



PROCESS INSTRUMENTATION

SITRANS FS230 Clamp-on interface detection flow meter

The SITRANS FS230 Clamp-on Ultrasonic Interface Detector is an outstanding choice for applications requiring the detection of crude oil or multi-product interfaces. By calculating sonic velocity and pressure along with compensating for temperature, the SITRANS FS230 Interface Detector is capable of supplying oil companies with highly precise and reliable readings. Detecting interfaces via this direct measurement method leads to substantial savings in both equipment usage and slop oil treatment -- exactly what businesses are looking for.

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The SITRANS FS230 Clamp-on Ultrasonic Interface Detector provides numerous benefits:

- Liquident calculation ensures extremely precise interface detection capabilities
- Data outputs include API number, density, temperature and pressure-compensated specific gravity
- User-settable alarm to indicate interface detection
- WideBeam ultrasonic transit-time technology ensures excellent accuracy
- Reliable interface detection via direct measurement method
- No pressure drop
- No need to stop the flow or cut the pipe

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The SITRANS FS230 Interface Detector is ideal for a wide variety of applications, including:

- Gasoline interface detection
- Multi-product interface detection
- Product identification
- Auto batching control
- Detection of entrained water and gas in all products

As with any other clamp-on flow meters from Siemens, it is not necessary to cut the pipe or shut down operations to install the Interface Detector; the transducers are quickly and easily mounted on the outside of the pipe, minimizing maintenance expenses and preventing deposits from forming.

The WideBeam principle

The SITRANS FS230 Interface Detector employs WideBeam transit-time technology, in which the pipe wall is utilized as an amplifier to optimize the signal-to-noise ratio. This increases precision by reducing sensitivity to any change in the medium type or pressure. It also renders the flow meter immune to most pressure-reducing valve noises. The WideBeam principle works with steel, aluminum, titanium and plastic pipes.

Liquident measurement

One major feature of the SITRANS FS230 is the meter's use of Liquident to detect interfaces, which has clear benefits for the meter's accuracy. A liquid's Liquident can be compared to a human being's unique fingerprint and is an extremely precise way to distinguish between products, even those with very similar densities. And because it factors in sonic velocity, rate of change in sonic velocity, temperature, pressure and density to Liquident the meter far exceeds the accuracy of a densitometer.

The SITRANS FS230 Interface Detector also includes a user-settable relay to indicate a rate of change alarm. This feature notifies the user or automated controller of the presence of an interface. The relay set point parameters are user-programmable and permit adjustments in sensitivity for fast vs. slow interfaces. Data outputs include API number, density and specific gravity at base temperature and pressure as well as at actual operating conditions.

Flexible product offering

The SITRANS FS230 Interface Detector is available with up to four paths for enhanced measurement of sonic velocity. It can also operate in conjunction with other versions of the SITRANS FS230 for those applications requiring a combination of interface detection and flow measurement.

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