

Electromagnetic Flowmeter FES7000 (Fill-MAG)

Intelligent filling and dosing of conductive fluids



- Exact dosing
- Gauged filling
- Reduced operating cost
- Minimum maintenance and cleaning time
- Short change-over times

Field^{IT}

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FES7000 (Fill-MAG) – Benefit from our smart sensor technology to reduce the expenditure for your filling and dosing processes

Exact dosing

Exact, highly reproducible dosing for both small and large volumes is essential for many industries where filling and dosing processes are involved. Companies of the food and beverages industry and the cosmetic, pharmaceutical and chemical industries – on one hand – have to meet legal requirements regarding the guaranteed minimum quantity and – on the other hand – aim at optimizing their product and production cost. ABB's FES7000 (Fill-MAG) filling and dosing system is an important step to solve this conflict of interests: the system provides for improved quality assurance and exact, reproducible dosing. Overfilling which has so far been a standard safety measure is considerably reduced. As a result, a decreased reject rate and increased savings in the production process are achieved without affecting the declared minimum filling quantity.

Superior technology

A stainless steel flowmeter with short response time and intelligent electronic module is the heart of the FES7000 (Fill-MAG) system. The system is provided with a special program for batch processes and filling applications with a reproducibility of < 0.2 % of rate. Four programmable batch and anticipatory contact quantities are available and can be selected externally via contact inputs or RS485 communication. An efficient, microprocessor-controlled electronic module is connected to the FES7000 (Fill-MAG) primary. It supplies all relevant data necessary for displaying the dosing and counter values. Optionally, the transmitter may be provided with an optocoupler or relay contacts. The μ P-electronics are equipped with an overrun meter and a special corrective algorithm which automatically tracks down and corrects changes in the overrun quantities which result from altered operational conditions within the plant.

Additional features

- Interface for communication with a higher-level/superior server station via ASCII-Protocol (RS485)
- Parameters for up to 32 transmitters can be centrally uploaded and changed by using the remote operator unit
- Stainless steel flowmeter primaries with a dimensionally stable and vacuum-proof PFA lining. Wide range of process connections through flexible connection technology, e.g. pipe couplings acc. to DIN 11851, welded stub ends or wafers.
- CIP/SIP up to 150 °C
- Certified acc. to FDA, 3A(28-03), EHEDG and FML
- Reduced cost for spare parts inventory and plant downtimes
- Standard statistic functions with settable quantities for overfilling and underfilling



Compliance with the European Pressure Equipment Directive (97/23/EC)

ABB observe the criteria for the module combination B1 (EC design test) and D (production quality assurance) for the production of all flowmeters over the entire nominal size range. The devices are classified in Category III and Fluid Group 1 (dangerous, flammable and noxious media) and, thus, comply with the maximum requirements of the European Pressure Equipment Directive.

Gauged filling

The Federal Physical and Technical Institute (PTB) in Braunschweig, Germany, has approved the FES7000 (Fill-MAG) measuring system for the following, standardized filling processes:

- Beer and beer wort
- Beer barrel filling
- Milk
- Beverage concentrate
- Brine
- Chemical liquids with a conductivity >20 μ S/cm

Savings at a glance

- Reduced operating cost
- Minimum safety overfilling
- Reduced maintenance and repair cost
- Minimum maintenance and cleaning time
- Short change-over times
- Low product cost

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