DS08

Viscosity Compensated Variable Area Flowmeter And Switch For High Pressure Applications, Mounting Independent

- for viscous media up to 600 cSt
- mounts in any position without recalibration
- small mounting dimensions
- materials brass or stainless steel
- high switching accuracy
- very small switch hysteresis
- robust design without glass measuring tube
- suitable for pressures up to 5000 psi / 350 bar

Description:
The flowmeter and switch model DS08 works according to a modified variable area principle.
The float is guided in a cylindrical measuring tube by means of a spring. 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.

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 DS08 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.

PKP Process Instruments Inc.
10 Brent Drive · Hudson, MA 01749
+1-978-212-0006 · +1-978-568-0060
Email: info@pkp.eu · Internet: www.pkp.eu

PKP Prozessmesstechnik GmbH
Borsigstraße 24 · D-65205 Wiesbaden
+49 (0) 6122-7055-0 · +49 (0) 6122-7055-50
Email: info@pkp.de · Internet: www.pkp.de

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Versions:

- flow switch only with Reed contact
- optionally as flow meter and switch with external pointer indicator and contact

Measuring ranges: 1.6-12.7 GPH ... 9.5-29 GPM
0.1-0.8 l/min ... 35-110 l/min
for viscosities up to 600 cSt

Materials: brass or st. Steel

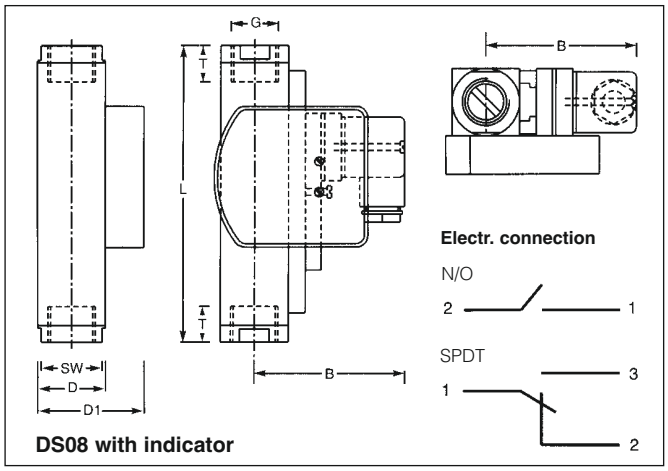
Contacts:

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 DS08.S...(230V, 1 A, 50 VA) ***250V, 1A, 50 VA (TYPE:2X)

Dimensions:

Model	Mounting dimensions in inch / mm							Weight (lbs / g)	
	SW	D	D1	B	NPT/G	T	L	without indication	with
DS08.M	1.06 / 27	1.22 / 31	1.89 / 48	1.89 / 48	1/2"	0.55 / 14	3.54 / 90	0.77 / 350	–
DS08.S	1.57 / 40	1.57 / 40	2.24 / 57	2.68 / 68	1"	0.67 / 17	5.12 / 130	2.20 / 1000	2.31 / 1050
Special connection									
DS08.M					1/4"	0.55 / 14	3.86 / 98	0.88 / 400	–
					3/8"	0.55 / 14	4.25 / 108	0.99 / 450	–
DS08.S					1/4"	0.83 / 21	5.98 / 152	2.42 / 1100	2.53 / 1150
					1/2"	0.83 / 21	5.98 / 152	2.42 / 1100	2.53 / 1150
					3/4"	0.83 / 21	5.98 / 152	2.42 / 1100	2.53 / 1150



DS08 with indicator

Technical Specifications:

max pressure:
brass version: 4350 psi / 300 bar (DS08.M),
3600 psi / 250 bar (DS08.S)
st. steel version: 5000 psi / 350 bar (DS08.M),
4350 psi / 300 bar (DS08.S)
pressure drop: 0.29-5.8 psi / 0.02-0.4 bar (DS08.M),
0.29-2.9 psi / 0.02-0.2 bar (DS08.S)
max. temp.: 248 °F / 120 °C, 320 °F / 160 °C optionally
materials: wetted parts:
brass version: nickel plated brass
st. steel version: stainless steel 316 Ti / 1.4571
O-rings (for DS08.-.xR… only):
DS08.x.x 1: Buna, optionally: EPDM, Viton
DS08.x.x.2: Viton, optionally: EPDM, Buna
electrical connection: plug acc.to DIN 43650 (optionally: 1m cable connection) (optionally: circular plug M 12x1 to EN 50044
accuracy: ± 10% f. s.
analog output: see model DSxx-A in section “accessory”

Ordering Code:

Order number: DS08. S. 4. 1. 1. 06. 1. 1. 1. 0

All metal viscosity compensated variable area flowmeter and switch

Size:
M = miniature
S = standard

Connection:
1RN = reduction to 1/4" NPT female
2RN = reduction to 1/2" NPT female, for DS08.S only
3RN = reduction to 3/4" NPT female, for DS08.S only
1R = reduction to G 1/4 female
2R = reduction to G 1/2 female
2 = G 1/2 female
3R = reduction to G 3/4 female
4 = G 1 female

Material:
1 = brass, spring st. steel 304 / 1.4310
2 = all st. steel 316 Ti / 1.4571

Scale:
1 = for viscous media up to 600 cST

Measuring ranges:
DS08.M. only

01U = 1.6-12.7 GPH	01 = 0.1 - 0.8 l/min
03U = 8.0-25.5 GPH	03 = 0.5 - 1.6 l/min
04U = 13-48 GPH	04 = 0.8 - 3 l/min
05U = 32-111 GPH	05 = 2 - 7 l/min

DS08.S. only

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 = 48-160 GPH	10 = 3 - 10 l/min
11U = 80-240 GPH	11 = 5 - 15 l/min
12U = 125-380 GPH	12 = 8 - 24 l/min
12AU = 15-320 GPH	12A = 1 - 20 l/min
13U = 160-480 GPH	13 = 10 - 30 l/min
13AU = 60-630 GPH	13A = 4 - 40 l/min
14U = 240-710 GPH	14 = 15 - 45 l/min
14AU = 80-790 GPH	14A = 5 - 50 l/min
15U = 320-950 GPH	15 = 20 - 60 l/min
15AU = 130-950 GPH	15A = 8 - 60 l/min
16U = 8.0-24.0 GPM	16 = 30 - 90 l/min
16AU = 3.2-18.5 GPM	16A = 12 - 70 l/min
17U = 9.5-29.0 GPM	17 = 35 - 110 l/min
17AU = 4.0-21.1 GPM	17A = 15 - 80 l/min

Version:
0 = switch only, without flow rate indication
1 = flow meter and switch, with side indicator (for DS08.S only)

No. of contacts:
0 = without contact (for flowmeters with indicator only)
1 = 1 contact
2 = 2 contacts

Contact function:
0 = without contact (for flowmeters with indicator only)
1 = N/O
2 = SPDT
3U = Ex-N/O, not available for DS08.M (EEx m II T6)
3S = Ex-SPDT, not available for DS08.M (EEx m II T6)

Options:
0 = without
1 = please indicate

attention: Please indicate flow-direction and mounting position.
Analog output 4-20 mA for DS08.S on request.

PKP Prozessmesstechnik GmbH
Borsigstraße 24 · D-65205 Wiesbaden
+49 (0) 6122-7055-0 · +49 (0) 6122-7055-50
Email: info@pkp.de · Internet: www.pkp.de

PKP Process Instruments Inc.
10 Brent Drive · Hudson, MA 01749
+1-978-212-0006 · +1-978-568-0060
Email: info@pkp.eu · Internet: www.pkp.eu