2O at 20 °C (1)** **m^3/h**
WBM-65	
Lowest switch point	8
Highest switch point	20

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, 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^3.
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.

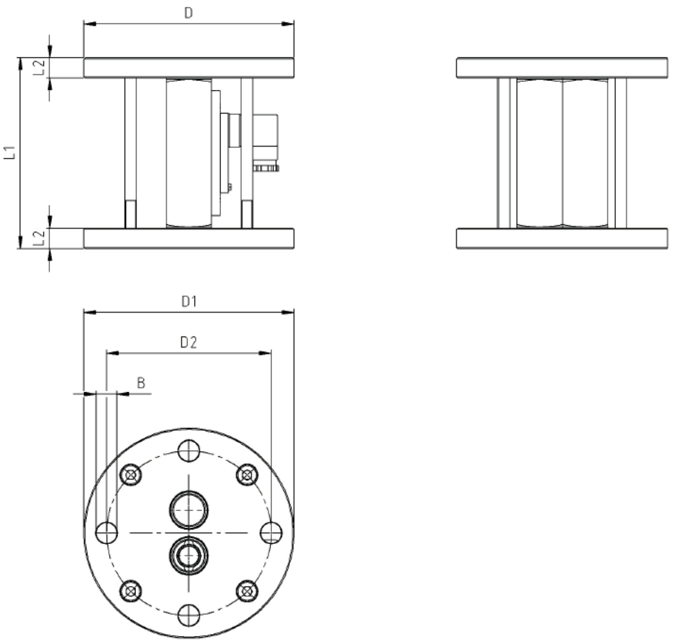
MATERIALS

Brass version, wetted parts	
Spring:	1.4571
Gaskets:	NBR (optional FKM, EPDM) (2)
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
Flange:	1.4571
all other wetted parts:	Brass

Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optoinal NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	1.4571
Flange:	1.4571
all other wetted parts:	1.4571

(2) Other gasket materials on request

TECHNICAL DRAWING



SUMMARY OF TYPES

Type		Overall dimensions [mm]											Weight approx.
	PN	DN	n	L1	L2	T	D	D1	D2	A1	A2	A3	[g]
WBM-65	16	65	4	168	18	18	185	185	145	–	–	–	1340
	25	65	8	176	22	18	185	185	145	–	–	–	1500

ELECTRICAL DATA

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

(3) Minimum load 3VA

ELECTRICAL CONNECTION

- Connector in compliance with EN 175301-803, Form A (DIN 43650, Form A)
- Connector M12x1
- 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.

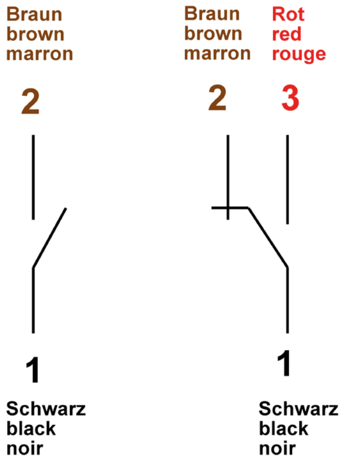
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor

WBMC

H2O Ex

OVERVIEW

Operation

- Float measuring principle

Application

- Cooling systems and cooling circuits
- Mechanical engineering
- Plant construction
- Pharmaceutical industry
- Chemical industry

Features

- Universal orientation
- High reliability
- High flow rates
- EX-version according to ATEX directive available
- Threaded connection

Installation information

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

OPERATING DATA

Operating pressure max.	180 bar
Pressure drop at 22 m³/h	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 WBMC Module ATEX.

Download: www.meister-flow.com

MEASURING RANGES

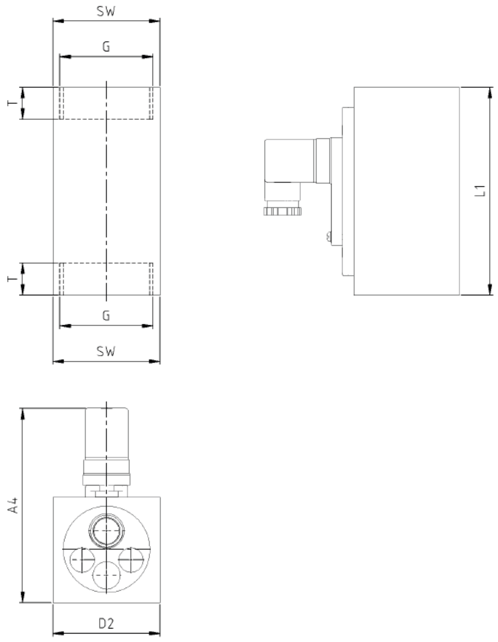
Type	**Switch point for H_2O at 20 °C (1)** **m³/h**
WBMC	
Lowest switch point	8
Highest switch point	20

(1) The specified measuring- / 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.

MATERIALS

Stainless steel version, wetted parts	
Spring:	1.4571
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx. [g]
	G (2)	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	
WBMC	2"	50	70	136	–	25	–	70	–	–	–	~128	1340

(2) NPT thread on request

ELECTRICAL DATA

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

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db

Change over	250V · 1A · 30VA [3]
Normally open	250V · 2A · 60VA

[3] 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)

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.

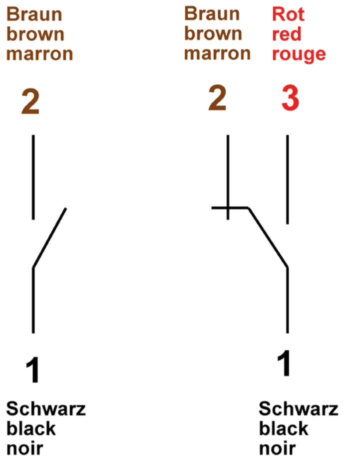
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM

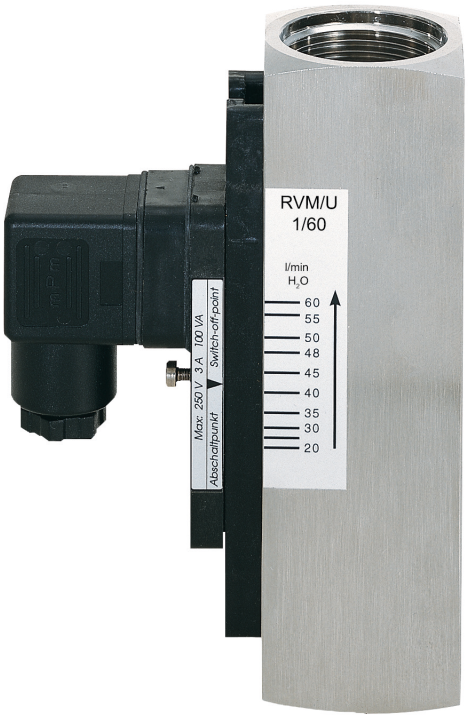


MASTERPIECES
MADE IN GERMANY

Flow Monitor

RVM/U-1

H_2O



OVERVIEW

Operation

- Float measuring principle

Application

- Cooling systems and cooling circuits
- Mechanical 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
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for RVM/U-1 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	250 bar (Brass version)
	300 bar (Stainless steel version)
Pressure drop	0,02 – 0,4 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 RVM/U-1 Module ATEX.

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

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C (1)**		
	l/min	**gph**	**gpm**
RVM/U-1/30	10 – 30	160 – 480	
RVM/U-1/45	15 – 45	240 – 710	
RVM/U-1/60	20 – 60	320 – 950	
RVM/U-1/90	30 – 90		8 – 24
RVM/U-1/150	60 – 150		16 – 40

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, 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^3.
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
Gaskets (2):	NBR (optional FKM, EPDM) (3)
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass

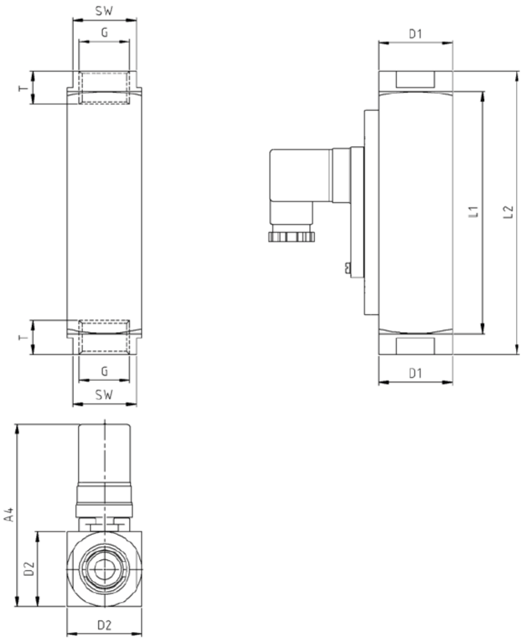
Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets (2):	FKM (optional NBR, EPDM) (3)
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571

(2) Only with process connections

(3) Other gasket materials on request

TECHNICAL DRAWING

Stainless steel version (4-sided)



SUMMARY OF TYPES

Stainless steel version (4-sided)

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	ca. [g]
RVM/U-1/30	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1320
	1"	25	40	130	–	17	–	40	–	–	–	~98	1130
RVM/U-1/45	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1320
	1"	25	40	130	–	17	–	40	–	–	–	~98	1130
RVM/U-1/60	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1320
	1"	25	40	130	–	17	–	40	–	–	–	~98	1130
RVM/U-1/90	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1320
	1"	25	40	130	–	17	–	40	–	–	–	~98	1130
RVM/U-1/150	1"	25	40	130	–	17	–	40	–	–	–	~98	1130

ELECTRICAL DATA

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

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db	
ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db	
Change over	250V · 1A · 30VA [3]
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA [3]
Normally open	250V · 3A · 100VA

[3] 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.

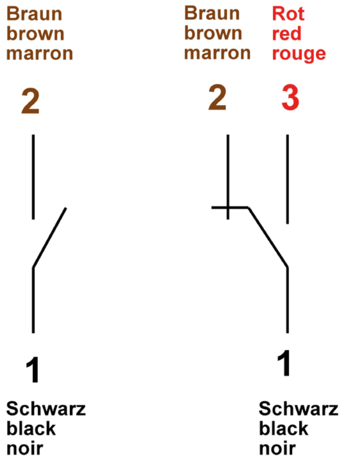
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



meister®

MASTERPIECES
MADE IN GERMANY

Flow Monitor

RVM/U-2

H_2O Ex

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
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for RVM/U-2 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

RVM/U-2 1 0004 12-15 E M

OPERATING DATA

Operating pressure, max.	300 bar (Brass version)
	350 bar (Stainless steel version)
Pressure drop	0,02 – 0,3 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 RVM/U-2 Module ATEX.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C (1)**		
	l/min	**gph**	**gpm**
RVM/U-2/02	0,02 – 0,2	0,3 – 3,35	
RVM/U-2/06	0,2 – 0,6	3,2 – 9,5	
RVM/U-2/1	0,4 – 1,8	6,5 – 28,5	
RVM/U-2/3	0,8 – 3,2	13 – 51	
RVM/U-2/7	2 – 7	32 – 111	
RVM/U-2/13	3 – 13	48 – 205	
RVM/U-2/20	4 – 20	65 – 315	
RVM/U-2/30	8 – 30	130 – 480	

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, 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^3.
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

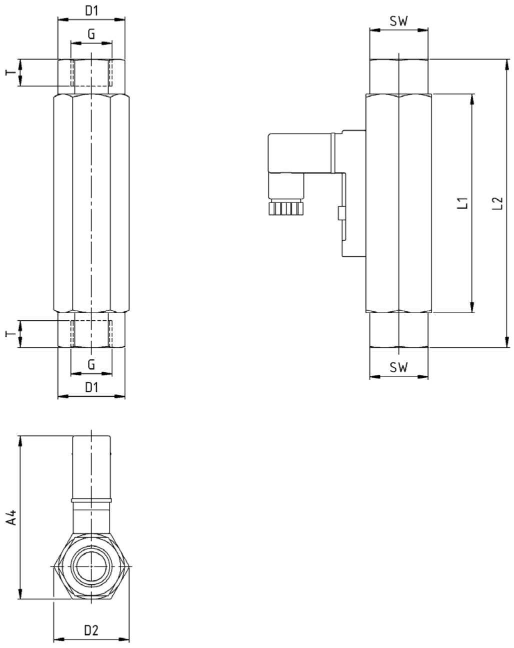
Brass version, wetted parts	
Spring:	1.4571
Gaskets:	NBR (optional FKM, EPDM) (2)
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass

Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571

(2) Other gasket materials on request

TECHNICAL DRAWING

For devices with switch contact 15x50



SUMMARY OF TYPES

For devices with switch contact 15x50

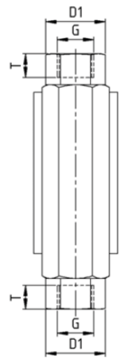
Type	Overall dimensions [mm]											Weight approx.
	G (3)	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g] (4)
RVM/U-2/02 RVM/U-2/06	1/4"	8	24	90	98,0	10	27,7	31,2	–	–	–	~67	350
	3/8"	10	24	90	118,6	11	27,7	31,2	–	–	–	~67	350
	1/2"	15	27	90	–	14	–	31,2	–	–	–	~67	350
RVM/U-2/1 RVM/U-2/3	1/4"	8	24	90	98,0	10	27,7	31,2	–	–	–	~67	350
	3/8"	10	24	90	118,6	11	27,7	31,2	–	–	–	~67	350
	1/2"	15	27	90	–	14	–	31,2	–	–	–	~67	350
RVM/U-2/7 RVM/U-2/13	1/4"	8	24	90	98,0	10	27,7	31,2	–	–	–	~67	350
	3/8"	10	24	90	118,6	11	27,7	31,2	–	–	–	~67	350
	1/2"	15	27	90	–	14	–	31,2	–	–	–	~67	350
RVM/U-2/20 RVM/U-2/30	1/2"	15	27	90	–	14	–	31,2	–	–	–	~67	350

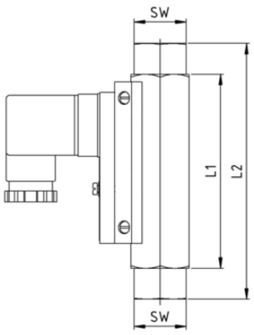
(3) NPT thread on request

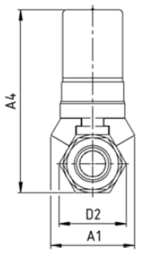
(4) Connection cable weight, 2 m approx. 80 g

TECHNICAL DRAWING

For devices with switch contact 30x70







SUMMARY OF TYPES

For devices with switch contact 30x70

Type	Overall dimensions [mm]												Weight approx.
	G [5]	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g] [6]
RVM/U-2/02 RVM/U-2/06	1/4"	8	24	90	98,0	10	27,7	31,2	38,9	–	–	~85	350
	3/8"	10	24	90	118,6	11	27,7	31,2	38,9	–	–	~85	350
	1/2"	15	27	90	–	14	–	31,2	38,9	–	–	~85	350
RVM/U-2/1 RVM/U-2/3	1/4"	8	24	90	98,0	10	27,7	31,2	38,9	–	–	~85	350
	3/8"	10	24	90	118,6	11	27,7	31,2	38,9	–	–	~85	350
	1/2"	15	27	90	–	14	–	31,2	38,9	–	–	~85	350
RVM/U-2/7 RVM/U-2/13	1/4"	8	24	90	98,0	10	27,7	31,2	38,9	–	–	~85	350
	3/8"	10	24	90	118,6	11	27,7	31,2	38,9	–	–	~85	350
	1/2"	15	27	90	–	14	–	31,2	38,9	–	–	~85	350
RVM/U-2/20 RVM/U-2/30	1/2"	15	27	90	–	14	–	31,2	38,9	–	–	~85	350

[5] NPT thread on request

[6] Connection cable weight, 2 m approx. 80 g

ELECTRICAL DATA

For devices with switch contact 15x50

Change over (COC) (7)	250V · 1,5A · 50VA (8)
Normally open (NOC)	230V · 3A · 60VA
Change over M12x1 (-20 °C – 85 °C)	125V · 1,5A · 50VA (8)
Normally open M12x1 (-20 °C – 85 °C)	125V · 3A · 60VA
Change over PLC (7)	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 °C < $T_{Service}$ < 45 °C

Marking

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

(7) Available with connector only

(8) Minimum load 3VA

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) (9)

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) (9)

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

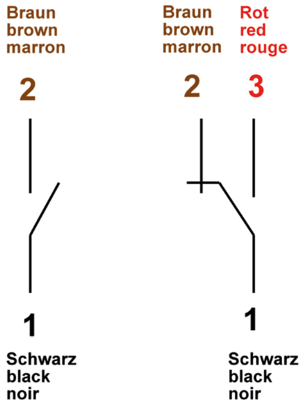
Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

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

CONNECTION DIAGRAM



ELECTRICAL DATA

For devices with switch contact 30x70

Change over (COC)	250V · 1,5A · 50VA (10)
Normally open (NOC)	250V · 3A · 100VA
Change over M12x1 (-20 °C – 85 °C)	250V · 1,5A · 50VA (10)
Normally open M12x1 (-20 °C – 85 °C)	250V · 3A · 100VA
Change over PLC	250V · 1A · 60VA

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb II T6 & ATEX II 2 D Ex tD A21 IP67 T80 °C

ATEX II 2 G Ex mb II T5 & ATEX II 2 D Ex tD A21 IP67 T100 °C

Change over	250V · 1A · 30VA (10)
Normally open	250V · 2A · 60VA

(10) Minimum load 3VA

ELECTRICAL CONNECTION

For devices with switch contact 30x70

- 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)

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.

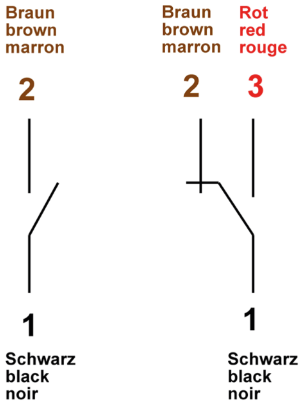
Power supply

Not required (potential-free reed contacts)

Connector types

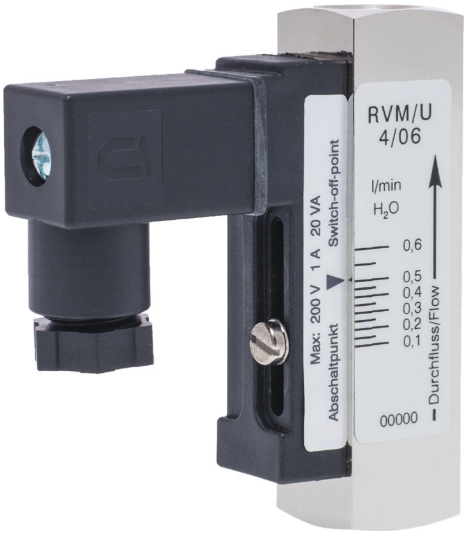
Other connector types or cable lengths on request

CONNECTION DIAGRAM



Flow Monitor

RVM/U-4



H2O Ex

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
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for RVM/U-4 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	300 bar (Brass version) 350 bar (Stainless steel version)
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 RVM/U-4 Module ATEX.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C [1]**		
	l/min	**gph**	**gpm**
RVM/U-4/01	0,005 – 0,06	0,08 – 0,95	
RVM/U-4/02	0,04 – 0,13	0,65 – 2,05	
RVM/U-4/06	0,1 – 0,6	1,6 – 9,5	
RVM/U-4/1	0,2 – 1,2	3 – 19	
RVM/U-4/2	0,4 – 2	6,5 – 31,5	
RVM/U-4/3	0,5 – 3	8 – 48	
RVM/U-4/5	1 – 5	16 – 80	

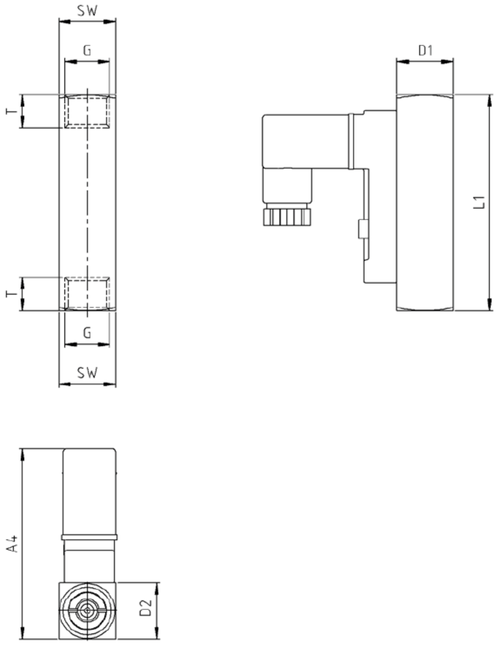
(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, vertical installation of the device and flow direction from bottom to top.
Other installation positions or deviation from the operating densities will increase the measurement error specified in the data sheet.
Operating density for water at 20 °C and 1.013 bar (absolute value): 1.00 kg/dm^3.
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
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass

Stainless steel version, wetted parts	
Spring:	1.4571
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G [2]	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g] [3]
RVM/U-4/01	1/4"	8	17	65	–	10	17	17	–	–	–	~57	140
RVM/U-4/02													
RVM/U-4/06													
RVM/U-4/1													
RVM/U-4/2													
RVM/U-4/3													
RVM/U-4/5													

[2] NPT thread on request

[3] Connection cable weight, 2 m ca. approx. 80 g

ELECTRICAL DATA

Change over (COC) [4] **Normally open (NOC)**	150V AC/DC · 1A · 20VA 140V AC · 0,7A · 20VA 200V DC · 1A · 20VA
Change over M12x1 [5] **Normally open M12x1** [5]	125V AC/DC · 1A · 20VA 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

Marking

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

---

[4] Available with connector only

[5] -20 °C – 85 °C

ELECTRICAL CONNECTION

- Connector in compliance with EN 175301-803, Form C (DIN 43650, Form C)
- Connector M12x1
- Cable (1 m) [6]

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) [6]

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

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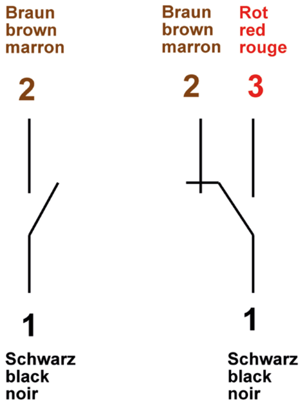
[6] Available as Normally Open Contact (NOC) only

CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

RVM/UA-1

H2O

OVERVIEW

Operation

- Float measuring principle

Application

- Cooling systems and cooling circuits
- Mechanical 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
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for
  RVM/UA-1 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

RVM/UA-1 1 0005 12-15 E M

OPERATING DATA

Operating pressure, max.	250 bar (Brass version)
	300 bar (Stainless steel version)
Pressure drop	0,02 – 0,4 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 RVM/UA-1 Module ATEX.

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

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C (1)**		
	l/min	**gph**	**gpm**
RVM/UA-1/30	10 – 30	160 – 480	
RVM/UA-1/45	15 – 45	240 – 710	
RVM/UA-1/60	20 – 60	320 – 950	
RVM/UA-1/90	30 – 90		8 – 24
RVM/UA-1/150	60 – 150		16 – 40

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, vertical installation of the device and flow direction from bottom to top.
Other mounting 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^3.
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

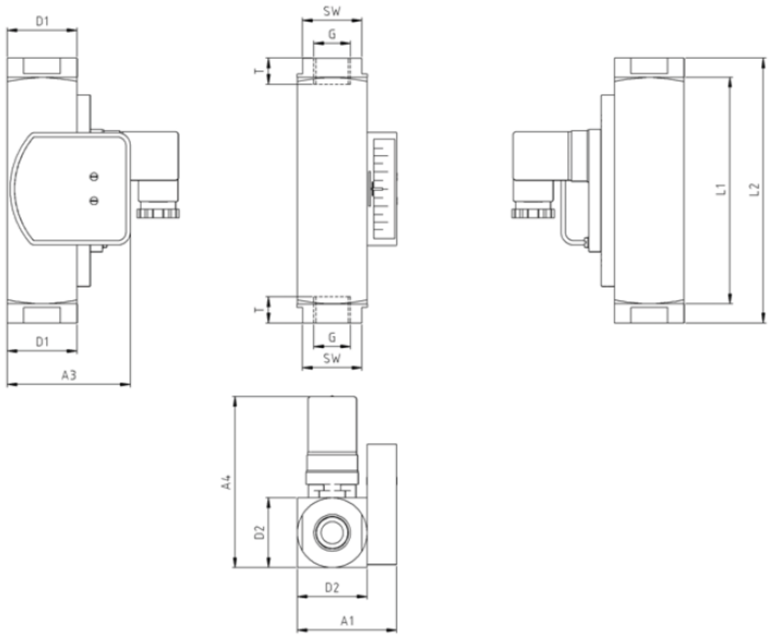
Brass version, wetted parts	
Spring:	1.4571
Gaskets (2):	NBR (optional FKM, EPDM) (3)
Magnets:	Hard ferrite
Threaded rings:	Brass
Float:	Brass
Device body:	Brass, nickel-plated
all other wetted parts:	Brass
Brass version, non-wetted parts	
Display:	Makrolon® / Brass, nickel-plated

Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets (2):	FKM (optional NBR, EPDM) (3)
Magnets:	Hard ferrite
Threaded rings:	1.4571
Float:	1.4571
Device body:	1.4571
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Display:	Makrolon® / Brass, nickel-plated

(2) Only with process connections

(3) Other gasket materials on request

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G [4]	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g] [5]
RVM/UA-1/30	3/4"	20	34	130	152	15	40	40	57	–	71	~98	1340
	1"	25	40	130	130	17	40	40	57	–	71	~98	1160
RVM/UA-1/45	3/4"	20	34	130	152	15	40	40	57	–	71	~98	1340
	1"	25	40	130	130	17	40	40	57	–	71	~98	1160
RVM/UA-1/60	3/4"	20	34	130	152	15	40	40	57	–	71	~98	1340
	1"	25	40	130	130	17	40	40	57	–	71	~98	1160
RVM/UA-1/90	1"	25	40	130	130	17	40	40	57	–	71	~98	1160
RVM/UA-1/150	1"	25	40	130	130	17	40	40	57	–	71	~98	1160

[4] NPT thread on request

[5] Connection cable weight, 2 m approx. 80 g

ELECTRICAL DATA

Change over (COC)	250V · 1,5A · 50VA [6]
Normally open (NOC)	250V · 3A · 100VA
Change over M12x1 (-20 °C – 85 °C)	250V · 1,5A · 50VA [6]
Normally open M12x1 (-20 °C – 85 °C)	250V · 3A · 100VA
Change over PLC	250V · 1A · 60VA

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db

Change over	250V · 1A · 30VA [6]
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA [6]
Normally open	250V · 3A · 100VA

[6] 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.

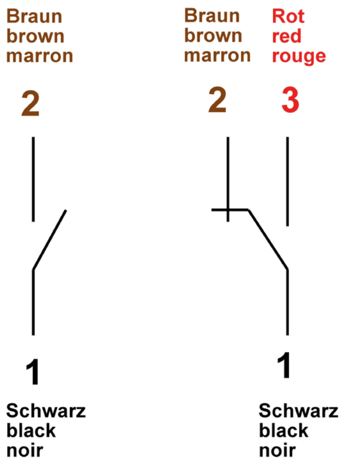
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



meister®

MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

RVM/UA-2

H_2O Ex

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
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for RVM/UA-2 Module BASICS / ...ATEX must be observed! !
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	300 bar (Brass version)
	350 bar (Stainless steel version)
Pressure drop	0,02 – 0,3 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 RVM/UA-2 Module ATEX.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C** (1)		
	l/min	**gph**	**gpm**
RVM/UA-2/02	0,02 – 0,2	0,3 – 3,35	
RVM/UA-2/06	0,2 – 0,6	3,2 – 9,5	
RVM/UA-2/1	0,4 – 1,8	6,5 – 28,5	
RVM/UA-2/3	0,8 – 3,2	13 – 51	
RVM/UA-2/7	2 – 7	32 – 111	
RVM/UA-2/13	3 – 13	48 – 205	
RVM/UA-2/20	4 – 20	65 – 315	
RVM/UA-2/30	8 – 30	130 – 480	

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, 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^3.
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.

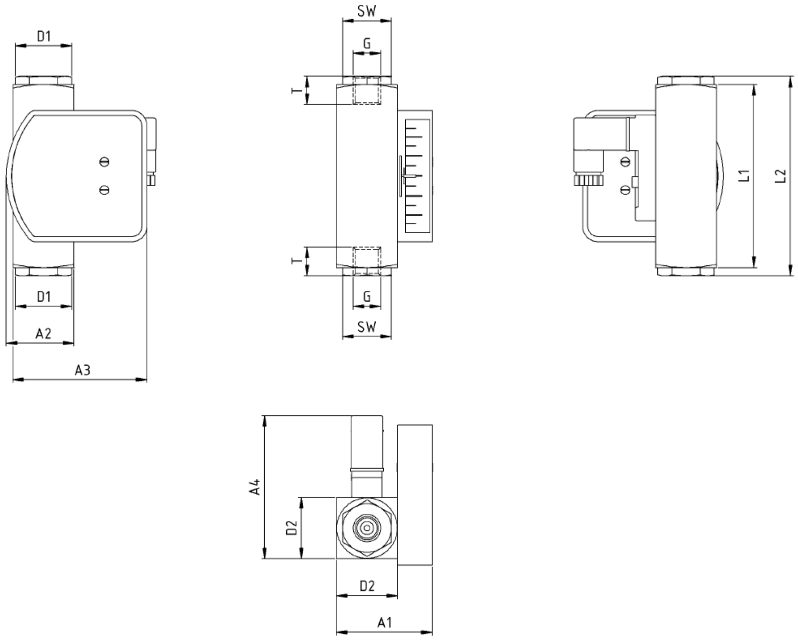
MATERIALS

Brass version, wetted parts	
Spring:	1.4571
Gaskets:	NBR (optional FKM, EPDM) (2)
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass
Brass version, non-wetted parts	
Indicator:	Makrolon® / Brass, nickel-plated

Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Indicator:	Makrolon® / Brass, nickel-plated

(2) Other gasket materials on request

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	**DN**	**SW**	**L1**	**L2**	**T**	**D1**	**D2**	**A1**	**A2**	**A3**	**A4**	**[g]**
RVM/UA-2/02 RVM/UA-2/06	1/4"	8	24	90	98	10	27,5	30	47	33	66	~70	620
	3/8"	10	24	90	119	11	27,5	30	47	33	66	~70	670
	1/2"	15	–	90	–	14	–	30	47	33	66	~70	570
RVM/UA-2/1 RVM/UA-2/3	1/4"	8	24	90	98	10	27,5	30	47	33	66	~70	620
	3/8"	10	24	90	119	11	27,5	30	47	33	66	~70	670
	1/2"	15	–	90	–	14	–	30	47	33	66	~70	570
RVM/UA-2/7 RVM/UA-2/13	1/4"	8	24	90	98	10	27,5	30	47	33	66	~70	620
	3/8"	10	24	90	119	11	27,5	30	47	33	66	~70	670
	1/2"	15	–	90	–	14	–	30	47	33	66	~70	570
RVM/UA-2/20 RVM/UA-2/30	1/2"	15	–	90	–	14	–	30	47	33	66	~70	570

ELECTRICAL DATA

Change over (COC) (3)	250V · 1,5A · 50VA (4)
Normally open (NOC)	230V · 3A · 60VA
Change over M12x1 (-20 °C – 85 °C)	125V · 1,5A · 50VA (4)
Normally open M12x1 (-20 °C – 85 °C)	125V · 3A · 60VA
Change over PLC (3)	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 °C < $T_{Service}$ < 45 °C

Marking

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

(3) Available with connector only

(4) Minimum load 3VA

ELECTRICAL CONNECTION

- Connector in compliance with EN 175301-803, Form C (DIN 43650, Form C)
- Connector M12x1
- Cable (1 m) (5)

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) (5)

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

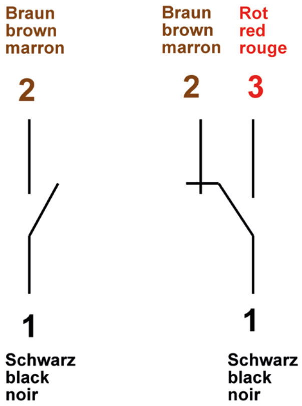
Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

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

CONNECTION DIAGRAM



Flow Monitor

RVM/U-S4

H_2O

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
- Hose connection

Installation information

- The operating instructions for RVM/U-S4 Module BASICS must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	16 bar (Brass version)
Pressure drop	0,02 – 0,2 bar
Temperature, max.	100 °C (optional 160 °C)
Measuring accuracy	±10 % of full scale

MEASURING RANGES

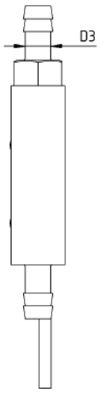
Type	**Switch range for H_2O at 20 °C (1)**		
	l/min	**gph**	**gpm**
RVM/U-S4/01	0,005 – 0,06	0,08 – 0,95	
RVM/U-S4/02	0,04 – 0,13	0,65 – 2,05	
RVM/U-S4/06	0,1 – 0,6	1,6 – 9,5	
RVM/U-S4/1	0,2 – 1,2	3,0 – 19,0	
RVM/U-S4/2	0,4 – 2	6,5 – 31,5	
RVM/U-S4/3	0,5 – 3	8 – 48	
RVM/U-S4/5	1 – 5	16 – 80	

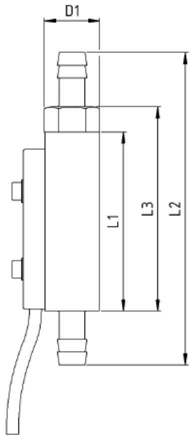
(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, vertical installation of the device and flow direction from bottom to top.
Other installation positions or deviation from the operating densities will increase the measurement error specified in the data sheet.
Operating density for water at 20 °C and 1.013 bar (absolute value): 1.00 kg/dm^3.
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.

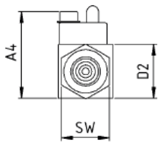
MATERIALS

Brass version, wetted parts	
Spring:	1.4571
Magnets:	Hard ferrite
Device body:	Brass
Gaskets:	NBR (optional FKM, EPDM)
all other wetted parts:	Brass

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	L3	D1	D2	D3	A2	A3	A4	[g]
RVM/U-S4/01	–	8	15	56	98	64	17,3	17	8	–	–	28	160
RVM/U-S4/02	–	8	15	56	98	64	17,3	17	8	–	–	28	160
RVM/U-S4/06	–	8	15	56	98	64	17,3	17	8	–	–	28	160
RVM/U-S4/1	–	8	15	56	98	64	17,3	17	8	–	–	28	160
RVM/U-S4/2	–	8	15	56	98	64	17,3	17	8	–	–	28	160
RVM/U-S4/3	–	8	15	56	98	64	17,3	17	8	–	–	28	160
RVM/U-S4/5	–	8	15	56	98	64	17,3	17	8	–	–	28	160

ELECTRICAL DATA

Normally open (NOC)	140V AC · 0,7A · 20VA
	200V DC · 1A · 20VA

ELECTRICAL CONNECTION

– Cable (1 m)

Ingress Protection

IP67: Cable

Output signal

The contact opens when the flow decreases below the set point.

Power supply

Not required (potential-free reed contacts)

Connector types

Other cable lengths on request

CONNECTION DIAGRAM

MASTERPIECES
MADE IN GERMANY

Flow Monitor

RVM/UM

H_2O c UL us Ex

OVERVIEW

Operation

- Float measuring principle

Application

- Cooling systems and cooling circuits
- Mechanical engineering
- Research & Development

Features

- High reliability
- High switch accuracy
- EX-version according to ATEX directive available
- UL Recognized version available
- High pressure resistance
- Threaded connection, special thread on request

Installation information

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

OPERATING DATA

Operating pressure, max.	250 bar (Brass version)
	300 bar (Stainless steel version)
Pressure drop	See diagram on page 6
Temperature, max.	120 °C (optional 160 °C)
Measuring accuracy:	
Switch point > 3 l/min	±5 % of switch value
Switch point ≤ 3 l/min	± 0,1 l/min

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

For UL Recognized devices, changed operating data apply. Refer to the Operating Instructions for RVM/UM Module BASICS.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch point for H_2O at 20 °C** (1)		
	l/min	**gph**	**gpm**
RVM/UM			
Lowest switch point	0,1	1,6	
Highest switch point	30	480	

The switch point is factory adjusted.

Please specify switch point when ordering!

The recommended maximum flow is 120 l/min.

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, 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^3.
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.

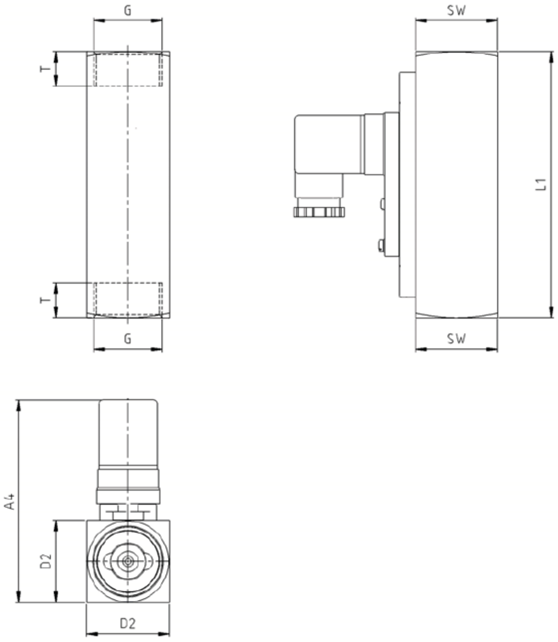
MATERIALS

Brass version, wetted parts	
Spring:	1.4571
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass

Stainless steel version, wetted parts	
Spring:	1.4571
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571

TECHNICAL DRAWING

Stainless steel version (4-sided)



SUMMARY OF TYPES

Stainless steel version (4-sided)

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	ca. [g]
RVM/UM	1"	25	40	130	–	17	–	40	–	–	–	~98	1150

ELECTRICAL DATA

Change over (COC)	250V · 1,5A · 50VA (2)
Normally open (NOC)	250V · 3A · 100VA
Change over M12x1 (-20 °C – 85 °C)	250V · 1,5A · 50VA (2)
Normally open M12x1 (-20 °C – 85 °C)	250V · 3A · 100VA
Change over PLC	250V · 1A · 60VA

EX-version in compliance with ATEX directive

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

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (2)
Normally open	250V · 3A · 100VA

(2) 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.

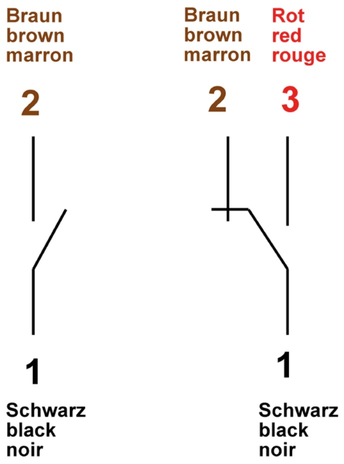
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

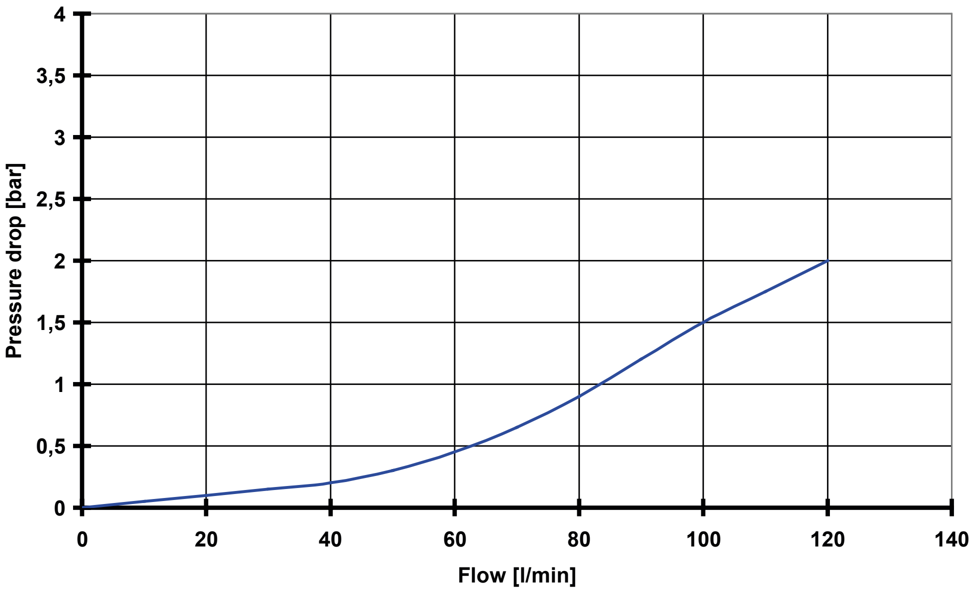
CONNECTION DIAGRAM



RVM/UM 4 0003 05-19 E M

PRESSURE DROP

RVM/UM, Pressure drop for water at 20 °C



MASTERPIECES
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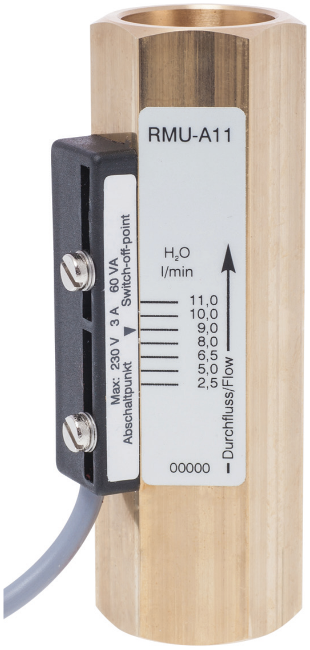
MASTERPIECES
MADE IN GERMANY

Flow Monitor

RMU-A



H_2O

OVERVIEW

Operation

- Float measuring principle

Application

- Cooling systems and cooling circuits
- Mechanical engineering
- High pressure cleaners
- Research & Development

Features

- Universal orientation
- High reliability
- Low sensitivity to dirt
- Infinitely variable switch point adjustment by operator
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for
  RMU-A Module BASICS must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	250 bar (Brass version)
Pressure drop:	
RMU-A11	25 - 175 mbar
RMU-A15	85 - 250 mbar
Temperature, max.	120 °C (optional 160 °C)
Measuring accuracy	±10 % of full scale

MEASURING RANGES

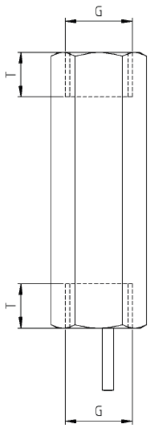
Type	**Switch range for H_2O at 20 °C [(1)]**		
	l/min	**gph**	**gpm**
RMU-A11	2,5 – 11	40 – 175	
RMU-A15	5 – 15,5	80 – 245	

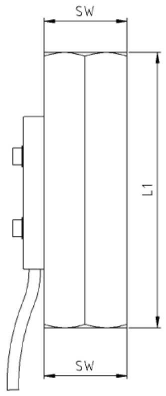
(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, vertical installation of the device and flow direction from bottom to top.
Other installation positions or deviation from the operating densities will increase the measurement error specified in the data sheet.
Operating density for water at 20 °C and 1.013 bar (absolute value): 1.00 kg/dm^3.
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.

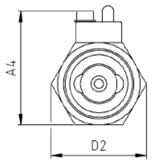
MATERIALS

Brass version, wetted parts	
Spring:	1.4571
Float:	Brass
Magnets:	Hard ferrite
Device body:	Brass

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	Overall dimensions [mm]											Weight approx.
	G $^{(2)}$	DN	SW	L1	L2	D1	D2	A1	A2	A3	A4	[g] $^{(3)}$
RMU-A11	1/2"	15	27	90	–	–	31,2	–	–	–	~37,5	350
RMU-A15	1/2"	15	27	90	–	–	31,2	–	–	–	~37,5	350

(2) NPT thread on request

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

ELECTRICAL DATA

Normally open (NOC)	230V · 3A · 60VA

ELECTRICAL CONNECTION

– Cable (1 m)

Ingress Protection

IP67: Cable

Output signal

The contact opens when the flow decreases below the set point.

Power supply

Not required (potential-free reed contacts)

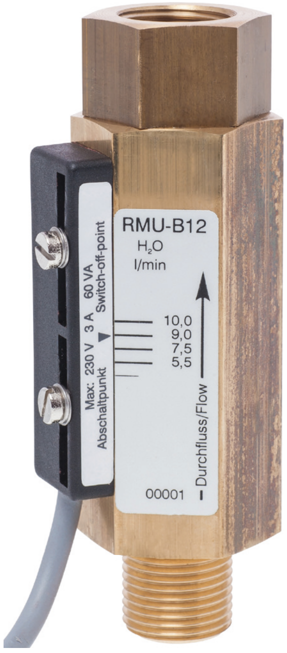
Connector types

Other cable lengths on request

CONNECTION DIAGRAM

Flow Monitor

RMU-B



H_2O

OVERVIEW

Operation

- Float measuring principle

Application

- Cooling systems and cooling circuits
- Mechanical engineering
- High pressure cleaners
- Research & Development

Features

- Universal orientation
- High reliability
- Low sensitivity to dirt
- Infinitely variable switch point adjustment by operator
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for RMU-B Module BASICS must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	250 bar (Brass version)
Pressure drop	0,025 – 0,3 bar
Temperature, max.	100 °C (optional 160 °C)
Measuring accuracy	±10 % of full scale

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C (1)**		
	l/min	**gph**	**gpm**
RMU-B02	0,4 – 1,7	6,5 – 27	
RMU-B12	5,5 – 10	87 – 159	
RMU-B18	8,5 – 15,5	135 – 245	

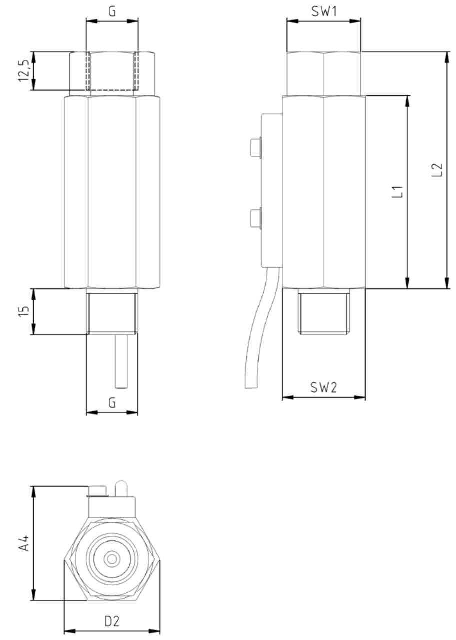
(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, vertical installation of the device and flow direction from bottom to top.
Other installation positions or deviation from the operating densities will increase the measurement error specified in the data sheet.
Operating density for water at 20 °C and 1.013 bar (absolute value): 1.00 kg/dm^3.
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
Float:	Brass
Magnets:	Hard ferrite
Gaskets:	NBR (2)
Device body:	Brass

(2) Other gasket materials on request

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G (AG) (3)	G (IG) (3)	DN	SW 1	SW 2	L1	L2	D2	A1	A2	A3	A4	[g] (4)
RMU-B02	3/8"	3/8"	10	24	27	63	77,3	31,2	–	–	–	~37,5	320
RMU-B12	3/8"	3/8"	10	24	27	63	77,3	31,2	–	–	–	~37,5	320
RMU-B18	3/8"	3/8"	10	24	27	63	77,3	31,2	–	–	–	~37,5	320

(3) NPT thread on request

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

ELECTRICAL DATA

Normally open (NOC)	230V · 3A · 60VA

ELECTRICAL CONNECTION

– Cable (1 m)

Ingress Protection

IP67: Cable

Output signal

The contact opens when the flow decreases below the set point.

Power supply

Not required (potential-free reed contacts)

Connector types

Other cable lengths on request

CONNECTION DIAGRAM

RMU-B 4 0001 12-15 E M

MASTERPIECES
MADE IN GERMANY

Flow Monitor & Indicator

WY

H2O

OVERVIEW

Operation

- Float measuring principle

Application

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

Features

- Universal orientation
- Wide measuring range
- High reliability
- High switch accuracy
- Infinitely variable switch point adjustment by operator
- Fittings in angle seat can be replaced without removing entire device from system
- Scales are burned onto the sight glass
- Threaded connection, special thread on request

Installation information

- The operating instructions for WY must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	10 bar
Pressure drop	approx. 0,3 bar
Temperature, max.	100 °C
Measuring accuracy	±10 % of full scale

MEASURING RANGES

Type	**Switch range for H_2O at 20 °C** (1)		
	l/min	**gph**	**gpm**
WY-15	2,5 – 25		
WY-25	10 – 100		

(1) The specified measuring- / switch ranges are valid for water having a density of 1.00 kg/dm^3, vertical installation of the device and flow direction from bottom to top.
Other mounting 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^3.
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.

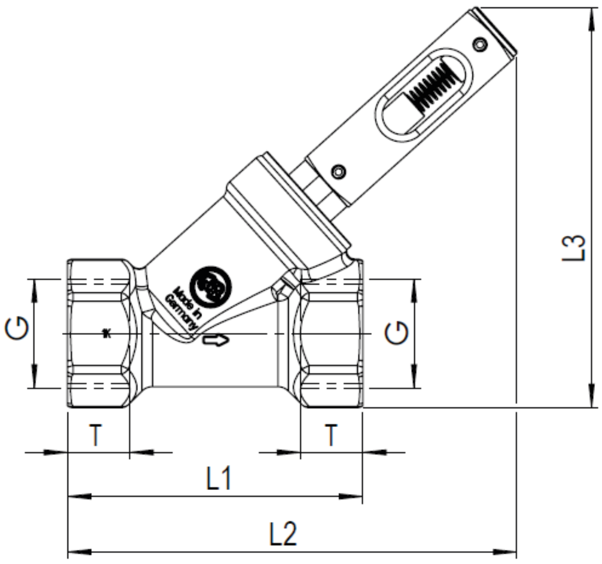
MATERIALS

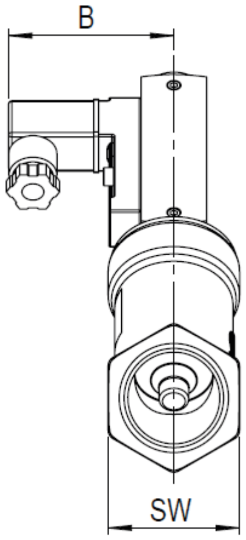
Brass version, wetted parts	
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	NBR (optional FKM, EPDM) (2)
Magnets:	Hard ferrite
Float:	PEEK (WY-15) Brass (WY-25)
all other wetted parts:	Brass, nickel-plated
Brass version, non-wetted parts	
Device housing:	Aluminium, anodized

(2) Other gasket materials on request

WY 2 0001 01-16 E M

TECHNICAL DRAWING

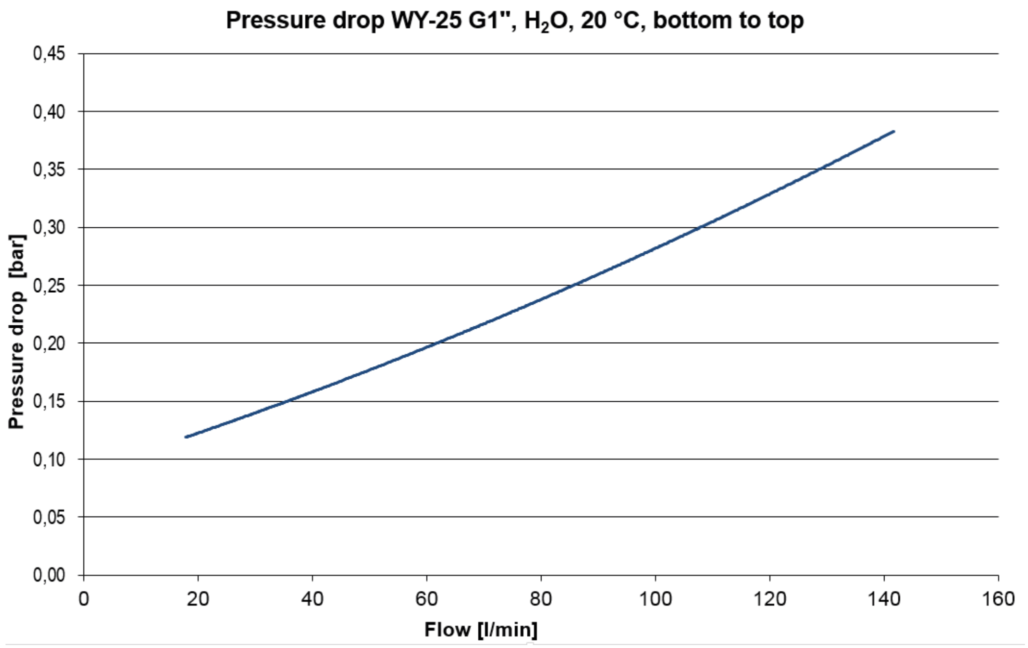




SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	L3	T	B	A1	A2	A3	A4	[g]
WY-15	1/2"	–	27	65	117	101	14	50	–	–	–	–	300
WY-25	1"	–	41	90	137	122	19	50	–	–	–	–	700

PRESSURE DROP DIAGRAM



WY 3 0001 01-16 E M

ELECTRICAL DATA

Change over (COC)	150V AC/DC · 1A · 20VA
Normally open (NOC)	140V AC · 0,7A · 20VA
	200V DC · 1A · 20VA
Change over M12x1 (3)	125V AC/DC · 1A · 20VA
Normally open M12x1 (3)	125V AC · 0,7A · 20VA
	125V DC · 1A · 20VA

(3) -20 °C – 85 °C

ELECTRICAL CONNECTION

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

Ingress Protection

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

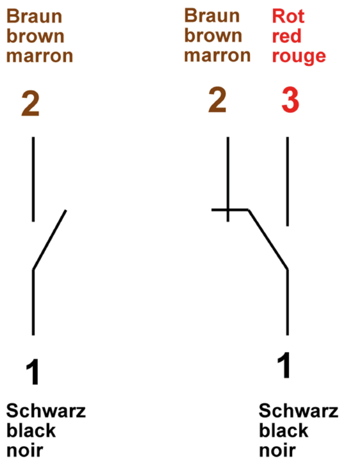
Connector types

Other connector types on request

Optional

Analog output: 4…20 mA or 0…10V

CONNECTION DIAGRAM



meister®

MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

DKG-1

OIL

c UL us

Ex

OVERVIEW

Operation

- Float measuring principle

Application

- Mechanical engineering
- Central lubrication
- Circulation lubrication
- Transformers

Features

- Universal orientation
- High reliability
- High switch accuracy
- Viscosity compensated
- 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 DKG-1 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	10 bar
Pressure drop	0,02 – 0,4 bar
Viscosity range	30 cSt to 600 cSt
Temperature, max.	120 °C (optional 160 °C)
Measuring 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 DKG-1 Module ATEX.

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

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for Oil, density 0,9 kg/dm^3 (1)**		
	l/min	**gph**	**gpm**
DKG-1/1 (2)	0,1 – 0,8	1,6 – 12,7	
DKG-1/2	0,5 – 1,5	8 – 24	
DKG-1/4	1 – 4	16 – 63	
DKG-1/8	2 – 8	32 – 127	
DKG-1/10	3 – 10	48 – 159	
DKG-1/15	5 – 15	80 – 240	
DKG-1/24	8 – 24	125 – 380	
DKG-1/30	10 – 30	160 – 475	
DKG-1/45	15 – 45	240 – 710	
DKG-1/60	20 – 60	320 – 950	
DKG-1/90	30 – 90		8 – 24

(1) The specified measuring- /switch ranges are valid for oils having a density of 0.9 kg/dm^3 and a kinematic viscosity of 30 to 600 cSt, vertical installation of the device and flow direction from bottom to top.
Other installation positions or deviation from the operating densities and operating viscosities will increase the measurement error specified in the data sheet. Excessive operating viscosities will influence or may prevent function of the device.
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.

(2) Up to 400 cSt

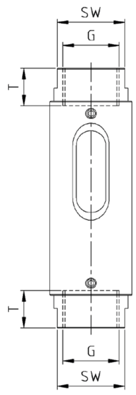
MATERIALS

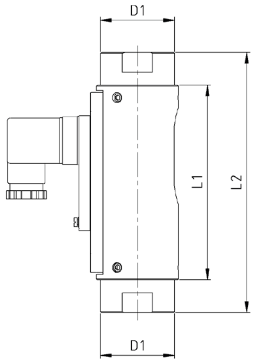
Brass version, wetted parts	
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	FKM (optional NBR, EPDM) (3)
Magnets:	Hard ferrite
all other wetted parts:	Brass, nickel-plated
Brass version, non-wetted parts	
Device housing:	Aluminium, anodized

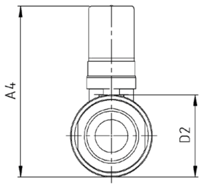
Stainless steel version, wetted parts	
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	FKM (optional NBR, EPDM) (3)
Magnets:	Hard ferrite
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Device housing:	Aluminium, anodized

(3) Other gasket materials on request

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g]
DKG-1/1 DKG-1/2 DKG-1/4	1/4"	8	41	118,5	144,5	10	45	50	–	–	–	~104	850
	1/2"	15	41	118,5	144,5	14	45	50	–	–	–	~104	850
	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
DKG-1/8 DKG-1/10 DKG-1/15 DKG-1/24	1/2"	15	41	118,5	144,5	14	45	50	–	–	–	~104	850
	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
DKG-1/30 DKG-1/45 DKG-1/60 DKG-1/90	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

ELECTRICAL DATA

Change over (COC)	250V · 1,5A · 50VA [(4)]
Normally open (NOC)	250V · 3A · 100VA
Change over M12x1 (-20 °C – 85 °C)	250V · 1,5A · 50VA [(4)]
Normally open M12x1 (-20 °C – 85 °C)	250V · 3A · 100VA
Change over PLC	250V · 1A · 60VA

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db

Change over	250V · 1A · 30VA [(4)]
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA [(4)]
Normally open	250V · 3A · 100VA

[(4)] 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.

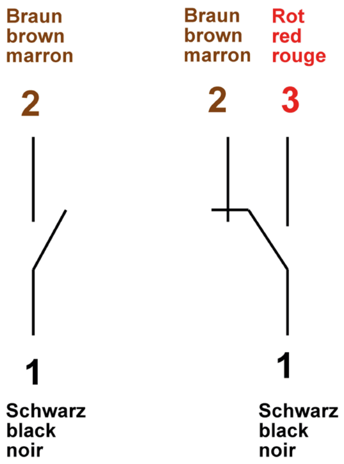
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

DKG-2

OIL

OVERVIEW

Operation

- Float measuring principle

Application

- Mechanical engineering
- Central lubrication
- Circulation lubrication
- Transformers

Features

- Universal orientation
- High reliability
- Viscosity compensated
- 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
  DKG-2 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

DKG-2 1 0007 12-15 E M

OPERATING DATA

Operating pressure, max.	16 bar
Pressure drop	0,02 – 0,2 bar
Viscosity range	30 cSt to 600 cSt
Temperature, max.	120 °C (optional 160 °C)
Measuring 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 DKG-2 Module ATEX.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for Oil, density 0,9 kg/dm³ (1)**		
	l/min	**gph**	**gpm**
DKG-2/2	0,5 – 1,7	8 – 27	
DKG-2/3	0,8 – 2,5	13 – 40	
DKG-2/4	1,3 – 4	21 – 63	
DKG-2/8	2,5 – 8	40 – 127	

(1) The specified measuring- /switch ranges are valid for oils having a density of 0.9 kg/dm³ and a kinematic viscosity of 30 to 600 cSt, vertical installation of the device and flow direction from bottom to top.
Other installation positions or deviation from the operating densities and operating viscosities will increase the measurement error specified in the data sheet. Excessive operating viscosities will influence or may prevent function of the device.
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.

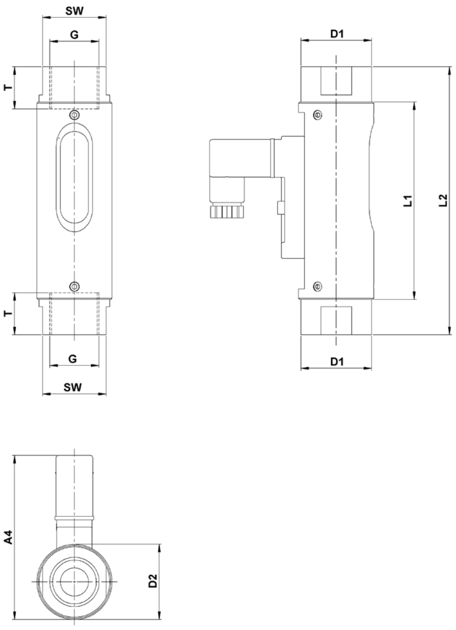
MATERIALS

Brass version, wetted parts	
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
all other wetted parts:	Brass, nickel-plated
Brass version, non-wetted parts	
Device housing:	Aluminium, anodized

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

(2) Other gasket materials on request

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g]
DKG-2/2 DKG-2/3 DKG-2/4 DKG-2/8	1/2"	15	27	84	114	14	30	32	–	–	–	~70	300

ELECTRICAL DATA

For devices with switch contact 15x50

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

$-5\ °C < T_{Service} < 45\ °C$

Marking

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

(3) Minimum load 3VA

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) (4)

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) (4)

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

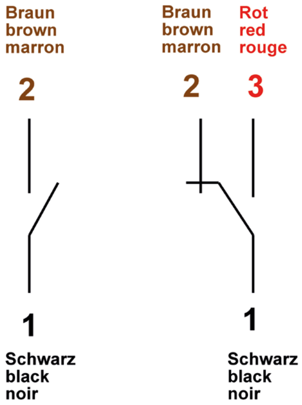
Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

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

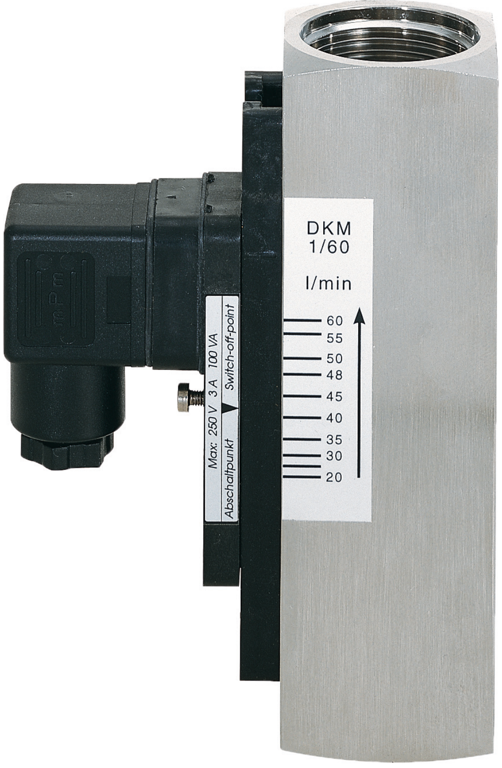
CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor

DKM-1



OIL

OVERVIEW

Operation

- Float measuring principle

Application

- Mechanical engineering
- Central lubrication
- Circulation lubrication
- Transformers

Features

- Universal orientation
- High reliability
- High switch accuracy
- Viscosity compensated
- Infinitely variable switch point adjustment by operator
- EX-version according to ATEX directive available
- UL Recognized version available
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for DKM-1 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	250 bar (Brass version)
	300 bar (Stainless steel version)
Pressure drop	0,02 – 0,4 bar
Viscosity range	30 cSt to 600 cSt
Temperature, max.	120 °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 DKM-1 Module ATEX.

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

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for Oil, density 0,9 kg/dm^3 (1)**		
	l/min	**gph**	**gpm**
DKM-1/2	0,5 – 1,5	8 – 24	
DKM-1/4	1 – 4	16 – 63	
DKM-1/8	2 – 8	32 – 127	
DKM-1/10	3 – 10	48 – 160	
DKM-1/15	5 – 15	80 – 240	
DKM-1/24	8 – 24	125 – 380	
DKM-1/30	10 – 30	160 – 480	
DKM-1/45	15 – 45	240 – 710	
DKM-1/60	20 – 60	320 – 950	
DKM-1/90	30 – 90		8 – 24
DKM-1/110	35 – 110		9,5 – 29

(1) The specified measuring- /switch ranges are valid for oils having a density of 0.9 kg/dm^3 and a kinematic viscosity of 30 to 600 cSt, vertical installation of the device and flow direction from bottom to top.
Other installation positions or deviation from the operating densities and operating viscosities will increase the measurement error specified in the data sheet. Excessive operating viscosities will influence or may prevent function of the device.
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.

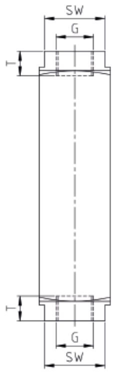
MATERIALS

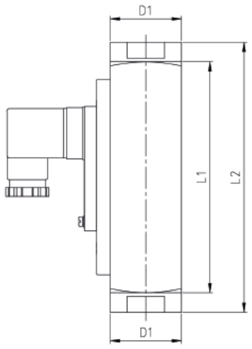
Brass version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass

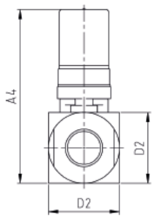
Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571

(2) Other gasket materials on request

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g]
DKM-1/2 DKM-1/4	1/4"	8	34	130	152	10	40	40	–	–	–	~98	1500
	1/2"	15	34	130	152	14	40	40	–	–	–	~98	1425
	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1340
	1"	25	40	130	130	18,5	40	40	–	–	–	~98	1160
DKM-1/8 DKM-1/10 DKM-1/15 DKM-1/24	1/2"	15	34	130	152	14	40	40	–	–	–	~98	1425
	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1340
	1"	25	40	130	130	18,5	40	40	–	–	–	~98	1160
DKM-1/30 DKM-1/45 DKM-1/60	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1340
	1"	25	40	130	130	18,5	40	40	–	–	–	~98	1160
DKM-1/90 DKM-1/110	1"	25	40	130	130	18,5	40	40	–	–	–	~98	1160

ELECTRICAL DATA

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

EX-version in compliance with ATEX directive

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

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (3)
Normally open	250V · 3A · 100VA

(3) 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.

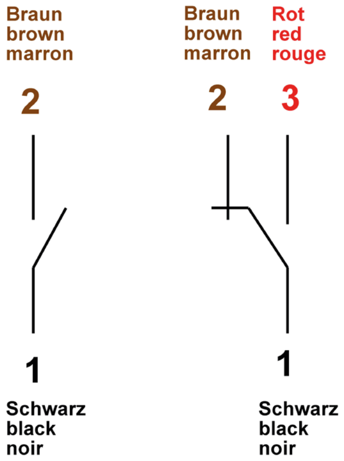
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor

DKM-2

OIL

OVERVIEW

Operation

- Float measuring principle

Application

- Mechanical engineering
- Central lubrication
- Circulation lubrication
- Transformers

Features

- Universal orientation
- High reliability
- High switch accuracy
- Viscosity compensated
- Infinitely variable switch point adjustment by operator
- EX-version according to ATEX directive available
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for
  DKM-2 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	300 bar (Brass version)
	350 bar (Stainless steel version)
Pressure drop	0,02 – 0,2 bar
Viscosity range	30 cSt to 600 cSt
Temperature, max.	120 °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 DKM-2 Module ATEX.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for Oil, density 0,9 kg/dm^3 (1)**		
	l/min	**gph**	**gpm**
DKM-2/2	0,5 – 1,6	8 – 25,5	
DKM-2/3	0,8 – 3	13 – 48	
DKM-2/7	2 – 7	32 – 111	

(1) The specified measuring- /switch ranges are valid for oils having a density of 0.9 kg/dm^3 and a kinematic viscosity of 30 to 600 cSt, vertical installation of the device and flow direction from bottom to top.
Other installation positions or deviation from the operating densities and operating viscosities will increase the measurement error specified in the data sheet. Excessive operating viscosities will influence or may prevent function of the device.
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

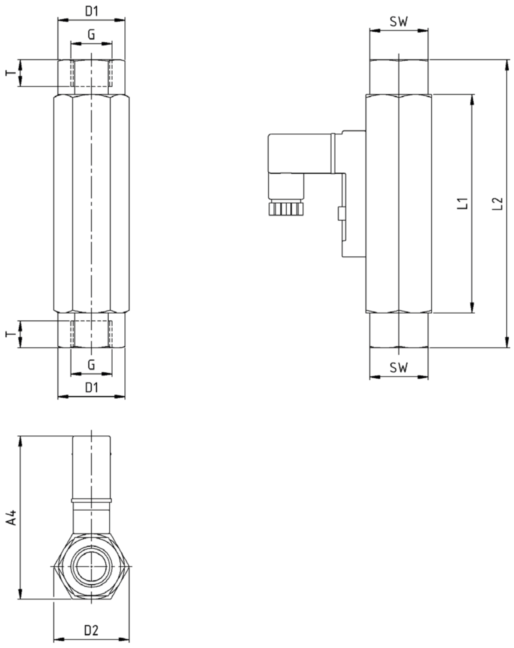
Brass version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass

Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571

(2) Other gasket materials on request

TECHNICAL DRAWING

For devices with switch contact 15x50



SUMMARY OF TYPES

For devices with switch contact 15x50

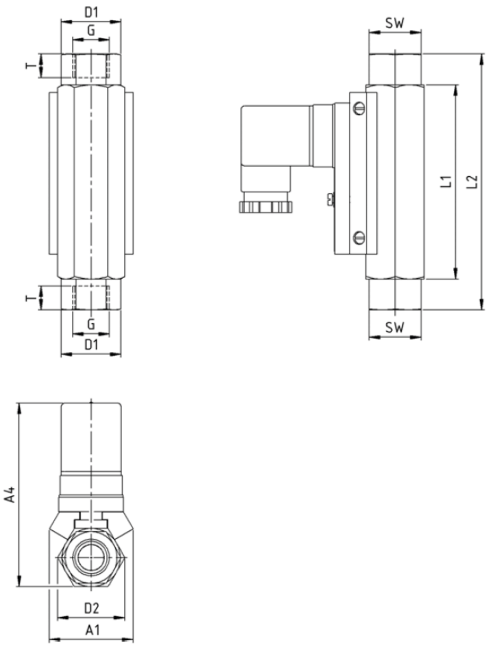
Type	Overall dimensions [mm]												Weight approx.
	G (3)	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g] (4)
DKM-2/2	1/4"	8	24	90	98	10	27,7	31,2	–	–	–	~67	350
	3/8"	10	24	90	118,6	11	27,7	31,2	–	–	–	~67	350
	1/2"	15	27	90	–	14	–	31,2	–	–	–	~67	350
DKM-2/3 DKM-2/7	1/2"	15	27	90	–	14	–	31,2	–	–	–	~67	350

(3) NPT thread on request

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

TECHNICAL DRAWING

For devices with switch contact 30x70



SUMMARY OF TYPES

For devices with switch contact 30x70

Type	**Overall dimensions [mm]**											**Weight approx.**
	G (5)	**DN**	**SW**	**L1**	**L2**	**T**	**D1**	**D2**	**A1**	**A2**	**A3**	**A4**	**[g] (6)**
DKM-2/2	1/4"	8	24	90	98,0	10	27,7	31,2	38,9	–	–	~85	350
	3/8"	10	24	90	118,6	11	27,7	31,2	38,9	–	–	~85	350
	1/2"	15	27	90	–	14	–	31,2	38,9	–	–	~85	350
DKM-2/3 DKM-2/7	1/2"	15	27	90	–	14	–	31,2	38,9	–	–	~85	350

(5) NPT thread on request

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

ELECTRICAL DATA

For devices with switch contact 15x50

Change over (COC) [7]	250V · 1,5A · 50VA [8]
Normally open (NOC)	230V · 3A · 60VA
Change over M12x1 (-20 °C – 85 °C)	125V · 1,5A · 50VA [8]
Normally open M12x1 (-20 °C – 85 °C)	125V · 3A · 60VA
Change over PLC [7]	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 °C < $T_{Service}$ < 45 °C

Marking

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

[7] Available with connector only

[8] Minimum load 3VA

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) [9]

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) [9]

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

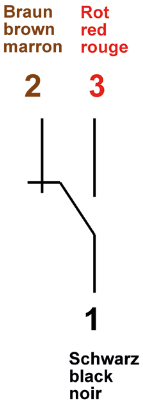
Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

[9] Available as Normally Open Contact (NOC) only

CONNECTION DIAGRAM



ELECTRICAL DATA

For devices with switch contact 30x70

Change over (COC)	250V · 1,5A · 50VA (10)
Normally open (NOC)	250V · 3A · 100VA
Change over M12x1 (-20 °C – 85 °C)	250V · 1,5A · 50VA (10)
Normally open M12x1 (-20 °C – 85 °C)	250V · 3A · 100VA
Change over PLC	250V · 1A · 60VA

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb II T6 & ATEX II 2 D Ex tD A21 IP67 T80 °C

ATEX II 2 G Ex mb II T5 & ATEX II 2 D Ex tD A21 IP67 T100 °C

Change over	250V · 1A · 30VA (10)
Normally open	250V · 2A · 60VA

(10) Minimum load 3VA

ELECTRICAL CONNECTION

For devices with switch contact 30x70

- 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)

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.

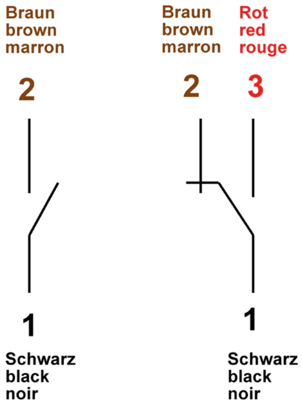
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

DKM/A-1

OIL

OVERVIEW

Operation

- Float measuring principle

Application

- Mechanical engineering
- Central lubrication
- Circulation lubrication
- Transformers

Features

- Universal orientation
- High reliability
- High switch accuracy
- Viscosity compensated
- Infinitely variable switch point adjustment by operator
- EX-version according to ATEX directive available
- UL Recognized version available
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for DKM/A-1 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	250 bar (Brass version)
	300 bar (Stainless steel version)
Pressure drop	0,02 – 0,4 bar
Viscosity range	30 cSt to 600 cSt
Temperature, max.	120 °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 DKM/A-1 Module ATEX.

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

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for Oil, density 0,9 kg/dm^3 (1)**		
	l/min	**gph**	**gpm**
DKM/A-1/2	0,5 – 1,5	8 – 24	
DKM/A-1/4	1 – 4	16 – 63	
DKM/A-1/8	2 – 8	32 – 127	
DKM/A-1/10	3 – 10	48 – 160	
DKM/A-1/15	5 – 15	80 – 240	
DKM/A-1/24	8 – 24	125 – 380	
DKM/A-1/30	10 – 30	160 – 480	
DKM/A-1/45	15 – 45	240 – 710	
DKM/A-1/60	20 – 60	320 – 950	
DKM/A-1/90	30 – 90		8 – 24
DKM/A-1/110	35 – 110		9,5 – 29

(1) The specified measuring- /switch ranges are valid for oils having a density of 0.9 kg/dm^3 and a kinematic viscosity of 30 to 600 cSt, vertical installation of the device and flow direction from bottom to top.
Other installation positions or deviation from the operating densities and operating viscosities will increase the measurement error specified in the data sheet. Excessive operating viscosities will influence or may prevent function of the device.
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.

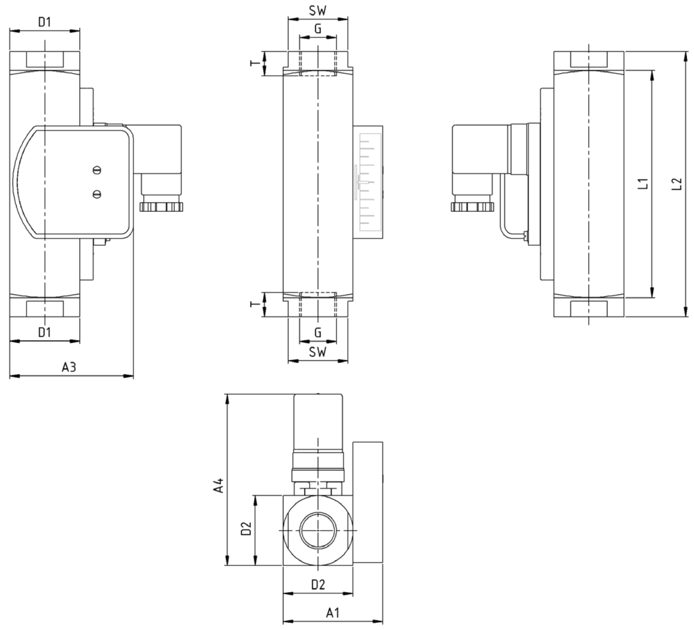
MATERIALS

Brass version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass
Brass version, non-wetted parts	
Display:	Makrolon® / Brass, nickel-plated

Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Display:	Makrolon® / Brass, nickel-plated

(2) Other gasket materials on request

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g]
DKM/A-1/2 DKM/A-1/4	1/4"	8	34	130	152	10	40	40	57	–	70,5	~98	1550
	1/2"	15	34	130	152	14	40	40	57	–	70,5	~98	1475
	3/4"	20	34	130	152	15	40	40	57	–	70,5	~98	1390
	1"	25	40	130	130	17	40	40	57	–	70,5	~98	1210
DKM/A-1/8 DKM/A-1/10 DKM/A-1/15 DKM/A-1/24	1/2"	15	34	130	152	14	40	40	57	–	70,5	~98	1475
	3/4"	20	34	130	152	15	40	40	57	–	70,5	~98	1390
	1"	25	40	130	130	17	40	40	57	–	70,5	~98	1210
DKM/A-1/30 DKM/A-1/45 DKM/A-1/60	3/4"	20	34	130	152	15	40	40	57	–	70,5	~98	1390
	1"	25	40	130	130	17	40	40	57	–	70,5	~98	1210
DKM/A-1/90 DKM/A-1/110	1"	25	40	130	130	17	40	40	57	–	70,5	~98	1210

ELECTRICAL DATA

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

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db

Change over	250V · 1A · 30VA (3)
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (3)
Normally open	250V · 3A · 100VA

(3) 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.

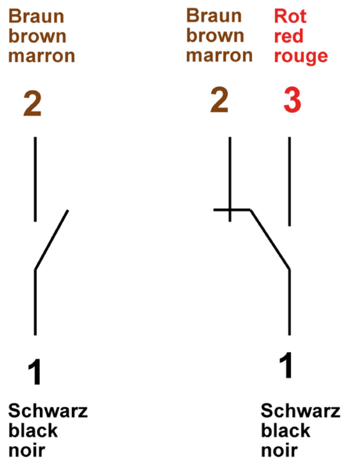
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



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MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

DKM/A-2

OIL

OVERVIEW

Operation

- Float measuring principle

Application

- Mechanical engineering
- Central lubrication
- Circulation lubrication
- Transformers

Features

- Universal orientation
- High reliability
- High switch accuracy
- Viscosity compensated
- Infinitely variable switch point adjustment by operator
- EX-version according to ATEX directive available
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for DKM/A-2 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	300 bar (Brass version)
	350 bar (Stainless steel version)
Pressure drop	0,02 – 0,2 bar
Viscosity range	30 cSt to 600 cSt
Temperature, max.	120 °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 DKM/A-2 Module ATEX.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for Oil, density 0,9 kg/dm^3 (1)**		
	l/min	**gph**	**gpm**
DKM/A-2/2	0,5 – 1,6	8 – 25,5	
DKM/A-2/3	0,8 – 3	13 – 48	
DKM/A-2/7	2 – 7	32 – 111	

(1) The specified measuring- /switch ranges are valid for oils having a density of 0.9 kg/dm^3 and a kinematic viscosity of 30 to 600 cSt, vertical installation of the device and flow direction from bottom to top.
Other installation positions or deviation from the operating densities and operating viscosities will increase the measurement error specified in the data sheet. Excessive operating viscosities will influence or may prevent function of the device.
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.

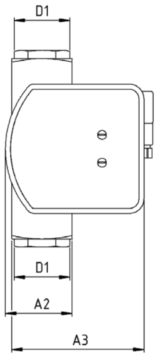
MATERIALS

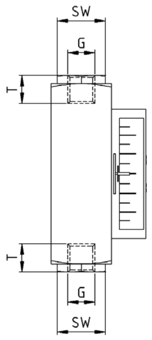
Brass version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optinal NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass
Brass version, non-wetted parts	
Display:	Makrolon® / Brass, nickel-plated

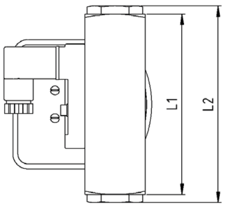
Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optinal NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Display:	Makrolon® / Brass, nickel-plated

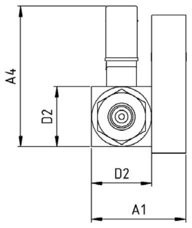
(2) Other gasket materials on request

TECHNICAL DRAWING









SUMMARY OF TYPES

Type	**Overall dimensions [mm]**												**Weight approx.**
	G	**DN**	**SW**	**L1**	**L2**	**T**	**D1**	**D2**	**A1**	**A2**	**A3**	**A4**	**[g]**
DKM/A-2/2	1/4"	8	24	90	98	10	27,5	30	47	33	66	~70	620
	3/8"	10	24	90	119	11	27,5	30	47	33	66	~70	670
	1/2"	15	–	90	–	14	–	30	47	33	66	~70	570
DKM/A-2/3 DKM/A-2/7	1/2"	15	–	90	–	14	–	30	47	33	66	~70	570

ELECTRICAL DATA

For devices with switch contact 15x50

Change over (COC) [3]	250V · 1,5A · 50VA [4]
Normally open (NOC)	230V · 3A · 60VA
Change over M12x1 (-20 °C – 85 °C)	125V · 1,5A · 50VA [4]
Normally open M12x1 (-20 °C – 85 °C)	125V · 3A · 60VA
Change over PLC [3]	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 °C < $T_{Service}$ < 45 °C

Marking

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

[3] Available with connector only

[4] Minimum load 3VA

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) [5]

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) [5]

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

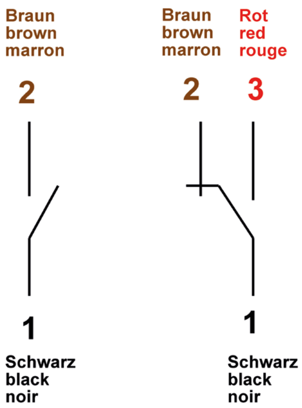
Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

[5] Available as Normally Open Contact (NOC) only

CONNECTION DIAGRAM



MASTERPIECES
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Flow Monitor

DKME-1

OIL

OVERVIEW

Operation

- Float measuring principle

Application

- Mechanical engineering
- Central lubrication
- Circulation lubrication
- Transformers

Features

- Universal orientation
- High reliability
- High switch accuracy
- Wide switch range
- Viscosity compensated
- Infinitely variable switch point adjustment by operator
- EX-version according to ATEX directive available
- UL Recognized version available
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for
  DKME-1 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	250 bar (Brass version)
	300 bar (Stainless steel version)
Pressure drop	0,02 – 0,4 bar
Viscosity range	30 cSt to 600 cSt
Temperature, max.	120 °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 DKME-1 Module ATEX.

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

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for Oil, density 0,9 kg/dm^3 (1)**		
	l/min	**gph**	**gpm**
DKME-1/20	1 – 20	15 – 320	
DKME-1/40	4 – 40	60 – 630	
DKME-1/50	5 – 50	80 – 790	
DKME-1/60	8 – 60	130 – 950	
DKME-1/70	12 – 70		3,2 – 18,5
DKME-1/80	15 – 80		4 – 21,1

(1) The specified measuring- /switch ranges are valid for oils having a density of 0.9 kg/dm^3 and a kinematic viscosity of 30 to 600 cSt, vertical installation of the device and flow direction from bottom to top.
Other installation positions or deviation from the operating densities and operating viscosities will increase the measurement error specified in the data sheet. Excessive operating viscosities will influence or may prevent function of the device.
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.

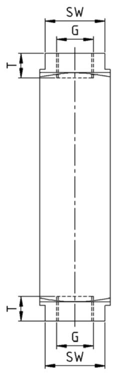
MATERIALS

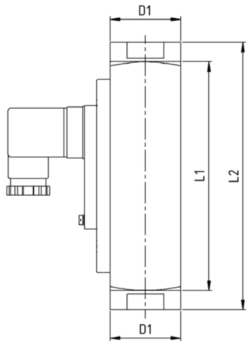
Brass version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass

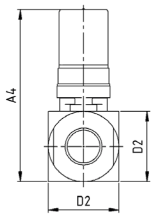
Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571

(2) Other gasket materials on request

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	**DN**	**SW**	**L1**	**L2**	**T**	**D1**	**D2**	**A1**	**A2**	**A3**	**A4**	**[g]**
DKME-1/20 DKME-1/40	1/2"	15	34	130	152	14	40	40	–	–	–	~98	1425
	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1340
	1"	25	40	130	130	17	40	40	–	–	–	~98	1160
DKME-1/50	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1340
DKME-1/60	1"	25	40	130	130	17	40	40	–	–	–	~98	1160
DKME-1/70 DKME-1/80	1"	25	40	130	130	17	40	40	–	–	–	~98	1160

ELECTRICAL DATA

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

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db

Change over	250V · 1A · 30VA (3)
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (3)
Normally open	250V · 3A · 100VA

(3) 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.

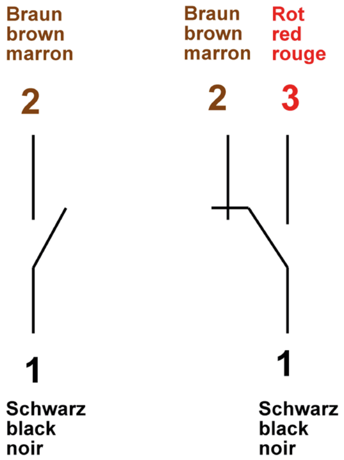
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



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MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

DKME/A-1

OIL

OVERVIEW

Operation

- Float measuring principle

Application

- Mechanical engineering
- Central lubrication
- Circulation lubrication
- Transformers

Features

- Universal orientation
- High reliability
- High switch accuracy
- Wide switch range
- Viscosity compensated
- Infinitely variable switch point adjustment by operator
- EX-version according to ATEX directive available
- UL Recognized version available
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for DKME/A-1 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	250 bar (Brass version)
	300 bar (Stainless steel version)
Pressure drop	0,02 – 0,4 bar
Viscosity range	30 cSt to 600 cSt
Temperature, max.	120 °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 DKME/A-1 Module ATEX.

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

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for Oil, density 0,9 kg/dm^3 (1)**		
	l/min	**gph**	**gpm**
DKME/A-1/20	1 – 20	15 – 320	
DKME/A-1/40	4 – 40	60 – 630	
DKME/A-1/50	5 – 50	80 – 790	
DKME/A-1/60	8 – 60	130 – 950	
DKME/A-1/70	12 – 70		3,2 – 18,5
DKME/A-1/80	15 – 80		4 – 21,1

(1) The specified measuring- /switch ranges are valid for oils having a density of 0.9 kg/dm^3 and a kinematic viscosity of 30 to 600 cSt, vertical installation of the device and flow direction from bottom to top.
Other installation positions or deviation from the operating densities and operating viscosities will increase the measurement error specified in the data sheet. Excessive operating viscosities will influence or may prevent function of the device.
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.

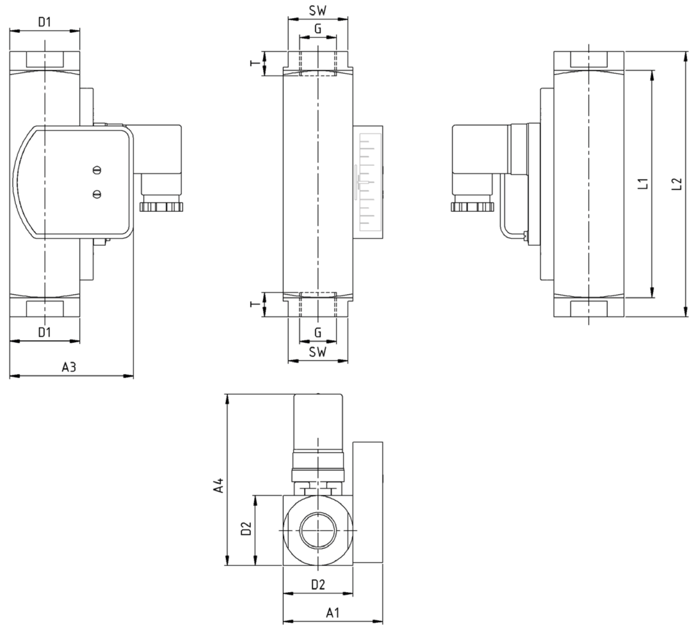
MATERIALS

Brass version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass
Brass version, non-wetted parts	
Display:	Makrolon® / Brass, nickel-plated

Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Display:	Makrolon® / Brass, nickel-plated

(2) Other gasket materials on request

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	**Overall dimensions [mm]**												**Weight approx.**
	G	**DN**	**SW**	**L1**	**L2**	**T**	**D1**	**D2**	**A1**	**A2**	**A3**	**A4**	**[g]**
DKME/A-1/20 DKME/A-1/40	1/2"	15	34	130	152	14	40	40	57	–	70,5	~98	1475
	3/4"	20	34	130	152	15	40	40	57	–	70,5	~98	1390
	1"	25	40	130	130	17	40	40	57	–	70,5	~98	1210
DKME/A-1/50	3/4"	20	34	130	152	15	40	40	57	–	70,5	~98	1390
DKME/A-1/60	1"	25	40	130	130	17	40	40	57	–	70,5	~98	1210
DKME/A-1/70 DKME/A-1/80	1"	25	40	130	130	17	40	40	57	–	70,5	~98	1210

ELECTRICAL DATA

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

EX-version in compliance with ATEX directive

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

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (3)
Normally open	250V · 3A · 100VA

(3) 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.

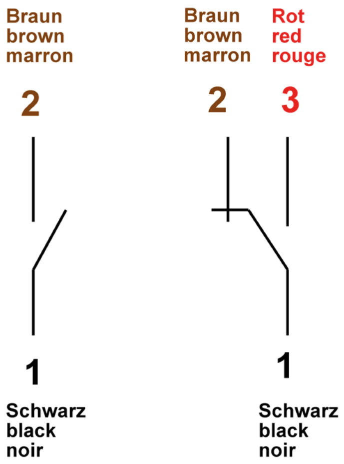
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

DWG-L

AIR

OVERVIEW

Operation

- Float measuring principle

Application

- Mechanical engineering
- Medical engineering
- Pharmaceutical industry
- Chemical industry
- Research & Development

Features

- High reliability
- High switch accuracy
- Wide switch range
- 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 DWG-L Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	10 bar
Pressure drop	0,01 – 0,2 bar
Temperature, max.	80 °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 DWG-L Module ATEX.

For UL Recognized devices, changed operating data apply. Refer to the Operating Instructions for DWG-L Module BASICS.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for Air at 1 bar abs. & 20 °C (1)**		
	Nl/min	**SCFH**	**SCFM**
DWG-L1,5	3 – 30	6,5 – 63,5	
DWG-L3	6 – 60	13 – 127	
DWG-L8	6 – 160	13 – 340	
DWG-L12	20 – 220	42 – 465	
DWG-L18	40 – 360	85 – 760	
DWG-L35	60 – 700		2,1 – 24,7
DWG-L50	60 – 825		2 – 29
DWG-L100	200 – 1600		7 – 56,5

(1) The specified measuring- / switch ranges are valid for air having a density of 1.205 kg/m^3, 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^3
Standard density for air (at 0 °C and 1.013 bar (absolute value): 1.293 kg/m^3
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.

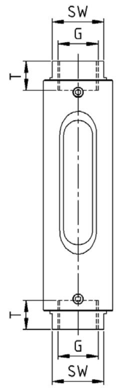
MATERIALS

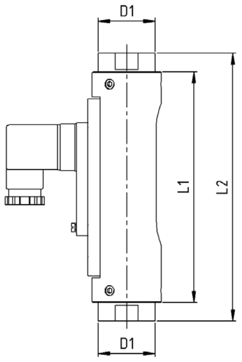
Brass version, wetted parts	
Float:	POM
Sight glass:	DURAN® 50
Gaskets:	NBR (optional FKM, EPDM) (2)
all other wetted parts:	Brass, nickel-plated
Brass version, non-wetted parts	
Device housing:	Aluminium, anodized

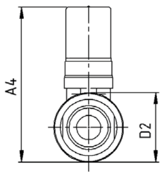
Stainless steel version, wetted parts	
Float:	POM
Sight glass:	DURAN® 50
Gaskets:	FKM (optional NBR, EPDM) (2)
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Device housing:	Aluminium, anodized

(2) Other gasket materials on request

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	**Overall dimensions [mm]**												**Weight approx.**
	G	**DN**	**SW**	**L1**	**L2**	**T**	**D1**	**D2**	**A1**	**A2**	**A3**	**A4**	**[g]**
DWG-L1,5 DWG-L3 DWG-L8 DWG-L12	1/4" 3/8" 1/2"	8 10 15	32 32 32	121 121 121	132 135 135	10 15 14	35 35 35	43 43 43	– – –	– – –	– – –	~96 ~96 ~96	800 800 800
DWG-L18	1/2"	15	32	143	161	14	35	43	–	–	–	~96	800
	3/4"	20	32	143	166	15	35	43	–	–	–	~96	960
DWG-L35	3/4"	20	41	143	163	15	45	50	–	–	–	~104	1450
DWG-L50	1"	25	41	143	163	17	45	50	–	–	–	~104	1450
DWG-L100	1"	25	41	159	205	17	45	50	–	–	–	~104	1450

ELECTRICAL DATA

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

EX-version in compliance with ATEX directive

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

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (3)
Normally open	250V · 3A · 100VA

(3) 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.

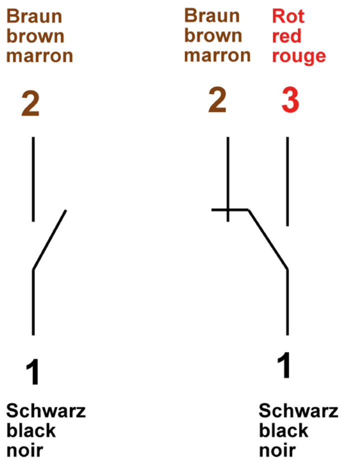
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

RVO/U-L1

AIR

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**

OPERATING DATA

Operating pressure, max.	10 bar
Pressure drop	0,02 – 0,4 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-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

MEASURING RANGES

Type	**Switch range for air at 1 bar abs. & 20 °C (1)**		
	Nl/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

(1) The specified measuring- / switch ranges are valid for air having a density of 1.205 kg/m^3, 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^3
Standard density for air (at 0 °C and 1.013 bar (absolute value): 1.293 kg/m^3
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.

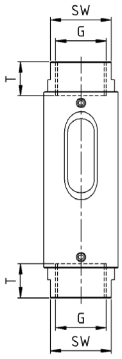
MATERIALS

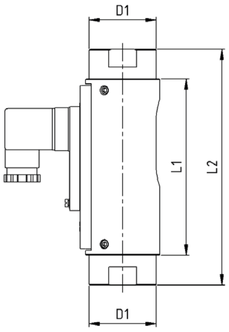
Brass version, wetted parts	
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	NBR (optional FKM, EPDM) (2)
Magnets:	Hard ferrite
all other wetted parts:	Brass, nickel-plated
Brass version, non-wetted parts	
Device housing:	Aluminium, anodized

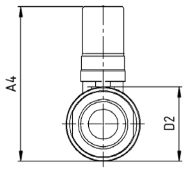
Stainless steel version, wetted parts	
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Device housing:	Aluminium, anodized

(2) Other gasket materials on request

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g]
RVO/U-L10080	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-L10130	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-L10420	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-L10625	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

ELECTRICAL DATA

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

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db

Change over	250V · 1A · 30VA (3)
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (3)
Normally open	250V · 3A · 100VA

(3) 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.

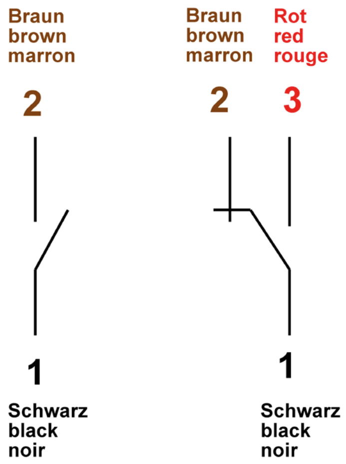
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

RVO/U-L2

AIR

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-L2 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	16 bar
Pressure drop	0,02 – 0,3 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-L2 Module ATEX.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for air at 1 bar abs. & 20 °C (1)**		
	Nl/min	**SCFH**	**SCFM**
RVO/U-L20012	3 – 12	6,5 – 25	
RVO/U-L20030	7 – 30	15 – 64	
RVO/U-L20040	12 – 40	25 – 85	
RVO/U-L20080	20 – 80		0,7 – 2,8
RVO/U-L20125	28 – 125		1 – 4,4
RVO/U-L20200	50 – 200		1,8 – 7
RVO/U-L2/15	100 – 420		3,5 – 14,8
RVO/U-L20500	200 – 500		7,1 – 17,7

(1) The specified measuring- / switch ranges are valid for air having a density of 1.205 kg/m^3, 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^3
Standard density for air (at 0 °C and 1.013 bar (absolute value): 1.293 kg/m^3
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.

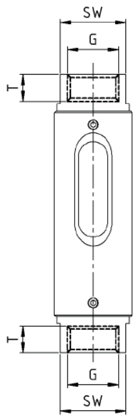
MATERIALS

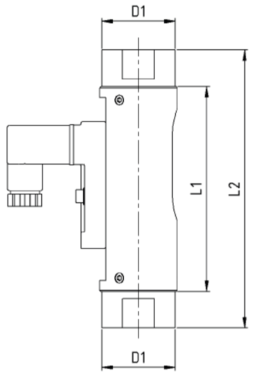
Brass version, wetted parts	
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	NBR (optional FKM, EPDM) (2)
Magnets:	Hard ferrite
all other wetted parts:	Brass, nickel-plated
Brass version, non-wetted parts	
Device housing:	Aluminium, anodized

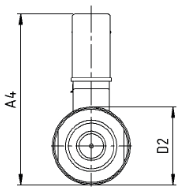
Stainless steel version, wetted parts	
Spring:	1.4571
Sight glass:	DURAN® 50
Gaskets:	FKM (optional NBR, EPDM) (2)
Magnets:	Hard ferrite
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Device housing:	Aluminium, anodized

(2) Other gasket materials on request

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	**Overall dimensions [mm]**												**Weight approx.**
	G [3]	**DN**	**SW**	**L1**	**L2**	**T**	**D1**	**D2**	**A1**	**A2**	**A3**	**A4**	**[g]** [4]
RVO/U-L20012	1/2"	15	27	84	114	14	30	32	–	–	–	~70	300
RVO/U-L20030													
RVO/U-L20040													
RVO/U-L20080													
RVO/U-L20125													
RVO/U-L20200													
RVO/U-L2/15													
RVO/U-L20500													

(3) NPT thread on request

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

ELECTRICAL DATA

For devices with switch contact 15x50

Change over (COC)	250V · 1,5A · 50VA (5)
Normally open (NOC)	230V · 3A · 60VA
Change over M12x1 (-20 °C – 85 °C)	125V · 1,5A · 50VA (5)
Normally open M12x1 (-20 °C – 85 °C)	125V · 3A · 60VA
Change over PLC	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 °C < $T_{Service}$ < 45 °C

Marking

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

---

(5) Minimum load 3VA

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) (6)

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) (6)

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

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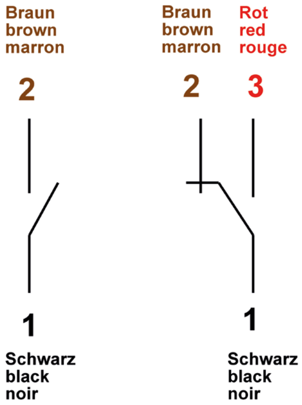
(6) Available as Normally Open Contact (NOC) only

CONNECTION DIAGRAM



RVO/U-L2 4 0003 10-17 E M

MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

RVO/U-L4

AIR

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]	
	Nl/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.

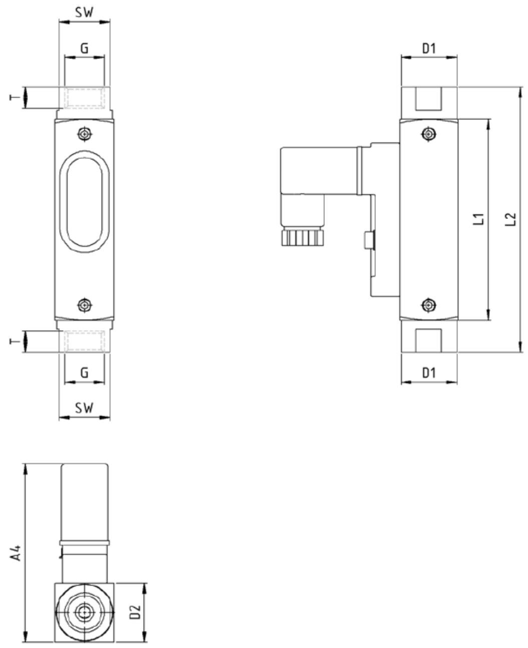
MATERIALS

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

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

[2] Other gasket materials on request

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G (3)	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g] (4)
RVO/U-L40001	1/4"	8	17	68	90	10	19	20	–	–	–	~60	140
RVO/U-L40002													
RVO/U-L40003													
RVO/U-L40005													
RVO/U-L40008													
RVO/U-L40012													
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) (5)	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

Marking

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

(5) Available with connector only

(6) -20 °C – 85 °C

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

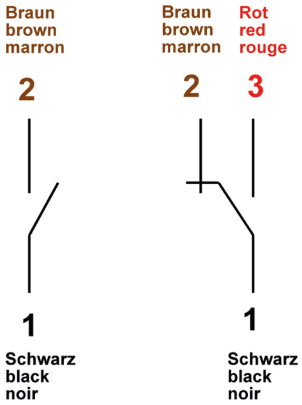
Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

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

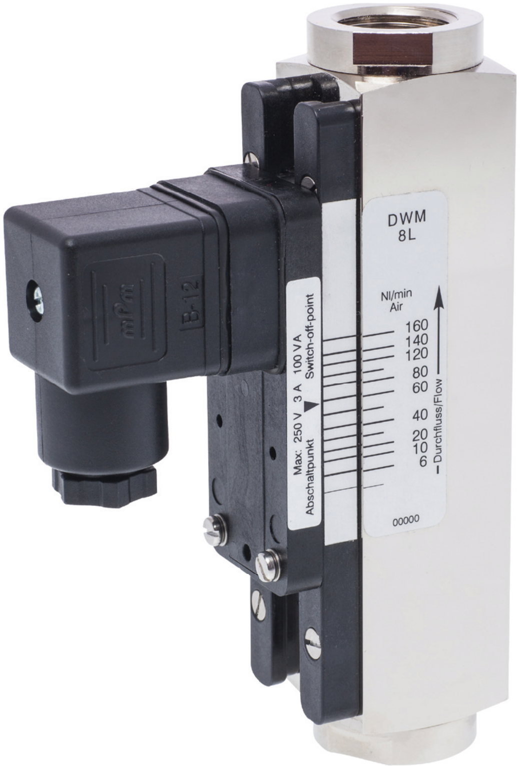
CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor

DWM-L



AIR

OVERVIEW

Operation

- Float measuring principle

Application

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

Features

- High reliability
- High switch accuracy
- Wide switch range
- Infinitely variable switch point adjustment by operator
- EX-version according to ATEX directive available
- UL Recognized version available
- High pressure resistance
- Threaded connection, special thread on request

Installation information

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

DWM-L 1 0005 12-15 E M

OPERATING DATA

Operating pressure, max.	200 bar (Brass version)
	300 bar (Stainless steel version)
Pressure drop	0,02 – 0,4 bar
Temperature, max.	80 °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 DWM-L Module ATEX.

For UL Recognized devices, changed operating data apply. Refer to the Operating Instructions for DWM-L Module BASICS.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for Air at 1 bar abs. & 20 °C (1)**		
	Nl/min	**SCFH**	**SCFM**
DWM-L1,5	1 – 28	2 – 59	
DWM-L3	4 – 60	8 – 127	
DWM-L8	6 – 160	15 – 340	
DWM-L12	20 – 240	40 – 510	
DWM-L18	40 – 360	80 – 760	
DWM-L50	60 – 700		2 – 24,5
DWM-L100	200 – 1450		7 – 51

(1) The specified measuring- / switch ranges are valid for air having a density of 1.205 kg/m^3, 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^3
Standard density for air (at 0 °C and 1.013 bar (absolute value): 1.293 kg/m^3
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 at decreasing flow.
Other measuring- /switch ranges are available upon request.

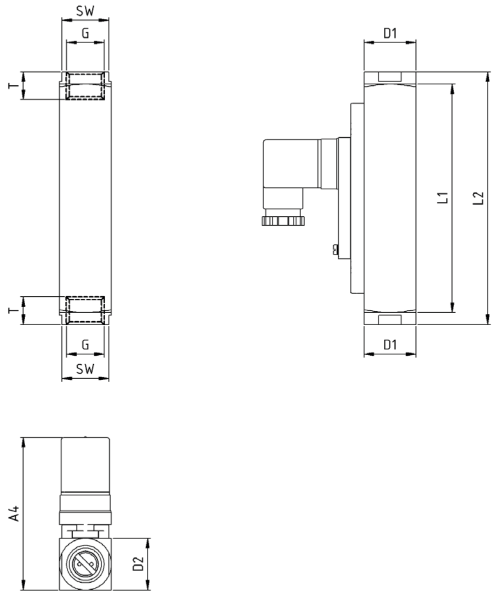
MATERIALS

Brass version, wetted parts	
Float:	POM
Gaskets:	NBR (optional FKM, EPDM) (2)
Threaded rings:	
only DWM-L50 (1“), DWM-L100 (1“)	Brass
Centering disc:	
only DWM-L50	Brass, nickel-plated
Process connections:	
not for DWM-L50 (1“), DWM-L100 (1“)	Brass, nickel-plated
all other wetted parts:	Brass, nickel-plated

Stainless steel version, wetted parts	
Float:	POM
Gaskets:	FKM (optional NBR, EPDM) (2)
Threaded rings:	
only DWM-L50 (1“), DWM-L100 (1“)	1.4571
Centering disc:	
only DWM-L50	1.4571
Process connections:	
not for DWM-L50 (1“), DWM-L100 (1“)	1.4571
all other wetted parts:	1.4571

(2) Other gasket materials on request

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	Overall dimensions [mm]												Weight approx.
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g]
DWM-L1,5													800
DWM-L3	1/4"	8	27	117	131	10	30	30	–	–	–	~88	800
	3/8"	10	27	117	131	15	30	30	–	–	–	~88	
DWM-L8	1/2"	15	27	117	131	14	30	30	–	–	–	~88	800
DWM-L12													800
DWM-L18	1/2"	15	27	132	146	14	30	30	–	–	–	~88	800
	3/4"	20	32	132	174	15	35	30	–	–	–	~88	960
DWM-L50	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1450
	1"	25	40	156	–	17	40	40	–	–	–	~98	1450
DWM-L100	1"	25	40	200	–	17	40	40	–	–	–	~98	1450

ELECTRICAL DATA

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

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db

Change over	250V · 1A · 30VA (3)
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (3)
Normally open	250V · 3A · 100VA

(3) 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.

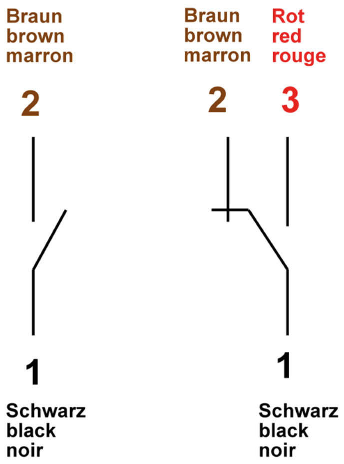
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



meister®

MASTERPIECES
MADE IN GERMANY

Flow Monitor & Flow Indicator

DWM/A-L

AIR

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OVERVIEW

Operation

- Float measuring principle

Application

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

Features

- High reliability
- High switch accuracy
- Wide switch range
- Infinitely variable switch point adjustment by operator
- EX-version according to ATEX directive available
- UL Recognized version available
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for DWM/A-L Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	200 bar (Brass version) 300 bar (Stainless steel version)
Pressure drop	0,02 – 0,4 bar
Temperature, max.	80 °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 DWM/A-L Module ATEX.

For UL Recognized devices, changed operating data apply. Refer to the Operating Instructions for DWM/A-L Module BASICS.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for Air at 1 bar abs. & 20 °C** [(1)]		
	Nl/min	**SCFH**	**SCFM**
DWM/A-L1,5	1 – 28	2 – 59	
DWM/A-L3	4 – 60	8 – 127	
DWM/A-L8	6 – 160	15 – 340	
DWM/A-L12	20 – 240	40 – 510	
DWM/A-L18	40 – 360	80 – 760	
DWM/A-L50	60 – 700		2 – 24,5
DWM/A-L100	200 – 1450		7 – 51

(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 at decreasing flow.
Other measuring- /switch ranges are available upon request.

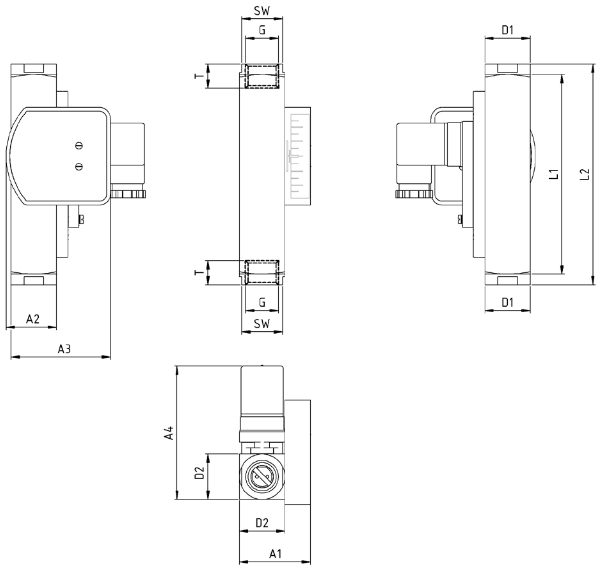
MATERIALS

Brass version, wetted parts	
Float:	POM
Gaskets:	NBR (optional FKM, EPDM) (2)
Threaded rings: only DWM/A-L50 (1“), DWM/A-L100 (1“)	Brass
Centering disc: only DWM/A-L50	Brass, nickel-plated
Process connections: not for DWM/A-L50 (1“), DWM/A-L100 (1“)	Brass, nickel-plated
all other wetted parts:	Brass, nickel-plated
Brass version, non-wetted parts	
Display:	Makrolon® Brass, nickel-plated

Stainless steel version, wetted parts	
Float:	POM
Gaskets:	FKM (optoinal NBR, EPDM) (2)
Threaded rings: only DWM/A-L50 (1“), DWM/A-L100 (1“)	1.4571
Centering disc: only DWM/A-L50	1.4571
Process connections: not for DWM/A-L50 (1“), DWM/A-L100 (1“)	1.4571
all other wetted parts:	1.4571
Stainless steel version, non-wetted parts	
Display:	Makrolon® Brass, nickel-plated

(2) Other gasket materials on request

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	**Overall dimensions [mm]**												**Weight approx.**
	G	**DN**	**SW**	**L1**	**L2**	**T**	**D1**	**D2**	**A1**	**A2**	**A3**	**A4**	**[g]**
DWM/A-L1,5													850
DWM/A-L3	1/4"	8	27	117	131	10	30	30	47	33,5	65,5	~88	850
	3/8"	10	27	117	131	15	30	30	47	33,5	65,5	~88	
DWM/A-L8	1/2"	15	27	117	131	14	30	30	47	33,5	65,5	~88	850
DWM/A-L12													850
DWM/A-L18	1/2"	15	27	132	146	14	30	30	47	33,5	65,5	~88	850
	3/4"	20	32	132	174	15	35	30	47	33,5	65,5	~88	1010
DWM/A-L50	3/4"	20	34	130	152	15	40	40	57	–	70,5	~98	1500
	1"	25	40	156	–	17	40	40	57	–	70,5	~98	1500
DWM/A-L100	1"	25	40	200	–	17	40	40	57	–	70,5	~98	1500

ELECTRICAL DATA

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

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C

Change over	250V · 1A · 30VA [3]
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA [3]
Normally open	250V · 3A · 100VA

[3] 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.

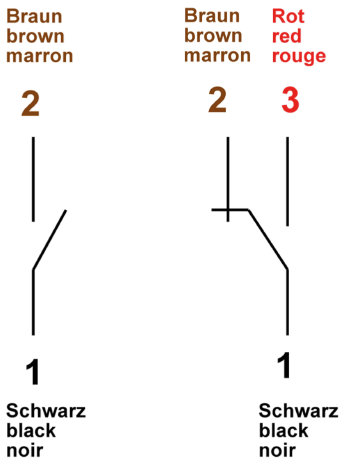
Power supply

Not required (potential-free reed contacts)

Connector types

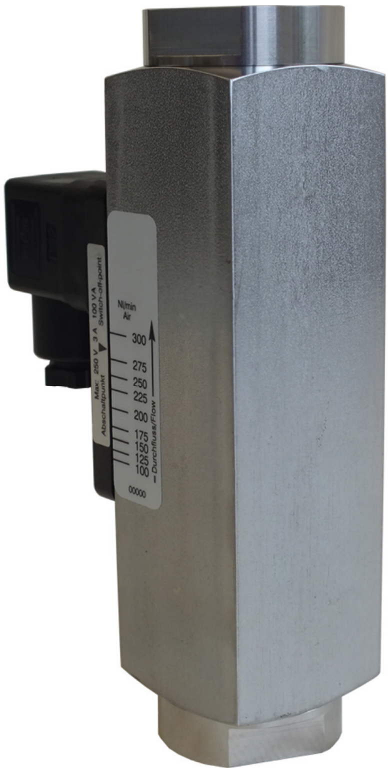
Other connector types or cable lengths on request

CONNECTION DIAGRAM



Flow Monitor

RVM/U-L1



AIR

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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
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for RVM/U-L1 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	250 bar (Brass version)
	300 bar (Stainless steel version)
Pressure drop	0,02 – 0,4 bar
Temperature, max.	120 °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 RVM/U-L1 Module ATEX.

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

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for Air at 1 bar abs. & 20 °C** (1)		
	Nl/min	**SCFH**	**SCFM**
RVM/U-L10180	60 – 180	125 – 380	
RVM/U-L10300	100 – 300	210 – 640	
RVM/U-L10650	200 – 650		7 – 23

(1) The specified measuring- / switch ranges are valid for air having a density of 1.205 kg/m^3, 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^3
Standard density for air (at 0 °C and 1.013 bar (absolute value): 1.293 kg/m^3
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
Gaskets: (2)	NBR (optional FKM, EPDM) (3)
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass

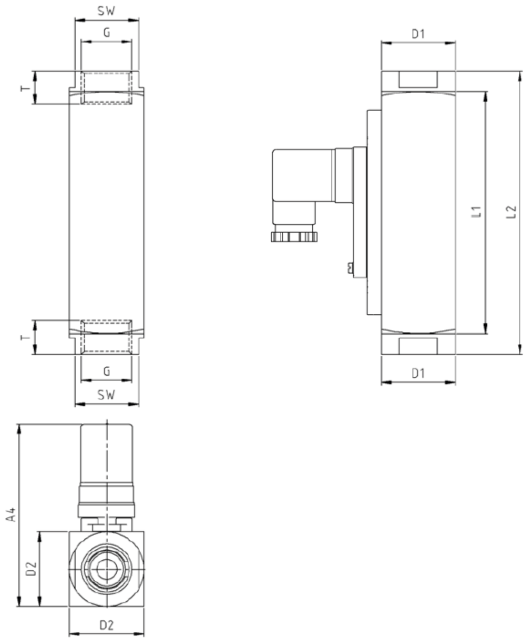
Stainless steel version, wetted parts	
Spring:	1.4571
Gaskets: (2)	FKM (optional NBR, EPDM) (3)
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571

(2) Only with process connections

(3) Other gasket materials on request

TECHNICAL DRAWING

Stainless steel version (4-sided)



SUMMARY OF TYPES

Stainless steel version (4-sided)

Type	Overall dimensions [mm]											Weight approx.
	G	**DN**	**SW**	**L1**	**L2**	**T**	**D1**	**D2**	**A1**	**A2**	**A3**	**A4**	**[g]**
RVM/U-L10080	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1320
	1"	25	40	130	–	17	–	40	–	–	–	~98	1130
RVM/U-L10300	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1320
	1"	25	40	130	–	17	–	40	–	–	–	~98	1130
RVM/U-L10650	3/4"	20	34	130	152	15	40	40	–	–	–	~98	1320
	1"	25	40	130	–	17	–	40	–	–	–	~98	1130

ELECTRICAL DATA

Change over (COC)	250V · 1,5A · 50VA (4)
Normally open (NOC)	250V · 3A · 100VA
Change over M12x1 (-20 °C – 85 °C)	250V · 1,5A · 50VA (4)
Normally open M12x1 (-20 °C – 85 °C)	250V · 3A · 100VA
Change over PLC	250V · 1A · 60VA

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db

Change over	250V · 1A · 30VA (4)
Normally open	250V · 2A · 60VA

UL Recognized switch contacts

Change over	240V · 1,5A · 50VA (4)
Normally open	250V · 3A · 100VA

(4) 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.

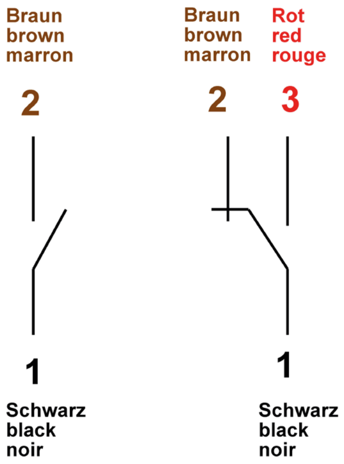
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

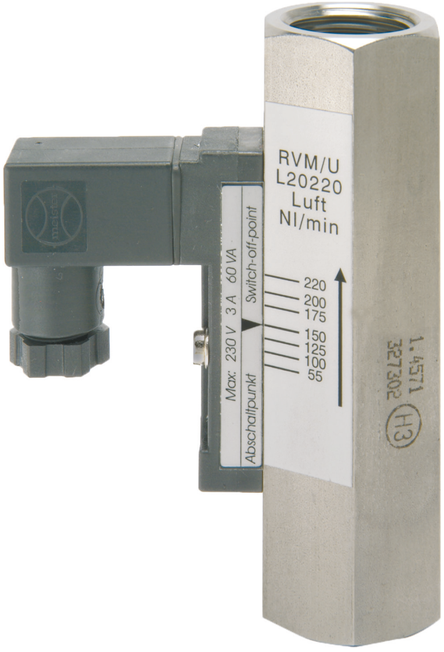
CONNECTION DIAGRAM



MASTERPIECES
MADE IN GERMANY

Flow Monitor

RVM/U-L2



AIR

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
- High pressure resistance
- Threaded connection, special thread on request

Installation information

- The operating instructions for RVM/U-L2 Module BASICS / ...ATEX must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	300 bar (Brass version) 350 bar (Stainless steel version)
Pressure drop	0,02 – 0,3 bar
Temperature, max.	120 °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 RVM/U-L2 Module ATEX.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for air at 1 bar abs. & 20 °C** [1]		
	Nl/min	**SCFH**	**SCFM**
RVM/U-L20010	2,5 – 10	5,5 – 21	
RVM/U-L20020	5,5 – 20	12 – 42	
RVM/U-L20030	8 – 30	17 – 64	
RVM/U-L20035	10 – 35	21 – 74	
RVM/U-L20090	45 – 90	95 – 190	
RVM/U-L20220	55 – 220	115 – 465	
RVM/U-L20240	65 – 240	140 – 510	
RVM/U-L20300	80 – 300	170 – 640	
RVM/U-L20525	140 – 525		5 – 18,5

(1) The specified measuring- / switch ranges are valid for air having a density of 1.205 kg/m^3, 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^3
Standard density for air (at 0 °C and 1.013 bar (absolute value): 1.293 kg/m^3
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.

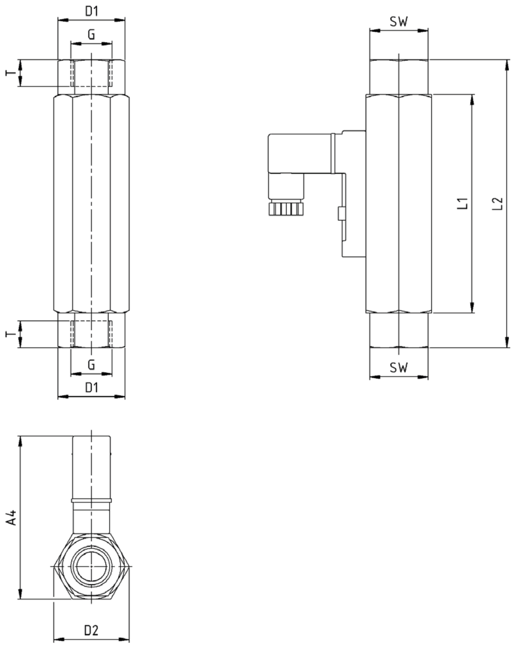
MATERIALS

Brass version, wetted parts	
Spring:	1.4571
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass

Stainless steel version, wetted parts	
Spring:	1.4571
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571

TECHNICAL DRAWING

For devices with switch contact 15x50



SUMMARY OF TYPES

For devices with switch contact 15x50

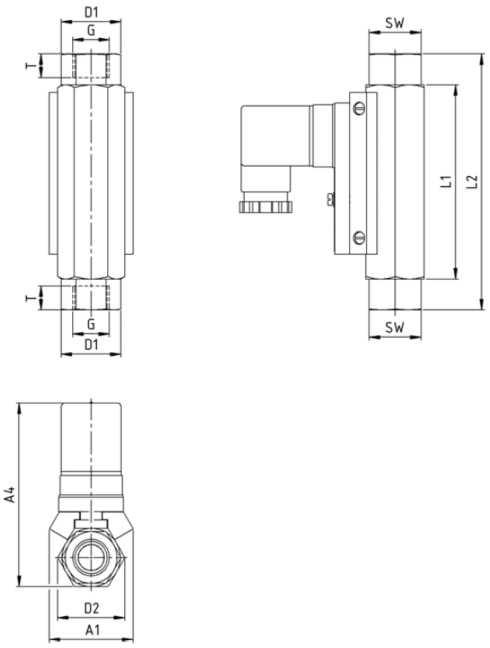
Type	Overall dimensions [mm]											Weight approx.
	G (2)	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g] (3)
RVM/U-L20010	1/2"	15	27	90	–	14	–	31,2	–	–	–	~67	350
RVM/U-L20020													
RVM/U-L20030													
RVM/U-L20035													
RVM/U-L20090													
RVM/U-L20220													
RVM/U-L20240													
RVM/U-L20300													
RVM/U-L20525													

(2) NPT thread on request

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

TECHNICAL DRAWING

For devices with switch contact 30x70



SUMMARY OF TYPES

For devices with switch contact 30x70

Type	Overall dimensions [mm]											Weight approx.
	G [4]	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	ca. [g] [5]
RVM/U-L20010	1/2"	15	27	90	–	14	–	31,2	38,9	–	–	~85	350
RVM/U-L20020													
RVM/U-L20030													
RVM/U-L20035													
RVM/U-L20090													
RVM/U-L20220													
RVM/U-L20240													
RVM/U-L20300													
RVM/U-L20525													

[4] NPT thread on request

[5] Connection cable weight, 2 m approx. 80 g

ELECTRICAL DATA

For devices with switch contact 15x50

Change over (COC)	250V · 1,5A · 50VA (6)
Normally open (NOC)	230V · 3A · 60VA
Change over M12x1 (-20 °C – 85 °C)	125V · 1,5A · 50VA (6)
Normally open M12x1 (-20 °C – 85 °C)	125V · 3A · 60VA
Change over PLC	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 °C < $T_{Service}$ < 45 °C

Marking

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

---

(6) Minimum load 3VA

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) (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)

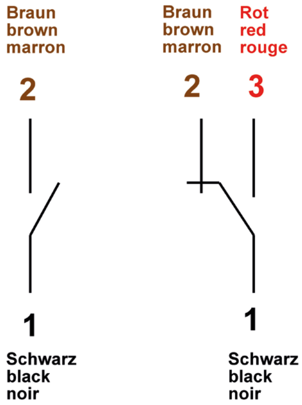
Connector types

Other connector types or cable lengths on request

---

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

CONNECTION DIAGRAM



ELECTRICAL DATA

For devices with switch contact 30x70

Change over (COC)	250V · 1,5A · 50VA [8]
Normally open (NOC)	250V · 3A · 100VA
Change over M12x1 (-20 °C – 85 °C)	250V · 1,5A · 50VA [8]
Normally open M12x1 (-20 °C – 85 °C)	250V · 3A · 100VA
Change over PLC	250V · 1A · 60VA

EX-version in compliance with ATEX directive

ATEX II 2 G Ex mb II T6 & ATEX II 2 D Ex tD A21 IP67 T80 °C

ATEX II 2 G Ex mb II T5 & ATEX II 2 D Ex tD A21 IP67 T100 °C

Change over	250V · 1A · 30VA [8]
Normally open	250V · 2A · 60VA

[8] Minimum load 3VA

ELECTRICAL CONNECTION

For devices with switch contact 30x70

- 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)

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.

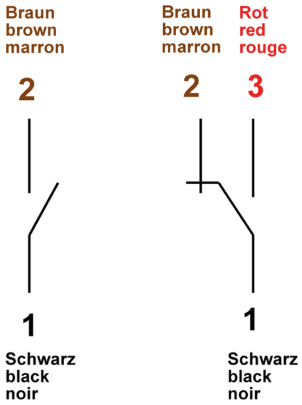
Power supply

Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

CONNECTION DIAGRAM



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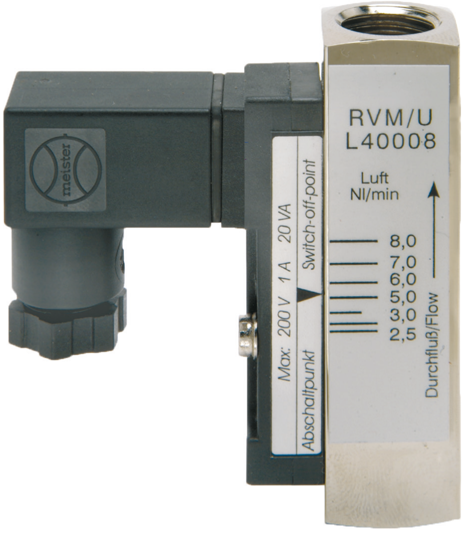
Flow Monitor

RVM/U-L4



AIR

Ex

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
- High pressure resistance
- Threaded connection, special thread on request

Installation information

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

OPERATING DATA

Operating pressure, max.	300 bar (Brass version)
	350 bar (Stainless steel version)
Pressure drop	0,02 – 0,2 bar
Temperature, max.	120 °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 RVM/U-L4 Module ATEX.

Download: www.meister-flow.com

MEASURING RANGES

Type	**Switch range for air at 1 bar abs. & 20 °C (1)**		
	Nl/min	**SCFH**	**SCFM**
RVM/U-L40002	0,6 – 2,2	1,3 – 4,7	
RVM/U-L40006	1,7 – 6	3,5 – 12,7	
RVM/U-L40008	2,5 – 8	5,3 – 17	
RVM/U-L40012	3 – 12	6,5 – 25,5	
RVM/U-L4/06	3 – 22	6,5 – 47	
RVM/U-L40024	7 – 24	15 – 51	
RVM/U-L40034	12 – 34	25 – 72	
RVM/U-L4/2	16 – 56	34 – 118	
RVM/U-L4/3	20 – 80	42 – 170	

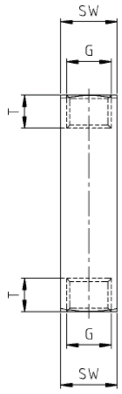
(1) The specified measuring- / switch ranges are valid for air having a density of 1.205 kg/m^3, vertical installation of the device and flow direction from bottom to top.
Other installation positions or deviation from the operating densities will increase the measurement error specified in the data sheet.
Operating density for air at 20 °C and 1.013 bar (absolute value): 1.205 kg/m^3
Standard density for air (at 0 °C and 1.013 bar (absolute value): 1.293 kg/m^3
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.

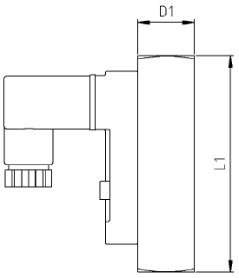
MATERIALS

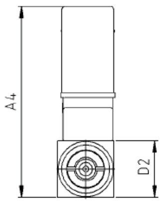
Brass version, wetted parts	
Spring:	1.4571
Magnets:	Hard ferrite
Device body:	Brass, nickel-plated
all other wetted parts:	Brass

Stainless steel version, wetted parts	
Spring:	1.4571
Magnets:	Hard ferrite
Device body:	1.4571
all other wetted parts:	1.4571

TECHNICAL DRAWING







SUMMARY OF TYPES

Type	Overall dimensions [mm]											Weight approx.
	G (2)	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	[g] (3)
RVM/U-L40002	1/4"	8	17	65	–	10	17	17	–	–	–	~57	140
RVM/U-L40006													
RVM/U-L40008													
RVM/U-L40012													
RVM/U-L4/06													
RVM/U-L40024													
RVM/U-L40034													
RVM/U-L4/2													
RVM/U-L4/3													

(2) NPT thread on request

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

ELECTRICAL DATA

Change over (COC) (4)	150V AC/DC · 1A · 20VA
Normally open (NOC)	140V AC · 0,7A · 20VA
	200V DC · 1A · 20VA
Change over M12x1 (5)	125V AC/DC · 1A · 20VA
Normally open M12x1 (5)	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

$-5\ °C < T_{Service} < 45\ °C$

Marking

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

(4) Available with connector only

(5) -20 °C – 85 °C

ELECTRICAL CONNECTION

- Connector in compliance with EN 175301-803, Form C (DIN 43650, Form C)
- Connector M12x1
- Cable (1 m) (6)

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) (6)

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

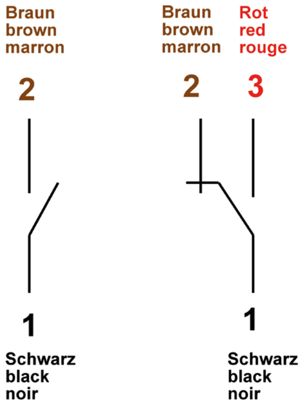
Not required (potential-free reed contacts)

Connector types

Other connector types or cable lengths on request

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

CONNECTION DIAGRAM



MASTERPIECES
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Flow Limiting

BA, BB, BC

H2O

OVERVIEW

Operation

- Mechanical flow limiter

Application

- Water treatment
- Irrigation
- Sanitary installations

Features

- Universal orientation
- High reliability
- No power supply required
- Suitable for hot water
- Threaded connection

Installation information

- The operating instructions for BA, BB, BC must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Control pressure	2 - 10 bar
Operating pressure, max.	10 bar
Temperature, max.	200 °C
Measuring accuracy	up to 2 l/min ± 15 % of nominal value
	at 3 l/min and higher ± 10 % of nominal value

FLOW

Type	**Flow for H_2O at 20 °C**	
	Q_{min}	**Q_{max}**
	l/min	**l/min**
BA [1/2"]	1	30
BA [3/4"]	1	30
BB [1/2"]	1	30
BB [3/4"]	1	30
BC [3/4"]	1	30
BC [1 1/2"]	3	90
BC [2"]	5	150
BC [2 1/2"]	7	210
BC [3"]	9	270

MATERIALS

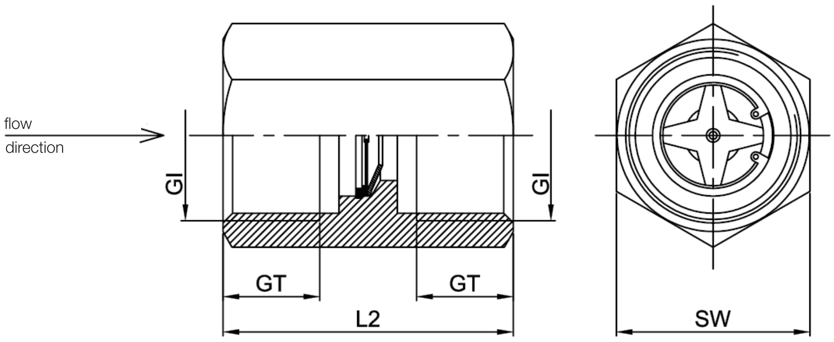
Brass version, wetted parts	
Device body:	Brass
Regulating star:	1.4310
Cone:	1.4301
Rivet:	1.4301
Retaining ring:	1.4122

Stainless steel version, wetted parts	
Device body:	1.4305 (1)
Regulating star:	1.4310
Cone:	1.4301
Rivet:	1.4301
Retaining ring:	1.4122

(1) BC 1.4571

TECHNICAL DRAWING

BA



SUMMARY OF TYPES

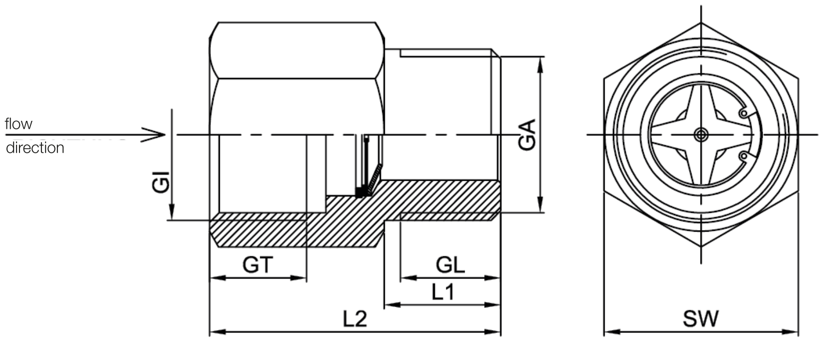
BA

Type	Overall dimensions [mm]				Weight approx.
	GI	GT	SW	L2	[g]
BA [1/2"]	1/2"	14	27	43	72
BA [3/4"]	3/4"	15	30	45	125

Flow: 1 – 30 l/min in 1 l/min increments

TECHNICAL DRAWING

BB



SUMMARY OF TYPES

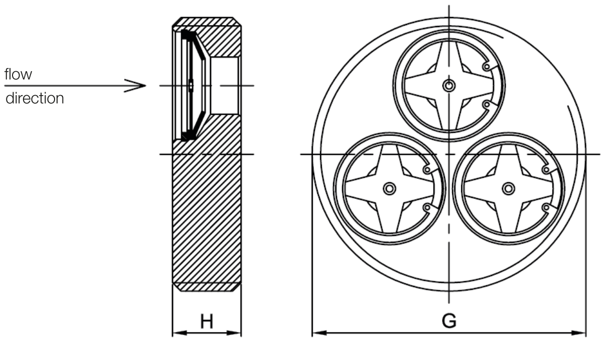
BB

Type	Overall dimensions [mm]							Weight approx.
	GI	GA	GT	GL	SW	L1	L2	[g]
BB [1/2"]	1/2"	1/2"	14	14	27	16	43	104
BB [3/4"]	3/4"	3/4"	15	15,5	30	18	45	135

Flow: 1 – 30 l/min in 1 l/min increments

TECHNICAL DRAWING

BC



SUMMARY OF TYPES

BC

Type	Overall dimensions [mm]				Weight approx.
	G	H	Q_{min} (2)	Q_{max} (2)	[g]
BC [3/4"]	3/4"	12	1	30	25
BC [1 1/2"]	1 1/2"	12	3	90	104
BC [2"]	2"	15	5	150	190
BC [2 1/2"]	2 1/2"	15	7	210	290
BC [3"]	3"	15	9	270	375

(2) from Q_{min} to Q_{max} in 1 l/min increments

MASTERPIECES
MADE IN GERMANY

Flow Limiting

BF

H_2O

OVERVIEW

Operation

- Mechanical flow limiter

Application

- Water treatment
- Irrigation
- Sanitary installations

Features

- Universal orientation
- High reliability
- No power supply required
- Suitable for hot water
- Threaded connection

Installation information

- The operating instructions for BF must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Control pressure	2 - 10 bar
Operating pressure, max.	10 bar
Temperature, max.	200 °C
Measuring accuracy	up to 2 l/min ± 15 % of nominal value at 3 l/min and higher ± 10 % of nominal value

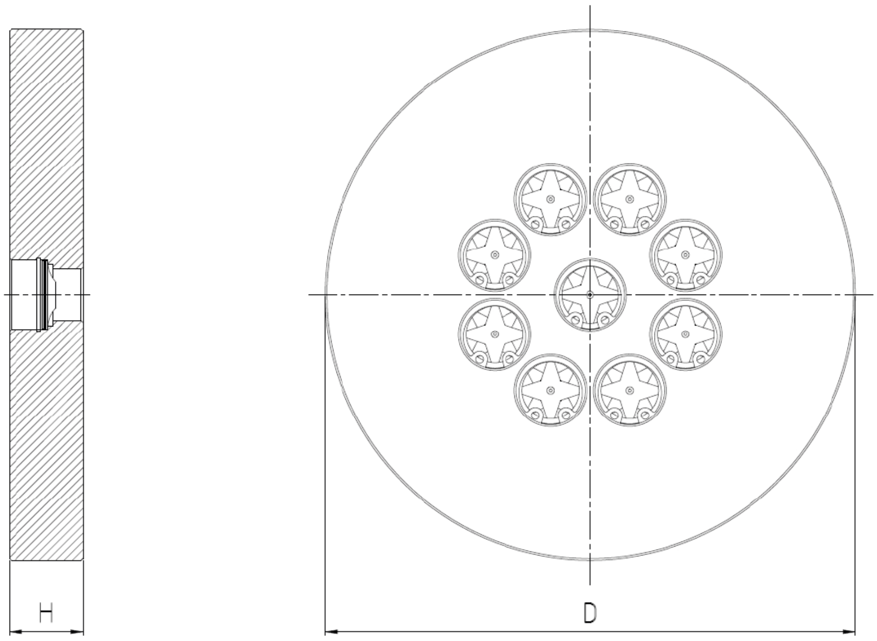
FLOW

Type	**Flow for H_2O at 20 °C**	
	Q_{min}	**Q_{max}**
	l/min	**l/min**
BF [DN 40]	2	60
BF [DN 50]	4	120
BF [DN 65]	7	210
BF [DN 80]	9	270
BF [DN 100]	14	420

MATERIALS

Stainless steel version, wetted parts	
Device body:	1.4571
Regulating star:	1.4310
Cone:	1.4301
Rivet:	1.4301
Retaining ring:	1.4122

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	Overall dimensions [mm]							
	Nennweite	Standard	Number of	Pressure rating	Flow [l/min]		H	D
			Regulating stars	Device body	min.	max.	[mm]	[mm]
BF	DN 40	DIN / ASME	2	PN 16 / 300 lbs	2	60	19,1	95
BF	DN 50	DIN	4	PN 16	4	120	18,0	110
BF	DN 50	ASME	4	300 lbs	4	120	23,9	113
BF	DN 65	DIN / ASME	7	PN 16 / 300 lbs	7	210	23,9	130
BF	DN 80	DIN	9	PN 16	9	270	20,0	145
BF	DN 80	ASME	9	300 lbs	9	270	23,9	150
BF	DN 100	DIN	14	PN 16	14	420	20,0	165
BF	DN 100	ASME	14	300 lbs	14	420	23,9	182

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BF 4 0001 12-15 E M

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MASTERPIECES
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Unimpeded Flow Sections

BS-228

H_2O AIR OIL

OVERVIEW

Operating principle

- Unimpeded flow sections for measuring devices and sensors

Application

- Flow meters
- Flow sensors
- Flow monitors

Features

- Universal orientation
- Quick and secure installation
- High pressure resistance
- Gasket or O-ring seals
- High chemical resistance
- Upstream length 10 x DN
- Downstream length 5 x DN
- Connecting thread to DIN EN ISO 228-1

Installation information

- The operating instructions for the measuring device or sensor must be observed!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating pressure, max.	
with gasket	16 bar
with O-ring	see type overview on page 3
Temperature, max.	160 °C Depending on the O-ring material used
Process connection	Thread to DIN EN ISO 228-1

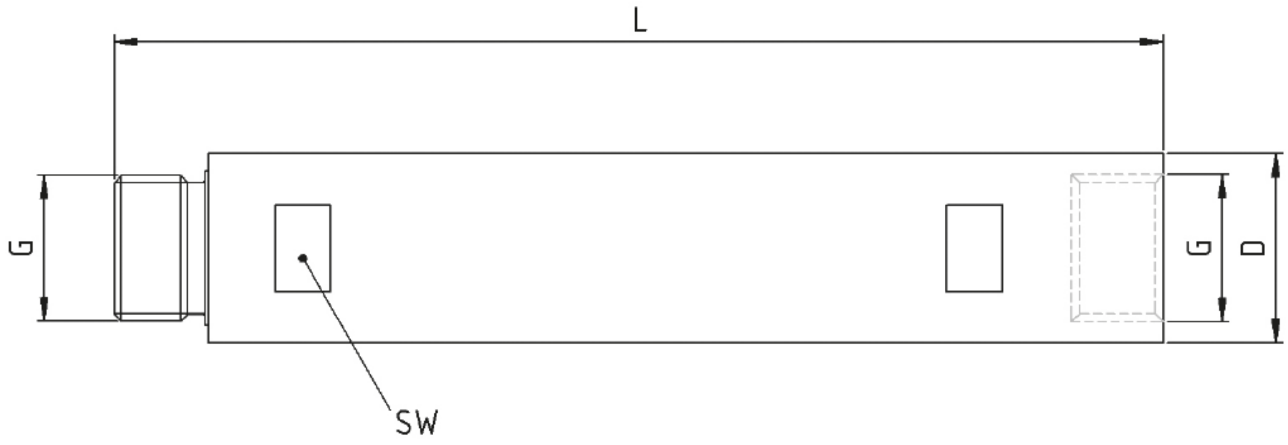
MATERIALS

Brass version, wetted parts	
Unimpeded flow section:	Brass
Gaskets:	
Gasket	PTFE
O-ring	NBR (optional FKM, EPDM)

Stainless steel version, wetted parts	
Unimpeded flow section:	1.4571
Gaskets:	
Gasket	PTFE
O-ring	FKM (optional NBR, EPDM)

BS-228 2 0003 12-15 E M

TECHNICAL DRAWING



SUMMARY OF TYPES

Type	Overall dimensions [mm]									
	G	G	DN	SW	L	D	p_{max} [bar] Brass version with O-ring		p_{max} [bar] Stainless steel version with O-ring	
	external	internal					up to 120 °C	up to 160 °C	up to 120 °C	up to 160 °C
BS-228 [1/4"] upstream	1/4"	1/4"	8	16	80	18	300	140	350	350
BS-228 [1/4"] downstream	1/4"	1/4"	8	16	40	18	300	140	350	350
BS-228 [1/2"] upstream	1/2"	1/2"	15	24	150	27	260	110	350	350
BS-228 [1/2"] downstream	1/2"	1/2"	15	24	75	27	260	110	350	350
BS-228 [1"] upstream	1"	1"	25	36	250	40	210	90	300	300
BS-228 [1"] downstream	1"	1"	25	36	125	40	210	90	300	300

MASTERPIECES
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BS-228 4 0001 12-15 E M

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MASTERPIECES
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Transceiver with IO-Link Interface

SIGNAL 4.0 IO PRO®

IO-Link

H2O AIR OIL GAS

OVERVIEW

Device description

The SIGNAL 4.0 IO PRO is a fully digital transceiver for industrial process measurement. The position of a magnetic float / piston is detected by means of a well-proven Hall sensor and transmitted via IO-Link Interface.

Additionally, it is possible to connect external sensors to monitor temperature and pressure. Those signals are then transmitted via the IO-Link Interface.

Application

- Use in combination with float-type sensors for various flow media (see table on page 186)
- Industry 4.0

Characteristics

- IO-Link Interface (IEC 61131-9)
- Internal recording of the flow rate
- Connection of external temperature and pressure sensors possible (Sensors not included)
- Conversion of the analog temperature and pressure signal to IO-Link
- Calculation of viscosity from measured temperature for ISO VG oils
- Same footprint as the proven SIGNAL 4.0
- Housing manufactured with additive manufacturing

Installation information

- Refer also to the applicable data sheets and operating instructions for the flow monitor!!
- **Download: www.meister-flow.com**

OPERATING DATA

Accuracy	± 10 % of full scale value[1]
Operating temperature	0 °C - 70 °C
Storage temperature	0 °C - 70 °C

[1] On request the accuracy can be significantly increased by a customized calibration.

MATERIALS

Non-wetted parts	
Housing:	Polyamide

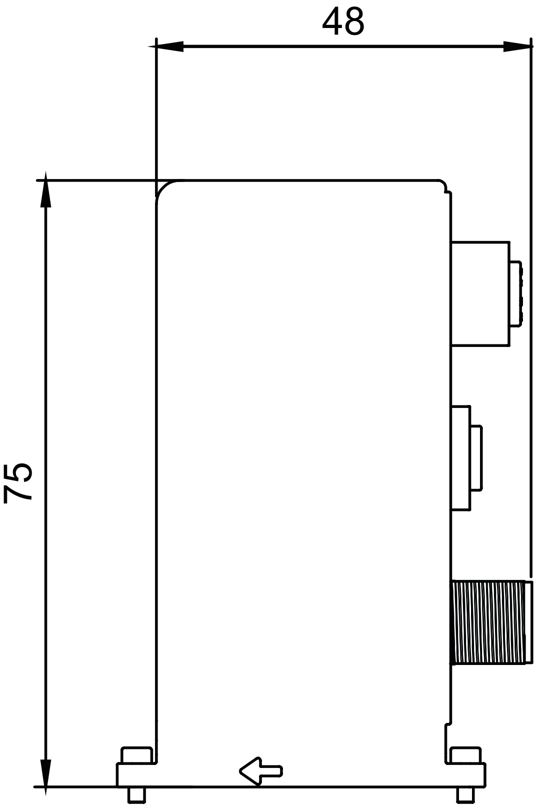
POSSIBLE COMBINATIONS

Flow

Monitor	**Transceiver**	**Combination**
DUM	+ SIGNAL 4.0 IO PRO	= DUM/IO PRO
DUM/A	+ SIGNAL 4.0 IO PRO	= DUM/A/IO PRO
DWM	+ SIGNAL 4.0 IO PRO	= DWM/IO PRO
DWM/A	+ SIGNAL 4.0 IO PRO	= DWM/A/IO PRO
RVM/U-1	+ SIGNAL 4.0 IO PRO	= RVM/U-1/IO PRO
RVM/UA-1	+ SIGNAL 4.0 IO PRO	= RVM/UA-1/IO PRO
RVM/U-2	+ SIGNAL 4.0 IO PRO	= RVM/U-2/IO PRO
RVM/UA-2	+ SIGNAL 4.0 IO PRO	= RVM/UA-2/IO PRO
RVM/U-4	+ SIGNAL 4.0 IO PRO	= RVM/U-4/IO PRO
WY	+ SIGNAL 4.0 IO PRO	= WY/IO PRO
DKM-1	+ SIGNAL 4.0 IO PRO	= DKM-1/IO PRO
DKM/A-1	+ SIGNAL 4.0 IO PRO	= DKM/A-1/IO PRO
DKM-2	+ SIGNAL 4.0 IO PRO	= DKM-2/IO PRO
DKM/A-2	+ SIGNAL 4.0 IO PRO	= DKM/A-2/IO PRO
DKME-1	+ SIGNAL 4.0 IO PRO	= DKME-1/IO PRO
DKME/A-1	+ SIGNAL 4.0 IO PRO	= DKME/A-1/IO PRO
DWM-L	+ SIGNAL 4.0 IO PRO	= DWM-L/IO PRO
DWM/A-L	+ SIGNAL 4.0 IO PRO	= DWM/A-L/IO PRO
RVM/U-L1	+ SIGNAL 4.0 IO PRO	= RVM/U-L1/IO PRO
RVM/U-L2	+ SIGNAL 4.0 IO PRO	= RVM/U-L2/IO PRO
RVM/U-L4	+ SIGNAL 4.0 IO PRO	= RVM/U-L4/IO PRO

* Further combinations are listed in the operating instructions.

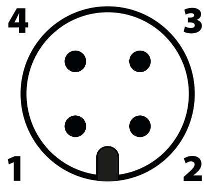
TECHNICAL DRAWING



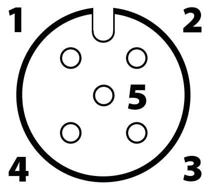
CONNECTION DIAGRAMS

Round plug M12x1, A-coding

Connection for IO-Link (Plug)



Connection for external sensor (Socket)



Pin assignment

1: 24 V

2: not connected

3: GND

4: IO-Link

Pin assignment (Socket)

1: Supply out

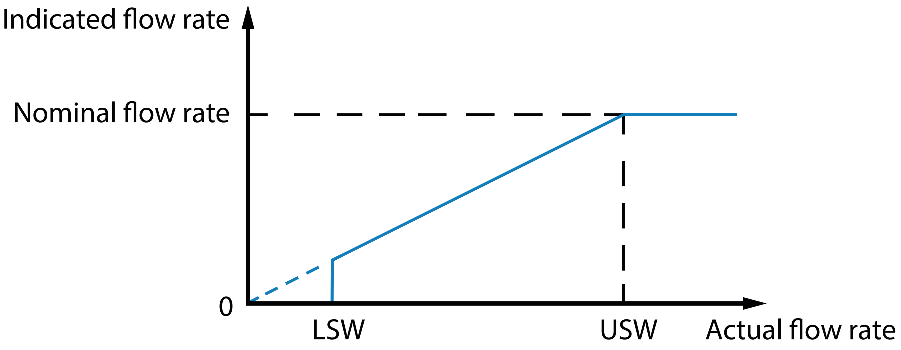
2: PT1000

3: GND

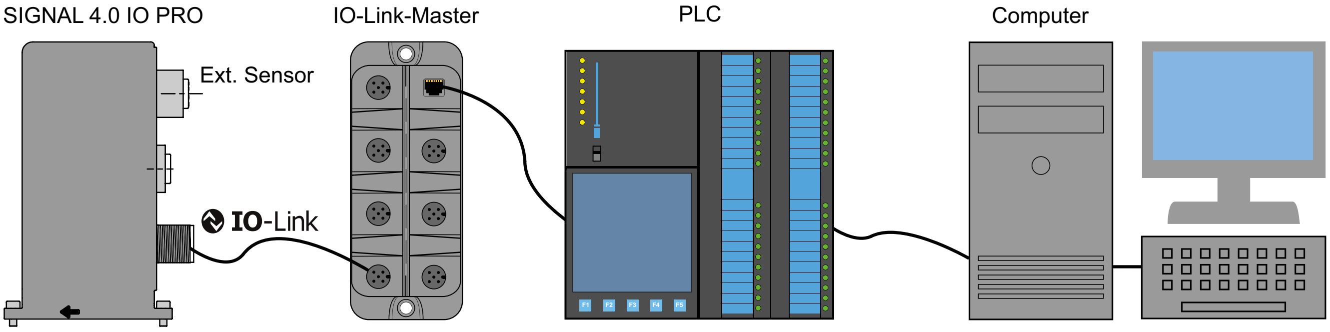
4: 0 ... 10 V in

5: PT1000

CHARACTERISTICS



LSW = Lower scale value
USW = Upper scale value



ELECTRICAL DATA

Signal output

IO-Link Specification V1.1

Power supply

24 VDC (20 ... 30 VDC)

Power consumption

approx. 1,5 W

Data transfer rate

COM3 (230,4 kBaud)

Connection

For round plug M12x1, A-coding
- 4-pin for IO-Link Interface (Plug)
- 5-pin for connection of external temperature and pressure sensors (Socket)

Ingress protection

IP 65
IP 67

Notes

Please note that the flowmeter and the SIGNAL 4.0 IO PRO digital transceiver have been optimally adjusted to each other and should not be exchanged! If the unit however needs to be exchanged, a new parameterization is necessary.

Please also refer to the data sheets and operating instructions of the respective flowmeter!

MASTERPIECES
MADE IN GERMANY

Analog Transmitter

SIGNAL 4.0

H2O OIL AIR

OVERVIEW

Operation

- The position of a magnetic float / piston is detected by means of Hall sensors and converted into an analog signal.

Application

- Use in combination with float-type sensors for various flow media (see table on page 2)
- Industry 4.0

Features

- Analog output (4-20 mA and 0-10 V)

Installation information

- Refer also to the applicable data sheets and operating instructions for the flow monitor!
- **Download: www.meister-flow.com**

SIGNAL 4.0 1 0002 08-18 E M

OPERATING DATA

Accuracy (1)	± 10 % of full scale
Operating temperature	-20 °C - 70 °C
Storage temperature	-20 °C - 80 °C
Repeatability	tbd.

(1) Higher calibration accuracy when calibrated individually. Available on request.

MATERIALS

Non-wetted parts

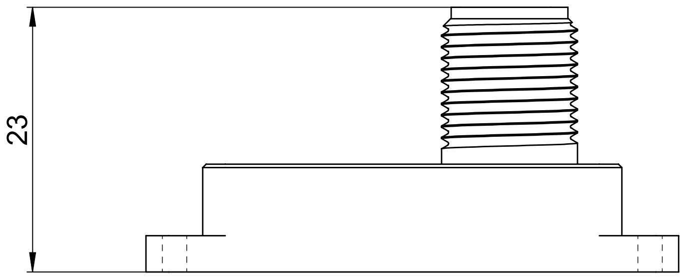
Housing:	Aluminium, blue anodized

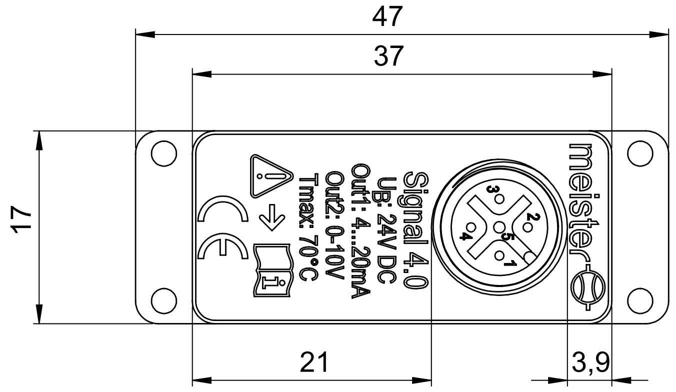
POSSIBLE COMBINATIONS

Type

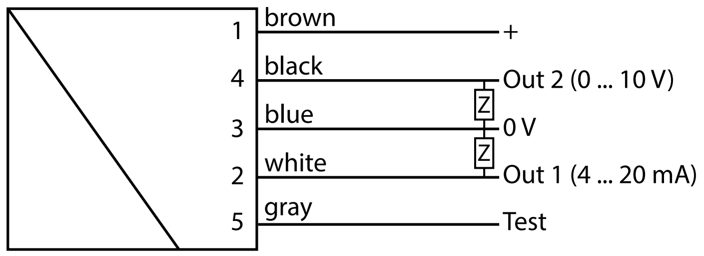
Sensor	**Transmitter**	**Combination**
DUM	+ SIGNAL 4.0	= DUM/SIGNAL 4.0
DUM/A	+ SIGNAL 4.0	= DUM/A/SIGNAL 4.0
DWM	+ SIGNAL 4.0	= DWM/SIGNAL 4.0
DWM/A	+ SIGNAL 4.0	= DWM/A/SIGNAL 4.0
RVM/U-1	+ SIGNAL 4.0	= RVM/U-1/SIGNAL 4.0
RVM/UA-1	+ SIGNAL 4.0	= RVM/UA-1/SIGNAL 4.0
RVM/U-2	+ SIGNAL 4.0	= RVM/U-2/SIGNAL 4.0
RVM/UA-2	+ SIGNAL 4.0	= RVM/UA-2/SIGNAL 4.0
RVM/U-4	+ SIGNAL 4.0	= RVM/U-4/SIGNAL 4.0
WY	+ SIGNAL 4.0	= WY/SIGNAL 4.0
DKM-1	+ SIGNAL 4.0	= DKM-1/SIGNAL 4.0
DKM/A-1	+ SIGNAL 4.0	= DKM/A-1/SIGNAL 4.0
DKM-2	+ SIGNAL 4.0	= DKM-2/SIGNAL 4.0
DKM/A-2	+ SIGNAL 4.0	= DKM/A-2/SIGNAL 4.0
DKME-1	+ SIGNAL 4.0	= DKME/SIGNAL 4.0
DKME/A-1	+ SIGNAL 4.0	= DKME/A/SIGNAL 4.0
DWM-L	+ SIGNAL 4.0	= DWM-L/SIGNAL 4.0
DWM/A-L	+ SIGNAL 4.0	= DWM/A-L/SIGNAL 4.0
RVM/U-L1	+ SIGNAL 4.0	= RVM/U-L1/SIGNAL 4.0
RVM/U-L2	+ SIGNAL 4.0	= RVM/U-L2/SIGNAL 4.0
RVM/U-L4	+ SIGNAL 4.0	= RVM/U-L4/SIGNAL 4.0

TECHNICAL DRAWING





CONNECTION DIAGRAM



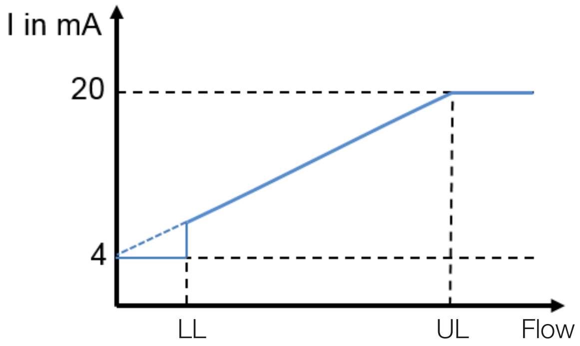
Attention:

Pin 5 must not be electrically connected! We strongly recommend use of a four core cable.

The SIGNAL 4.0 must not be removed from the basic unit. In case of a removal a loss of warranty is possible.

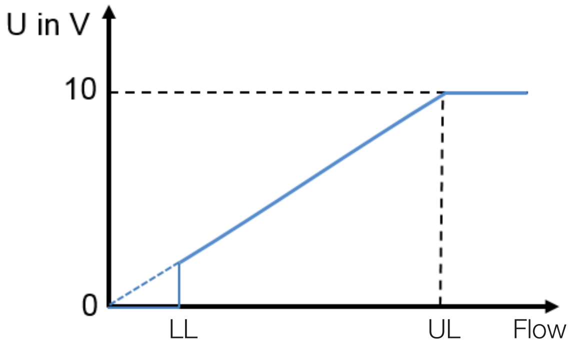
CHARACTERISTICS

Current-Flow characteristic



LL: lower limit of measuring range
UL: upper limit of measuring range

Voltage-Flow characteristic



LL: lower limit of measuring range
UL: upper limit of measuring range

ELECTRICAL DATA

Analog output

4...20 mA and 0...10 V

Power supply

24 VDC (19...30 VDC)

Power consumption

< 1 W

Current output

Max. load 600 Ω

Voltage output

Max. current 10 mA

Connection

For round plug M12x1, 5 pin

Ingress Protection

IP 65
IP 67

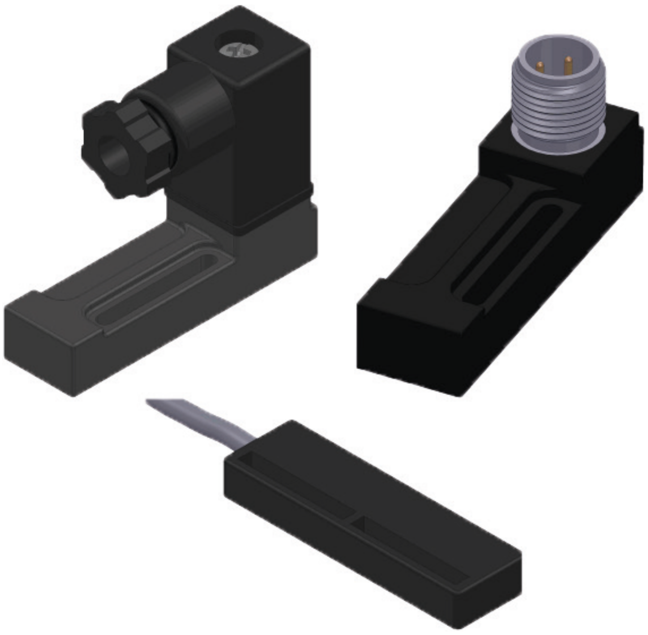
Notes

Please note that the flowmeter and the SIGNAL 4.0 analog transmitter have been optimally adjusted to each other and may not be exchanged!
Please also refer to the data sheets and operating instructions of the respective flowmeter!

MASTERPIECES
MADE IN GERMANY

Switch Contact

SG-15



OVERVIEW

Operating principle

- Reed contact

Application

- The switch contact is for use on mechanical flow meters for the electronic monitoring of flow limits.

Features

- Normally open or Change over
- Bi-stable switching behavior within the specified measuring range
- Sealed housing IP 65 or IP67 (depending on connection)

Connection options

- Connector in compliance with EN 175301-803, Form C
- Connector M12x1
- Cable

Notice

- Refer also to the Data Sheets and Operating Instructions of the respective flow sensor!
- **Download: www.meister-flow.com**

SG-15 1 0001 03-16 E M

OPERATING DATA

Operating temperature	
Standard	
EN 175301-803	-20 °C – 120 °C
Cable	-20 °C – 120 °C
M12x1	-20 °C – 85 °C
High temperature version	
EN 175301-803	-20 °C – 160 °C
Cable	-20 °C – 160 °C

For switch contacts in explosion-proof design according to ATEX directive, changed operating data apply. Refer to data sheet for SG-15 EX!

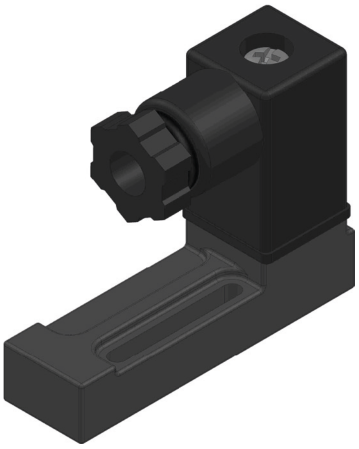
Download: www.meister-flow.com

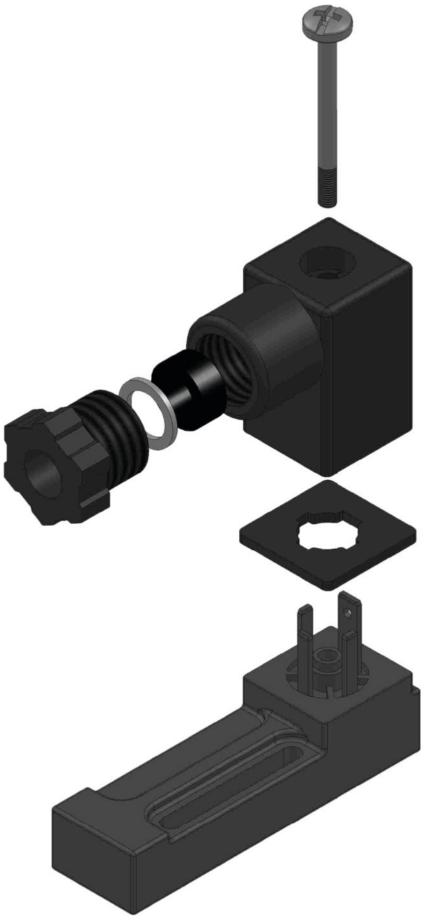
COMBINATION OPTIONS

Media	**Device**	
H_2O	RVM/U-2	RVM/U-4
	RVM/UA-2	RVM/U-S4
	RMU-A	
	RMU-B	
	RVO/U-2	RVO/U-4
		WY
Oil	DKG-2	
	DKM-2	
	DKM/A-2	
Air	RVM/U-L2	RVM/U-L4
	RVO/U-L2	RVO/U-L4

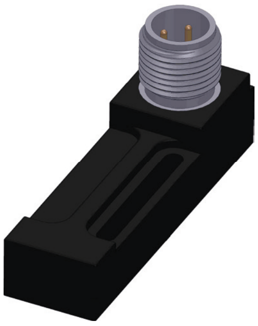
CONNECTION OPTIONS

Connector in compliance with EN 175301-803





Connector M12x1



Cable

ELECTRICAL DATA

Version for:
RVM/U-2, RVM/UA-2 RMU-A, RMU-B, RVO/U-2,
DKG-2, DKM-2, DKM/A-2, RVM/U-L2 and RVO/U-L2

Change over (COC) (1)	250V · 1,5A · 50VA (2)
Normally open (NOC)	230V · 3A · 60VA
Change over M12x1 (-20 °C – 85 °C)	125V · 1,5A · 50VA (2)
Normally open M12x1 (-20 °C – 85 °C)	125V · 3A · 60VA
Change over PLC (COC) (1)	250V · 1A · 60VA

Version for:
RVM/U-4, RVM/U-S4, RVO/U-4, WY, RVM/U-L4 and RVO/U-L4

Change over (COC) (1)	150V AC/DC · 1A · 20VA
Normally open (NOC)	140V AC · 0,7A · 20VA 200V DC · 1A · 20VA
Change over M12x1 (-20 °C – 85 °C)	125V AC/DC · 1A · 20VA
Normally open M12x1 (-20 °C – 85 °C)	125V AC · 0,7A · 20VA 125V DC · 1A · 20VA

(1) Possible with connector only

(2) Minimum load 3VA

ELECTRICAL CONNECTION

- Connector in compliance with EN 175301-803, Form C (DIN 43650, Form C)
- Connector M12x1
- Cable (1 m) (3)

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

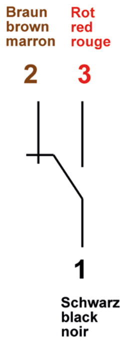
Not required (potential-free reed contacts)

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

CONNECTION DIAGRAM

Connector in compliance with EN 175301-803 and cable

Change over (COC)



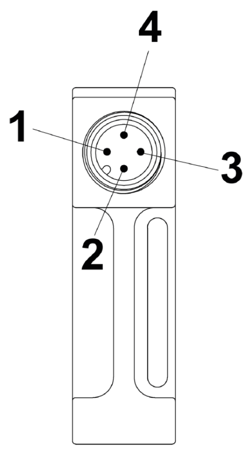
Normally open (NOC)

M12x1

Change over (COC)

Normally open (NOC)

Pin-assignment



MASTERPIECES
MADE IN GERMANY

Switch Contact

SG-30

OVERVIEW

Operating principle

- Reed contact

Application

- The switch contact is for use on mechanical flow meters for the electronic monitoring of flow limits.

Features

- Normally open or Change over
- Bi-stable switching behavior within the specified measuring range
- Sealed housing IP 65 or IP67 (depending on connection)

Connection options

- Connector in compliance with EN 175301-803, Form A
- Connector M12x1
- Cable

Notice

- Refer also to the Data Sheets and Operating Instructions of the respective flow sensor!
- **Download: www.meister-flow.com**

OPERATING DATA

Operating temperature	
Standard	
EN 175301-803	-20 °C – 120 °C
Cable	-20 °C – 120 °C
M12x1	-20 °C – 85 °C
High temperature version	
EN 175301-803	-20 °C – 160 °C
Cable	-20 °C – 160 °C

For switch contacts in explosion-proof design according to ATEX directive, changed operating data apply. Refer to data sheet for SG-30 EX!

For UL Recognized devices, changed operating data apply. Refer to data sheet for SG-30 UL!

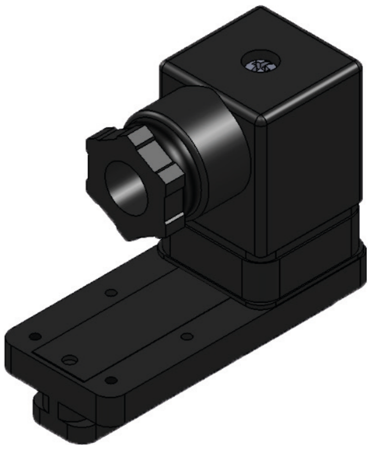
Download: www.meister-flow.com

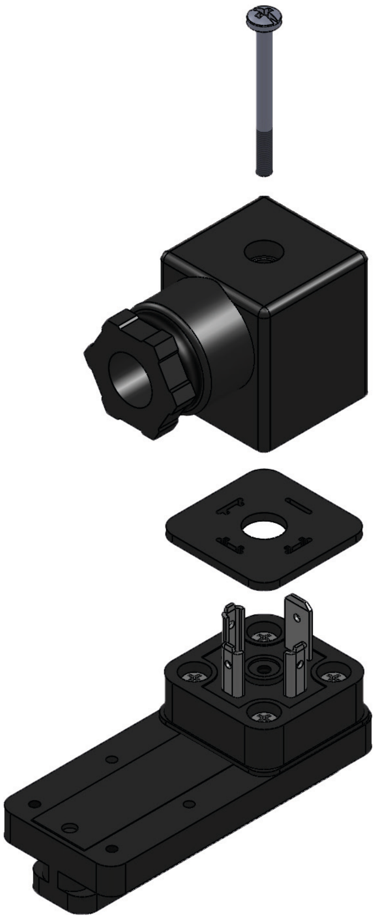
COMBINATION OPTIONS

Media	**Device**	
H_2O	DUG	DWG
	DWM	DWM/A
	DUM	DUM/A
	RVM/U-1	RVM/U-2
	RVM/UA-1	RVM/UA-2
	RVO/U-1	
	WBM	WBMC
	RVM/UM	
Oil	DKG-1	
	DKM-1	DKM-2
	DKM/A-1	DKM/A-2
	DKME-1	DKME/A-1
Air	DWG-L	
	DWM-L	DWM/A-L
	RVM/U-L1	RVM/U-L2
	RVO/U-L1	

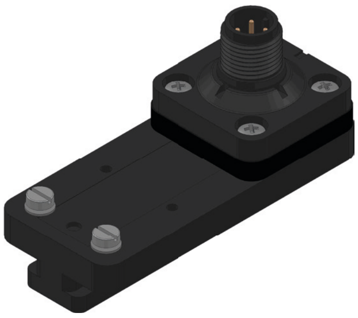
CONNECTION OPTIONS

Connector in compliance with EN 175301-803

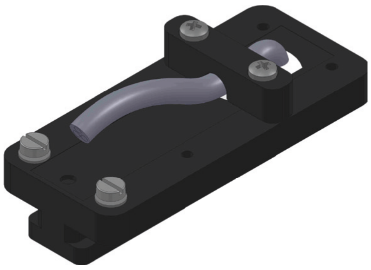




Connector M12x1



Cable



ELECTRICAL DATA

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

(1) Minimum load 3VA

ELECTRICAL CONNECTION

- Connector in compliance with EN 175301-803, Form A (DIN 43650, Form A)
- Connector M12x1, 4-pin
- 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.

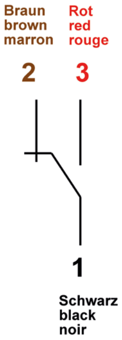
Power supply

Not required (potential-free reed contacts)

CONNECTION DIAGRAM

Connector in compliance with EN 175301-803 and cable

Change over (COC)



Normally open (NOC)

Connector M12x1

Change over (COC)

Normally open (NOC)

Pin assignment