

# ELETTA SWEDISH ENGINEERING SINCE 1947

High quality design and manufacture of flow meters and flow switches.



# Our history



Eletta Flow AB was founded in 1947 with a vision to provide innovative flow measurement solutions for various industries. Since then we have been at the forefront of the industry, constantly pushing the boundaries and setting new standards.

Eletta flowmeters are well known for their extreme reliability in critical applications. Some have worked perfectly and are still in use for more than 50 years. Planned obsolescence is a non-existent concept at Eletta.



# Our products



Our patented technology enables accurate and reliable measurements, giving our customers valuable data in their processes.

The products are developed with a focus on...

- Quality
- Durability
- Reliability
- Longlivety

Our solutions are tailored to improve process control and increase efficiency in a variety of applications.



## S-series



S-series has a large, easy-to-read, custom dial 120 mm, which is linear to the flow. The dial is clearly visible even in a tough and dusty industrial environment. It has two adjustable microswitches that are independent of each other. They are adjustable within the measurement range and they can be set for high/high or high/low or low/low flow alarms, for example to protect equipment in refrigeration or lubricating oil systems. Is insensitive to magnetic fields.

Micro switch: two adjustable SPDT micro switche, repeatability <2%.

S02, S05 do not have microswitches but only show flow rate.

• Switch rating: max 15 A @ 480 VAC & 2 A @ 30 VDC

• Pipe section: brass, powder coated steel, stainless steel (other material on request, contact Eletta)

• **Pipe sizes:** DN 15 - DN 550

Housing: aluminum, stainless steel

• **Resolution:** available in 1:2 and 1:5 flow measuring turndown

• IP class: IP43 as standard, IP65 as option

• Temperature spec: dependent on configuration. Contact Eletta

Options: Atex certified, High temperatuer, separate mounting, parallell mounting with M – Series and more!















S-FSS

S-GL

S-GSS

S-SS-FSS

S-SS-FSS - Atex

S-SS-GSS

S-SS-GSS - Atex



# V-series V1 &V15



V1 & V15 series is a very robust and reliable flow switch which is insensitive to magnetic fields. It has a micro-switch, which is adjustable within the measuring range and can be set to alarm at high or low flow, to protect equipment such as cooling water and lubricating oil circuits.

• Micro switch: one adjustable SPDT micro switches, repeatability <2%

• Switch rating: max 15 A @ 480 VAC & 2 A @ 30 VDC

• Pipe section: brass, powder coated steel, stainless steel (other material on request, Contact Eletta)

Pipe sizes: DN 15 - DN 550

• Housing: aluminum, stainless steel

• Measuring range: 1:2 and 1:5

• IP class: IP65 as standard

• Temperature spec: dependent on configuration. Contact Eletta

• Options: Atex certified, Indication display, LED display as an option

High temperatuer, separate mounting, parallell mounting with M - Series and more!

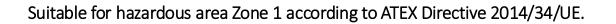


# V-series V1 &V15





# V - Exd flow switch







#### **Ambient Temperature**

- Omg. T. < 75°C

#### Liquid Temperature

- Liquid T. < 85°C
- Liquid T. < 100°C
- Liquid T. < 135°C
- Liquid T. < 200°C

#### Class Temperature

- T6
- T5
- T4
- T3



Cover with internal view

Rotatable, graduated wheel for micro switch adjustment

SPST micro switch 5A at 250 VAC

- 3 meter cable

<u>Labelling</u>

(Ex) II 2G Ex h d IIC T6(85°C)... T3(200°C) – Gb



V-SS-Gss



V-FA



V-FSS



V-GL



V-GS



# V-series V2 &V25



V2 & V25 is a very robust and reliable flow monitor for harsh and dusty industrial environment. The compact design, appr. 60 % smaller that V1 and V15 series and allows installation in places with very limited space. The Monitor is insensitive to surrounding magnetic fields and it combines the long standing proven me-chanical function with outstanding reliability.

Micro switch: two adjustable SPDT micro switches

Switch rating: AC Voltage: 4 A @ 250 VAC & Rating, DC Voltage: 5 A resistive, 2,5 A inductive @ 28 Vdc
Pipe section: brass, powder-coated steel, stainless steel (other material on request, contact Eletta)

• Pipe sizes: DN15 - DN550

Housing: plastic

• Measuring range: 1:2 and 1:5

IP class: IP43

Temperature spec: dependent on configuration. Contact Eletta







V2/V25-FSS V2/V25-GSS

V2/V25-GL



### D-series



D-SS-FSS

The **D series** has a backlit digital display that can be rotated electronically. It has a 4-20 mA, HART, pulse or frequency output, the accuracy is  $\pm$  2% F.S. (full scale) and it is not affected by static pressure. It can be installed both vertically and horizontally and offers zero-settable volume summation of the flow within the measuring range. You can simulate a flow before the meter is in operation.

Micro switch: two adjustable alarm points

• Pipe section: brass, powder coated steel, stainless steel (other material on request, contact Eletta)

• Pipe sizes: DN15 - DN550

**Housing:** aluminum, stainless steel

• Measuring range: 1:2 and 1:5

• IP class: IP65

• Temperature spec: dependent on configuration. Contact Eletta



D-SS-GSS



D-GSS



D-GL



D-FSS





### R-series



• R-series is a flow transmitter with 3 different variants we have, RH for HART, RS for Separate Electronics for areas of high magnetic interference like nuclear synchrotrons, and RC for same as RS but also having Ceramic connectors and potentiometer for nuclear radiation added to magnetic interference in the installation environment.

• Pipe section: brass, powder-coated steel, stainless-steel (other material on request, contact Eletta)

• Pipe sizes: DN15 - DN550

Housing: aluminum, stainless steel

• Turn down: 1:2 and 1:5

• IP class: IP65

• Temperature spec: dependent on configuration. Contact Eletta









R-FA R-GL

R-GSS

R-FSS



# RH RS R5C



RH is fitted with a linear potentiometer, giving 4 wires resistive signal. Resisitive signal is converted to 4-20 mA signal directly proportional to measured flow by 2 wires transmitter. 4-20 mA transmitter is including HART protocol communication.



RS is fitted with a linear potentiometer giving 4 wires resitive signal. Resisitve signal is converted to 4-20 mA signal directly porpotional to measured flow by an external transmitter. This setup is allowing to use RS flow transmitter even into very high magnetic fields areas.



R5C is fitted with a ceramic potentiometer giving 4 wires resitive signal. Resisitve signal is converted to 4-20 mA signal directly porpotional to measured flow by an external transmitter. The ceramic potentiometer is allowing to use R5C flow transmitter even into hazardous area with presence of radioactivity.



### M-series



The M3 - series has two independent piezoresistive absolute pressure sensors that give you a compact flowmeter that can be used for three different functions: Gas flow measurement, Liquid flow measurement and Differential pressure measurement. M3 can measure most occurring gases and compensates for changes in pressure and temperature (mass flow measurement). Programmable with Eletta's flowcenter. 4-20 mA och Modbus output.

Micro switch: Two piezoresistive absolute pressure sensors

brass, powder coated steel, stainless steel (other material on request, contact Eletta) Pipe section:

Pipe sizes: DN15 - DN550

plastic, stainless steel Housing:

Measuring range: 1:10 IP class: IP65

Pressure classes: 10, 25, 50 bar

dependent on configuration. Contact Eletta Temperature spec:

loop-powered OLED 128\*32 pixels. Optional:













M3-G..BR

M3-G..SS

M3-GL



# Eletta Steam



#### **Control Unit Assembly**

- Mounting Plate
- Condensate Pots
- Control Unit
- 6 mm Stainless Tubing



#### User Interface

- Touch screen Display
- Trends and Graphs
- Remote access via Smart Phone
- Available in 5 sizes
- email function
- Analogue 4-20mA output
- Modbus output

**ELETTA STEAM** - is our integrated solution for reliable mass flow measurement of saturated steam.

#### Our flow meter gives you:

**Simplicity:** ELETTA STEAM is delivered complete, set-up at the factory, and ready to easily install.

Accuracy: Mass flow measurement of saturated steam to ensure your process is always operating optimally.

Reliability: Proven DP technology with no moving parts to minimize the risk of failure & production stoppages.

**Performance:** Accurate measurement of steam flow, can signifigantly reduce energy consumption.



#### M-Series Control Unit

Housing: plastic or stainless steel

• Measuring range: 10:1 turndown

IP dass: IP67

• Pressure classes: 10, 25, 50 bar

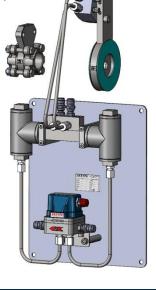
• Communication: 4 - 20 mA, Modbus output

Integrated Temperature sensor



#### **Primary Flow Element**

- Flanged (**FSS**) ½" 20"
- Threaded (GSS) ½" − 1"
- · Stainless Steel



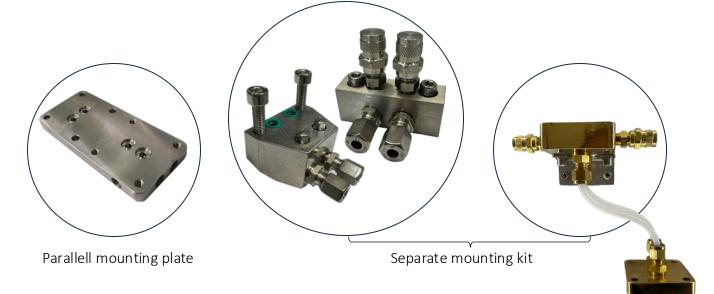


# Addition



#### Unique flexibility and a wide range of additional accessories!

for more information contact Eletta





### SP-G



Our flow switch SP-G is designed to fit small flow and line sizes. It works on the principle of variable flow area where the alarm switch point can be set at a very low flow and still the switch is capable of handling large flows without creating a large pressure drop. You can install it horizontal or vertically. Another feature is that the outlet can be rotated 90° or 180° with respect to the inlet. This gives you good alternatives in places where space is very limited.

• Micro switch: mechanical SPDT

Switch rating: max 10 A @ 250 VAC

Pipe section: brass, stainless steel

• Pipe sizes: DN15 - DN20

Housing: aluminum, plastic

• Flow range: 0-3.5 m/s. Max flow limited by pump capacity and acceptable pressure drop

Min-max swich point: 1,5 l/min – 30 l/min

IP class: IP43Pressure classes: PN 25

• Temperature spec: dependent on configuration. Contact Eletta

Options: Atex certified



# SP-GA



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. 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.

Micro switch: mechanical SPDT
 Switch rating: max 10 A @ 250 VAC

• Pipe section: brass

Pipe sizes: DN25 - DN40

Housing: aluminumFlow range: 0-300 l/min

• Min-max swich point: 3 l/min – 70 l/min

IP class: IP43Pressure classes: PN25

• Temperature spec: dependent on configuration. Contact Eletta



### PR1



The Eletta PR1 Paddle Switch is using the liquid flow to activate the spring supported paddle and the micro-switch to give an alarm if the flow stops or starts. The installation is simple as you can cut the paddle to the desired length on site according to the actual pipe size. The paddle aligns fully with the flow and creates a very small pressure drop. The function works only in one flow direction.

Micro switch: mechanical SPDT Switch rating: 250 VAC 16 A

• Pipe section: brass, stainless steel

• **Pipe sizes:** DN50 – 250

Process connection: 25 mm thread (1" BSP or NPT) (through pipe wall)

• **IP class:** IP 65

• Pressure classes: PN 25 bar

Temperature spec: dependent on configuration. Contact Eletta
 Length: 200 mm - can be cut to the desired length



# Industrial segment & customers



#### Industrial segment

- Pulp and Paper
- Nuclear energy
- Particle accelerator
- Foundries
- Steel industry
- Cement industry
- Medical equipment
- Chemical industry
- Mining industry
- Thermal power plants
- Hydroelectric power plants
- Car industry





#### **Distributors**

- Austria Eletta Messtechnik GmbH
- **Australia** Control Components
- **Brazil** Applitech
- Czech Rep Level Instruments
- **Egypt** HAK Automation
- **Finland** Kontram
- Hungary Hennlich Ipartechnika
- Italy Trafag Italia
- **Japan** Gadelius K.K.
- Malaysia Haven Automation, Tritan
- Norway Sigum Fagerberg
- Poland Brammer, Bth Numa
- **Spain** Lana Sarrate
- South Africa DLM
- South Korea Daelim

- **Switzerland** Eletta Switzerland, Wisag
- **Thailand** U-Thong Co.,Ltd.
- Turkey S-Meter
- **UAE** Peeraj Group
- **UK** MJ Wilson Group
- **Vietnam** MOG Engineering JSC

#### **Subsidiaries**

- **Belgium** Eletta Instrumentation SAS
- China Eletta (Beijing) Co. Ltd.
- France Eletta Instrumentation SAS
- **Germany** Eletta Messtechnik GmbH
- India Eletta Instrumentation India
- Indonesia Eletta Flow AB's Resident Regional
- **Sweden** Eletta Direct Sale
- USA Eletta Flow, Inc.





# Thanks for your interest

