

SW...

Flow control switch for liquids and gases



Summary

Mechanical flow control switch indicates liquid or gas flow by a changeover contact in pipes sized 1/2" to 8".

Application

- **Indication of media flow at pumps, compressors, chillers, heat exchangers, and other technologies.**

Function

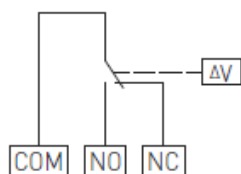
The media flow actuates the measuring paddle which is mechanically linked to the switch. Sensitivity is set by a screw inside of the cover, see table.

Mind the correct position of the switch in the pipe: install it vertically in a horizontal piping, before and after the switch there should be a calming section of min. 5x pipe diameter.

Technical data

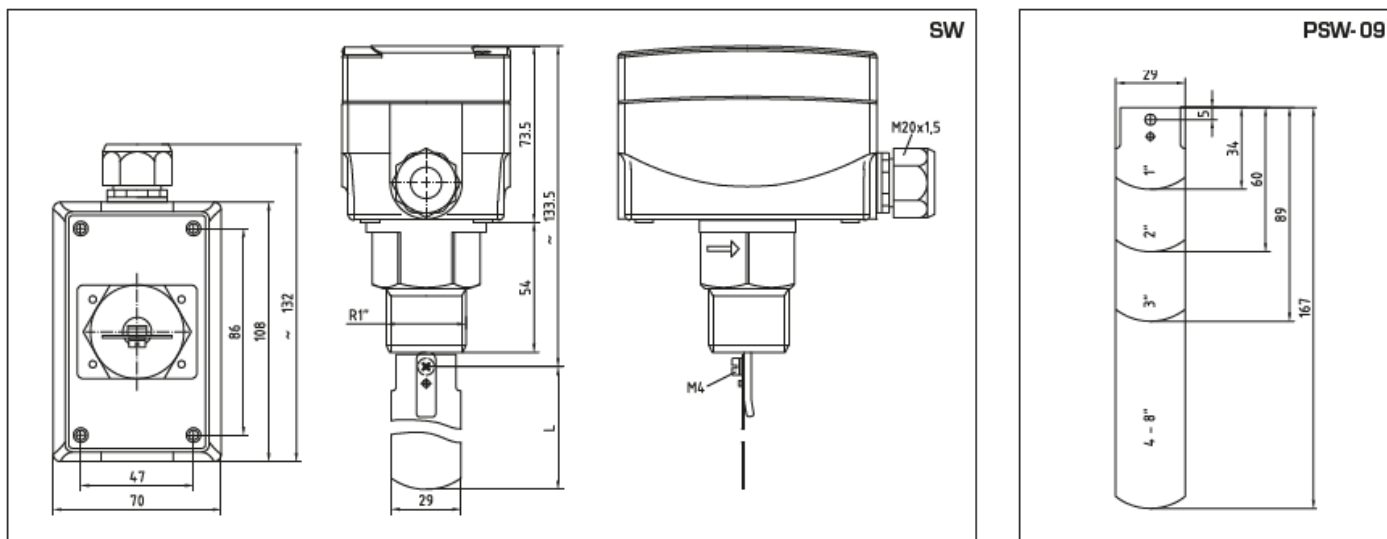
Contact load	15 (8) A, 24...250 V AC; at 24 V AC min. 150 mA
Contact type	dust-proof changeover one pole potential-free contact
Cover	polyamide, glass fibre (30 %) reinforced, colour similar to RAL 9010
Dimensions	108 x 70 x 73,5 mm
Body	zinc-covered steel
Threaded part	brass or stainless steel, see table
Paddle	steel, 1.4401, VA
Cable gland	M20x 1.5, with tension relief
Ambient temperature	-40...85 °C
Max. media temperature	120 °C
Terminals	screw terminals for wires 0,14 – 1,5 mm ²
Protection degree	IP65
Dimensions	see below

Terminals



COM red
NO yellow (COM-NO closed if flow)
NC blue (COM-NC closed if no flow)

Dimensions



Setting ranges

SW-1EPL, SW-2

Ø of the pipe, DN	Default value Off (m³/h)	Default value On (m³/h)	Max. set value Off (m³/h)	Max. set value On (m³/h)
1"	0.6	1.0	2.0	2.1
1 1/4"	0.8	1.3	2.8	3.0
1 1/2"	1.1	1.7	3.7	4.0
2"	2.2	3.1	5.7	6.1
2 1/2"	2.7	4.0	6.5	7.0
3"	4.3	6.2	10.7	11.4
4"	11.4	14.7	27.7	29.0
4" Z	6.1	8.0	17.3	18.4
5"	22.9	28.4	53.3	55.6
5" Z	9.3	12.9	25.2	26.8
6"	35.9	43.1	81.7	85.1
6" Z	12.3	16.8	30.6	32.7
8"	72.6	85.1	165.7	172.5
8" Z	38.6	46.5	90.8	94.2

SW-3, SW-4

Ø of the pipe, DN	Default value Off (m³/h)	Default value On (m³/h)	Max. set value Off (m³/h)	Max. set value On (m³/h)
1/2"	0.174	0.48	0.846	0.948
3/4"	0.138	0.408	0.768	0.858
1"	0.2	0.6	1.0	1.1
1 1/4"	0.25	0.9	1.4	1.6
1 1/2"	0.5	1.2	1.6	2.2
2"	0.9	2.3	3.6	4.1
3"	2.1	4.9	7.4	8.2

DN versus paddles

Ø of the pipe, DN inches	Ø of the pipe, DN in mm	Paddles combination (PSW-09)
1/2"	15	1
3/4"	20	1
1	25	1
1 1/4"	32	1
1 1/2"	40	1
2"	50	1,2
2 1/2"	65	1,2
3"	80	1,2,3
4" Z	100	1,2,3, and 4 cut to 92 mm
5" Z	125	1,2,3, and 4 cut to 117 mm
6" Z	150	1,2,3, and 4 cut to 143 mm
7-8" Z	200	1,2,3,4 (original length)

Type overview

Type	DN	PN max	Medium	Material of parts which are in contact with the medium	according to DIN 2950
SW1-EPL	1" – 8"	11 bar	normal	brass	
SW2	1" – 8"	30 bar	aggressive	stainless steel, V4A	
SW3	1/2"	11 bar	normal	brass	✓
SW4	3/4"	11 bar	normal	brass	✓

Notes

Accessories: PSW-09, spare paddles

Z – the fourth, long paddle adds to the three paddles which are installed already (1, 2, 3, and 4).