

Electromagnetic flowmeter HygienicMaster FEH300/500 The first choice for all hygienic applications





## HygienicMaster For all applications

The HygienicMaster family of flowmeters is designed specifically for the food and beverage and pharmaceutical industries.

### Overview of the key features

Nominal diameter Nominal pressure Process connection

Lining Protection class Fluid temperature Ex approvals

Certificates Inputs/outputs

Communication

Verification tool

DN 1...DN 100 (1/25...4") PN 10...PN 40, CI 150...CI 300 Weld stubs, threaded pipe connections, Tri-Clamps, wafer-type flanges, external threads, flanges in accordance with DIN/EN, ASME, JIS PFA, vacuum stable IP 67 or IP 68 Up to 180 °C (356 °F) ATEX, IEC Zone 1 and Zone 2, FM, CSA Div 1 and Div 2, GOST 3A, EHEDG, FDA approved materials Analog output (4...20 mA), pulse output, contact input/output HART protocol (standard) **PROFIBUS PA** FOUNDATION Fieldbus "ScanMaster" software







### The HygienicMaster family Tailored to your needs

HygienicMaster is available in two series: HygienicMaster FEH300 with basic functionality and HygienicMaster FEH500 with enhanced functions and options.

### HygienicMaster FEH300 – accurate flow measurement easily mastered

The HygienicMaster FEH300 flowmeter provides a range of process connections, approvals and communication protocols.

- Accuracy: 0.4% of rate, optional: 0.2% of rate
- Diagnostic functions: empty pipe detection

## HygienicMaster FEH500 – additional functions and options

- Accuracy: 0.3% of rate, optional: 0.2% of rate
- Diagnostic functions
  Detection of gas bubbles and deposits on electrodes
  Monitoring of conductivity and sensor temperature
- Additional functions and options
  - Grounding check
  - Batch function
  - Fingerprint
  - Trend data recording
  - Two measuring ranges
  - Sensor designs for very low flows (nominal diameter DN 1...DN 2)

## Fieldbus Digital communication

# Reduced costs through improved monitoring

### Getting more information

Designed for digital communication via HART, PROFIBUS PA or FOUNDATION Fieldbus, HygienicMaster FEH300 and HygienicMaster FEH500 provide an excellent overview of the process. Easy access to all status information is obtained via the flowmeter's advanced DTM (Device Type Manager). Graphical representations of the measuring values allow the operator to immediately recognize deviations. When a limit value is exceeded, an alarm is signaled. The configuration of the meter is archived for documentation purposes. By transferring this configuration to comparable meters, costs can be saved.









### HygienicMaster FEH500 Additional diagnostic functions

# Detecting electrode coating, gas bubbles and conductivity changes

### Convincing advantages

Using its advanced diagnostic functions, HygienicMaster FEH500 monitors its own operability and the process. The integral monitoring functions for the conductivity and sensor temperature further extend these possibilities. The diagnostic data can be read out for analysis via the DTM thus allowing to detect critical conditions early and take the appropriate precautions in order to increase the productivity and avoid downtimes.

### Fingerprint – the reference in the sensor

Alterations like coating on the electrodes or a changed sensor coil resistance are identified by comparison with a reference – the fingerprint. One fingerprint is made in factory, a second in the commissioning phase. At any time during operation, a fingerprint representing the current state can be made and compared with the data of existing fingerprints. The recognition of changes permits to achieve maximum safety in the process.



### ScanMaster The verification tool

# Checking HygienicMaster FEH300/500 and documenting the test results

#### Safe and easy to operate operation

ScanMaster verifies the functionality of the transmitter inputs and outputs, without the need to deinstall the device. The sensor integrity can be checked without deinstallation as well. Gradual changes are recorded as trends by HygienicMaster FEH500 and read out via ScanMaster, enabling the operator to graphically view the data and cyclically monitor the measured values. A very simple way to check the installed device for correct functioning. The determined test results are stored in a database and can be retrieved and printed at any time.





## HygienicMaster FEH500 Ready for any challenge

## Performance and accuracy for your industry

## Grounding check – to make sure the instrument is grounded correctly

One of the most common causes of failures is insufficient grounding. Help is at hand in the form of the new grounding check functionality implemented in the HygienicMaster FEH500. This feature helps to prevent already in the commissioning phase the occurrence of such failures.

### Sensor design for very low flows

When using a sensor with a size of only 1 mm, the HygienicMaster FEH500 is capable of measuring flow rates as low as 0.72 l/h.

### Improved performance

The optimized sensor and transmitter of the HygienicMaster FEH500 provide for reliable and accurate flow measurement even under difficult conditions.

### **Fill function**

HygienicMaster FEH500 features a presetting counter and overrun correction and is suitable for fill processes with filling times greater than 3 seconds.





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