



KSR Flow Switches

1007-2





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KSR Flow Switches



General Description

KSR Flow Switches are used to monitor and display the flow rates of liquids or gaseous media e.g. in cooling systems of welding machines, pumps, compressors, hydraulic systems etc.

Measuring Principle

KSR Flow Switches are based on the variable-area flowmeter principle.

A float with integrated permanent magnets is guided within a slotted tube. A reed contact is contained in an adjustable switch housing on the outside of the flowmeter body.

The in-flowing medium moves the float in the direction of the flow. As soon as the float with its magnets reaches the contact position, the switch is activated. If the flow rate increases further, the float will continue to move until it reaches a built-in stop. This stop prevents the float from moving out of the switch range. The switch will stay closed until the flow rate drops below the selected flow rate (bistable behaviour).



Switch Range

All KSR Flow Switches are equipped with a normally open contact as a standard. The switch point can be adjusted to anywhere within the switch range. The actual flow rate can be much higher than the switch range (typically double).

Mounting Orientation

KSR Flow Switches type DWG, DWM and DWM/A must be mounted vertically with the flow direction from bottom to top. All other types can be mounted in any position but care has to be taken to ensure the correct flow direction.

Switching Hysteresis

Hysteresis is the differential between the switch closing and opening again. The difference is the result of the movement required by the float to close and open the contact. The smaller the hysteresis, the more accurate is the output of the flow switch. By selecting certain magnets and reed contacts with particularly fine tolerances, KSR Flow Switches provide a minimal hysteresis. This is of advantage in all high precision applications.

Display

Local displays are available. On KSR Flow Switches with sight glass, the top edge of the float serves to indicate the flow rate on the measuring scale. The flow rate on types with a needle indicator can be read off on the supplied scale. Please note, that all scales are calibrated for a certain medium..

Technical Advantages

- High switching repeatability
- High operational reliability
- Small switching hysteresis
- Fully adjustable switch point
- Wide switch range
- Solid industrial design
- Available with viscosity compensation

Installation

KSR Flow Switches require very little maintenance work. Please clean the flow switch in regular intervals if it is subject to media that contain magnetic particles. These intervals can be extended when filters with magnetic retainers are used.

Flow switches work flow dependent and not pressure dependent.

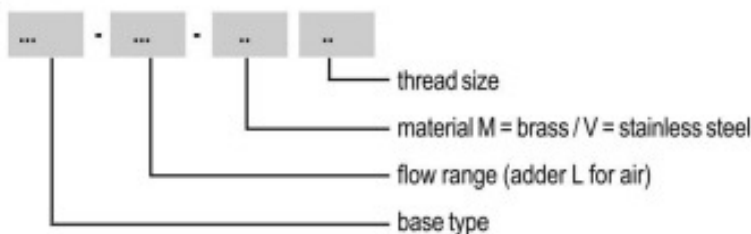
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Overview

Base type	Mounting orientation	Display	Viscosity compensation	Pressure range max. (bar)	Switch range (l/min H ₂ O)	(NI/min Air)	Page
DWG	vertical	sight glass	no	10	0.1 - 50	3 - 1600	6
DWM/A	vertical	needle indicator	no	300	0.1 - 50	1 - 1400	7
DWM	vertical	without	no	300	0.1 - 50	1 - 1400	8
DUG	universal	sight glass	no	10	0.2 - 250	-	9
DUM/A	universal	needle indicator	no	300	0.2 - 250	-	10
DKG	universal	sight glass	yes	16	0.5 - 90	-	11
DKM/A	universal	needle indicator	yes	300	0.1 - 110	-	12
DKM	universal	without	yes	350	0.5 - 110	-	13
RVO/U	universal	sight glass	no	16	0.005 - 150	-	14
RVO/U-L	universal	sight glass	no	16	-	0.2 - 625	15
RVM/U	universal	without	no	300	0.005 - 150	-	16
RVM/U-L	universal	without	no	300	-	0.6 - 650	17

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Type code



e.g. **DWG - 1,5 - V 1/2"** = type DWG, flow range 0.1 - 1.5 l/min Water, stainless steel, threaded BSP 1/2"

Materials

All types can be supplied in 2 different material-designs:

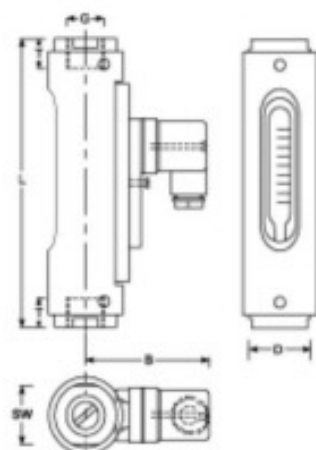
Components	Brass design	Stainless steel design
Float	brass nickel-plated	1.4571
Slotted tube	brass nickel-plated	1.4571
Spring	1.4310 (DUG, DUM/A, DKG, DKM/A, DKM, RVO/U, RVM/U, RVO/U-L, RVM/U-L only)	1.4571
Process connection	brass nickel-plated	1.4571
Sight glass	Duran 50 (DWG, DUG, DKG and RVO/U only)	
Gaskets	Perbunan, Viton or EPDM	

DWG



Operating Data		
Material	brass nickel-plated or stainless steel 316 Ti (1.4571) outer cover aluminium anodized	
Orientation	vertical	
Pressure (bar)	10	
Pressure drop (bar)	0.01 - 0.2	
Temperature max. (°C)	120 (160 optional)	
Accuracy	± 5 % FS	
Electrical Data	SPST	SPDT
Standard	250 V / 1 A / 100 VA	250 V / 0.5 A / 50 VA
EEx m II T6	250 V / 1 A / 60 VA ATEX II 2G EEx m II T6	250 V / 0.5 A / 30 VA
Electrical connection	coupler plug to DIN 43650	
Housing protection	IP 65	

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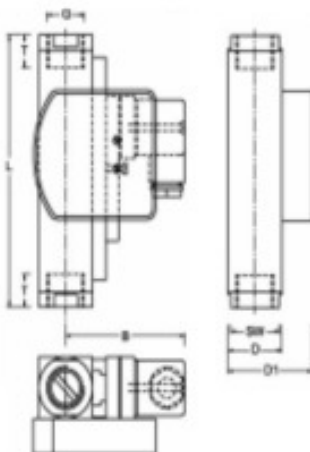
Type	Switch range l/min		Dimensions in mm						Weight approx. g
	H ₂ O	Air	SW	D	B	G	T	L	
DWG - 1,5	0.1 - 1.5	3 - 30	32	43	73	1/4"	14	132	625
DWG - 3	0.2 - 3.0	6 - 60				3/8"	14	135	
DWG - 8	0.3 - 8.0	6 - 160				1/2"	15	135	
DWG - 12	1 - 12	20 - 220				3/4"	16	167	
DWG - 18	2 - 18	40 - 360	32	43	73	1/2"	15	163	650
						3/4"	16	167	
DWG - 35	3 - 35	60 - 700	41	50	76	3/4"	18	164	850
DWG - 50	4 - 50	60 - 825				1"	19	184	1000
DWG - 100	-	200 - 1600				1"	21	222	1100

DWM/A



Operating Data		
Material	brass nickel-plated or stainless steel 316 Ti (1.4571)	
Orientation	vertical	
Pressure (bar)	100 - 200 (stainless steel 300)	
Pressure drop (bar)	0.02 - 0.4	
Temperature max. (°C)	120 (160 optional)	
Accuracy	± 5 % FS	
Electrical Data	SPST	SPDT
Standard	250 V / 1 A / 100 VA	250 V / 0.5 A / 50 VA
EEx m II T6	250 V / 1 A / 60 VA ATEX II 2G EEx m II T6	250 V / 0.5 A / 30 VA
Electrical connection	coupler plug to DIN 43650	
Housing protection	IP 65	

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Type	Switch range l/min		Dimensions in mm						Weight approx. g
	H ₂ O	Air	SW	D	B	G	T	L	
DWM/A - 1,5	0.1 - 1.5	1 - 28	27	30	71	1/4"	14	131	850
DWM/A - 3	0.2 - 3.0	4 - 60				3/8"	19		
DWM/A - 8	0.3 - 8.0	6 - 160				1/2"	19		
DWM/A - 12	1 - 12	20 - 240							
DWM/A - 18	2 - 18	40 - 360	27	30	71	1/2"	19	148	850
			32	30	71	3/4"	17	174	1010
DWM/A - 35	3 - 35	-	34	40	76	3/4"	18	152	1500
DWM/A - 50	4 - 50	60 - 700	40	40	76	1"	18	156	1500
DWM/A - 100	-	200 - 1400	50	50	81	1"	20	200	2800

DWM



Operating Data		
Material	brass nickel-plated or stainless steel 316 Ti (1.4571)	
Orientation	vertical	
Pressure (bar)	100 - 200 (stainless steel 300)	
Pressure drop (bar)	0.02 - 0.4	
Temperature max. (°C)	120 (160 optional)	
Accuracy	± 5 % FS	
Electrical Data	SPST	SPDT
Standard	250 V / 1 A / 100 VA	250 V / 0.5 A / 50 VA
EEx m II T6	250 V / 1 A / 60 VA ATEX II 2G EEx m II T6	250 V / 0.5 A / 30 VA
Electrical connection	coupler plug to DIN 43650	
Housing protection	IP 65	

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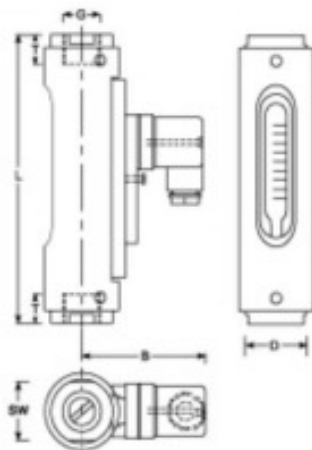


Type	Switch range l/min		Dimensions in mm						Weight approx. g
	H ₂ O	Air	SW	D	B	G	T	L	
DWM - 1,5	0.1 - 1.5	1 - 28	27	30	71	1/4"	14	131	800
DWM - 3	0.2 - 3	4 - 60				3/8"	19		
DWM - 8	0.3 - 8	6 - 160				1/2"	19		
DWM - 12	1 - 12	20 - 240				1/2"	19		
DWM - 18	2 - 18	40 - 360	27	30	71	1/2"	19	148	800
			32	30	71	3/4"	17	174	960
DWM - 35	3 - 35	-	34	40	76	3/4"	18	152	1450
DWM - 50	4 - 50	80 - 1000	40	40	76	1"	19	156	1450
DWM - 100	-	200 - 1400	50	50	81	1"	20	200	2750

DUG



Operating Data		
Material	brass nickel-plated or stainless steel 316 Ti (1.4571) outer cover aluminium anodized	
Orientation	universal mounting	
Pressure (bar)	10	
Pressure drop (bar)	0.02 - 0.5	
Temperature max. (°C)	120 (160 optional)	
Accuracy	± 5 % FS	
Electrical Data	SPST	SPDT
Standard	250 V / 1 A / 100 VA	250 V / 0.5 A / 50 VA
EEx m II T6	250 V / 1 A / 60 VA ATEX II 2G EEx m II T6	250 V / 0.5 A / 30 VA
Electrical connection	coupler plug to DIN 43650	
Housing protection	IP 65	



Type	Switch range l/min		Dimensions in mm						Weight approx. g	
	H ₂ O	Air	SW	D	B	G	T	L		
DUG - 4	0.2 - 4	not suitable for gases	32	43	73	1/4"	14	132	625	
DUG - 6	0.5 - 6					3/8"	14	132		
DUG - 8	0.5 - 8					1/2"	15	135		
DUG - 14	0.5 - 14		32	43	73	1/2"	15	135	660	
DUG - 22	2 - 22					1/2"	15	135		
DUG - 28	1 - 28					1/2"	15	135		
DUG - 45	2 - 45		32	43	73	3/4"	18	167	850	
DUG - 80	2 - 80					3/4"	18	164		1000
DUG - 90	6 - 90					1"	19	184		
DUG - 110	6 - 110		41	50	76	1"	19	184	1000	
DUG - 150	15 - 150					1 1/4"	21	216		1300
DUG - 220	30 - 220					1 1/4"	21	210		
DUG - 250	35 - 250		50	55	79	1 1/4"	21	222	1400	

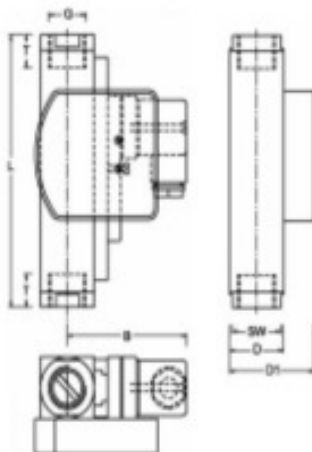
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DUM/A



Operating Data		
Material	brass nickel-plated or stainless steel 316 Ti (1.4571)	
Orientation	vertical	
Pressure (bar)	200 (stainless steel 300)	
Pressure drop (bar)	0.02 - 0.4	
Temperature max. (°C)	120 (160 optional)	
Accuracy	± 5 % FS	
Electrical Data	SPST	SPDT
Standard	250 V / 1 A / 100 VA	250 V / 0.5 A / 50 VA
EEx m II T6	250 V / 1 A / 60 VA ATEX II 2G EEx m II T6	250 V / 0.5 A / 30 VA
Electrical connection	coupler plug to DIN 43650	
Housing protection	IP 65	

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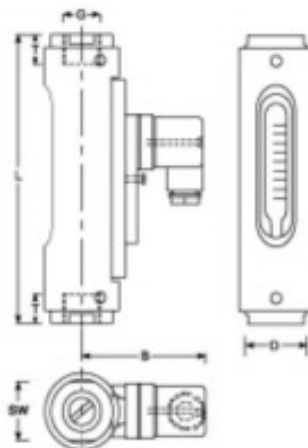
Type	Switch range l/min		Dimensions in mm						Weight approx. g
	H ₂ O	Air	SW	D	B	G	T	L	
DUM/A - 4	0.2 - 4	not suitable for gases	27	30	71	1/4"	14	130	900
DUM/A - 5	0.6 - 5								
DUM/A - 8	0.5 - 8								
DUM/A - 14	1 - 14								
DUM/A - 28	1 - 28								
DUM/A - 40	2 - 40		27	30	71	1/2"	14	148	950
DUM/A - 55	4 - 55		34	40	76	3/4"	18	152	1450
DUM/A - 70	1 - 70								
DUM/A - 90	8 - 90								
DUM/A - 110	5 - 110								
DUM/A - 150	10 - 150								
DUM/A - 220	35 - 220		50	50	81	1 1/2"	21	200	3050
DUM/A - 250	35 - 250		60	60	82	1 1/2"	24	200	3850

DKG

viscosity compensated up to 600 mm²/s



Operating Data		
Material	brass nickel-plated or stainless steel 316 Ti (1.4571) outer cover aluminium anodized	
Orientation	universal mounting	
Pressure (bar)	10 (DKG - 1) 16 (DKG - 2)	
Pressure drop (bar)	0.02 - 0.4 (DKG - 1) 0.02 - 0.2 (DKG - 2)	
Temperature max. (°C)	120 (160 optional)	
Accuracy	± 5 % FS	
Electrical Data	SPST	SPDT
Standard	250 V / 1 A / 100 VA	250 V / 0.5 A / 50 VA
EEx m II T6	250 V / 1 A / 60 VA	250 V / 0.5 A / 30 VA
	ATEX II 2G EEx m II T6	
Electrical connection	coupler plug to DIN 43650	
Housing protection	IP 65	



Type	Switch range l/min		Dimensions in mm						Weight approx. g
	Oil	Air	SW	D	B	G	T	L	
DKG -2/2	0.5 - 1.7	not suitable for gases	27	32	53	1/2"	14	114	300
DKG -2/4	1.3 - 4					41	50	77	
DKG -2/8	2.5 - 8		1/2"	17	145				850
DKG -1/1	0.1 - 0.8		3/4"	17	139				
DKG -1/2	0.5 - 1.5		1"	17	158				
DKG -1/4	1 - 4		41	50	77	1/2"	17	145	850
DKG -1/8	2 - 8					3/4"	17	139	
DKG -1/10	3 - 10								
DKG -1/15	5 - 15					41	50	77	
DKG -1/24	8 - 24		1"	17	158				
DKG -1/30	10 - 30		41	50	77				3/4"
DKG -1/45	15 - 45					1"	17	158	
DKG -1/60	20 - 60								
DKG -1/90	30 - 90								

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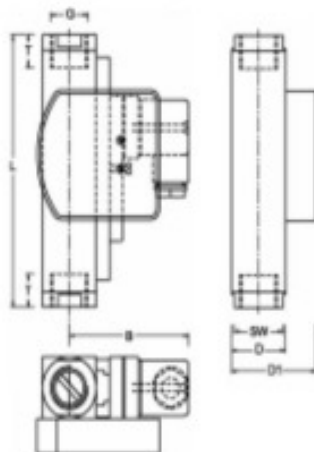
DKM/A

viscosity compensated up to 600 mm²/s



Operating Data		
Material	brass nickel-plated or stainless steel 316 Ti (1.4571)	
Orientation	universal mounting	
Pressure (bar)	250 (stainless steel 300)	
Pressure drop (bar)	0.02 - 0.4	
Temperature max. (°C)	120 (160 optional)	
Accuracy	± 5 % FS	
Electrical Data	SPST	SPDT
Standard	250 V / 1 A / 100 VA	250 V / 0.5 A / 50 VA
EEx m II T6	250 V / 1 A / 60 VA ATEX II 2G EEx m II T6	250 V / 0.5 A / 30 VA
Electrical connection	coupler plug to DIN 43650	
Housing protection	IP 65	

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Type	Switch range l/min		Dimensions in mm					Weight approx. g	
	Oil	Air	SW	D	B	G	T		L
DKM/A - 1/1	0.1 - 0.8	not suitable for gases	34			1/4"	21	152	1590
DKM/A - 1/2	0.5 - 1.5		34	40	76	1/2"	21	152	1515
DKM/A - 1/4	1 - 4		34			3/4"	21	152	1430
			40			1"	17	130	1250
DKM/A - 1/8	2 - 8		34			1/2"	21	152	1515
DKM/A - 1/10	3 - 10		34	40	76	3/4"	21	152	1430
			40			1"	17	130	1250
DKM/A - 1/24	8 - 24		34	40	76	3/4"	21	152	1430
			40	40	76	1"	17	130	1250
DKM/A - 1/30	10 - 30		34	40	76	3/4"	21	152	1430
DKM/A - 1/45	15 - 45		34	40	76	3/4"	21	152	1430
			40	40	76	1"	17	130	1250
DKM/A - 1/60	20 - 60		34	40	76	3/4"	21	152	1430
DKM/A - 1/90	30 - 90		34	40	76	3/4"	21	152	1430
		40	40	76	1"	17	130	1250	
DKM/A - 1/110	35 - 110	40	40	76	1"	17	130	1250	

DKM

viscosity compensated up to 600 mm²/s



Operating Data		
Material	brass nickel-plated or stainless steel 316 Ti (1.4571) outer cover aluminium anodized	
Orientation	universal mounting	
Pressure (bar)	250 (stainless steel 300) (DKM - 1) 300 (stainless steel 350) (DKM - 2)	
Pressure drop (bar)	0.02 - 0.4 (DKM - 1) 0.02 - 0.2 (DKM - 2)	
Temperature max. (°C)	120 (160 optional)	
Accuracy	± 5 % FS	
Electrical Data	SPST	SPDT
Standard	250 V / 1 A / 100 VA	250 V / 0.5 A / 50 VA
EEx m II T6	250 V / 1 A / 60 VA ATEX II 2G EEx m II T6	250 V / 0.5 A / 30 VA
Electrical connection	coupler plug to DIN 43650	
Housing protection	IP 65	

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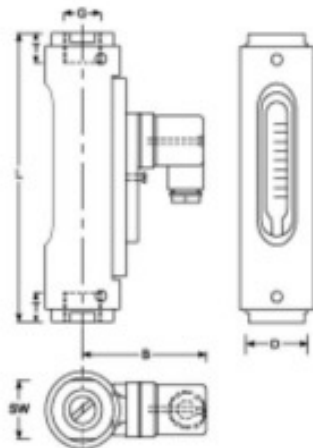
Type	Switch range l/min		Dimensions in mm					Weight approx. g				
	Oil	Air	SW	D	B	G	T		L			
DKM - 2/2	0,5 - 1,6	not suitable for gases	24	31	52	1/4"	14	98	400			
			24			3/8"		108		450		
			27			1/2"		90			350	
DKM - 2/3	0,8 - 3		27	31	52	1/2"	14	90	350			
DKM - 2/7	2 - 7		34	40	76	1/4"	21	152	1500			
DKM - 1/1	0,1 - 0,8					1/2"		21		152	1425	
DKM - 1/2	0,5 - 1,5					3/4"		21		152		1340
DKM - 1/4	1 - 4					1"		17		130	1160	
						34		40		76		1/2"
DKM - 1/8	2 - 8					34		40		76	3/4"	21
DKM - 1/10	3 - 10		40	40	76	1"	17	130	1160			
DKM - 1/15	5 - 15		34	40	76	3/4"	21	152		1340		
DKM - 1/24	8 - 24					1"		17	130		1160	
DKM - 1/30	10 - 30					34		40	76			3/4"
DKM - 1/45	15 - 45		40	40	76	1"	17	130	1160			
DKM - 1/60	20 - 60		40	40	76	1"	17	130		1160		
DKM - 1/90	30 - 90											
DKM - 1/110	35 - 110											

RVO/U



Operating Data		
Material	brass nickel-plated or stainless steel 316 Ti (1.4571) outer cover aluminium anodized	
Orientation	universal mounting	
Pressure (bar)	10 (RVO/U - 1) 16 (RVO/U - 2, RVO/U - 4)	
Pressure drop (bar)	0.02 - 0.4 (RVO/U - 1) 0.02 - 0.3 (RVO/U - 2) 0.02 - 0.2 (RVO/U - 4)	
Temperature max. (°C)	120 (160 optional)	
Accuracy	± 5 % FS	
Electrical Data	SPST	SPDT
Standard	250 V / 1 A / 100 VA	250 V / 0.5 A / 50 VA
EEx m II T6 (nur RVO/U-1)	250 V / 1 A / 60 VA ATEX II 2G EEx m II T6	250 V / 0.5 A / 30 VA
Electrical connection	coupler plug to DIN 43650	
Housing protection	IP 65	

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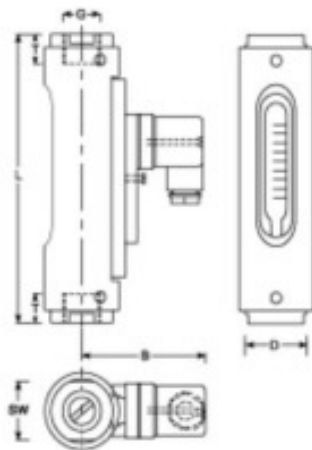
Type	Switch range l/min		Dimensions in mm						Weight approx. g
	H ₂ O	Air	SW	D	B	G	T	L	
RVO/U - 4/01	5 - 60 ml	*	17	20	49	1/4 "	10	90	140
RVO/U - 4/02	20 - 140 ml	*							
RVO/U - 4/06	0.1 - 0.6	*							
RVO/U - 4/1	0.2 - 1.2	*							
RVO/U - 4/2	0.4 - 2.0	*							
RVO/U - 4/3	0.5 - 3.0	*							
RVO/U - 4/5	1.0 - 5.0	*	27	32	53	1/2 "	14	114	300
RVO/U - 2/05	0.1 - 0.5	*							
RVO/U - 2/1	0.2 - 1	*							
RVO/U - 2/2	0.4 - 1.6	*							
RVO/U - 2/4	1 - 4	*							
RVO/U - 2/8	2 - 8	*							
RVO/U - 2/15	4 - 15	100 - 420	41	50	77	3/4 "	18	139	800
RVO/U - 2/20	5 - 22	120 - 480							
RVO/U - 2/28	6 - 28	*							
RVO/U - 1/30	8 - 30	*							
RVO/U - 1/45	15 - 45	*	41	50	77	1 "	18	158	900
RVO/U - 1/90	30 - 90	*							
RVO/U - 1/150	60 - 150	*							

* for gases see RVO/U - L

RVO/U-L



Operating Data		
Material	brass nickel-plated or stainless steel 316 Ti (1.4571) outer cover aluminium anodized	
Orientation	universal mounting	
Pressure (bar)	10 (RVO/U - L1) 16 (RVO/U - L2, RVO/U - L4)	
Pressure drop (bar)	0.02 - 0.4 (RVO/U - L1) 0.02 - 0.3 (RVO/U - L2) 0.02 - 0.2 (RVO/U - L4)	
Temperature max. (°C)	120 (160 optional)	
Accuracy	± 5 % FS	
Electrical Data	SPST	SPDT
Standard	250 V / 1 A / 100 VA	250 V / 0.5 A / 50 VA
EEx m II T6 (nur RVO/U-1)	250 V / 1 A / 60 VA ATEX II 2G EEx m II T6	250 V / 0.5 A / 30 VA
Electrical connection	coupler plug to DIN 43650	
Housing protection	IP 65	



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Type	Switch range l/min		Dimensions in mm						Weight approx. g
	H ₂ O	Air	SW	D	B	G	T	L	
RVO/U-L40001		0.2 - 1.3	17	20	49	1/4"	10	90	140
RVO/U-L40002		0.5 - 2							
RVO/U-L40003		0.8 - 3							
RVO/U-L40005		1.5 - 5							
RVO/U-L40008		2 - 8							
RVO/U-L40012		3 - 12							
RVO/U-L40014		3.5 - 14							
RVO/U-L40020		5.5 - 20							
RVO/U-L40024		7 - 24							
RVO/U-L40035		10 - 35							
RVO/U-L40042		10 - 42							
RVO/U-L20012		3 - 12							
RVO/U-L20030		7 - 30							
RVO/U-L20040		12 - 40							
RVO/U-L20125		28 - 125							
RVO/U-L20200		50 - 200							
RVO/U-L10080		22.5 - 80	41	50	77	3/4"	21	139	800
RVO/U-L10130		50 - 130							
RVO/U-L10420		130 - 420							
RVO/U-L10625		200 - 625							

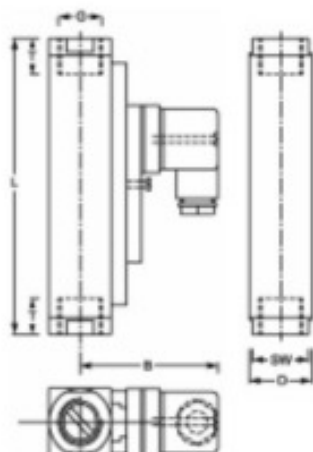
for liquids see RVO/U

RVM/U



Operating Data		
Material	brass nickel-plated or stainless steel 316 Ti (1.4571)	
Orientation	universal mounting	
Pressure (bar)	250 (RVM/U - 1, RVM/U - 2)	300 (RVM/U - 4)
Pressure drop (bar)	0.02 - 0.4 (RVM/U - 1)	0.02 - 0.3 (RVM/U - 2)
		0.02 - 0.2 (RVM/U - 4)
Temperature max. (°C)	120 (160 optional)	
Accuracy	± 5 % FS	
Electrical Data		
	SPST	SPDT
Standard	250 V / 1 A / 100 VA	250 V / 0.5 A / 50 VA
EEx m II T6	250 V / 1 A / 60 VA	250 V / 0.5 A / 30 VA
	ATEX II 2G EEx m II T6	
Electrical connection	coupler plug to DIN 43650	
Housing protection	IP 65	

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Type	Switch range l/min		Dimensions in mm						Weight approx. g
	H ₂ O	Air	SW	D	B	G	T	L	
RVM/U - 4/01	5 - 60 ml	*	17	17	47	1/4"	10	65	140
RVM/U - 4/02	40 - 130 ml	*							
RVM/U - 4/06	0.1 - 0.6	2 - 12							
RVM/U - 4/1	0.2 - 1.2	*							
RVM/U - 4/2	0.4 - 2	8 - 40							
RVM/U - 4/3	0.5 - 3	10 - 60	27	31	52	1/2"	14	90	350
RVM/U - 4/5	1 - 5	*							
RVM/U - 2/02	0.02 - 0.2	*							
RVM/U - 2/06	0.2 - 0.6	*							
RVM/U - 2/1	0.4 - 1.8	*							
RVM/U - 2/3	0.8 - 3.2	16 - 64	41	47	76	3/4"	21	152	1200
RVM/U - 2/7	2 - 7	*							
RVM/U - 2/13	3 - 13	*							
RVM/U - 2/20	4 - 20	80 - 400							
RVM/U - 2/30	8 - 30	*							
RVM/U - 1/30	11 - 30	*	41	47	76	1"	17	130	1050
RVM/U - 1/45	15 - 45	*							
RVM/U - 1/60	20 - 60	*							
RVM/U - 1/90	30 - 90	*							
RVM/U - 1/150	60 - 150	*	41	47	76	1"	17	130	1050

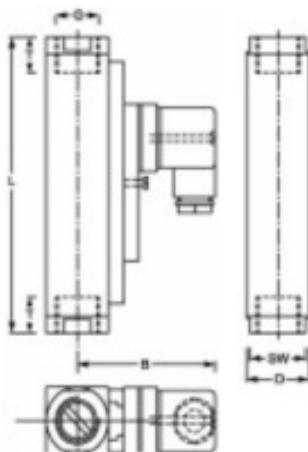
* for gases see RVM/U - L

RVM/U-L



Operating Data		
Material	brass nickel-plated or stainless steel 316 Ti (1.4571)	
Orientation	universal mounting	
Pressure (bar)	250 (RVM/U - L1, RVM/U - L2) 300 (RVM/U - L4)	
Pressure drop (bar)	0.02 - 0.4 (RVM/U - L1) 0.02 - 0.3 (RVM/U - L2) 0.02 - 0.2 (RVM/U - L4)	
Temperature max. (°C)	120 (160 optional)	
Accuracy	± 5 % FS	
Electrical Data	SPST	SPDT
Standard	250 V / 1 A / 100 VA	250 V / 0.5 A / 50 VA
EEx m II T6	250 V / 1 A / 60 VA ATEX II 2G EEx m II T6	250 V / 0.5 A / 30 VA
Electrical connection	coupler plug to DIN 43650	
Housing protection	IP 65	

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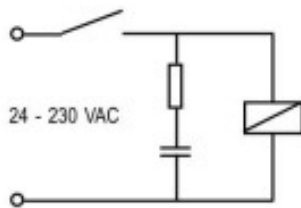
Type	Switch range l/min		Dimensions in mm						Weight approx. g
	H ₂ O	Air	SW	D	B	G	T	L	
RVM/U-L40002		0.6 - 2.2	17	17	47	1/4"	10	65	140
RVM/U-L40006		1.7 - 6							
RVM/U-L40008		2.5 - 8							
RVM/U-L40012		3 - 12							
RVM/U-L40024		7 - 24							
RVM/U-L40034		12 - 34							
RVM/U-L20010		2.5 - 10	27	31	52	1/2"	14	90	350
RVM/U-L20020		5.5 - 20							
RVM/U-L20030		8 - 30							
RVM/U-L20035		10 - 35							
RVM/U-L20220		55 - 220							
RVM/U-L20240		65 - 240							
RVM/U-L20300		80 - 300	41	47	76	3/4"	21	152	1200
RVM/U-L10180		60 - 180							
RVM/U-L10300		100 - 300							
RVM/U-L10650		200 - 650							

for liquids see RVM/U

Contact protection measures

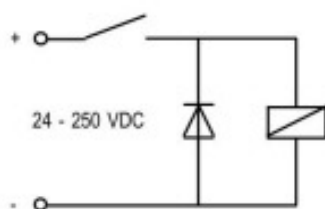
To ensure reliable operation and highest possible service life, we recommend using one of the following circuits..

Inductive load AC



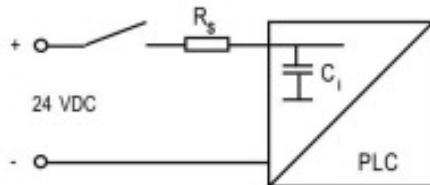
RC-modules acc. to table

Inductive load DC



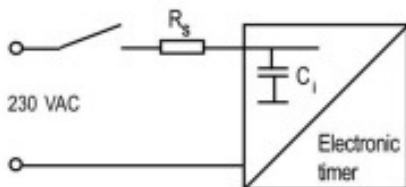
Shunt diode e.g. 1N4007

Current limitation with capacitive load e.g. PLC and cables > 50 m

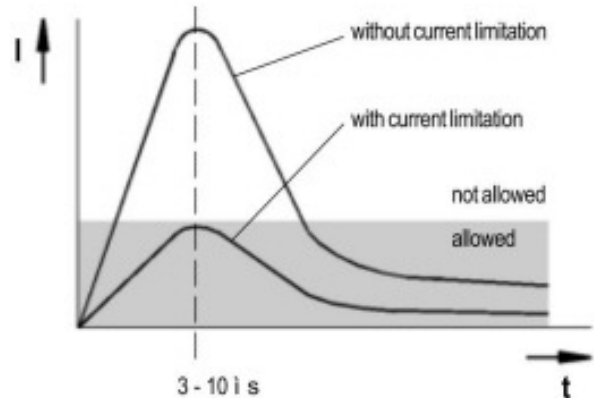


$R_s = 22 \text{ Ohm}$
(47 Ohm with 10VA contacts)
 $C_1 = \text{internal capacitance}$

Current limitation with electronic timers



$R_s = 220 \text{ Ohm}$
(230 VAC)
 $C_1 = \text{internal capacitance}$



Protective RC-modules

Please use RC-modules according to the table below. Rating of the switches and supply voltage will determine the type to be used.

For reed contacts 10-40VA

Capacitance	Resistance	Voltage	Type
0,33µF	100 Ohm	24V AC	A 3/24
0,33µF	220 Ohm	48V AC	A 3/48
0,33µF	470 Ohm	115V AC	A 3/115
0,33µF	1500 Ohm	230V AC	A 3/230

For reed contacts 40-100VA

Capacitance	Resistance	Voltage	Type
0,33µF	47 Ohm	24V AC	B 3/24
0,33µF	100 Ohm	48V AC	B 3/48
0,33µF	470 Ohm	115V AC	B 3/115
0,33µF	1000 Ohm	230V AC	B 3/230

Other types might lead to destruction or lower service life of the reed contacts.

Quality at

