

SITRANS FX300

1. Introduction 介绍



SITRANS F X

Improve industrial process performance with the “All in One-Solution”

“一站式解决方案” 改善了工业过程性能

Unique Vortex flow meter with integrated pressure- und temperature-compensation in 2-wire version

独特的带温度和压力补偿功能二线制

涡街流量计

SITRANS FX300

2. The SITRANS F X flow measuring device

流量测量仪表

Highlights

亮点



- 2-wire instrument with integrated pressure- and temperature-compensation
带内置温压补偿的二线制仪表
- Energy measurement of steam
蒸汽能量测量
- Wearless, fully welded st. steel construction with high corrosion-, pressure- and temperature resistance
无磨损、全焊接不锈钢结构，用于高腐蚀、高压和高温场合
- Highest application reliability due to the Intelligent Signal Processing (ISP) stable measuring results
高可靠性，采用智能信号处理（ISP）稳定测量结果
- Immediate operating through Plug & Play
即插即用的工作模式
- Maintenance free construction of the sensor
传感器采用免维护结构
- Sizing software included without price adder
免费的选型软件

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3. SITRANS F X Construction

SITRANS F X 的结构

**Fully welded bluff body**

全焊接旋涡发生体

- No problems with pressure shocks
完全抵抗压力的冲击

Pick up in the shadow of the bluff body

压电传感器安装在旋涡发生体的后面

- Slightly mechanical stress of the pick up
轻微的机械应力
- No damaging of the pick up due to passing solid contents
介质中的固体颗粒不会损坏压电传感器
- Barely danger of deposits at the pick up which can have a sensor failure as consequence
沉积物不宜堵塞

SITRANS F X a really robust construction in good quality**SITRANS F X 是一款真正具有坚固结构的优质产品**

SITRANS FX300

3. SITRANS F X Construction

SITRANS F X 的结构



Robust stainless steel design

坚固的不锈钢设计

welded bluff body, resistant against pressure shocks

全焊接旋涡发生体，抵抗压力的冲击

Sensor mounted where turbulence occurs around the bluff body

压电传感器安装在旋涡发生体后面产生旋涡的地方

barely risk of deposits

不易堵塞

no damage from solid particles 不受固体颗粒的冲击

less stress of the pick up (long term reliability)

极小的应力（保证长期可靠性）

Temperature measurement integrated into sensor (standard, integrated temperature compensation for saturated steam)

传感器中内置温度探头（标配，用于饱和蒸汽应用）



SITRANS FX300**5. The Product Family****产品家族****Standard valve 标准型**

Flanged and sandwich instrument for steam, gases and liquids with integrated temperature compensation for saturated steam as standard

法兰型和夹持型涡街流量计，用于蒸汽、气体和液体的测量。标配的内置温度补偿，可直接用于测量饱和蒸汽的质量流量

Additionally with centring rings for an easy installation

另配有定心环，便于夹持型涡街流量计的安装



SITRANS FX300

5. The Product Family

产品家族

Option: Pressure sensor 可选：压力传感器

Flange and sandwich instrument with integrated pressure compensation for gases or steam

带有压力补偿的法兰型和夹持型涡街流量计，可用于气体和蒸汽的测量

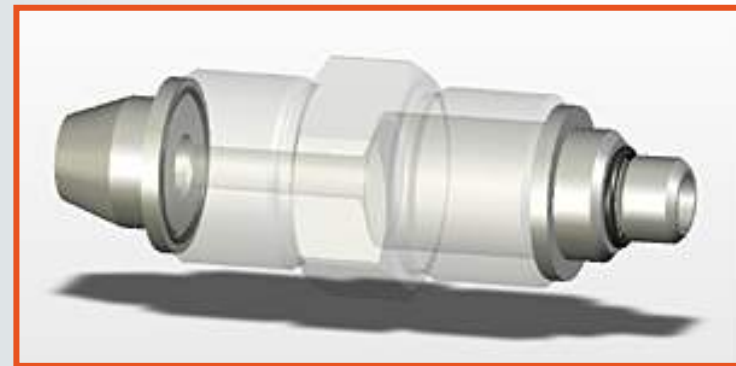
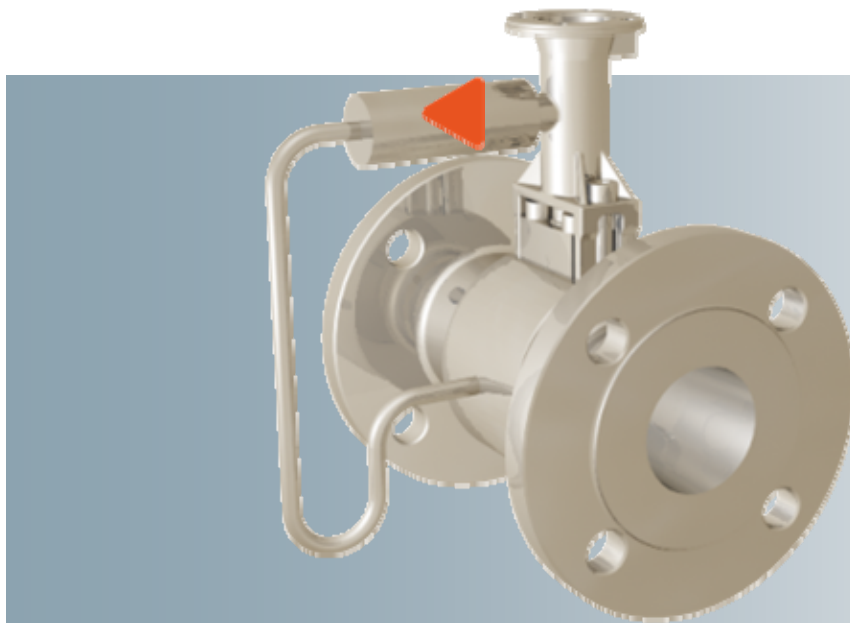


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5. The Product Family 产品家族

Built-in sensor provides unique pressure measuring options

内置的传感器提供独特的压力测量功能



SITRANS FX300

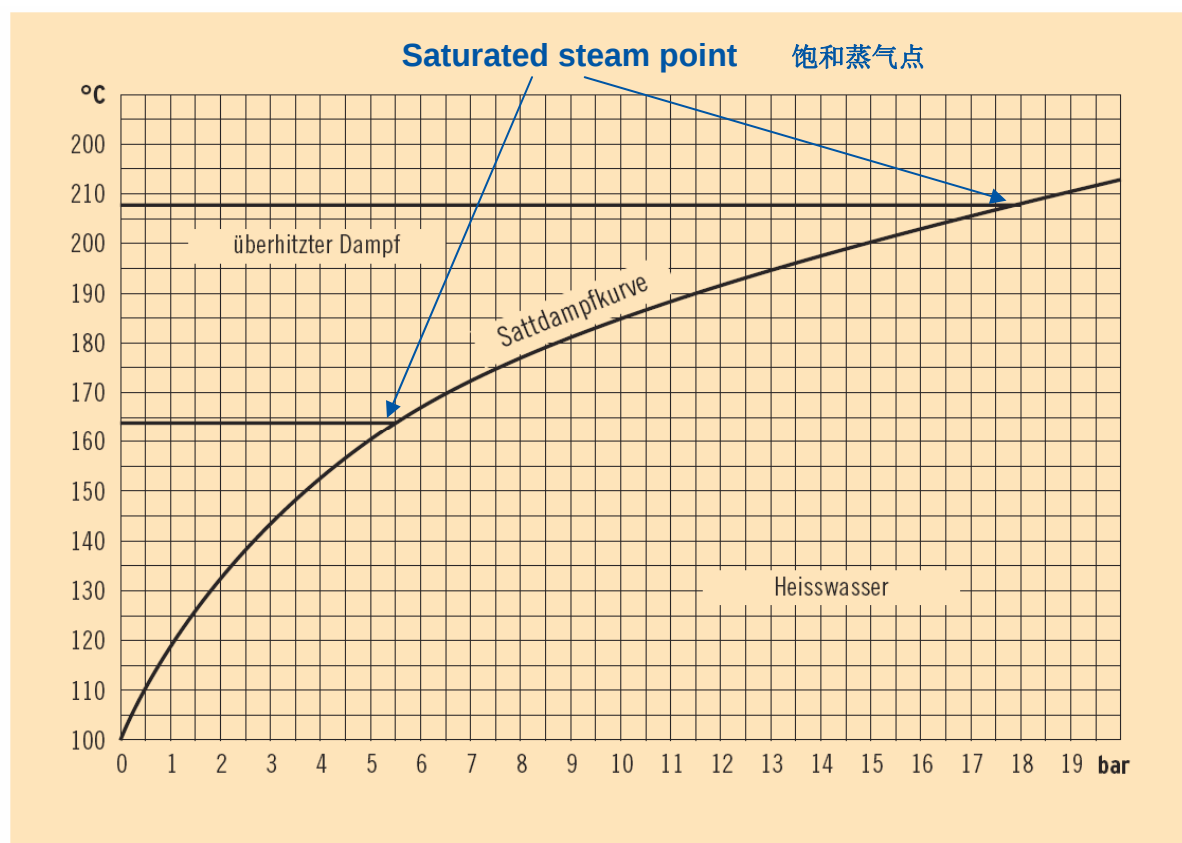
5. The Product Family

产品家族

Steam curve

蒸汽曲线

bar	°C
0,5	110,8
1,0	119,6
1,5	126,8
2,0	132,9
2,5	138,2
3,0	142,9
3,5	147,2
4,0	151,1
4,5	154,7
5,0	158,1
5,5	161,2
6,0	164,2
6,5	167,0
7,0	169,6
7,5	172,1
8,0	174,5
8,5	176,8
9,0	179,0
9,5	181,3
10,0	183,2
11,0	187,1
12,0	190,7
13,0	194,1
14,0	197,4
15,0	200,4
16,0	203,4
17,0	206,1
18,0	208,8



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5. The Product Family

产品家族

Option: Isolation valve 可选：切断阀

- Exchanging of the pressure sensor under process conditions
在线可更换压力传感器
- Pressure sensor for leakage- and pressure tests capable of being shut of
压力传感器泄漏和压力测试时，可以关闭
- Pressure sensor can be checked and calibrated afterwards by using the two way valve
可通过二阀组对压力传感器进行检查和校验



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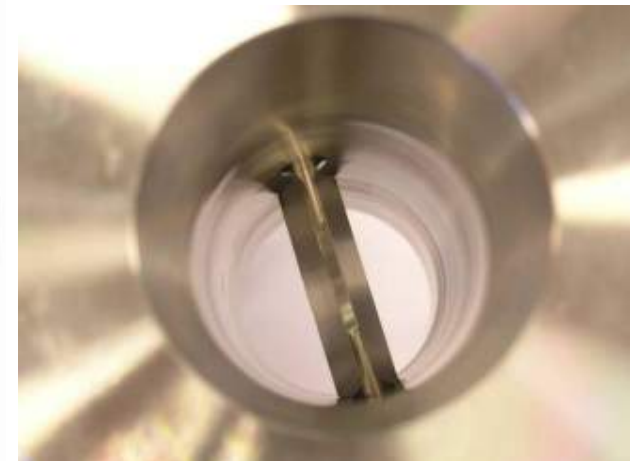
5. The Product Family

产品家族

Option: Dual Sensor

可选：双传感器

- Dual independent measurements
二路独立地测量
- Loss of signal nearly impossible
信号丢失的可能性几乎为零
- If a redundant measurement is required
如果需要冗余测量的场合
- Multi product pipelines
多种介质走同一根管道



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5. The Product Family

产品家族

Technical Data 技术指标

- Flange EN DN 15 – DN 300, ASME ½" – 12" 法兰型 DN15~300 (1/2" ~12")
- Sandwich DN 15 – DN 100, ½" – 4" 夹持型 DN15~100 (1/2" ~ 4")
- PN 10 – PN 100, 150 – 600 lb, higher pressures on request
压力等级: PN10~PN100, ANSI 150# ~ 600#, 可提供更高压力产品
- Sensor: 传感器材质:
 - 1.4404 / 316L 316L 不锈钢
 - Hastelloy C4 on request 哈氏合金 C4, 特殊订货
- Converter housing: 转换器外壳材质:
 - Aluminium, 铝
 - 1.4404 / 316L in preparation 316L 不锈钢 (准备中)
- Temperature compensation for saturated steam as standard
可用于饱和蒸汽质量流量测量的温度补偿功能是标配
- Optional pressure sensor for pressure- and temperature compensation for industrial gases and steam
可选的压力传感器, 用于工业气体和蒸汽测量的温压补偿
- Optional isolation valve for exchanging of the pressure sensor under process conditions
可选的切断阀, 在线可更换压力传感器



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5. The Product Family

产品家族

Technical Data 技术指标

- Ambient temperature -40...+65°C; -4...+149F (Ex version)

环境温度 -40...+85°C; -40...+185F (Non Ex version)

防爆型

非防爆型
- Medium temperature -40...+240°C; -40...+464F

介质温度
- Accuracy $Re \geq 20000 \pm 0,75\%$ for liquids

精度 $Re \geq 20000 \pm 1\%$ for gases and steam

$10000 < Re < 20000 \pm 2\%$ for liquids, gases and steam

液体

气体和蒸汽

液体、气体和蒸汽
- Accuracy pressure- and temperature compensated

$Re \geq 20000 \pm 1,5\%$ for gases and steam

$10000 < Re < 20000 \pm 2,5\%$ for gases and steam

温压补偿精度
- Repeatability $\pm 0,1\%$

重复性
- Power supply 14...28 V DC (Ex version)

供电电源 14...36 V DC (Non Ex version)

防爆型

非防爆型
- ATEX II 2G EEX d ia [ia] IIC T6,

FM Class I, II, III Div 1, CSA, CRN

ATEX 防爆标准

FM 防爆标准

