1 # EU - TYPE EXAMINATION CERTIFICATE

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

3	EU - Type Examination Certificate Number:	**Baseefa17ATEX0020X – Issue 4**
4	Product:	**Model 8800D Vortex Flowmeter**
5	Manufacturer:	**Emerson – Rosemount, Micro Motion Inc.**
6	Address:	**12001 Technology Drive, Eden Prairie, MN 55344, USA**

7 This re-issued certificate extends EU Type Examination Certificate No. Baseefa17ATEX0020X to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

8 SGS Baseefa, Notified Body number 1180, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this 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.

The examination and test results are recorded in confidential Report No. **See Certificate History**

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

EN IEC 60079-0: 2018 EN 60079-31: 2014

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 EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following :

Ⓔx II 2D Ex tb IIIC T85°C Db (-20°C ≤ T_a ≤ +70°C)

SGS Baseefa Customer Reference No. **7305** Project File No. **19/0417**

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R S SINCLAIR
TECHNICAL MANAGER
On behalf of SGS Baseefa Limited

13 # Schedule

14 ## Certificate Number Baseefa17ATEX0020X – Issue 4

15 Description of Product

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

It consists of four printed circuit boards (PCB's), a terminal block and an optional liquid crystal display unit mounted within a coated aluminium alloy or stainless steel enclosure forming the transmitter assembly. This is either mounted on a stainless steel, nickel alloy, carbon steel or super duplex meter body, or connected via a coaxial cable to a remote meter body which contains the piezoelectric sensor.

The transmitter converts the sensor input to a 4-20mA output, HART digital output or pulse totalizer signal output. The transmitter can be fitted with an alternative Fieldbus output board to form Foundation Fieldbus variants of the Model 8800D Vortex Flowmeters.

Connection to external circuit 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 points. The installation of external connections and the plugging of the unused entry must be carried out using appropriate Ex e or Ex t cable glands or blanking plug components with a minimum degree of protection of IP66 certified by an approved certification body.

The input parameters of the different variants of the equipment are as follows: -

Model 8800D 4-20mA HART Vortex Flowmeter

Maximum Working Voltage = 42V d.c.

Model 8800D Foundation Fieldbus Vortex Flowmeter

Maximum Working Voltage = 32V d.c.

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 identified above.

16 Report Number

See Certificate History

17 Specific Conditions of Use

1. The enclosure may be made from aluminium alloy with a protective polyurethane paint finish which may constitute a potential electrostatic ignition risk. Care should be taken to protect it from external conditions conducive to the build-up of electrostatic charge on such surfaces. The enclosure must not be rubbed or cleaned with a dry cloth.
2. 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.

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

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
08800-0101	1 to 7	BG	8/14/19	Approval Drawing for Model 8800D Intrinsically Safe Configuration, ATEX / IECEx, 4/20mA / HART / Fieldbus

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
08800-5506	1 of 1	AD	7/12/17	Filter: EMI
08800-7019	1 to 5	AE	10/22/15	Coplanar Transformer I.S. 250V Spaced
08800-7020	1 to 3	AJ	7/7/15	Transformer, Vortex
08800-7022	1 to 3	AE	2/14/17	Transformer, 250V IS, Vortex
08800-7606	1 of 1	AG	02/14/17	Schematic Diagram, Vortex Terminal Board
08800-7607	1 to 3	AD	02/14/17	PCB, Vortex Terminal Blk Common Electronics
08800-7608	1 to 4	BD	2/15/17	Terminal Block Assembly
08800-7609	1 of 1	AB	03/26/18	Schematic Diagram Vortex LCD Board
08800-7610	1 to 3	AF	08/09/17	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 to 3	AJ	09/07/17	Terminal Board Fieldbus
08800-7618	1 & 2	BB	9/8/17	Terminal Block Assembly
08800-7700	1 to 4	AP	12/19/16	Phoenix Vortex Sensor Board
08800-7701	1 to 10	AM	10/18/17	Printed Wiring Board, Phoenix Vortex Sensor Board
08800-7702	1 & 2	AY	12/19/16	PCA Phoenix Vortex Sensor Board
08800-7703	1 & 2	AR	03/08/18	8800D HART Output Board Schematic
08800-7704	1 to 9	AJ	12/19/16	Printed Wiring Board Phoenix Vortex HART Output Board
08800-7705	1 & 2	AP	12/19/16	PCA, Phoenix Vortex HART Output Board
08800-7719	1 to 5	AG	11/16/10	8800D Fieldbus Hornet Schematic
08800-7720	1 to 3	AC	11/16/10	PWB 8800D Fieldbus Hornet
08800-7721	1 of 1	AF	06/22/15	PCA, 8800D Foundation Fieldbus Hornet Output Board

The above drawings are associated and held with IECEx Certificate No. IECEx BAS 05.0028X, and are also associated with IECEx Certificate No's. IECEx BAS 05.0029X & IECEx BAS 17.0019X, and ATEX Certificate No's. Baseefa05ATEX0084X & Baseefa05ATEX0085X.

20 Certificate History

Certificate No.	Date	Comments
Baseefa17ATEX0020X	5 May 2017	The release of the prime certificate. The associated test and assessment against the requirements of EN 60079-0: 2012 + A11: 2013 and EN 60079-31: 2014 is documented in Certification Report No. GB/BAS/ExTR17.0032/00 (held with IECEx BAS 17.0019X Iss. 0).
Baseefa17ATEX0020X Issue 1	20 October 2017	This issue of the certificate permits minor mechanical, PCB and drawing changes not affecting the original assessment. The above changes are documented in Certification Report No. GB/BAS/ExTR17.0223/00 (held with IECEx Certificate No. IECEx BAS 05.0028X Iss. 13).
Baseefa17ATEX0020X Issue 2	12 February 2018	This issue of the certificate permits the fitting of an alternative piezo sensor in all variants of the equipment, and the fitting of an alternative fire rated cable on remote sensor mounted variants of the equipment. The above changes are assessed not to affect the original assessment of the equipment, and are documented in Certification Report No. GB/BAS/ExTR17.0375/00 (held with IECEx Certificate No. IECEx BAS 05.0028X Iss. 14), Project File No. 17/0626.
Baseefa17ATEX0020X Issue 3	11 April 2019	This issue of the certificate permits minor circuit and drawing changes not affecting the previous assessment. This issue also confirms the current designs of the Model 8800D Vortex Flowmeter have been reviewed against the requirements of EN IEC 60079-0: 2018 in respect of the differences to EN 60079-0: 2012 + A11: 2013, and none of the differences affect the equipment. The standards listed on page 1 of the certificate were updated. The above changes are documented in Certification Report No. GB/BAS/ExTR19.0066/00 (held with IECEx Certificate No. IECEx BAS 05.0028X Iss. 15).
Baseefa17ATEX0020X Issue 4	27 August 2019	This issue permits the fitting of four Model 8800D Vortex Flowmeters onto a common process pipework to form the Model 8800DQ Quad Vortex Flowmeter. The four flowmeters fitted can be either the fixed or remote mounted variants of the Model 8800D and be a mixture of HART or Foundation Fieldbus variants of the equipment. The certification and input parameters to each Model 8800D remain as previously assessed. The Equipment Schedule was revised to detail the Model 8800DQ variant. The above changes are documented in Certification Report No. GB/BAS/ExTR19.0207/00 (held with IECEx Certificate No. IECEx BAS 05.0028X Iss. 16). Project File No. 19/0417.
For drawings applicable to each issue, see original of that issue.		