

# HIGH-FREQUENCY PRECISION

FlowSoniq® Ultrasonic Flow Meter  
FSQ/S1 for Liquid Media



MASTERPIECES  
MADE IN GERMANY

[www.meister-flow.com](http://www.meister-flow.com)

# FLOWSONIQ® FLOW METER



## THE NEW ULTRASONIC FLOW METER FLOWSONIQ® FSQ/S1

Simple in design. Precise and practical in function. That was our aim when developing the FSQ/S1, the latest member of our FlowSoniQ® family. The result is a device that focuses entirely on the essentials: reliable flow measurement with state-of-the-art ultrasonic technology - without unnecessary frills.

Thanks to its robust design, high-quality materials, and well-thought-out features, it delivers stable measurements, can be installed flexibly, and requires virtually no maintenance. A device with an integrated counter and local display that does exactly what it's supposed to do - nothing more, but certainly nothing less. And that's exactly where its strength lies.

## ULTRASONIC FLOW MEASUREMENT

Flow meters based on the ultrasonic principle, such as the FSQ/S1 from the FlowSoniQ® family, measure the flow of liquids without contact and with maximum precision - without any moving parts. This proven measuring method, for years, reliably detects even the smallest changes in flow and is ideal for demanding applications.



Their compact design, long service life, and low maintenance requirements make devices of this type a smart solution for modern processes in industry, laboratories, and technical applications.

## THE FLOWSONIQ® IS JUST RIGHT FOR YOU IF...

...you need digital, reliable, maintenance-free and precise flow measurement and monitoring of water-based media (including non-conductive liquids). Typical applications include:

- Cooling and heating systems
- Systems for process water supply
- Chemical plants
- Pharmaceutical plants
- Research and development, etc.



## UNRESTRICTED FLOW

The FlowSonic® FSQ/S1 operates without any obstructions in the flow path. This keeps the pipe cross-section fully open and free. This avoids pressure drop in the system and ensures greater efficiency.



## EASY OPERATION

The FlowSonic® FSQ/S1 is exceptionally easy to use. All relevant parameters can be intuitively configured directly on the device using clearly arranged control buttons. **This allows for quick commissioning, easy on-site adjustments, and straightforward handling in daily operation – all without the need for additional accessories.**



# SMART IN DESIGN – STRONG IN PERFORMANCE

## HIGH MEASURING ACCURACY

The FlowSonic® FSQ/S1 measures with an **accuracy of  $\pm 2$  %** of full scale – **stable, repeatable and independent of the medium's conductivity**. This is made possible by the proven ultrasonic transit-time difference method, which delivers precise results even under changing conditions. Ideal for sensitive applications where every deviation matters. **This enables early detection of fluctuations and helps prevent disruptions.**

## WIDE MEASURING RANGE

They cover a very wide range of use-cases with a single device. The FlowSonic® FSQ/S1 offers a measuring range from 0.5 to 80 l/min making it ideal for variable flow rates in systems, machinery or cooling circuits. **This leads to precise results – even at low or highly fluctuating flow rates.**

## VARIABLE MOUNTING POSITION

**The FlowSonic® FSQ/S1 can be installed in any position** and aligned according to your requirements. Thus, the illuminated display is always easy to read and **the FlowSonic® can be integrated into your systems easily, saving valuable space.**

## HIGH PROCESS RELIABILITY

The FlowSonic® FSQ/S1 features two integrated limit value relays (30 VDC / 1 A), that allow you to define two custom switching points - for example to trigger automatic shutdowns in case of critical flow conditions. **This enables active protection of your system against over- or undersupply.**



## MAINTENANCE-FREE

Since the **FlowSonic® FSQ/S1 works without any moving parts**, there is **no mechanical wear**. Its non-contact measurement principle ensures a long service life - even in continuous operation in industrial environments. **This helps reduce operating costs and prevents unplanned downtime.**

## VERSATILE INTERFACES

The FlowSonic® FSQ/S1 offers flexible output signals - choose from current, voltage or frequency output – making it **easy to integrate into existing systems or operate completely autonomously**. No additional external converters or interfaces are required, reducing effort, costs and complexity. **You benefit from straightforward installation and maximum flexibility.**

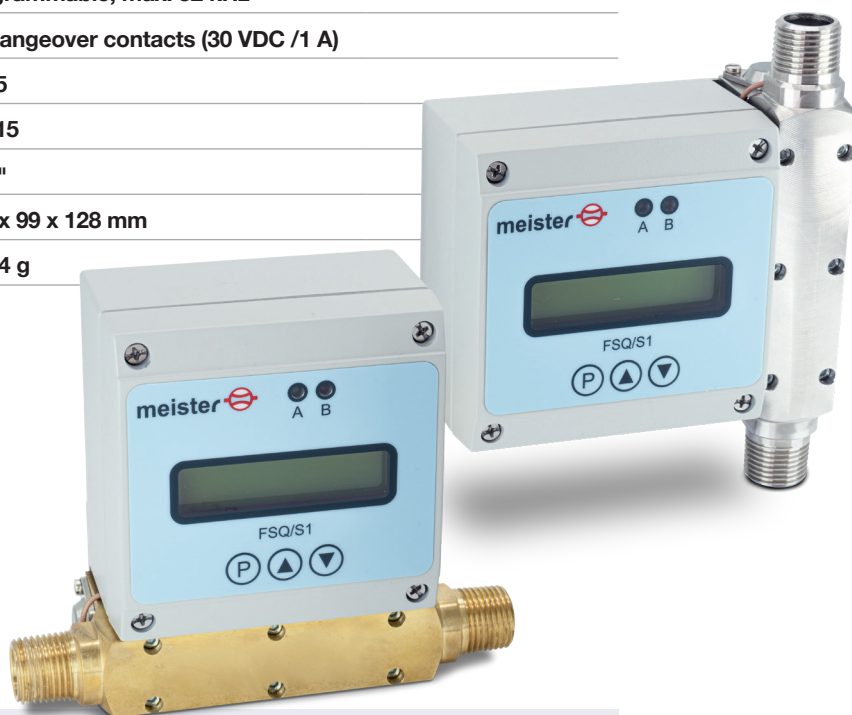


# TECHNICAL DATA

## FSQ/S1

MEASURING RANGE	<b>0.5 – 80 l/min (for H<sub>2</sub>O)</b>
MAX. OPERATING PRESSURE	<b>25 bar</b>
MEDIA TEMPERATURE	<b>-20 – 100 °C</b>
MEASURING ACCURACY	<b>± 2 % of full scale</b>
CURRENT OUTPUT	<b>4 – 20 mA</b>
VOLTAGE OUTPUT	<b>0 – 10 V</b>
FREQUENCY OUTPUT	<b>programmable, max. 32 kHz</b>
LIMIT VALUE RELAYS	<b>2 changeover contacts (30 VDC /1 A)</b>
INGRESS PROTECTION	<b>IP 65</b>
NOMINAL PIPE DIAMETER	<b>DN 15</b>
PROCESS CONNECTION	<b>R ½"</b>
DIMENSIONS (L x W x H)	<b>157 x 99 x 128 mm</b>
WEIGHT	<b>1,634 g</b>

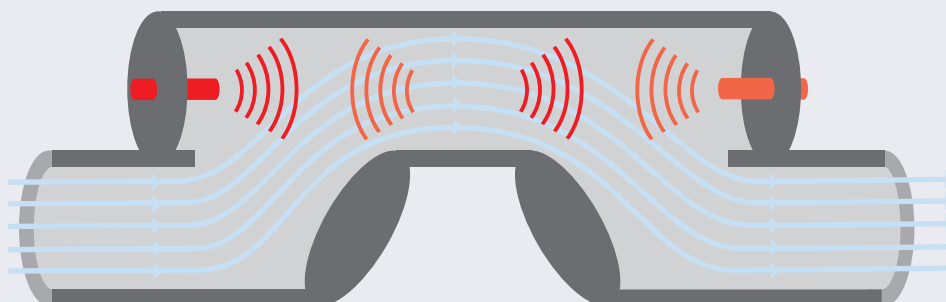
We offer the FSQ/S1 as brass and stainless steel version.



## THIS IS HOW THE FSQ/S1 MEASURES

The FlowSonic® uses two ultrasonic sensors positioned opposite each other inside the housing. These sensors alternate between sending and receiving sound pulses in and against the flow direction. Because sound travels faster with the flow than against it, a small time difference occurs. The device calculates the flow velocity precisely based on this so-called transit-time difference – without any moving parts.

Unlike many other ultrasonic flow meters, the measurement is taken parallel to the flow direction. This way, the cross-section is not narrowed by the sensors allowing the device to reliably and accurately measure very high flow velocities. At the same time, the pressure drop is minimized.



MEISTER STRÖMUNGSTECHNIK®

# A STRONG BRAND

## WITH RELIABLE PRODUCTS

With over 40 years of experience Meister Strömungstechnik® develops, produces, and globally distributes flowmeters for industrial applications to measure and monitor liquids and gaseous media.

Our products are characterized by outstanding quality, reliability, and longevity, especially under harsh conditions in nearly every industry.

Thousands of customers and millions of applications worldwide rely on our masterpieces "Made in Germany" by Meister Strömungstechnik®.

## MASTERPIECES MADE IN GERMANY FOR OVER 40 YEARS

Since 2002, we have been DIN ISO 9001 certified. Of course, we do comply with all relevant standards and guidelines, including UL/CSA certification for most of our products.

Many of our products are ATEX certified and can be used in explosive environments. Maximum customer value is the highest priority of Meister Strömungstechnik®.

We constantly invest in product improvements, product qualifications, and in our employees. In that way, we constantly expand and improve our competence level to successfully achieve maximum value for our business partners.

You need expert consultation or support? We are here to support you every step along your way.

**meister**   
MEMBER OF THE MEISTER-GROUP

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Here you find more information  
about FlowSoniq®:

