INTRODUCING EMERSON’S MICRO MOTION® FORK DENSITY METER

Density Measurement with Performance and Confidence
The combination of our industry-leading technology, wide breadth of products, unparalleled application expertise and customer support allows us to deliver unbeatable performance and value, time and time again.

Our Fork Density Meter (FDM) delivers accurate online density and concentration measurement using a direct insertion tuning fork design. This rugged and reliable meter raises the standard for inline density and concentration monitoring and enhances the interface detection, concentration control and blending operations of process fluids as diverse as refined hydrocarbons, mineral slurries and corrosive liquids such as acids and alkalis.

The Micro Motion Fork Density Meter Delivers:

Superior Measurement Capabilities
• A rugged direct insertion sensor that provides the best, real-time measurement of density (±1.0 kg/m³) and concentration (±0.1%)
• Multiple corrosion resistant materials for the most demanding process conditions
• Application flexibility with pipeline, bypass (fast) loop and tank installation support

A World-Class Leading Electronics Platform
• Local display and user interface that allows for simplified device management, minimizing maintenance requirements
• Simple integration into DCS, PLC and flow computers (Frequency/Time Period, Analog 4-20mA, HART, Modbus RS485, and FOUNDATION Fieldbus)
• Revolutionary device diagnostics and verification methods

Robust and Flexible Measurement
• Application-specific measurement and output configurations to ensure simple set-up and commissioning
• Optimized design; insensitive to vibration, temperature and pressure variations
### Application-Specific Configurations
Automatic, application-specific measurement and output configurations ensure simple set-up and commissioning.

### Meter Diagnostics
Built-in diagnostics for real-time monitoring and automated meter verification systems.

### Unrivalled Density Performance
A choice of installation options for replacement solutions give you the performance you need.

### Interconnectivity
Integral HART I/O allows direct input of external temperature, pressure and flow measurements for enhanced outputs.
Pipeline & Terminals

- **Interface and Product Detection**
  Improve cut-over accuracy and product quality determination to reduce scrap, waste or down-grading of multi-product pipelines

- **Leak Detection**
  Improve leak detection thresholds and reduce false alarms

Refining, Chemical & Petrochemical

- **Product Quality and Process Control**
  Optimize residence/cycle time while minimizing energy usage in condensers, contactors and reactors

- **Blending and Concentration Control**
  Reduce waste, rework and giveaway with optimal feed and production fluid quality measurement

Power, Metals, Mining & Minerals

- **Flue Gas Desulfurization (FGD)**
  Minimize raw material costs for optimized emissions and taxation reduction, and increased safety

- **Mineral Slurries**
  Optimize end product efficiency through characterized slurry composition
YOUR SOLUTION FOR THE MOST DEMANDING PROCESS APPLICATIONS

MICRO MOTION

For over 30 years, Emerson’s Micro Motion has been a technology leader delivering the most precise flow, density and concentration measurement devices for fiscal applications, process control and process monitoring. Our passion for solving flow and density measurement challenges is proven through the highly accurate and unbeatable performance of our devices.
Fork Density Meter Specifications

- **Measuring Range**: 0-3000 kg/m³ (0-3 g/cc)
- **Density Accuracy**: ±1.0 kg/m³ (±0.001 g/cc)
  Equivalent to: ±0.5°API, ±0.2° Brix, ±0.1% ABV, ±0.1% Conc.
- **Temperature Accuracy**: BS1904, DIN 43760 Class ‘B’ (±0.3 ± 0.005 X T)°C
- **Safety Approvals**: ATEX, CSA, IECEx (Explosion/Flame-Proof) – Zones 1 & 2
- **Display**: Two-line, LCD screen
  Optical switch configuration
- **Outputs**: Standard: Time Period, 4-20mA, HART, Modbus RS-485
  Optional: FOUNDATION™ fieldbus, WirelessHART™
- **Protection Class**: Ingress Protection: IP66/67, NEMA4
  EMC compliant with EN61326
- **Dimensions**: 355 mm (h) x 163 mm (w) x 163 mm (d)
  (Typical short stem version)
- **Weight (Typical)**: 6.7 kg (15 lbs)

For more information, please visit: www.MicroMotion.com/density

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