

ROBUST HIGH QUALITY FLOW MONITORS

1 Setpoint Contact
Shockproof up to 4G
Longlife



Mechanical Flow Switch for Liquids



SP-GA Flow Switch is designed to give an initial alarm at a very low flow and still be capable of allowing a high full liquid flow passing through when pumps or valves are activated by the micro switch. The function is based on fluid flow activation only and therefore it is not affected by changes in static pressure.

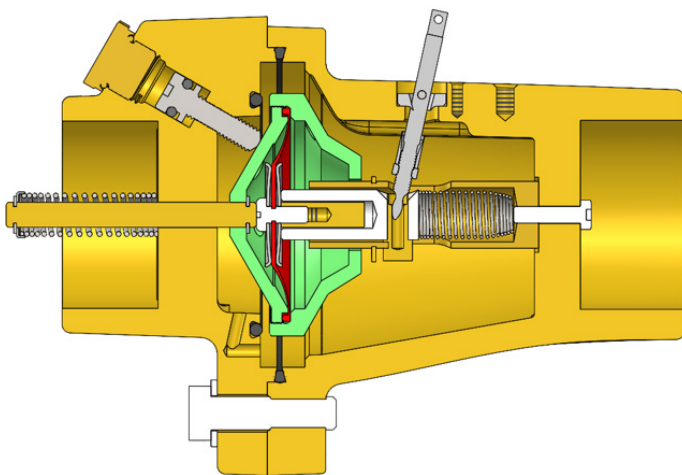
SP-GA comes in dimension DN40. You can use reductions for to have it in DN32 or DN25. Filters are available as option.

SP-GA has a mechanical micro switch. You have the possibility to chose a set point from 3 l/min up to 70 l/min. The set point is calibrated from factory and can be adjusted in field. Maximum flow is approximately 300 l/min.

Benefits of the series

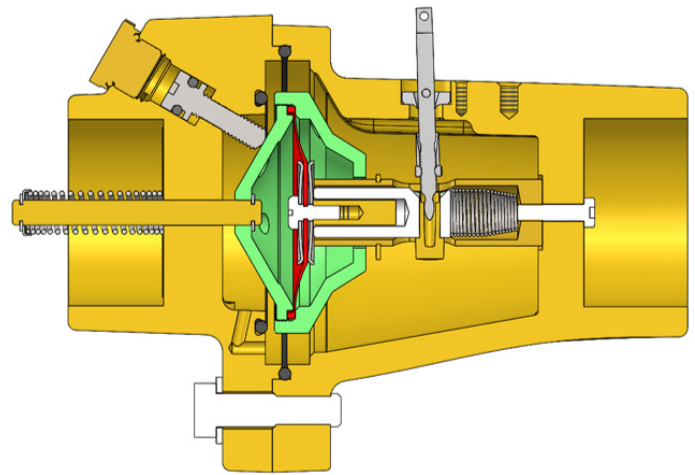
- Rugged and sturdy design
- Insensitive to magnetic fields
- Simple and economical installation
- One adjustable SPDT micro switch for flow alarm
- Can be mounted in any position
- Pressure up to 25 bar
- Can be used in any liquid
- Function based on flow and not affected by the static line pressure.

Working Principle



Closed

Inside the Flow Switch there is a spring loaded calibrated disc, which will be lifted by the liquid passing. The shaft holding the disc is mechanically connected to a lever, which will influence the micro switch to trip at a preset flow value.



Open

As soon as the micro switch has tripped a pump to start or open a valve, the flow increases and the possible flow area increases. The increasing flow volume will push the disc to open fully. Max flow passage is only limited by the pump capacity and the applications accepted pressure drop.

The **SP-GA** Flow Switch is designed to give an initial alarm at a very low flow and still capable of allowing a high full liquid flow passing through when pumps or valves are activated by the micro switch. This is since the SP-GA Flow Switch is designed with a variable flow passage area which increases as the liquid flow rate increases.

The **SP-GA** is also equipped with an internal rubber diaphragm to make the switch even more sensitive at low liquid flows.

As the disc inside is spring loaded, it is possible to install the Eletta SP-GA Flow Switch in any position, vertical, horizontal or even up side down. This gives an advantage over other types of flow switches such as Rotameters, Target or Paddle, which generally requires vertical mounting.

The function is based on liquid flow activation only and therefore it is not affected by changes in static pressure.

Important 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

Variation of process connections and materials: Steel, Stainless Steel and Brass

Flow range:	0 –300 l/min
Min Switch point:	3 l/min
Max Switch point:	70 l/min
Wetted Material:	Copper alloy and stainless steel 316
Rubber Parts:	EPDM and Fluorinated rubber (FPM) as option
Max. pressure:	25 bar (363 PSI)
Max. temp:	90°C (195°F) std with 120°C (248°F) as option
Process connection:	DN40 (BSP 1 1/2") standard and DN32 (BSP 1 1/4") or DN25 (BSP 1") with a reducing nipple (option)
Enclosure material:	Aluminum
Protection class:	IP43 (NEMA 3R) with cable gland PR18,6 included
Alarm:	The SP-GA has one (1) micro switch contact, adjustable to trip within the above mentioned min/max switch point
Micro switch spec:	Contact surfaces are silver plated as standard Type: SPDT Hysteresis: apx. 20% Current rating: 250V/8 A Nominal 250V/10 A Therma
Pre set alarm:	3 l/min increasing flow (if not ordered differently)
Pressure drop:	apx. 0,075 bar/3 l/min. (lowest switching point)
Approvals:	The Eletta Flow Monitors conforms 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..
Certificates:	



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.

