

DS03

Variable Area Flowmeter And Switch

- small mounting dimensions
- materials brass or stainless steel
- scales for water and air
- high switching accuracy
- very small switch hysteresis
- measuring glass with burnt-in scale



Description:

The flowmeter and switch model DS03 works according to a modified variable area principle.

The float is guided in a cylindrical measuring glass. 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.

Application:

The variable area flowmeter and switch model DS03 is used for measuring and monitoring the flow of low viscosity liquids and gases, i. e. in cooling circuits of welding machines and laser systems, for pump monitoring, compressors and many other applications.

Measuring Ranges:

Water: 1.6-23.8 GPH...60...790 GPH
0.1-1.5 l/min ... 4-50 l/min
Air: 6.5-63.5 SCFH...7-56.5 SCFM
3-30 NI/min ... 200-1600 NI/min
at 14.7 psia / 1.013 bar abs. and 68 °F / 20 °C

Materials: brass or stainless steel

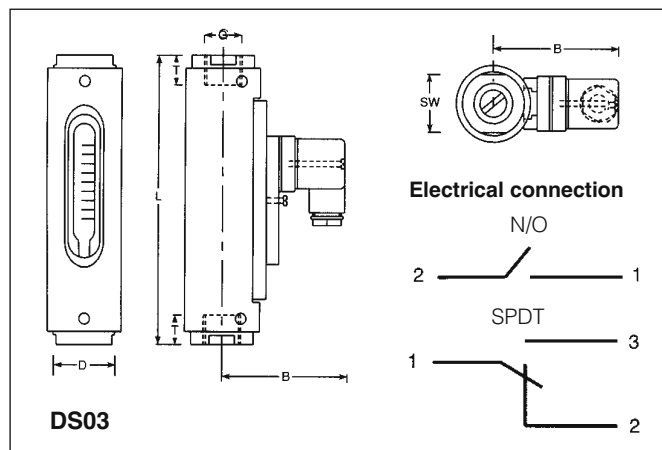
Contacts:

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

Dimensions:

Model	Mounting dimensions in inch / mm						Weight lbs / g
	SW	D	B	NPT / G	T	L	
DS03.1.x.x.x	1.26 / 32	1.69 / 43	2.87 / 73	1/4	0.55 / 14	5.20 / 132	1.38 / 625
DS03.2.x.x.x	1.26 / 32	1.69 / 43	2.87 / 73	1/2	0.59 / 15	5.31 / 13	1.38 / 625
DS03.2.x.x.05	1.26 / 32	1.69 / 43	2.87 / 73	1/2	0.59 / 15	6.42 / 163	1.43 / 650
DS03.3.x.x.05	1.26 / 32	1.69 / 43	2.87 / 73	3/4	0.63 / 16	6.57 / 167	1.43 / 650
DS03.3.x.x.06/07	1.61 / 41	1.97 / 50	2.99 / 76	3/4	0.71 / 18	6.46 / 164	2.21 / 1000
DS03.4.x.x.06/07	1.61 / 41	1.97 / 50	2.99 / 76	1	0.75 / 19	7.24 / 184	2.21 / 1000
DS03.4.x.x.08	1.61 / 41	1.97 / 50	2.99 / 76	1	0.79 / 20	7.87 / 200	2.43 / 1100



Technical Specifications:

max. pressure: 145 psi / 10 bar
pressure drop: 0.15-2.9 psi / 0.01-0.2 bar
max. temperature: 212 °F / 100 °C
(320 °F / 160 °C optionally) for liquids, 194 °F / 90 °F for gases
materials: Measuring glass: Duran 50
Housing: anodized aluminium
O-rings: Buna,
(optionally: Viton, EPDM)
electrical connections: plug acc. to DIN 43650
(optionally: 1 m cable connection)
accuracy: ± 5% f. s.
analog output: see model DSxx-A
in section "accessory"

Ordering Code:

Order number: DS03. 3. 1. 1. WA06. 1. 1. 0

Variable area flowmeter and switch

Connection:

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

Material:

1 = brass
2 = all st. steel 316 Ti / 1.4571

Scale:

1 = for Water
2 = for air (at 14.7 psia / 1.013 bar abs., 68 °F / 20 °C)

Measuring ranges:

DS03.1 and DS03.2:

Water WU01 = 1.6 - 23.8 GPH	WA01 = 0.1 - 1.5 l/min
WU02 = 3.2 - 47.5 GPH	WA02 = 0.2 - 3 l/min
WU03 = 5.0 - 127 GPH	WA03 = 0.3 - 8 l/min
WU04 = 16 - 190 GPH	WA04 = 1 - 12 l/min

Air LU01 = 6.5 - 63.5 SCFH	LA01 = 3 - 30 NI/min
LU02 = 13 - 127 SCFH	LA02 = 6 - 60 NI/min
LU03 = 13 - 340 SCFH	LA03 = 6 - 160 NI/min
LU04 = 42 - 465 SCFH	LA04 = 20 - 220 NI/min

DS03.2 and DS03.3:

Water WU05 = 32 - 285 GPH	WA05 = 2 - 18 l/min
Air LU05 = 85 - 760 SCFH	LA05 = 40 - 360 NI/min

DS03.3 and DS03.4:

Water WU06 = 48 - 550 GPH	WA06 = 3 - 35 l/min
WU07 = 60 - 790 GPH	WA07 = 4 - 50 l/min
Air LU06 = 2.1 - 24.7 SCFM	LA06 = 60 - 700 NI/min
LU07 = 2.0 - 29.0 SCFM	LA07 = 60 - 825 NI/min

DS03.4 only:

Water LU08 = 7 - 56.5 SCFM	LA08 = 200 - 1600 NI/min
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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 (EEx m II T6)
3U = Ex-SPDT (EEx m II T6)

Options:

0 = without
1 = please indicate