



Flow Monitor DWM

Flow monitor for liquids and gases according to the variable area measuring principle



- Continuous switching point adjustment
- High switching reliability
- Pressure resistance up to 300 bar
- Ex version according to Atex
- Analog output 4-20mA and 0-10V for different measuring ranges

D-EN-DWM-20200528



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Applications

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

Features

- High functional reliability
- High switching accuracy
- Large switching range
- Continuous adjustment of the switching point by the user
- Ex version available according to ATEX directive
- UL approved version available
- High pressure resistance
- Thread connection, special thread on request

Installation instructions

The device must be installed vertically in the system. The flow is from bottom to top.

The flow switch may not be used as a supporting part in pipe constructions!

The medium must not have any solid bodies with it! We recommend installing type SFD or SFM strainers.

External magnetic fields influence the switch contact. Keep a sufficient distance from magnetic fields (e.g. electric motors)!

The operating instructions for DWM must be observed!

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)
Accuracy	± 5 % of full scale
Changed operating data apply to devices in Ex version according to the ATEX directive.	



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Measuring ranges			
Type	Switching range for H ₂ O 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 / switching ranges apply to water with a density of 1.00 kg / dm³, with vertical installation of the device and flow from bottom to top.

Other installation positions or operating densities deviating from this specification increase the measurement error specified in the data sheet.

Operating density of water at 20 °C and 1.013 bar absolute: 1.00 kg / dm³.

Special scales for different media, operating conditions and installation positions (only for devices that are independent of position) are available on request.

The specified switching values are switch-off points, i.e. switching values with falling flow. Other measuring / switching ranges are available on request.



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Material		
Brass, wetted parts		Stainless steel, wetted parts
Float	brass, nickel-plated	1.4571
Gasket (2)	NBR (optional FKM, EPDM)	FKM (optional NBR, EPDM)
Threaded ring Only DWM-35 (1"), DWM-50 (1")	brass	1.4571
Centering disk Only DWM-35, DWM-50	brass, nickel-plated	1.4571
Screws Not DWM-35 (1"), DWM-50 (1")	brass, nickel-plated	1.4571
All other wetted parts	brass, nickel-plated	1.4571
(2) Other gasket materials on request.		

Type	Dimensions (mm)												Weight approx. [g]
	G	DN	SW	L1	L2	T	D1	D2	A1	A2	A3	A4	
DWM-1,5													800
DWM-3	1/4"	8	27	117	131	10	30	30	-	-	-	~88	800
DWM-8	3/8"	10	27	117	131	15	30	30	-	-	-	~88	800
DWM-12	1/2"	15	27	117	131	14	30	30	-	-	-	~88	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

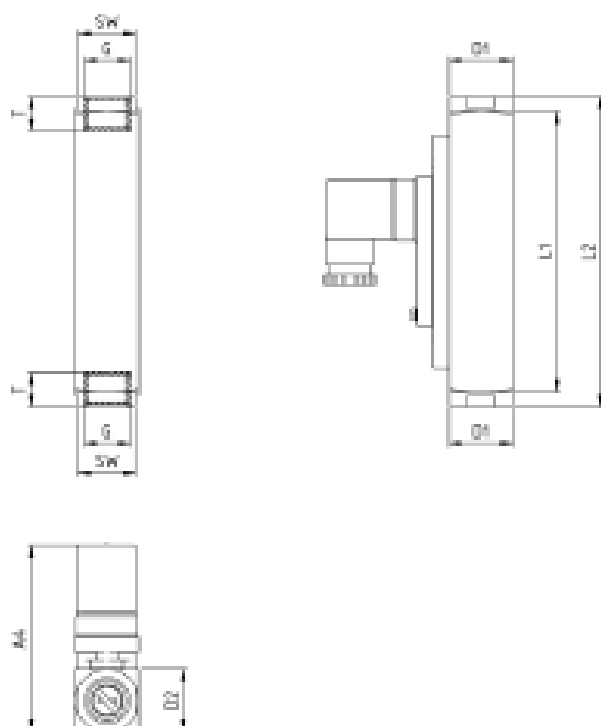
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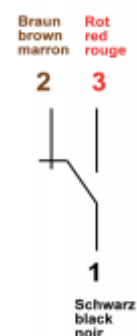
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Technical drawing



Connector in compliance with EN 175301-803 Form A and cable

Change over (COC)

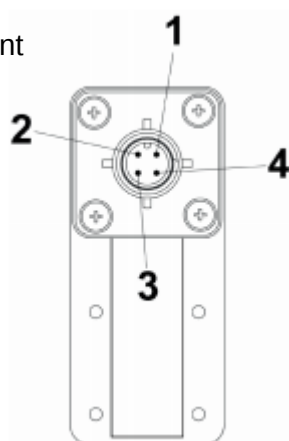


Normally open (NOC)



M12x1

Pin assignment



Change over (COC)



Normally open (NOC)





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Electrical Data	
Change over (COC)	250 V • 1,5A • 50 VA ⁽³⁾
Normally open (NOC)	250 V • 3A • 100 VA
Change over M 12x1 (-20 °C – 85 °C)	250 V • 1,5A • 50 VA ⁽³⁾
Normally open M 12x1 (-20 °C – 85 °C)	250 V • 3A • 100 VA
EX-version in compliance with ATEX directive	
ATEX II 2G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80 °C Db	
ATEX II 2G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100 °C Db	
Change over	250 V • 1A • 30 VA
Normally open	250 V • 2A • 60 VA
UL recognized switch contacts	
Change over	240 V • 1,5A • 50 VA ⁽³⁾
Normally open	250 V • 3A • 100 VA
(3) Minimum load 3 VA	



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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)
Plug types Other connector types or cable lengths on request

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Important instructions!

Technical changes and errors reserved.

Pictures can be similar.

The operating instructions belonging to this device must be observed! Download at www.schmidt-messtechnik.com.