

1 **TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres  
Directive 2014/34/EU**

3 Type Examination Certificate Number: **SGS23ATEX0089X**

4 Product: **Model 8600D / 8800D Vortex Flowmeter**

5 Manufacturer: **Emerson – Rosemount, Micro Motion Inc.**

6 Address: **12001 Technology Drive, Eden Prairie, MN 55344, USA**

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 SGS Fimko Oy certifies that the product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.

The examination and test results are recorded in confidential Report No. **GB/SGS/ExTR23.0092/00**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN IEC 60079-0:2018 EN 60079-7:2015+A1:2018 IEC 60079-11:2023 EN 60079-15:2010**

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign “X” is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 This TYPE EXAMINATION CERTIFICATE relates only to the design of the specified equipment and not to specific items of equipment subsequently manufactured.

12 The marking of the product shall include the following:

**See Schedule**

SGS Fimko Oy Customer Reference No. **7305**

Project File No. **23/0184**

This document is issued by the Company subject to their General Conditions for Certification Services accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained herein reflects the Company’s findings at the time of their intervention only and within the limits of Client’s instructions, if any. It does not necessarily indicate that the equipment may be used in particular industries or circumstances. The Company’s sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, schedule included, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

**SGS Fimko Oy**

Takomotie 8  
FI-00380 Helsinki, Finland  
Telephone +358 (0)9 696 361  
e-mail [sgs.fimko@sgs.com](mailto:sgs.fimko@sgs.com)  
web site [www.sgs.fi](http://www.sgs.fi)

Business ID 0978538-5 Member of the SGS Group (SGA SA)



Mikko Välimäki  
SGS Fimko Oy

13 **Schedule**

14 **Certificate Number SGS23ATEX0089X**

15 **Description of Product**

The Model 8600D / 8800D Vortex Flowmeter is a two-wire, piezoelectric-based flowmeter designed to measure the flow of a fluid within a pipe.

It consists of a sensor board, 4-20mA HART, Fieldbus/FISCO or MODBUS output board, terminal board and optional Liquid Crystal Display (LCD) unit mounted within a coated aluminium alloy or stainless steel enclosure forming the transmitter assembly. This is either mounted on a stainless steel meter body or connected via a coaxial cable to a remote meter body, which contains the piezoelectric sensor. The transmitter converts the signal input to a 4-20mA HART, Fieldbus/FISCO or MODBUS digital output or pulse totalizer signal output.

This certification additionally covers the remote coax cable assembly supplied with the meter. The remote cable model option codes are RXX or AXX, where R indicates standard cable, A indicates armored cable, and XX indicates the length of the cable. The maximum allowed cable length is 152 meters (500 feet).

Connection to the external circuits is achieved by the use of a 4-way terminal block within the transmitter enclosure, entry to which is gained by a threaded conduit entry point. The installation of external connections and the plugging of the unused entry must be carried out using appropriate Ex e or Ex n cable glands or blanking plug components with a minimum degree of protection of IP54 certified by an approved certification body.

Four variants of the above Model 8800D Vortex Flowmeters can be mounted on process pipework to form the Model 8800DQ Quad Vortex Flowmeter. Each Model 8800D Vortex Flowmeter mounted to the arrangement has the same input parameters as noted below.

The certification codes and input parameters of the different variants of the equipment are as follows:

**Model 8600D 4-20mA HART Vortex Flowmeter / Model 8600D Modbus Vortex Flowmeter**  
**Model 8800D 4-20mA HART Vortex Flowmeter / Model 8800D Modbus Vortex Flowmeter**

⊕ II 3 G Ex nA ic IIC T5 Gc (-50°C ≤ Ta ≤ +70°C) or Ex ec ic IIC T5 Gc (-50°C ≤ Ta ≤ +70°C)

Maximum Working Voltage = 42V d.c.

**Model 8600D Foundation Fieldbus Vortex Flowmeter**  
**Model 8800D Foundation Fieldbus Vortex Flowmeter**

⊕ II 3 G Ex nA ic IIC T5 Gc (-50°C ≤ Ta ≤ +60°C) or Ex ec ic IIC T5 Gc (-50°C ≤ Ta ≤ +60°C)

Maximum Working Voltage = 32V d.c.

16 **Report Number**

GB/SGS/ExTR23.0092/00

17 **Specific Conditions of Use**

1. When fitted with 90V transient suppressors, the equipment is not capable of passing the 500V insulation test. This must be taken into account upon installation.
2. The enclosure may be made from aluminium alloy with a protective polyurethane paint finish. The polyurethane paint finish may constitute an electrostatic hazard and must only be cleaned with a damp cloth.
3. When the equipment is installed, particular precautions must be taken to ensure, taking into account the effect of process fluid temperature, that the ambient temperature of the electrical housing of the equipment meets the marked protection type temperature range.
4. The equipment must be installed in accordance with local electrical installation regulations/codes and must meet the requirements of permanently earthed equipment.
5. The equipment must be installed in an area of at least pollution degree 2, as defined in IEC 60664-1.

## 18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
1.2.7	LVD type requirements
1.2.8	Overloading of equipment (protection relays, etc)
1.4.1	External effects
1.4.2	Aggressive substances, etc

## 19 Drawings and Documents

Number	Sheet	Issue	Date	Description
08600-0101	1 - 4	AH	07/24/23	Approval Drawing for Model 8600D Intrinsically Safe Configuration, ATEX / IECEx, 4/20mA / HART / Fieldbus / MODBUS
08800-0101	1 – 6	BI	07/24/23	Approval Drawing for Model 8800D Intrinsically Safe Configuration, ATEX / IECEx, 4/20mA / HART / Fieldbus / MODBUS
08800-5506	1 of 1	AE	05/02/19	Filter: EMI
08800-7019	1 – 5	AH	01/06/21	Coplanar Transformer I.S. 250V Spaced
08800-7020	1 to 3	AJ	7/7/15	Transformer, Vortex
08800-7022	1 – 3	AG	01/26/23	Transformer, 250V IS, Vortex
08800-7606	1 of 1	AG	02/14/17	Schematic Diagram, Vortex Terminal Board
08800-7607	1 – 3	AE	12/19/19	PCB, Vortex Terminal Blk Common Electronics
08800-7608	1 – 4	BE	07/02/20	Terminal Block Assembly
08800-7609	1 of 1	AB	03/26/18	Schematic Diagram Vortex LCD Board
08800-7610	1 – 3	AG	12/19/19	Printed Circuit Board LCD Board, 2 Line
08800-7611	1 & 2	AL	03/26/18	PCA, Vortex Shrouded, LCD Board, 2 Line
08800-7616	1 of 1	AG	11/01/06	Schem, Vortex Fieldbus Terminal Board
08800-7617	1 – 3	AK	12/19/19	Terminal Board Fieldbus
08800-7618	1 & 2	BC	07/02/20	Terminal Block Assembly
08800-7700	1 – 4	AQ	08/11/21	Phoenix Vortex Sensor Board
08800-7701	1 to 10	AN	05/01/23	Printed Wiring Board, Phoenix Vortex Sensor Board
08800-7702	1 & 2	AZ	05/02/03	PCA Phoenix Vortex Sensor Board
08800-7703	1 & 2	AR	03/08/18	8800D HART Output Board Schematic
08800-7704	1 – 9	AL	05/02/23	Printed Wiring Board Phoenix Vortex HART Output Board
08800-7705	1 of 1	AS	05/02/23	PCA, Phoenix Vortex HART Output Board
08800-7719	1 – 5	AJ	06/18/19	8800D Fieldbus Hornet Schematic
08800-7720	1 – 6	AH	08/17/23	PWB 8800D Fieldbus Hornet
08800-7721	1 & 2	AI	08/09/23	PCA, 8800D Foundation Fieldbus Hornet Output Board
08800-7740	1 of 1	AB	08/12/20	Schematic Diagram, Vortex Modbus Terminal Brd
08800-7741	1 – 3	AE	05/21/21	PCB, Vortex Modbus Terminal Board
08800-7742	1 of 1	AD	05/21/21	PCA, Vortex Modbus Terminal Board

---

<b>Number</b>	<b>Sheet</b>	<b>Issue</b>	<b>Date</b>	<b>Description</b>
08800-7743	1 – 4	AD	10/18/21	Schematic Diagram, Vortex Modbus Interface Brd
08800-7744	1 – 3	AE	05/21/21	PCB, Vortex Modbus Interface Board
08800-7745	1 of 1	AE	05/21/21	PCA, Vortex Modbus Interface Board
08800-7746	1 of 1	AE	11/03/21	Vortex HMC HART to Modbus Converter, IS, ROHS

All drawings are common to SGS23ATEX0088X & IECEx SGS 23.0043X