



# Gas flow Meter

## FM4/04 & FM4/60

Ideal gas flow measuring equipment for the smallest - as well as discontinuous - flows

Specially designed for thermo-analysis and process technique



## FM4, the gas flow meter for smallest volumes and universal applications

### General

- Ideal gas-flow-measuring equipment for the smallest gas flows
- Especially suited for thermo analysis and process technique
- Closed system, toxic gasses can be drawn off
- Excess pressure or partial vacuum balanced out by means of gas flow through the barrier fluid

### Measurement range

- Flow quantities at  
FM4/04: max. 4 l/h or 70 ml/min  
FM4/60: max. 60 l/h or 1000 ml/min
- Totalizer up to 999.999 l
- Integrator with analog output for 1000 pulses: 0...10 VDC
  - divider for 1, 10, 100, 1000 and 10'000 l/10Vdc
  - when overrunning, starts again at 0
- Pulse output 5 VDC for external processing:
  - un-calibrated with approx. 100 pulse/ml (depending on model and tubes)
  - pre-calibrated with 1 pulse/ml

### Calibration and accuracy

- Simple calibration with water by weighing or gauging the capacity by litres
- Pump can be calibrated to 1 pulse/ml thanks to divider 1...999; typical 100 pulse/ml (depending on model and tubes)
- Pump rate can be preset, therefore gives the most optimal calibration accuracy
- Accuracy: typ. 0.5% (FM4/04) to 1% (FM4/60) or 2 ml, whatever the greater

### Measuring principal

- Pump switches on at excess pressure of approx. 3 mm H<sub>2</sub>O (0.3 mbar)
- Capacitive measuring system. Does not come into contact with the barrier fluid
- Barrier fluid can be any type of watery solution; can be covered by silicon oil
- Parts in contact with gas (only glass or silicon) easily removable for cleaning

### Brief technical data

- Voltage: 230 or 115 VAC, please specify
- Frequency: 48 to 62 Hz
- Power: 50VA
- Battery: 3.6 V for totalizer
  
- Output: Analog 0 to 10 VDC, max. 1 mA, resp. current sink 4 to 20 mA, U > 13 VDC  
D/A converter 10 bit
- Raw pulses: Digital pulse +5 VDC CMOS
  
- Dimension: width 295 mm  
height 320 mm  
depth 280 mm
  
- Weight: 10.5 kg