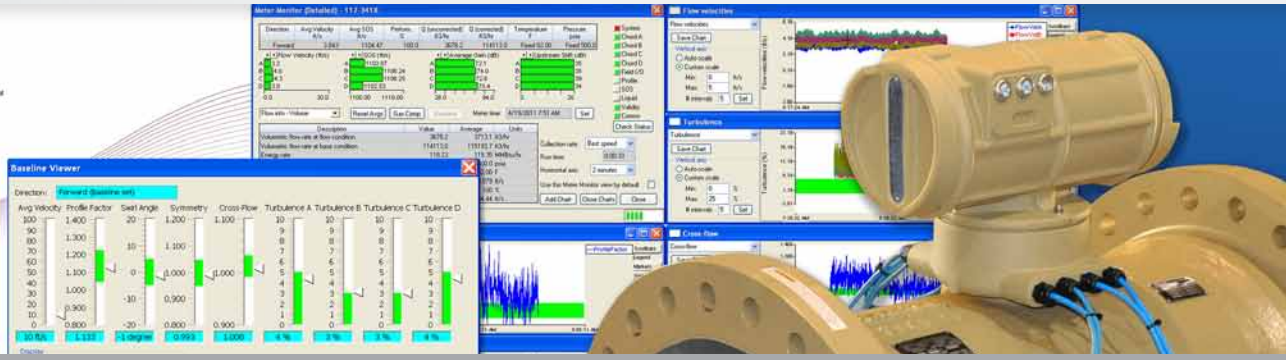
Daniel Ultrasonic Meters Predictive Diagnostics

MeterLink™



See what others can't see

If you can't count on your meters, you can't count on your measurement. That's why engineers around the world trust Daniel® smart ultrasonic meters.

With flow dynamics intelligence and HART® communications, Daniel ultrasonic flow meters deliver real-time diagnostics, stability, and operational cost savings. These meters are used for liquid and gas measurement and applications requiring high accuracy, low maintenance and low pressure drop.

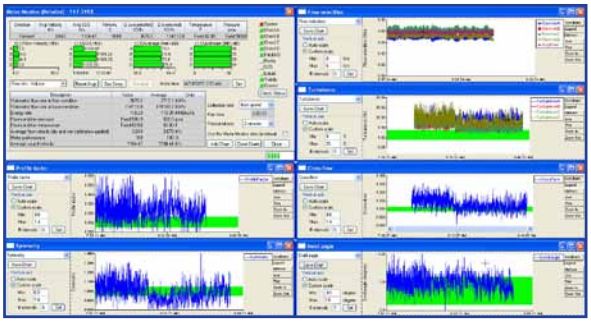
The advanced real-time monitoring and alarm capabilities of Daniel ultrasonic meters will not only reduce measurement uncertainty and improve uptime, but will also help you rethink measurement practices for bottom line improvement.

Operators can finally take control of flow measurement with easy access to expert flow analysis, flow disturbances alerts, and suggested corrective actions.

Know when your flow is disturbed

Daniel's new MeterLink™ software gives users access to information not seen before. When your meter is equipped with Continuous Flow Analysis (CFA) feature, you will not only access *more* data, but *actionable,* critical information. This information is presented in an intuitive graphical format that takes complexity out of your flow measurement.

Delivered to the right person at the right time, this critical information will empower your staff to work predictively, instead of reactively.



MeterLink™ screen charts display green limit bands for key flow parameters

Enhanced functionality

MeterLink™ expands on the capabilities of the original Customer Ultrasonic (CUI) Interface to provide enhanced reliability and better user functionality. MeterLink v1.0 supports:

- Microsoft® Windows® 7, Vista, and XP
- Microsoft® Office 2007-2010

EMERSON™
Process Management

Using MeterLink to unleash continuous flow analysis

MeterLink provides the fastest and most in-depth diagnostics based on the meter's Continuous Flow Analysis (CFA) feature. CFA feature generates actionable alerts to identify not only abnormal flow profiles, but also indicate possible process upsets and help validate the integrity of the meter and analog measurements.

MeterLink™ Features		MeterLink™ without Continuous Flow Analysis Feature	MeterLink™ with Continuous Flow Analysis Feature
Operation	Mark II Gas Ultrasonic Meter Support		
	Monitor Screen	●	●
	Chart Diagnostic Data	●	●
	Multiple Charts	●	●
	Charts with Green Limit Bands	●	●
	View Waveforms	●	●
	AGA 10 Calculator	●	●
	SNR displayed in dB	●	●
	Improved Help Topics / Links	●	●
	Baseline Viewer™		●
	Maintenance Logs	●	●
History	Trend Maintenance Logs	●	●
	Hourly / Daily Log Graphing	●	●
Configuration	Field Setup Wizard	●	●
	Meter Directory Support	●	●
	Automatic File Naming	●	●
	Compare Configurations from Logs	●	●
	Analog Input Calibration	●	●
	Flow Calibration Wizard	●	●
	Modbus TCP Server Configuration	●	●
	Baseline Configuration Wizard	●	●
Alarms	Alarm / Audit Logs	●	●
	Display New Latched Alarms	●	●
	Severity Alarm Display	●	●
	Bore Build-up Alert		●
	Blockage Alert		●
	Abnormal Profile Alert		●
	Liquid Detection Alert		●
	SOS Deviation Alert		●
	Reverse Flow Detection Alert	●	●

Expert information at your fingertips

Actionable Alerts

Daniel ultrasonic meters can now generate the following actionable alerts * in gas flows:

- Blockage
- Bore build-up
- Reverse flow detection
- Liquid detection
- Abnormal flow profile
- SOS deviation

** Optional - available when meter is equipped with CFA feature*

Actionable alerts are available via:

- Daniel's ultrasonic flow meter interface, MeterLink™, a Windows®-based software application
- Emerson's AMS™ Suite and 375 / 475 Field Communicator
- Modbus serial and TCP/IP communications

Series 100 Plus Option Board

The Series 100 Plus Board allows the meter to communicate directly with digital plant architecture via the HART® protocol, such as PlantWeb®, or a 375 / 475 Field Communicator. It supports pressure and temperature inputs and is recommended for real-time GC vs. AGA 10 Speed of Sound comparison.

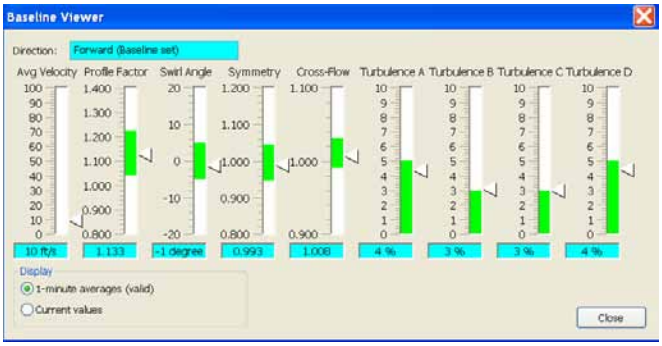
MeterLink™ Baseline Viewer™

Predictive alerts are generated by deviations from baseline values. Baselines can be established at a calibration lab or upon initial start-up, triggering alarms to identify installation problems or flow disturbances that can add to measurement uncertainty.

Deviation alarms are sorted by severity level and a summary of current and latched alarms empowers users to monitor and control the integrity of metering operations .

Daniel's Baseline Viewer™* alerts operators of flow upsets to avoid unscheduled downtime by providing real-time visual indication that the meter is operating within setpoints. A single at-a-glance view of key flow parameters including cross-flow, swirl angle, symmetry, turbulence, profile factor, and average velocity help pinpoint conditions affecting flow measurement.

** Optional - available when meter is equipped with CFA feature*



MeterLink™ Baseline Viewer™, available with Continuous Flow Analysis feature, provides immediate visual indication that the meter is operating within desired ranges

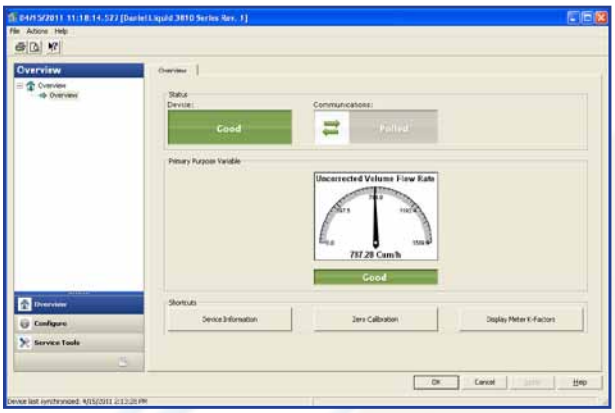
EMERSON™
Process Management

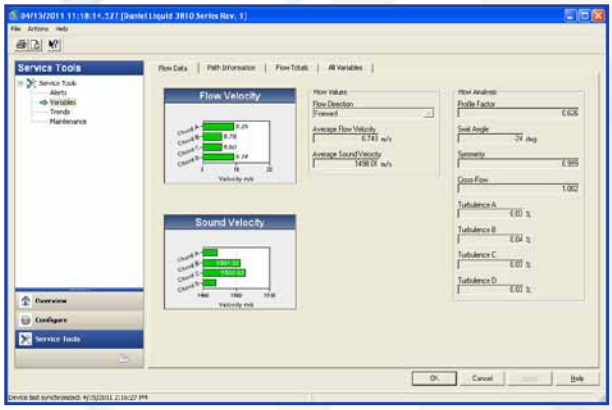
Work smarter

AMS™ Suite Dashboard

Daniel ultrasonic meter diagnostics can also be accessed via Emerson's AMS™ Suite. This predictive maintenance software uses enhanced EDDL functionality to improve ease of use and give a consistent, graphical presentation of information across Emerson's intelligent field devices.

Plant personnel can quickly detect and respond to abnormal situations with an intuitive view of the process. Users can configure the ultrasonic meter online in the maintenance shop using AMS Device Manager.





Diagnostic values can also be set and viewed via Emerson's AMS™ Suite predictive maintenance software

Get started today

To download your free copy of MeterLink™, visit us at www.daniel.com

To obtain a license key for unlocking the Continuous Flow Analysis feature, or if you need to upgrade the firmware of your Daniel meter, please contact your nearest Daniel Measurement and Control Sales and Service office.

Requirements

Software

Windows® XP Service Pack 2 or later installed, Windows Vista®, or 32-bit and 64-bit Windows® 7

Microsoft® Excel® 2000 or later version (log file(s) are CSV format if Excel 2000 or later is not available)

Microsoft® XML parser v2.6 or above

Hardware

133MHz Pentium or higher processor (300MHz recommended)

512 MB RAM

100 MB of free hard disk space

One serial port available for remote / local connection*

One Ethernet port available for remote / local connection*

Printer (optional)

Super VGA monitor (at least 1024x768 resolution)

**For on-line operations*

Emerson Process Management
Daniel Measurement and Control, Inc.
www.daniel.com

North America/Latin America:
USA - Houston, Texas
T +1.713.467.6000
USA Toll Free 1.888.FLOW.001

Middle East, Africa: Dubai, UAE
T +971.4.811.8100

Asia Pacific: Singapore
T +65.6777.8211

Europe: Stirling, Scotland
T +44.1786.433400

DAN-MeterLink-BRCH-1211 /Printed in the USA.

DANIEL™

EMERSON™
Process Management