



SW-06

Variable Area Flowmeter and Switch, Mounting Position Independent, High Pressure Type



Features

- / Any mounting position,
no need of recalibration
- / Compact design
- / Brass and stainless steel versions
- / Highly accurate switching
- / Very low switching hysteresis
- / Robust design without sight glass
- / Suitable for high operating pressures

Description:

The SW-06 series of flowmeters and switches operates according to a modified variable area principle. The float is introduced into a cylindrical slit nozzle. The flowing medium moves the float in the direction of flow. An externally mounted indicator instrument is magnetically coupled with the float and indicates the flowing volume on the scale mounted on a scale. A reed contact is situated outside the device. This reed contact is infused in a stepless adjustable housing and thus protected from external influences. When the float reaches along with its integrated magnet the position of the reed contact, the contact blades get closed. If the volume of flow is higher the float continues to move maximum up to the stopper that prevents overriding of the operating range. This ensures a bistable switching action at any time.

Application:

The spring action and magnetic float ensure absolute functional safety. Due to the spring mounted inside that presses the float in the opposite direction of flow into its initial position, the device can be deployed in any mounting position. No readjustment is required as the artificially matured spring is under pretension. The SW-06 series of variable area flowmeters and switches is intended for measuring and monitoring low-viscosity fluids, for example, in cooling systems for welding machines, laser and pipe installations, pump monitoring, compressors etc.



Ordering Codes:

Order number SW-06. 1. 1. 1. 06. 1. 1. 1. 1. 0

SW-06 Variable Area Flowmeter and Switch

Process connection /

- 1 = female thread G 1/4"
- 2 = female thread G 1/2"
- 3 = female thread G 3/4"
- 4 = female thread G 1"
- 5 = female thread G 1 1/4"
- 6 = female thread G 1 1/2"

Material /

- 1 = brass, spring made of stainless steel 1.4571
- 2 = fully stainless steel 1.4571

Scale /

- 1 = for water (20°C)

Operating ranges / deactuation flow rates

SW-06.1 and SW-06.2:

- 01 = 0.2 .. 4 l/min
- 03 = 0.6 .. 5 l/min
- 04 = 0.5 .. 8 l/min
- 05 = 1 .. 14 l/min
- 06 = 1 .. 28 l/min

SW-06.2 and SW-06.3:

- 07 = 2 .. 40 l/min
- 08 = 4 .. 55 l/min

SW-06.3 and SW-06.4:

- 09 = 1 .. 70 l/min
- 10 = 8 .. 90 l/min
- 11 = 5 .. 110 l/min

SW-06.5 only:

- 12 = 10 .. 150 l/min

SW-06.5 and SW-06.6:

- 13a = 35 .. 220 l/min
- 14 = 35 .. 250 l/min

Flow indicator /

- 0 = switch only, no flow indicator
- 1 = flowmeter and switch, with display instrument

Number of contacts /

- 0 = no contacts (for devices with indicator only)
- 1 = 1 contact
- 2 = 2 contacts

Contact function /

- 0 = no contacts (for devices with indicator only)
- 1 = NO-contact
- 2 = change-over contact
- 3 = Ex-change-over contact (always with 2 m infused cable)
- 4 = Ex-NO-contact (always with 2 m infused cable)
- 5 = change-over contact for PLC

Electrical connection /

- 0 = none, if no contacts
- 1 = plug DIN43650 shape A, counter plug incl.
- 2 = plug M12x1, counter plug incl. (-20°C...+85°C)
- 3 = 1 m infused cable (2 m for Ex)

Special issues/

- 0 = none
- 1 = please specify in detailed text

Attention: Please specify mounting position and direction of flow in detailed text.

Technical Specifications:

- Protection class /** IP65 with plug, IP67 with cable connection or with device plug M12x1
- max. Pressure /** Brass version: 200 bar
Stainless steel version: 300 bar
- Pressure drop /** 0.02 .. 0.8 bar
- max. Temp. /** 100°C (160°C optional)
- El. Connection /** device plug as per DIN 43650 A
- Accuracy /** ±5% of full scale value

Contacts (max. V):

Contact function	
NO-contact	250V, 3A, 100VA
Change-over, CO M12x1	250V, 1.5A, 50VA ⁽²⁾
Ex-NO ⁽¹⁾	250V, 2A, 60VA
Ex-Change-over ⁽¹⁾	250V, 1A, 30VA ⁽²⁾
Change over PLC	250V, 1A, 60VA

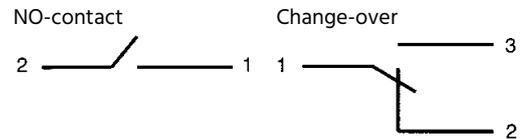
⁽¹⁾ ATEX II 2 G Ex mb IIC T6 Gb & ATEX II 2 D Ex tb IIIC T80°C Db (max. Ambient temperature 75°C)

ATEX II 2 G Ex mb IIC T5 Gb & ATEX II 2 D Ex tb IIIC T100°C Db (max. Ambient temperature 90°C)

⁽²⁾ Minimum load 3VA

The contact opens respectively changes, when the upcoming flow falls below the adjusted setpoint.

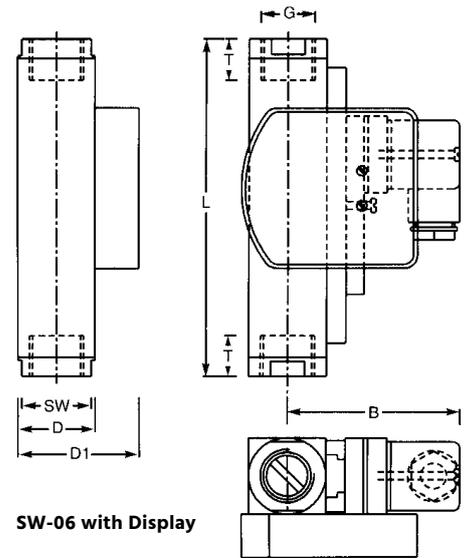
El. Connection:





Dimensions in mm:

Type	SW	D	D1	B	G	T	L	Weight	with Display
SW-06.1.x.x.x	27	30	47	71	1/4"	14	131	850 g	900 g
SW-06.2.x.x.01-06	27	30	47	71	1/2"	14	131	850 g	900 g
SW-06.2.x.x.07/08	27	30	47	71	1/2"	14	146	900 g	950 g
SW-06.3.x.x.07/08	32	35	47	71	3/4"	16	174	900 g	950 g
SW-06.3.x.x.09-11	34	40	57	76	3/4"	18	152	1400 g	1450 g
SW-06.4.x.x.09-11	40	40	57	76	1"	19	156	1100 g	1150 g
SW-06.5.x.x.12	50	50	57	76	1 1/4"	21	200	2750 g	2800 g
SW-06.5.x.x.13a-14	50	50	67	81	1 1/4"	21	200	3000 g	3050 g
SW-06.6.x.x.13a-14	60	60	77	82	1 1/4"	24	200	3800 g	3850 g



Wetted Parts:

Element	brass version	st. steel version
Outer housing	aluminium enodized	aluminium enodized
Spring	st. steel 1.4571	st. steel 1.4571
Seals	NBR (optional FKM, EPDM)	FKM (optional NBR, EPDM)
Other parts	brass nickel-plated	st. steel 1.4571
Thread rings (SW-06.4.x...SW-06.6.x)	brass	st. steel 1.4571
Centering washer (op. ranges 09...11)	brass nickel-plated	st. steel 1.4571
Display	macrolon	macrolon

