

# Magnetic-Inductive Flow Meter FMQ

## Application/Specified usage

- Magnetic-Inductive Flowmeter for the measurement of flow rate and volume in food and pharmaceutical applications
- Suitable for liquids, weak and gases with a minimum conductivity of 5 µS/cm
- Flow rate measurement of media containing solids (> 5% solid particle content)
- Measurement range from 20 l/h to 640 000 l/h
- Suitable for dosing and filling applications

## Hygienic design/Process connection

- Sensor made entirely of stainless steel
- Hygienic design
- All parts in contact with the product are FDA compliant
- Transmitter made of PFA, vacuum tight and gaseous
- Process connection optional available material L 4013 or L 4014 with 3.1 certificate
- Process connection optionally with 1/2, 1/4 or 3/8" gss. electropolished
- Electrode made of stainless steel 316L
- CIP/COP-cleaning up to max. 120 °C (max. 30 minutes)

## Special features/benefits

- High measurement accuracy even at low flow rates
- Simple and user-friendly parameterization
- Service type for measuring the quantity (volume counter optional)
- Automatic empty pipe detection avoids uncalibrated readings for empty pipes
- PFA lining for maximum resistance to aggressive substances such as acids and bases
- Vacuum tight, tight meter tube lining, even at high temperatures
- Removal (cleaning head with illuminated graphic display)
- Operation of device via optical keys without opening the housing
- Minimal maintenance and care requirements
- Pharmaceutical version available with all necessary certificates

## Functional principle

The principle behind this measurement method is Faraday's law of induction. This law states that a voltage is induced in a conductor that moves in a magnetic field. In the magnetic-inductive measurement method, the flowing conductive medium acts as the conductor. Two vertically positioned field coils generate a constant magnetic field. The voltage induced in the flowing medium is observed by two electric steel electrodes that are arranged horizontally. The voltage is directly proportional to the flow rate and can be expressed as the flow volume using the nominal tube width. The derived measurement values are made available as a current signal and a 20 mA standard signal.

## Certification



## FMQ features



## Magnetic-Inductive measurement

