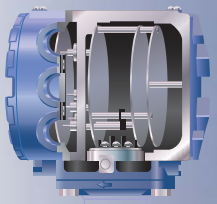
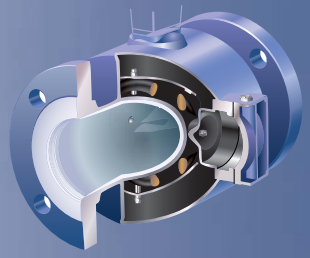
Reliability improves availability

Designed for reliability

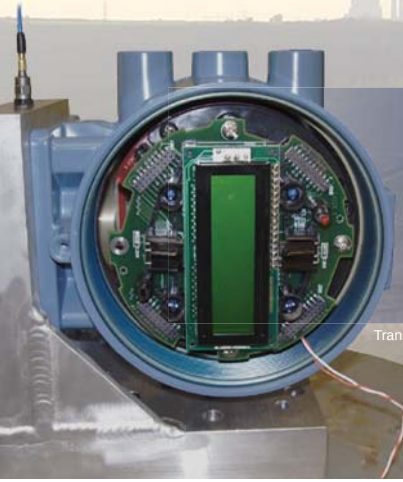
Keeping your process running safely with reliable measurements is critical. Moisture, vibration and changing environmental conditions all work to undermine the reliability of your magnetic flowmeter and the resulting measurement. The Rosemount E-Series is designed to be the most reliable magnetic flowmeter available, and every meter is tested prior to shipping to ensure it is ready for your application.





Robust construction

E-Series magnetic flowmeters are unaffected by moisture. The transmitter is designed with dual compartments and uses local operator interface technology to keep the electronics moisture-free and maintain safe local configuration in hazardous environments. The sensor is all-welded to eliminate gaskets and prevent moisture ingress.



Superior reliability

E-Series magnetic flowmeters are reliable in high vibration applications. The E-Series transmitter design passed nine independent vibration test specifications, including IEC61298-3 High Vibration Pipeline and US MIL-810. By eliminating extra wiring connections, E-Series sensor magnetics improve performance and reliability in applications where vibration is an issue.

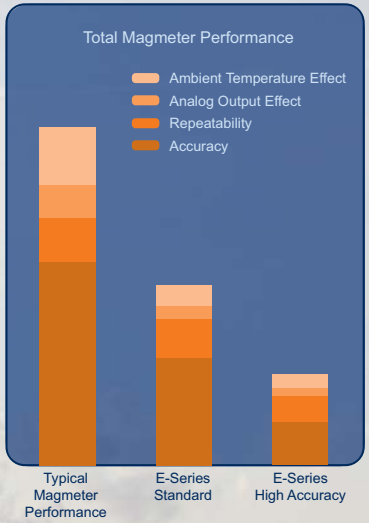
Transmitter testing on vibration stand

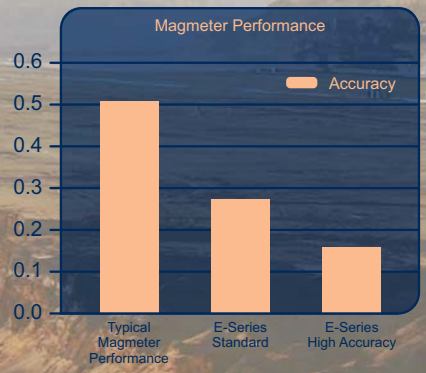
Superior accuracy for improved process control

Inaccurate flow measurement makes process control and optimization difficult. In addition to reference accuracy, inadequate straight pipe runs, ambient temperature effects and digital to analog (D to A) conversion errors all have an impact on the measurement accuracy achieved in the field.

Industry-leading installed performance

Every E-series transmitter goes through a temperature characterization and verification process to minimize the effects of ambient temperature changes, D to A conversion, and repeatability. The result is a dramatic improvement in installed performance for your application.





2X Improvement in accuracy

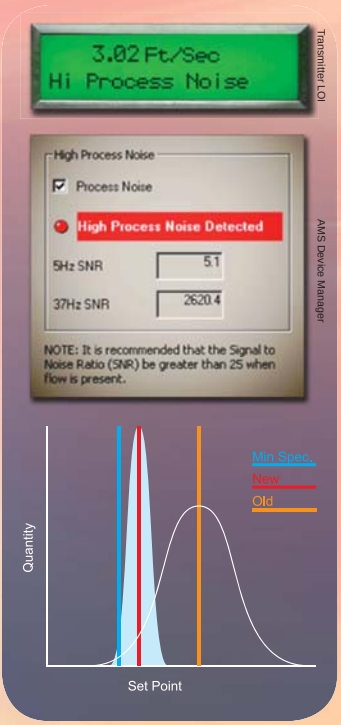
The Rosemount E-Series delivers a two-fold improvement in accuracy over traditional magnetic flowmeters. E-Series transmitters feature enhanced circuitry for both the coil driver and measurement electrodes, as well as improved sensor magnetics. The result is standard accuracy of 0.25 % +/- 1mm/s with an option for 0.15% +/- 1mm/s.

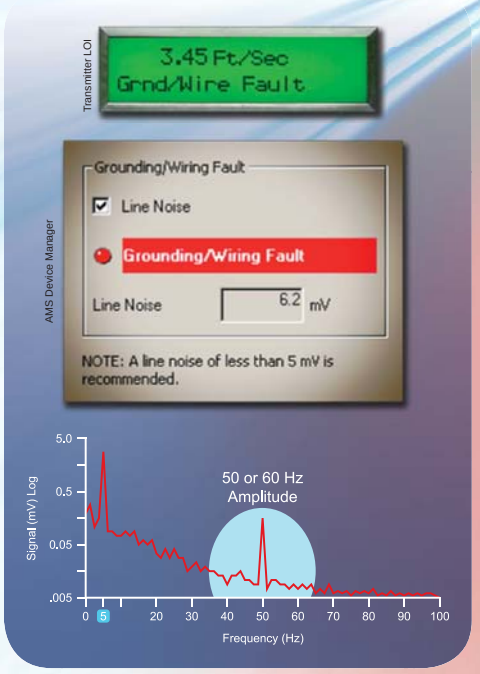
Diagnostics simplify your life

Installing, maintaining and troubleshooting a flowmeter can be time consuming. To simplify these tasks, Rosemount E-Series offers unprecedented diagnostics that let you verify the meter's installation and health throughout the life of the meter. If there is an issue, the diagnostics provide actionable feedback. The diagnostics can be easily accessed through the meter's local operator interface, a 475 communicator or AMS® Suite: Intelligent Device Manager software.

Improve process control signal

A noisy flow measurement is a common issue in applications where there is a slurry, entrained gas, or an active chemical reaction. E-Series high process noise detection diagnoses these causes and provides a means to remove the variability from your flow measurement. When high process noise is detected, simply adjust from the standard coil drive frequency (5 Hz) to the high coil drive frequency (37 Hz). This will stabilize readings without adding dead-time to your control loop, allowing for tighter set-points and improved process control.



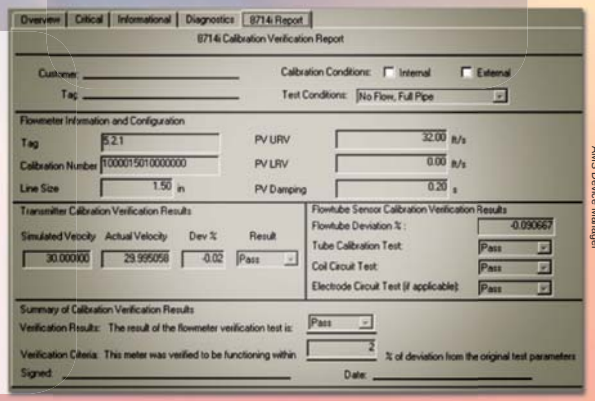


Simplify installation

Improper grounding is the most common installation issue with magnetic flowmeters. With E-Series ground & wiring fault detection diagnostic, you can quickly verify that your installation is correct. Now, no matter who installs your meter, getting it right is easy.

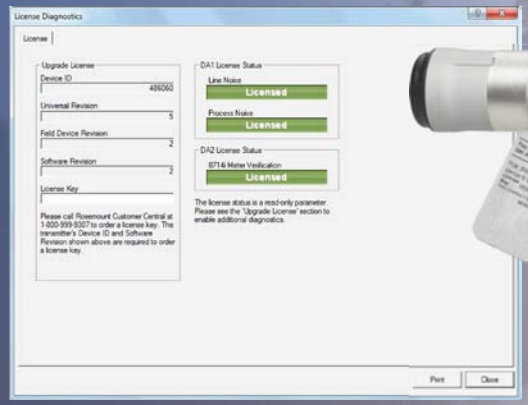
Reduce maintenance and troubleshooting

With Emerson meter verification you can confirm the health of the entire E-Series magnetic flowmeter - both transmitter and sensor – without the need for additional external equipment. It's no longer necessary to remove the sensor from the line or use costly and time consuming specialized equipment to verify a meter's performance.



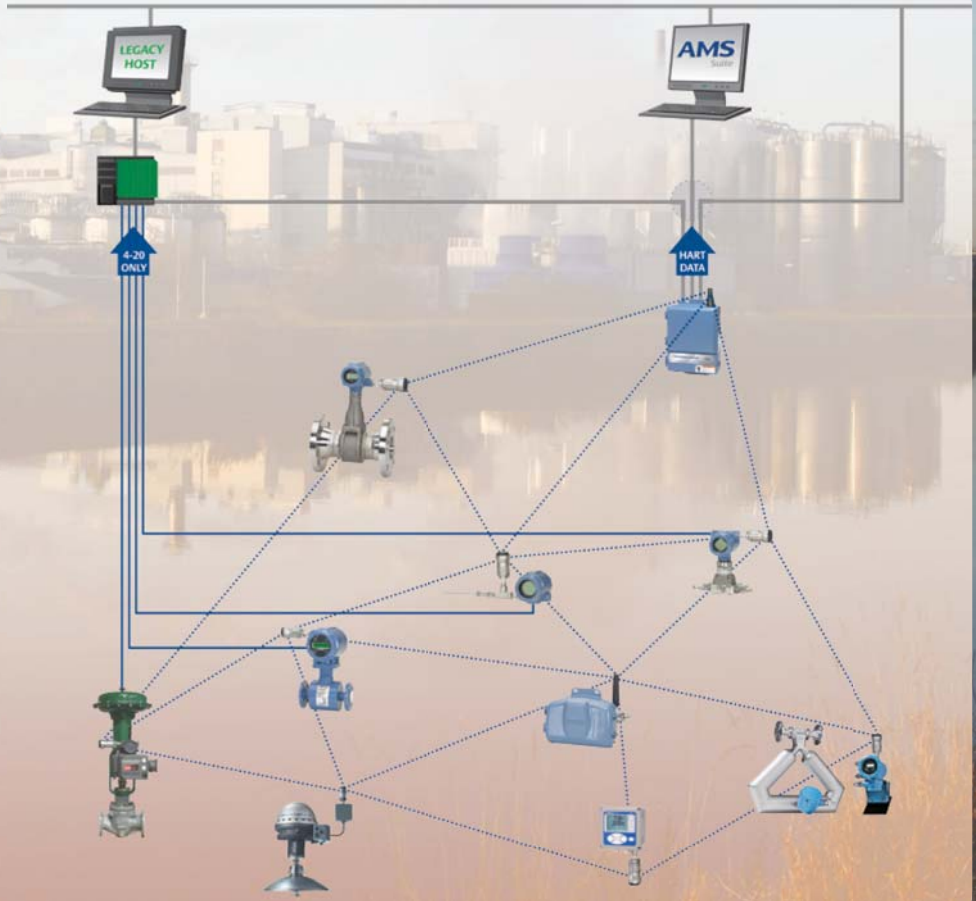
Diagnostics when you want them

With E-Series Magnetic Flowmeters from Rosemount, enabling diagnostics in the field is easy. Every E-Series transmitter has the capability to field license the advanced diagnostics allowing you to take advantage of the diagnostics when you need them.



Simplify access to E-Series diagnostics

The Rosemount E-Series Magnetic Flowmeters with the Smart Wireless THUM adapter powers the PlantWeb® digital plant architecture by delivering more advanced field intelligence for better decision-making to help you achieve unparalleled efficiency and productivity.



Comprehensive magnetic flowmeter offering

E-Series delivers a wide offering of electrode and liner materials, process connections, and enhanced features to meet the many needs of the process industries.

Step 1: Sensor Type

	Type	Application Notes	Accuracy Option	Line Sizes	Coil Drive Power
	8705	Standard process design	0.25% Standard 0.15% High	15 - 900mm 0.5 - 36 inch	Pulsed DC
	8711	Compact light-weight	0.25% Standard 0.15% High	4 - 200mm 0.15 - 8 inch	Pulsed DC
	8721	Designed for F&B and life science, 3-A and EHEDG	0.5% Standard 0.25% High	15 - 100mm 0.5 - 4 inch	Pulsed DC
	8707	Best in P&P, M&M slurry flows, and noisy applications	0.5% Standard 0.25% High	80 - 900mm 3 - 36 inch	High-Signal Pulsed DC

Step 2: Liner Material Selection

	Liner	Notes	Temp Limits	Type and Line Sizes	
	PFA	BEST FLUOROPOLYMER Excellent resistance to chemicals and abrasion. Suitable for any application.	-20 to 350˚F (-29 to 177˚C)	Flanged 15 - 350mm 0.5 - 14 inch	Wafer 4 - 8mm 0.15 - 0.3 inch
	PTFE	BETTER FLUOROPOLYMER More cost effective than PFA. Excellent chemical resistance, but less abrasion resistance than PFA.	-20 to 350˚F (-29 to 177˚C)	Flanged 15 - 900 mm 0.5 - 36 inch	Wafer 15 - 200mm 0.5 - 8 inch
	ETFE	GOOD FLUOROPOLYMER Similar chemical and abrasion resistance to PTFE, but a lower maxium temperature and more expensive.	-20 to 300˚F (-29 to 149˚C)	Flanged 15 - 400mm 0.5 - 16 inch	Wafer 15 - 200mm 0.5 - 8inch
	Polyurethane	Typically applied to clean water (no chemicals). Abrasion resistant to slurries with small particles.	0 to 140˚F (-18 to 60˚C)	Flanged 15 - 900 mm 0.5 - 36 inch	
	Neoprene	Typically applied to water and sea water. Abrasion resistant to slurries with small particles.	0 to 185˚F (-18 to 85˚C)	Flanged 80 - 1800mm* 1.5 - 72 inch	
	Linatex	Typically applied to mining slurries, abrasion resistant to larger debris.	0 to 158˚F (-18 to 70˚C)	Flanged 80 - 900 mm 1.5 - 36 inch	

*Available above 900mm (36 inch) as a special order.

Step 3: Electrode Type and Material Selection

	Electrode Type	Application Notes
	Button	Standard electrode design. Use for most applications, especially where abrasion is a concern. Has fair resistance to coating which can be improved by properly sizing flowtube sensor.
	Bullet-nose	Use where coating is a concern and no solids are present. Bullet-nose electrode should not be used in abrasive or slurry applications as the particles will result in increased process noise on the electrodes.

Electrode Material	Application Notes
316L SST	Standard electrode material. Compatible with most low concentration water based applications. Avoid using stainless in higher concentration acid applications.
Nickel Alloy 276	Use in medium to high concentration acids where SST is not acceptable. Use in applications with high chloride concentrations, such as sea water.
Platinum (80% Platinum, 20% Iridium)	Ideal for liquor applications found in pulp and paper industry. Also ideal as a spare electrode option to cover nearly every application in a plant. Compatible with nearly every process fluid.
Tantalum	Ideal for high concentration acid flows such as hydrochloric and hydrofluoric acids.
Titanium	Ideal for high concentration caustic (base) applications such as sodium and potassium hydroxides.

Step 4: Transmitter Selection

	Type	Notes	Accuracy Option	Power Supply	User Interface Output Protocol LOI
	8732	Integral or remote mounting	0.25% Std 0.15% High	Global AC/DC	HART®, FOUNDATION™ fieldbus, PROFIBUS PA optical switch LOI or display only
	8712	Remote wall	0.25% Std 0.15% High	Global AC/DC	HART Dedicated button LOI
	8712 High Signal	Remote wall. Compatible only with 8707 flowtube	0.5% Std 0.25%	115V AC	HART Dedicated button LOI

Step 5: Diagnostics and Enhanced Features

	Type	Notes	Availability
	Standard Diagnostics	Transmitter hardware fault; transmitter software fault; sensor coil fault; tunable empty pipe	With every E-Series transmitter
	D1	High accuracy option (0.15%)	8732 and 8712
	AX	Enhanced DI/DO capability	8732 and 8712
	HART/FF DA1/D01	Diagnostics suite includes: ground and wiring fault detection, high process noise detection.	8732 and 8712
	DA2/D02	SMART™ Meter Verification	8732 and 8712

Go to www.rosemount.com/8732e to learn more about how Rosemount E-Series can make a difference for you.