

ROBUST HIGH QUALITY FLOW MONITORS

1 1 Setpoint Contact
Long Service Life



Mechanical Flow Switch for Liquids



The SP-G flow switch is designed for low flow rates and small line sizes. It operates on the variable area principle, allowing the switch-point to be set at very low flow rates while still accommodating significantly higher flows with minimal pressure drop.

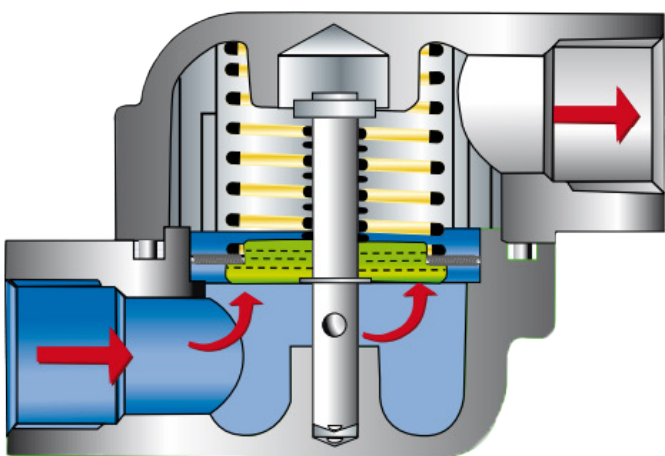
The SP-G is available in DN15 and DN20 sizes, with switch-points ranging from 1.5 to 30 l/min. The switch-point is factory calibrated and can be changed by replacing the pressure plate.

The SP-G incorporates a mechanical microswitch and can be installed in either horizontal or vertical piping. For added installation flexibility, the outlet can be rotated 90° or 180° relative to the inlet, making the SP-G particularly well suited for applications where installation space is limited.

Benefits

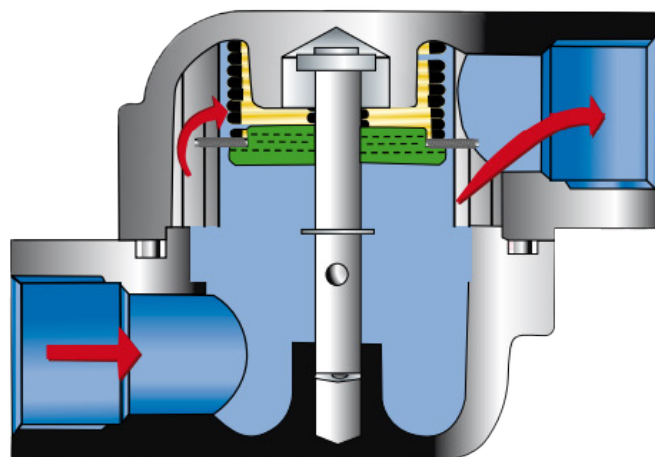
- Rugged, durable design
- Unaffected by magnetic fields
- Simple and economical installation
- One adjustable SPDT microswitch for flow alarm
- Can be mounted horizontally or vertically
- Pressure up to 25 bar (360 psi)
- Suitable for use with liquids
- Flow-actuated operation, unaffected by static line pressure

Working Principle



Closed

Inside the flow switch is a spring-loaded, calibrated disc that is lifted by the flowing liquid. The shaft holding the disc is mechanically connected to a lever, which activates the microswitch at the preset flow rate.



Open

Once the microswitch has been activated, the flow may continue to increase. As the flow rate increases, the disc moves further open, allowing increased flow through the switch with minimal additional pressure drop. Maximum flow is limited only by the system capacity and the allowable pressure drop for the application.

Developed as a compact alternative to the larger SP-GA, the Eletta SP-G Flow Switch is designed for low flow rates and small line sizes. Its variable-area operating principle allows the switch-point to be set at a very low flow rate while still accommodating significantly higher flows with minimum pressure loss.

The spring-loaded disc allows the SP-G to be installed in either horizontal or vertical piping. For additional installation flexibility, the outlet can be rotated 90° or 180° relative to the inlet, making the SP-G particularly well suited for applications where space is limited.

An internal calibrated disc activates the microswitch at the specified flow rate. The switch-point is factory calibrated prior to delivery.

Applications and Product Features

The Eletta Liquid Flow Switches reliable function has been proven for over 50 years and is of our own design and manufacture. It has been recognized all over the world for its economical and simple construction, which includes the unique lever sealing design, used in our complete Flow Products line including the differential pressure monitors. The switches are used in a variety of tough industrial applications that requires the reliability and sturdiness given by each instrument.

- Dry pump protection
- Low flow alarm in cooling circuits
- Antifreeze protection of heat pump systems
- Protecting heating tool in induction heating machines
- Low cost solution for difficult applications
- Very low flow switching point possible
- Needs no straight runs before or after the switch
- Pre adjusted switch points exclude the need of adjustments in the field

Process Connections and Material Options

Flow range	0 – 3.5 m/s. Max flow limited by pump capacity and acceptable pressure drop	
Min. Switch-point	1.5 l/min	
Max. Switch-point	30 l/min	
Wetted materials	Stainless steel 316, PTFE, EPDM for Water, NBR for Oil, FPM - Optional	
Max. pressure	25 bar (360 PSI)	
Max. Control Unit temperature	–20 - 90°C (–4 - 195°F) std –20 - 120°C (–4 - 248°F) option	
Process connection	DN15 (BSP or NPT 1/2") female	DN20 (BSP or NPT 3/4") male
Enclosure material	Aluminum	
Enclosure protection:	IP43 (NEMA 3R) with cable gland PR18	
Alarm:	One (1) microswitch, adjustable to trip within the min./max. switch-point range by changing the pressure plate.	
Pressure drop	approx. 0.03 bar/1.5 l/min. (lowest switch-point)	
Approvals:	The Eletta Flow Monitors conform with the EC directive for low voltage (LV) no: 2006/95/EC and electromagnetic compatibility (EMC) no: 2004/108/EC. Complies with applicable parts in PE-Directive 97/23/EC.	
ATEX-version	Explosion Proof Option for SP-G With One SPDT Switch Max 5A @ 250 VAC and 5A @ 30 VDC With 2014/34/EU. With 3 meter cable	

 II 2G Ex h d IIC T6 (85°C) T5(90°C) T4(120°C) - Gb

Certificates



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In our manuals you will find full details of the design, pressure drop graphs, measuring ranges and dimensional drawings. Visit www.eletta.com for more information about Eletta and our products.



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