

**SIEMENS**

*Ingenuity for life*



Higher productivity at  
a lower cost.

SITRANS FX330 - The all-in-one vortex  
solution for steam, gas and liquid.

[usa.siemens.com/vortex](http://usa.siemens.com/vortex)

# Enhanced energy and cost efficiency

Take your steam, gas and liquid measurements to a whole new level with the new, digitally based SITRANS FX330 vortex flow meter from Siemens. Ideal for HVAC and auxiliary systems and versatile enough for use in many process applications. The FX330 Vortex flow meter is a reliable and versatile flow system that combines flow, pressure and temperature monitoring into one user-friendly, two-wire device. You benefit from enhanced energy and process efficiency, greater accuracy and significant cost savings.

## Safety built right in

Designed from the ground up to be fully compliant with the IEC 61508 SIL 2 safety standard, the SITRANS FX330 is a perfect choice for hazardous installations. As a unique feature, the unit switches easily between SIL and non-SIL modes without the need for an on-site visit from a service technician.

## Minimal downtime

Keep your processes up and running – and your costs under control. The SITRANS FX330 provides redundant storage of all calibration and configuration data within the display memory and electronic modules, enabling quick-and-easy transfer of information to replacement devices.

## With the SITRANS FX330 you get

- Integrated pressure and temperature compensation for lower installation costs and increased accuracy
- Integrated online density compensation, for saturated steam – providing superior system accuracy
- Advanced signal filtering technology locks in stable measurements under fluctuating process conditions
- Integrated reduction of nominal diameter permits a large turndown ratio, reducing installation costs
- Sensor designed for low pressure loss to increase operational efficiency
- Around-the-clock support 7 days a week by our network of specialists in 190 countries





**HART**  
COMMUNICATION PROTOCOL



The new SITRANS FX330 integrates an intelligent, high-performance digital transmitter with a robust, fully welded sensor for all-in-one measurement of flow, pressure and temperature.

# A wide range of sizes or a space-saving design

	 <p><b>Flange version with online density compensation in a wide range of sizes</b></p>	 <p><b>All the advantages of the flange version in a space-saving design</b></p>
Measuring method	Kármán Vortex Street	
Measurement of	Volume flow, mass flow, corrected volume flow, density, temperature, pressure and heat energy	
Sizes	1/2" - 12"	1/2" - 4"
Display and keypad	High-resolution graphical display and 4 operating keys (alternative use magnetic pen)	
Connection	ASME B16.5	Wafer design (centering rings included)
Pressure rating	Class 150 - 600 lb. flange rating	
Material sensor	Stainless steel 1.4404 (316 L), Hastelloy C22 on request	
Material transmitter	Die-cast aluminium (Stainless steel in preparation)	
Accuracy	Steam and gases: ±1%, Liquids: ±0.75%	
Medium temperature	-40 °F - 464 °F	
Enclosure rating	IP 66 / IP 67 (NEMA 6)	
Remote transmitter	Connection cable up to 64 ft	
Temperature sensor	Standard integrated temperature sensor	
Pressure sensor	Optional integrated pressure sensor with or without isolation valve	
Current output	4 - 20 mA	
Digital output	Pulse (max. 1000 Hz), frequency, status, limit switch	
Communication	HART 7, Profibus PA and Foundation Fieldbus	
Ex Approvals	I.S. Class I Div.1 - IECEx II2 G Ex ia - ATEX II2 G Ex ia X.P. Class I Div.1 - IECEx II2 G Ex d - ATEX II2 G Ex d N.I. Class I Div. 2 - IECEx II3 G Ex nA - ATEX II3 G Ex nA D.I.P. Class I, III Div. 1 - IECEx II2 D Ex tb - ATEX II2 D Ex tb	
Certifications	SIL 2 certified	



Maintenance couldn't be easier: the pressure sensor can be replaced without ever demounting the meter from the process line.



The user-friendly interface features a high-resolution graphical display with highly legible characters, a rotatable screen and a wide range of language options.



### *Business is based on trust*

*A reliable partnership has many aspects: Being there when you're needed. Helping out even in the toughest situations. Reacting flexibly to provide what's expected in any situation.*

*Siemens has all the qualities that make for a successful partnership. And the results speak for themselves: dependable solutions that are tailored precisely to customer requirements.*

## Seamless integration into your installation

**With its enhanced digital capabilities the SITRANS FX330 can be seamlessly integrated into many operating environments and automation systems, making it ideal for a broad range of HVAC, auxiliary, chemical, and oil and gas installations.**

### **Optimize your HVAC and auxiliary installations**

To maximize the energy efficiency of any production process in any industry, you first must optimize the HVAC and auxiliary installations that provide it with vital behind-the-scenes support. One of the few flow technologies capable of measuring saturated and superheated steam, the versatile SITRANS FX330 is well suited for applications such as steam boilers and steam cleaners and at monitoring compressed air systems and supply gases.

### **Your benefits**

- Maintenance-free sensor design with a high level of durability with no moving parts
- 2-wire device with integrated pressure and temperature sensors eliminates the need for extra I/O devices and streamlines the steam billing process
- Easy-to-use interface utilizes HART for effective communication
- Isolation valve allows for inline checks and pressure sensor calibration with no process shutdown
- Cost-efficient energy calculation including net heat measurement



#### Safety assurance for the chemical industry

HVAC and auxiliary systems consume roughly two-thirds of the total energy required to operate a chemical production process. Integrate the SITRANS FX330 into an automation or energy supply solution and use your resources more efficiently. Since the flowmeter is SIL-2 certified for operation in hazardous areas, it's flexible and durable enough for installation almost anywhere the chemical industry needs to measure flow.

#### Your benefits

- Highly cost-efficient 2-wire design with integrated pressure and temperature measurement
- Sensor available in stainless steel or Hastelloy C22
- Self-diagnostics provide valuable information about the installation at start-up
- All sensors and electronics can be replaced without demounting the device from the process line, resulting in easier maintenance

#### Rugged and durable for harsh oil & gas applications

The wear-resistant SITRANS FX330 is designed for uninterrupted performance despite challenging conditions typical of the industry, including high pressures, high temperatures, fluctuating process conditions and corrosive environments. The versatile SITRANS FX330 monitors the auxiliary systems in support of many processes. The FX330 can be incorporated directly into certain upstream and downstream applications, such as flarestacks, dehydrators, high-pressure gas and liquid pipelines, power generation from gas and refineries.

#### Your benefits

- Rugged sensor design resistant to potential water hammer effects
- Sensor profile minimizes pressure loss for more efficient operation
- Advanced Vortex Frequency Detection (AVFD) provides intelligent signal processing technology and secures stable and reliable measurements resistant to external disturbances
- Isolation valve permits field checks and calibration of pressure sensor without the need for process shutdown



SIL 2, ATEX, QPS and IECEx approvals make installation possible in a variety of hazardous locations.

## For more information

Find everything about Flow Instruments:  
[usa.siemens.com/vortex](http://usa.siemens.com/vortex)

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