Get Advanced Process Insight for Custody Transfer Measurement

Today’s gas pipelines are likely to have dirt buildup, condensate and other contamination that can negatively impact measurement for months if undetected, significantly increasing your risk for LAUF product. Now you can pinpoint process upsets and flow disturbances faster than ever before with Emerson’s latest ultrasonic technology that provides advanced process insight.

New Daniel Dual-Configuration 3410 Series Gas Ultrasonic Flow Meters offer the power and performance of two meters in a single body, enabling operators to immediately verify, detect and validate the root cause of flow disturbances with greater specificity. There are three models now available and each one features unique transducer path layouts to enhance meter performance. The primary meter in each model is the signature Daniel four-path, chordal, British Gas-design meter, recently certified to OIML R137 1&2 Accuracy Class 0.5. The secondary meter varies by meter model and features either one or two reflective paths or a second set of four chordal paths.

Whether your operation requires integrated check metering or fully-redundant custody transfer measurement, Daniel Dual-Configuration Gas Ultrasonic Flow Meters are engineered to maximize uptime and throughput while keeping maintenance time and costs to a minimum.

**Model 3415**
**Gas Ultrasonic Flow Meter**

4+1 = Verification
A single reflective path at a 30° angle verifies flow disturbances for cost-effective, integrated check metering

**Model 3416**
**Gas Ultrasonic Flow Meter**

4+2 = Verification / Detection
A second vertical, reflective path at a 90° angle enables detection of trace amounts of liquid

**Model 3417**
**Gas Ultrasonic Flow Meter**

4+4 = Validation
Two independent, four-path meters in one body for ultra-reliable custody measurement redundancy
Improve Measurement Confidence

Designed to help you overcome today’s most complex custody transfer measurement challenges, our powerful two-in-one Daniel gas ultrasonic meters provide:

- **Unique transducer path layouts** for enhanced identification of blockages, dirt buildup or liquids along the bottom of the pipe
- **Lightning-fast sampling** for real-time communication of changing flow dynamics
- **3D view of the flow profile** with ability to measure all four primary flow disturbances – swirl, crossflow, asymmetry and turbulence
- **Immediate process alerts** to help operators rapidly identify buildup, liquids, blockages and/or deviating gas quality
- **A wealth of predictive diagnostics** to expedite diagnosis and troubleshooting.

Advantages of Reflective Path Technology

Models 3415 and 3416 meters combine chordal and reflective technologies for unparalleled check metering capabilities, including:

- Advanced warning of adverse flow conditions, process upsets and/or meter deviations due to improved sensitivity to pipe wall changes
- Virtual elimination of liquid-driven measurement errors with real-time detection of liquid volume fractions (LVF) of as little as 0.1% inside the pipe
- An alarm at 1.0% deviation (or user defined limit) within the flow computer or SCADA system to expedite notification.

Improve Measurement Confidence

Verify costly wall buildup in real time with 30° reflective path.

Delivering Decades of Application Expertise to You

With a legacy that spans eight decades, Emerson’s field-proven Daniel flow measurement solutions combined with our deep application expertise have enabled oil and gas companies worldwide to heighten the accuracy, efficiency and reliability of fiscal measurement operations.

We understand that even a small change in measurement accuracy can have a major impact on profitability. Contact your local Daniel representative today to learn how our solutions will help you streamline operations, improve productivity and enhance your bottom line.