

DS07

Viscosity Compensated Variable Area Flowmeter And Switch, Mounting Independent

- for viscous media up to 600 cSt
- mounts in any position without recalibration
- compact design
- materials brass or stainless steel
- high switching accuracy
- very small switch hysteresis
- measuring glass with burnt-in scale



Description:

The flowmeter and switch model DS07 works according to a modified variable area principle.

The float is guided in a cylindrical measuring glass by means of a spring. The flowing medium moves the float in the flow direction. The upper edge of the float shows the momentary flow via a burnt-in scale on the measuring glass. 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 measuring range of the meter.

Viscosity compensation, mounting position and reliability:

The built-in spring and the magnetic float guarantee an absolute reliability of the meter. This spring, which pushes the float back towards its zero position against the flow makes it possible to use the meter in any mounting position. The spring is artificially aged, thus eliminating the need for recalibration to the different mounting positions.

The strong spring and an orifice in the float work together to limit the effects of viscosity changes to an absolute minimum compared to regular variable area flowmeters.

Application:

The variable area flowmeter and switch model DS07 is used for measuring and monitoring the flow of viscous liquids, i. e. in central lubricating systems, any other lubricating circuitry, hydraulics, transformer oils etc.

Measuring Ranges:

8-27 GPH ... 8-24 GPM
 0.2-0.8 l/min ... 30-90 l/min
 for viscosities up to max. 600 cSt

Materials: brass or stainless steel

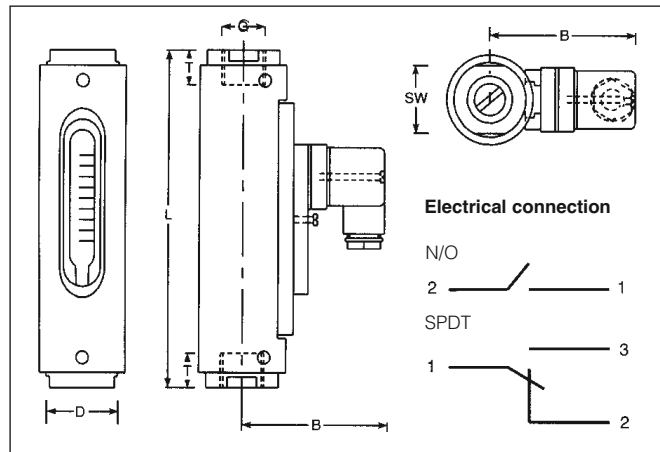
Contacts:

N/O: 250 V, 3 A, 100 VA**
 SPDT: 250 V, 1.5 A, 50 VA***
 Ex-N/O*: 250 V, 2 A, 60 VA
 Ex-SPDT*: 250 V, 1 A, 30 VA

* according to Atex 100a Ex II 2 G, EEx m II T6 and II 2D IP67 T80 °C
 ** for DS07.S.2/3/4...(230V, 1 A, 50 VA)
 *** 250V, 1A, 50 VA (TYPE:2X)

Dimensions:

Model	Mounting dimensions in inch / mm						Weight (lbs / g)
	SW	D	B	NPT / G	T	L	
DS07.S.1	1.61 / 41	1.97 / 50	3.03 / 77	1/4"	0.67 / 17	5.71 / 145	1.87 / 850
DS07.S.2	1.61 / 41	1.97 / 50	3.03 / 77	1/2"	0.67 / 17	5.71 / 145	1.87 / 850
DS07.M.1	1.06 / 27		2.07 / 53	1/2"	0.55 / 14	4.49 / 114	0.66 / 300
DS07.S.3	1.61 / 41	1.97 / 50	3.03 / 77	3/4"	0.67 / 17	5.47 / 139	1.87 / 850
DS07.S.4	1.61 / 41	1.97 / 50	3.03 / 77	1"	0.67 / 17	6.22 / 158	1.87 / 850



Technical Specifications:

max. pressure: 232 psi / 16 bar (DS07.M)
 145 psi / 10 bar (DS07.S)

pressure drop: 0.29 - 2.9 psi / 0.02 - 0.2 bar (DS07.M)
 0.29 - 5.8 psi / 0.02 - 0.4 bar (DS07.S)

max. temperature: 248 °F / 120 °C
 (320 °F / 160 °C on request)

materials: Measuring glass: Duran 50
 Housing: anodized aluminium
 O-rings: Perbunan
 (optionally: Viton, EPDM)

elektr. connection: plug acc. to DIN 43650
 (optionally: 1m cable connection)

accuracy: ± 10% f. s.

analog output: see model DSxx-A
 in section "accessory"

Ordering Code:

Order number: DS07. M. 2. 1. 1. 05. 1. 1. 0

Viscosity compensated variable area flowmeter and switch

Size:

M = miniature
 S = standard

Connection:

1N = 1/4" NPT female 1 = G 1/4 female
 2N = 1/2" female 2 = G 1/2 female
 3N = 3/4" female 3 = G 3/4 female
 4N = 1" female 4 = G 1 female

Material:

1 = brass, spring st. steel 1.4310
 2 = all st. steel 1.4571

Scale:

1 = for viscous media

Measuring ranges:

DS07.M 1/2" only:

01U = - 01 = 0.2 - 0.8 l/min
 02U = 3.2 - 15.9 GPH 02 = 0.2 - 1 l/min
 03U = 8 - 27 GPH 03 = 0.5 - 1.7 l/min
 04U = 21 - 63 GPH 04 = 1.3 - 4 l/min
 05U = 40 - 127 GPH 05 = 2.5 - 8 l/min

DS07.S 1/4" only:

06AU = 1.6 - 12.7 GPH 06 A = 0.1 - 0.8 l/min
 07AU = 8 - 24 GPH 07 A = 0.5 - 1.5 l/min
 08AU = 16 - 63 GPH 08 A = 1 - 4 l/min

DS07.S 1/2", 3/4", 1":

06U = 1.6 - 12.7 GPH 06 = 0.1 - 0.8 l/min
 07U = 8 - 24 GPH 07 = 0.5 - 1.5 l/min
 08U = 16 - 63 GPH 08 = 1 - 4 l/min
 09U = 32 - 127 GPH 09 = 2 - 8 l/min
 10U = 48 - 159 GPH 10 = 3 - 10 l/min
 11U = 80 - 240 GPH 11 = 5 - 15 l/min
 12U = 125 - 380 GPH 12 = 8 - 24 l/min

DS07.S 3/4", 1":

13U = 160 - 475 GPH 13 = 10 - 30 l/min
 14U = 240 - 710 GPH 14 = 15 - 45 l/min
 15U = 320 - 950 GPH 15 = 20 - 60 l/min
 16U = 8 - 24 GPM 16 = 30 - 90 l/min

No. of contacts:

0 = without contact
 1 = 1 contact
 2 = 2 contacts

Contact function:

0 = without contact
 1 = N/O
 2 = SPDT
 3S = Ex-N/O, not available for DS07.M (EEx m II T6)
 3U = Ex-SPDT, not available for DS07.M (EEx m II T6)

Options:

0 = without
 1 = please indicate