



## DECLARATION OF CONFORMITY

ABB Engineering (Shanghai) Ltd.

No.4528, KangXin Highway, PuDong New District

Shanghai, 201319, P.R. China

herewith confirm in sole responsibility that the products

Device: **Vortex flowmeter, Swirl flowmeter**

Models: **FSV430, FSV450, FSS430, FSS450**

are in compliance with the following API standards for non-custody transfer applications:

**API MPMS 14.12, 1st Edition, March 2017: Manual of Petroleum Measurement Standards Chapter 14—Natural Gas Fluid Measurement Section 12—Measurement of Gas by Vortex Meters**

### Notes:

- This declaration is only valid when the approved listed product is installed and operated according to the instructions.
- It is incumbent upon the End User or any of the other entities mentioned herein to make sure the installation is made in accordance to local and regional regulations and electric codes.
- As used in API MPMS 14.12, "shall" denotes a minimum requirement in order to conform to the specification.
- Expanded uncertainty is calculated according to API MPMS 14.12, and the type B estimation is used for the calculation. Uncertainties of our flowmeters are listed in the table below.

Expanded Uncertainty (including transmitter) depending on the measuring medium and operating mode	FSV 430, FSV 450	FSS 430, FSS 450
<b>Fluid</b>		
Operating volume flow	±0.76%	±0.59%
Mass flow measurement	±0.86%	±0.71%
<b>Gas</b>		
Operating volume flow	±1.05%	±0.59%
Standard volume flow*	±1.13%	±0.72%
Mass flow measurement*	±1.13%	±0.72%
<b>Steam</b>		
Operating volume flow	±1.05%	±0.59%
Measurement of overheated steam / saturated steam mass (with internal temperature measurement)	±3.02%	±2.89%
Measurement of overheated steam / saturated steam mass (with internal temperature measurement and external pressure measurement)*	±1.18%	±0.81%
Measurement of overheated steam / saturated steam mass (with external temperature and pressure measurement)**	±1.08%	±0.65%

\* When using a pressure transmitter with 0.1 % accuracy

\*\* When using a pressure transmitter with 0.1 % accuracy and a temperature transmitter with PT100 Class A

Global Vortex&Swirl Flow Meters Product Manager

R&D Manager

Carsten  
Habersetzer

Digitally signed by Carsten Habersetzer  
Reason: I am approving this document  
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Shanghai 18<sup>th</sup> of Dec 2023

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