

Product Information

Sensors and Instrumentation

Flow Switch FW1-...GM



- Economical design
- High switching power
- Insensitive to dirt

Characteristics

Mechanical flow switch, for fluid media, with spring-supported piston and magnetic triggering of a reed switch. Robust construction in brass and POM.

Technical data

Switch	reed switch		
Nominal width	DN 8..25		
Process connection	female thread G 1/4..G 1 (further process connections available on request)		
Switching range	1..11 l/min	for details see table "Ranges"	
Pressure loss	0.2..0.8 bar at Q _{max.}		
Q_{max.}	to 30 l/min		
Tolerance	±10 % of full scale value		
Pressure resistance	PN 100 bar optionally up to PN 800 bar		
Media temperature	-20..+90 °C		
Ambient temperature	-20..+70 °C		
Media	water (oils and aggressive media available on request)		
Wiring	normally open (n.o.) No. 0.378		
Switching voltage	max. 230 V AC		
Switching current	max. 0.5 A		
Switching capacity	max. 50 VA		
Protection class	2 - safety insulation		
Ingress protection	IP 67		
Electrical connection	for round plug connector M12x1, 4-pole		
Materials medium-contact	CW614N nickelled, CW614N, POM, 1.4310, hard ferrite		
Non-medium-contact materials	PC, 1.4301, 1.4305		
Weight	see table "Dimensions and weights"		
Installation location	Standard: horizontal inwards flow; other installation positions are possible; the installation position affects the switching point and range.		

Ranges

Details in the table correspond to horizontal inwards flow with decreasing flow rate.

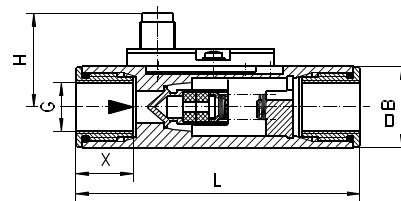
G	DN	Switching range l/min H ₂ O	Q _{max.} recommended	Pressure loss bar at Q _{max.} H ₂ O
G 1/4	DN 8	1 - 6	8	0.2
G 3/8	DN 10		10	0.3
G 1/2	DN 15		20	0.8
G 3/4	DN 20	1 - 11	30	0.2
G 1	DN 25			

Special ranges are available.

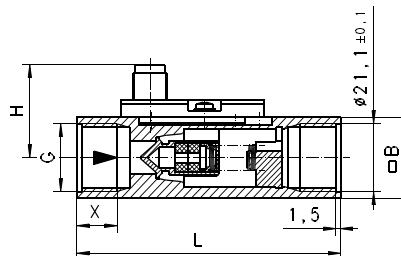
Dimensions and weights

G	Types	L	H	B	X	Weight kg
G 1/4	FW1-008GM	89	30	25	18	0.35
G 3/8	FW1-010GM					
G 1/2	FW1-015GM	85	36	36	12	0.30
G 3/4	FW1-020GM	100			18	0.75
G 1	FW1-025GM				38	40

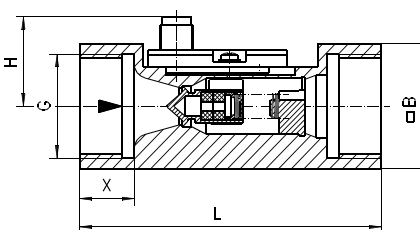
FW1-008..010GM



FW1-015GM



FW1-020..025GM



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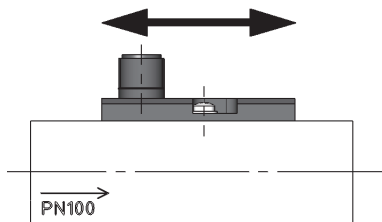
Handling and Operation

Note

- Include straight calming section of 5 x DN in inlet and outlet
- Include a filter if the media are dirty (use magnetic filter for ferritic components).
- It must be ensured that the values given for voltage, current, and power are not exceeded.
- When switch on, a load must be connected in series.
- The electrical details apply to ohmic loads. Capacitive, inductive and lamp loads must be operated using a protective circuit.

Adjustment

Loosen screw slightly, push the switching head into the desired position, and then retighten the screw.



Ordering code

FW1 - 1. 2. 3. 4.
 FW1 - G M

1. Nominal width	
008	DN 8 - G 1/4
010	DN 10 - G 3/8
015	DN 15 - G 1/2
020	DN 20 - G 3/4
025	DN 25 - G 1
2. Process connection	
G	female thread
3. Connection material	
M	brass
4. Switching range H ₂ O for horizontal inwards flow	
006	1 - 6 l/min
011	1 - 11 l/min

Options

- Switching value for oil
- Special values
- Cable outlet 3 m
- Pressure stages PS 500 and PS 800 for DN 15

Ordering information

- Specify direction of flow, medium, and switching range.
- For oils. State viscosity, temperature and designation (e.g. ISO VG 68) (enquire about switching range).