
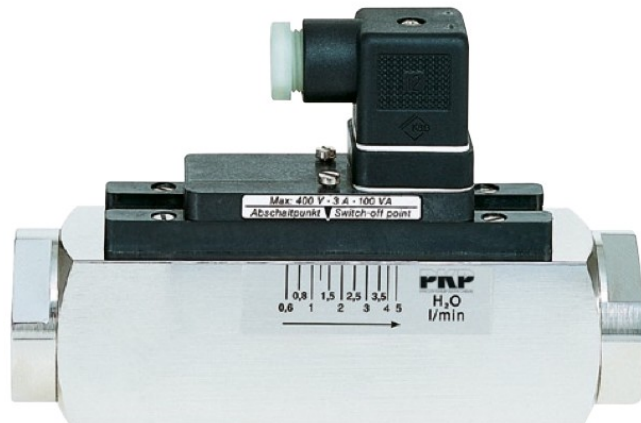


DS06

Variable Area Flowmeter and Switch for High Pressure Applications, mounting independent

- applicable for low viscosity liquids
- small mounting dimensions, any mounting position
- brass (nickel plated) or stainless steel version
- high switching accuracy
- robust design without a measuring glass tube
- for process pressure up to 300 bar
-  optional Ex- version acc. to ATEX
- analogue transmitter 4...20 mA available



Description:

The flowmeter and switch model DS06 works according to a modified variable area principle.

The float is guided in a cylindrical measuring tube by means of a slotted nozzle. The flowing medium moves the float in the flow direction. An externally mounted pointer indicator is magnetically coupled to the float and thus, following the float position, indicates the flow rate on a scale.

A Reed contact is mounted outside the meter in a sealed housing. When the float reaches the position of the Reed contact the switch will close. With higher flows the float moves further upward until it reaches a built-in float stop, still keeping the switch closed. This ensures a bistable switch function at any time.

The Reed contact is adjustable over the full switching range of the meter.

Typical application:

The variable area flowmeters and monitors DS02 are used to measure and monitor continuous flow rates of low-viscosity liquids or gaseous media.

Areas of applications are:

- cooling systems
- engineering
- medical technology
- pharmaceutical and chemical industries
- research and development

Models:

Measuring ranges: 0,2–4 l/min ... 35–250 l/min water

Materials: brass (nickel plated) or stainless steel versions

Technical Data:

Max. pressure: brass version: 200 bar
stainless steel version: 300 bar

Pressure loss: 0,02–0,8 bar

Max. media-temperature: 100 °C (optional 160 °C)
Ex-devices acc. to ATEX-marking

Operating temp.: 70 °C with analogue transmitter SU20

Electr. Connection: angle plug acc. to EN 155301-803, Form A (DIN 43650),
Ex-contact with 2 m cable,
optional: cable connection
round plug M12 x 1 acc. to EN 50044
angle plug with LED or glow lamp

Mounting position: ± 5 % of full scale
(for vertical installation)

Materials:

Brass version (nickel plated):

Wetted parts:
threaded rings: brass
spring: stainless steel 1.4571
gaskets: NBR (optional FKM, EPDM)

all other wetted parts: brass nickel plated

Stainless steel version 1.4571:

Wetted parts:
gaskets: FKM (optional NBR, EPDM)

all other wetted parts: stainless steel 1.4571

Order Code:

Order Number: DS06.3.1.1.09.1.1.1.0

**variable area flowmeter-
and switch**

Connection female thread:

1 = G 1/4 IG	1N = 1/4" NPT
1A = G 3/8 IG	1AN = 3/8" NPT
2 = G 1/2 IG	2N = 1/2" NPT
3 = G 3/4 IG	3N = 3/4" NPT
4 = G 1 IG	4N = 1" NPT
5 = G 1 1/4 IG	5N = 1 1/4" NPT
6 = G 1 1/2 IG	6N = 1 1/2" NPT

Material:

1 = brass nickel plated
2 = stainless steel 1.4571

Scale:

1 = for water

Measuring ranges:

DS06.1, DS06.1A and DS06.2:

01 = 0,2–4 l/min (water)
03 = 0,6–5 l/min (water)
04 = 0,5–8 l/min (water)
05 = 1–14 l/min (water)
06 = 1–28 l/min (water)

DS06.2 and DS06.3:

07 = 2–40 l/min (water)
08 = 4–55 l/min (water)

DS06.3 and DS06.4

09 = 1–70 l/min (water)
10 = 8–90 l/min (water)
11 = 5–110 l/min (water)

nur DS06.5

12 = 10–150 l/min (water)

DS06.5 and DS06.6

13 = 35–220 l/min (water)
14 = 35–250 l/min (water)

Addition S...= special scale

Flow indicator:

0 = Switch only, without flow indicator
1 = Flowmeter and -switch, with flow indicator

Number of contacts:

0 = without contact (only for devices with indication and/or SU20)
1 = 1 contact
2 = 2 contacts

Contact function / analogue output:

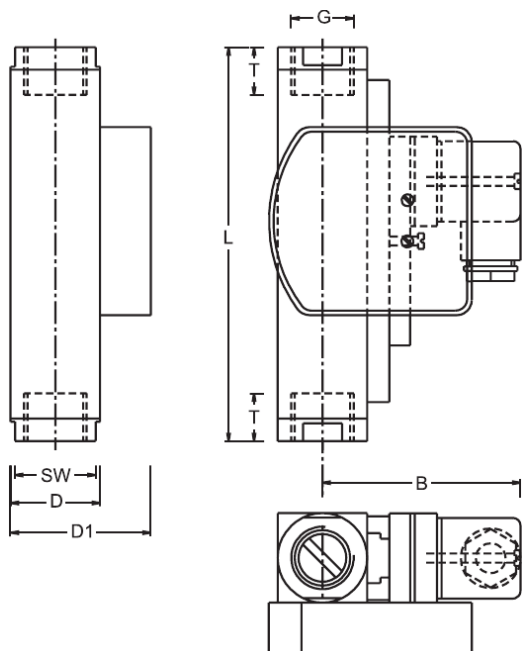
(contact or analogue transmitter available)

0 = without
1 = N/O
2 = SPDT
2X = SPDT for SPS application (not for DS06.5, DS06.6)
3S = Ex-N/O,
3U = Ex-SPDT
SU20 = analogue transmitter 4...20 mA and 0...10 V

Options:

0 = without
1 = please specify in plain text
HT = high temperature version 160 °C (for liquids only)
M12 = round plug M12 x 1 acc. to EN 50044 (Tmax. 85 °C)
Kx = cable version 1 m, 2 m, 5 m, or 10 m

Dimensions:



Dimensions:

Type	Dimensions [mm]							Weight appr. [g]
	SW	D	D1	B	G	T	L	
DS06.1.x.x.x	27	30	47	71	G ¼	14	131	850/900
DS06.2.x.x.x	27	30	47	71	G ½	14	130	850/900
DS06.2.x.x.07/08	27	30	47	71	G ½	14	146	900/950
DS06.3.x.x.07/08	32	35	47	21	G ¾	20	174	900/950
DS06.3.x.x.x	34	40	57	76	G ¾	18	152	1400/1450
DS06.4.x.x.9-11	40	40	57	76	G 1	19	156	1100/1150
DS06.5.x.x.12	50	50	57	76	G 1 ¼	21	200	2750/2800
DS06.5.x.x.x	50	50	67	81	G 1 ¼	21	200	3000/3050
DS06.6.x.x.x	60	60	77	82	G 1 ½	24	200	3800/3850

Contacts:

The contact opens/changes, if the flow level has fallen under the adjusted value.

Type	Size	Contact function	Switching capacity		
			Angle plug IP65	M12x1 plug IP67	cable connection (1 m) IP67
DS06.1	1/4"	1 = N/O	250 V / 3 A / 100 VA		
DS06.1A	3/8"	2 = SPDT	250 V / 1,5 A / 50 VA, min. load: 3 VA		
DS06.2	1/2"				
DS06.3	3/4"	2X = SPDT for SPS**	250 V / 1 A / 60 VA	-/-	-/-
DS06.4	1"	3S = Ex-N/O*	-/-	-/-	250 V / 2 A / 60 VA (2 m cable)
DS06.5	1 1/4"		-/-	-/-	250 V / 1 A / 30 VA, min load: 3 VA (2 m cable)
DS06.6	1 1/2"	3U = Ex-SPDT*	-/-	-/-	

* Exact max. switching capacity: see ATEX documents

** not available for DS06.5 and DS06.6

ATEX-designations:

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
 (with cable connection, Standard 2 m only)



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Analogue transmitter SU20:

- analogue signal 4...20 mA and 0...10 V
- operating temperature up to 70 °C
- accuracy: +/- 10 % of full scale
- aluminium housing, anodized



Technical Data:

Accuracy*:	+/- 10 % of full scale
Operating temperature:	-20...+70 °C
Storage temperature:	-20...+80 °C
Repeatability:	+/- 3 % of full scale
Material housing:	aluminium, blue anodized
Protection class:	IP67

* Higher calibration accuracy when calibrated individually. Available on request.

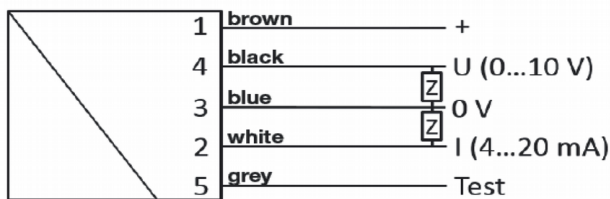
Electrical Data:

Analogue output:	4...20 mA and 0...10 V
Power supply:	24 VCD (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

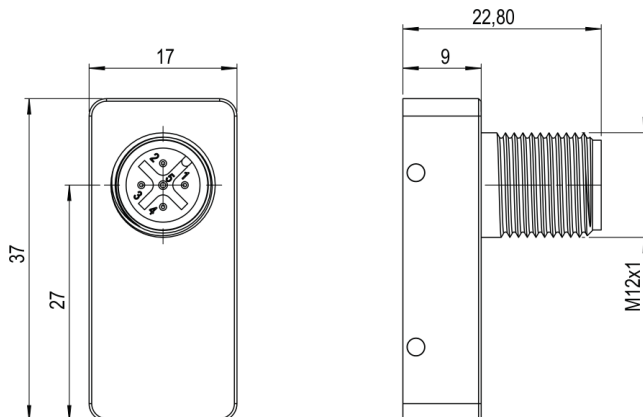
Note:

Please note that the flowmeter and the analogue transmitter have been optimally adjusted to each other and may not be exchanged!

Electrical connection:



Dimensions:



Accessories (see separate data sheets):

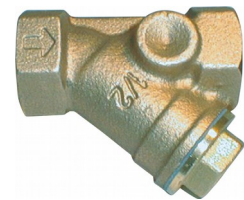
- Needle valves SNV01, SNV02



- Ball valves SKG01, SKG02



- Dirt traps SF00, SF01



- Protection relay MSR01



- M12 Plug connector PVC-cable SM12



Notes:

The specified measuring/switching ranges apply when the instrument is installed vertically and the flow rate is from bottom to top.

Other installation positions or operating densities deviating from the specified specifications increase the specified measuring error.

Special scales for different media and operating conditions are available on request.

The specified switching points are shut-off points at falling flow rates. Please note that the switch-on points are higher due to the hysteresis.

For applications where pressure surges are to be expected, please contact PKP!

