



Measurement made easy

SwirlMaster FSS430/FSS450

The flowmeter with a twist

Power and productivity
for a better world™



SwirlMaster FSS430/450

Measurement made easy

The most important data at a glance

Accuracy for liquids	± 0.50% of rate
Accuracy for gases and steam	± 0.50% of rate
Process connection	Flange design
Meter sizes	DN 15 (1/2") – DN 400 (16")
Media temperature	-55 °C to 280 °C (-67 °F to 567 °F)
Media viscosity	Max. 30 cP
Required straight pipe runs (depending on installation)	
Upstream section	3 x DN
Downstream section	1 x DN
Ex approvals	IECEX, ATEX, NEPSI 0/1/2/ Zone 20/21/22 approvals cFMus Class 1 Div. 1, Zone 0/1
Communication	HART 7
Outputs	4...20 mA, pulse output, frequency output
Input from field (optionally)	Pressure, temperature, methane content, density, gas analyzer



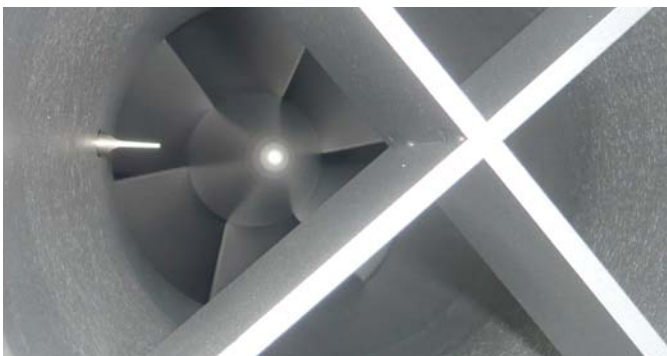
SwirlMaster FSS430/450

Reliability with hi-tech

Reliable, maintenance-free flow measurement with new hi-tech transmitter

ABB's robust swirl flowmeters are designed for reliable measurement of liquid, gas and steam in volume, mass or energy units.

- Digital signal processing for volume flow, totalization and pulse outputs leads to high reliability and flexibility
- Direct mass/energy flow or standard flow measurement without additional flow computer
- Hot pluggable display unit with through the glass (TTG) operation
- Integrated 4...20 mA and HART interface for pressure, gas content, temperature or medium density input
- Latest hazardous approvals incl. Zone 0 / Zone 20 approvals
- Low upstream and downstream requirements enable flexible installation without use of a flow straightener



SwirlMaster FSS430/450

Easy to operate

Simplified handling and commissioning

Intuitive user interface

- Easy set up even without manual
- 4 button operation, optionally through the glass with closed cover
- Well proven menu structure, common philosophy with other ABB instruments
- Sensor memory allows the exchange of electronics without recalibration or manual set up
- Meter diagnostics with clear help texts in the display
- Auto-Zero function for simplified start up even in noisy applications



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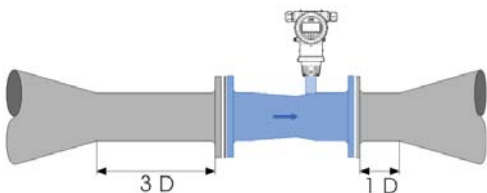
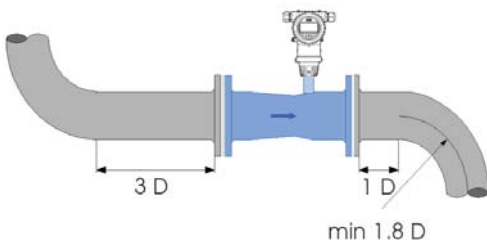
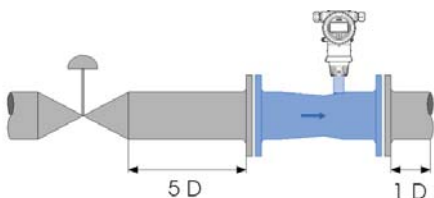
Easy to install

Lowest up- and downstream requirements enable many applications

Immune to turbulence

Allows installation:

- Without additional flow straightener
- Without pipe reduction
- Within 3D upstream/1D downstream down to no upstream/downstream
- Within 5 diameters behind from upstream control valve



SwirlMaster FSS430/450

Excellent measuring performance

Broad range of uses due to advanced electronics

Highly advanced electronics providing:

- Integral vibration cancellation
- Wide flow range up to 50:1 flow turn down
- Highest accuracy in liquid, gas and steam measurement
- Shortest response time (200 ms)
- Enhanced diagnostic functions for sensor supervision and temperature monitoring
- Special operation modes for steam energy flow with or without condensate backflow
- Gas engine for natural gas measurement according to AGA/GERG standards



SwirlMaster FSS430/450

Enhanced flow calculation capability

Integral mass and energy computation

Flow calculation

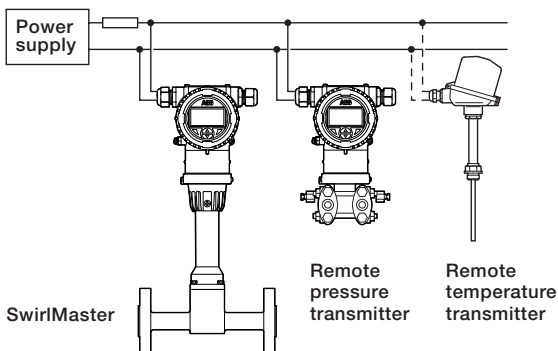
- Optional input modes for connection of remote transmitters (pressure, temperature, density, gas analyzer)
- HART or analogue
- No external flow computer needed

SwirlMaster FSS430

The standard design with excellent vibration cancellation and analogue output with HART communication. Optionally available with HMI and digital outputs. Available with integral or remote transmitter with up to 30 m (98 ft.) cable length.

SwirlMaster FSS450

The advanced swirl transmitter with additional analogue input for mass or energy flow measurement. Available with integral or remote transmitter with up to 30 m (98 ft.) cable length. Using optional inputs discrete flow computers are not longer needed in many applications.



Contact us

ABB Limited

Process Automation

Howard Road, St. Neots
Cambridgeshire, PE19 8EU, UK
Phone: +44 (0) 870 600 6122
Fax: +44 (0)1480 213 339
E-Mail: enquires.mp.uk@gb.abb.com

ABB Inc.

Process Automation

125 E. County Line Road
Warminster, PA 18974, USA
Phone: +1 215 674 6000
Fax: +1 215 674 7183

ABB Automation Products GmbH

Process Automation

Dransfelder Str. 2
37079 Goettingen, Germany
Phone: +49 551 905-534
Fax: +49 551 905-555

ABB Engineering (Shanghai) Ltd.

Process Automation

No. 4528, Kangxin Highway, Pudong New District
Shanghai, 201319, P.R. China
Phone: +86(0) 21 6105 6666
Fax: +86(0) 21 6105 6677
E-Mail: china.instrumentation@cn.abb.com

www.abb.com/measurement

Note:

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