

Flow Noise Diagnosis Function

- ❑ **Application:** Flow Noise Diagnosis
- ❑ **Products:** [ADMAG Total Insight Series AXG Magnetic Flowmeter](#)

❑ Requirement

Magnetic flowmeters seldomly fail because of no mechanical moving parts. However, flow measurement can sometimes be affected by bubbles, solids or sudden change of conductivity. These process conditions cause fluctuating outputs, resulting in product quality concerns. To maintain reliable flow measurement, the flow-meters must have the performance capability to cope with such disturbances.



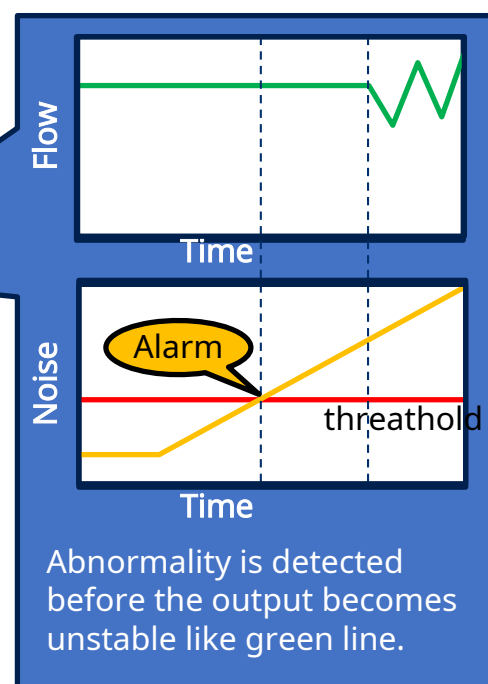
❑ Proposal

ADMAG Total Insight series AXG Magnetic Flowmeter has the unique system [“Dual Frequency Excitation”](#). It is capable of **stable flow measurement with high noise immunity**. With [Flow Noise Diagnosis Function](#), AXG can detect the following abnormalities.

- Bubbles due to pump cavitation
- Conductivity change due to chemical input or reduction in pump capacity
- Mixing of slurry or change in process condition
- Adhesion to the electrodes over time

Cause of Noise

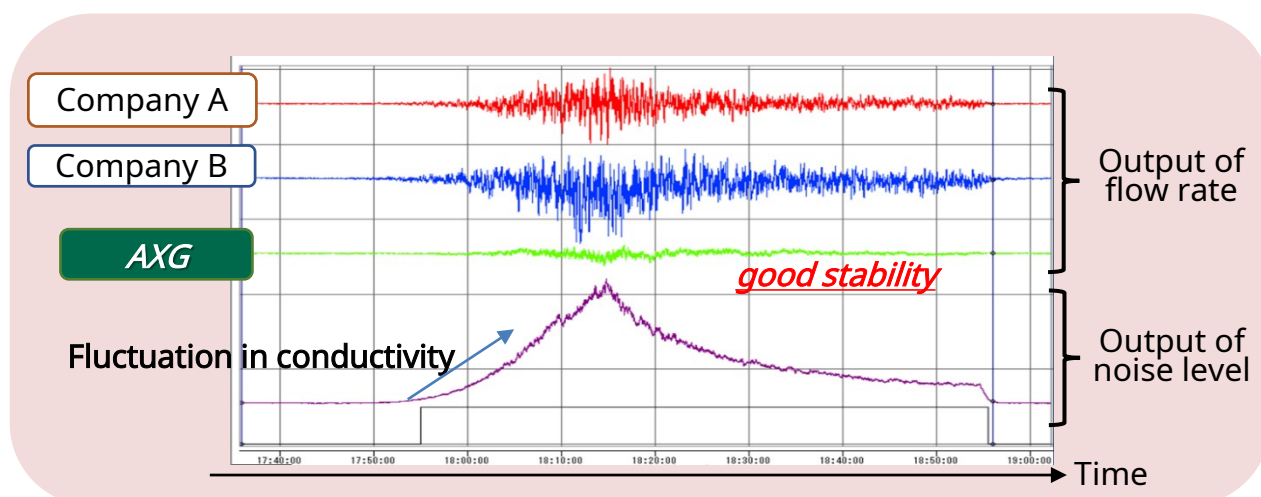
- Unstable Conductivity
- Slurry
- Bubble



□ Features

The graph below shows an example of measurement results. The flow output of AXG is compared with that of other company's flowmeters with unstable conductivity condition. **AXG outputs more stable flow rate** than the magnetic flowmeters of Company A and Company B.

In addition, **AXG is capable of outputting application noise** (purple line). This output can be used for detecting the abnormality of flow before the output becomes unstable.



AXG Magnetic Flowmeter
Integral Type



AXG Magnetic Flowmeter
Remote Sensor



AXG Magnetic Flowmeter
Remote Transmitter

□ Conclusion

The magnetic flowmeter is one of the instrumentation devices used for a long time in plants. The magnetic flowmeter is a product that has no mechanical moving parts and is easy to maintain. It is difficult to recognize the abnormality of fluid until output abnormality occurs. AXG can continue providing stable flow measurement even if abnormal fluid condition occurs. In addition to this, AXG can detect abnormalities of the application. It contributes to stable plant operations.

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