IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx DEK 11.0022X

Issue No: 8

Status: **Current**

Page 1 of 4

Date of Issue: **2018-07-11**

Applicant: **Emerson – Rosemount, Micro Motion Inc.**
12001 Technology Drive
Eden Prairie
MN 55344
United States of America

Equipment: **Vortex Flowmeter Model 8600D**

Optional accessory:

Type of Protection: **Ex db and Ex ia**

Marking:

Ex db [ia] IIC T6 ... T2 Ga/Gb (integral transmitter)
Ex db [ia Ga] IIC T6 Gb (remote transmitter)
Ex ia IIC T6 ... T2 Ga (remote sensor)

Certificate history:

Issue No. 8 (2018-07-11)
Issue No. 7 (2018-01-26)
Issue No. 6 (2017-03-22)
Issue No. 5 (2016-06-16)
Issue No. 4 (2015-09-28)
Issue No. 3 (2015-01-13)
Issue No. 2 (2013-11-14)
Issue No. 1 (2011-12-23)
Issue No. 0 (2011-04-15)

Approved for issue on behalf of the IECEx Certification Body:

R. Schuller

Position:

Signature:
(for printed version)

Date:

2018-07-11

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA Certification B.V.
Meander 1051,
6825 MJ Arnhem
The Netherlands

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Certificate No:	IECEx DEK 11.0022X	Issue No: 8
Date of Issue:	**2018-07-11**	Page 2 of 4

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12001 Technology Drive
Eden Prairie
MN 55344
United States of America

Additional Manufacturing location(s):

F-R Technologies De Flujo, S.A. De C.V.
Rosemount Flow Division Operations
Ave. Miguel de Cervantes 111
31136 Chihuahua
Mexico

Emerson Process Management Flow Technologies Co., Ltd.
111, Xing Min South Road
Jiangning, Nanjing
Jiangsu Province, 211100
China

Emerson Process Management Flow B.V.
Neonstraat 1
6718 WX Ede
The Netherlands

Emerson SRL
Emerson Street No 4
400641 Cluj-Napoca
Romania

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2014-10 Edition:3.0	Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

NL/DEK/ExTR11.0022/00
NL/DEK/ExTR11.0022/01
NL/DEK/ExTR11.0022/02
NL/DEK/ExTR11.0022/03
NL/DEK/ExTR11.0022/04
NL/DEK/ExTR11.0022/05
NL/DEK/ExTR11.0022/06
NL/DEK/ExTR11.0022/07

Quality Assessment Report:

NO/PRE/QAR16.0019/01
NO/PRE/QAR15.0010/00
NO/PRE/QAR15.0017/00
NO/PRE/QAR15.0018/00
NO/PRE/QAR15.0031/01

IECEx Certificate of Conformity

Certificate No:	IECEx DEK 11.0022X	Issue No: 8
Date of Issue:	2018-07-11	Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Model 8600D Vortex Flow meter consists of a cast aluminum or stainless steel electronics housing in type of protection flameproof enclosures Ex db and an integral or remote mounted stainless steel meter body/sensor assembly in type of protection intrinsic safety Ex ia. The electronics processes and converts the sensor signal into a 4-20 mA, HART digital or pulse output signal.

For the type designation, thermal and electrical data see Annex 1 to this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:

When the equipment is installed, precautions shall be taken to ensure the ambient temperature of the transmitter lies between -50 °C to +70 °C, taking into account process fluid effects. If the ambient temperature is outside this range remote transmitters shall be used.

For information regarding the dimensions of the flameproof joints, the manufacturer shall be contacted.

The Flowmeter is provided with special fasteners of property class A2-70 or A4-70.

Units marked with “Warning: Electrostatic Charging Hazard” may use non-conductive paint thicker than 0.2 mm. Precautions shall be taken to avoid ignition due to electrostatic charge on the enclosure.

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Certificate No: IECEx DEK 11.0022X Issue No: 8

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

- minor constructional changes

Annex:

381995000-Annex 1.pdf

Annex 1 to IECEx Report NL/DEK/ExTR11.0022/07
Annex 1 to Certificate of Conformity IECEx DEK 11.0022X
Annex 1 to EU-Type Examination Certificate DEKRA 12ATEX0189 X issue 6

Note: In this document [.] is used as decimal separator.

Description

The Model 8600D Vortex Flowmeter consists of a cast aluminum electronics housing in type of protection Ex db and an integral or remote mounted stainless steel meter body/sensor assembly in type of protection Ex ia. The electronics process and convert the sensor signal into a 4-20 mA, HART digital or pulse output signal.

Remote mounted sensor: in type of protection Ex ia IIC, only to be connected to the associated Model 8600D Vortex Flowmeter electronics. The maximum allowable length of the interconnecting cable is 152 m (500 ft).

Type designation

8600D	N	1	M5	_	V5
I	II	III	IV	V	VI

Designation	Explanation	Value	Explanation
I	Model	8600D	Vortex flowmeter
II	Sensor temperature	N	-50 °C to +250 °C
III	Conduit entry	1 2	½-14 NPT M20 x 1.5
IV	Display	M5 Blank	LCD display No display
V	Remote electronics	R10 R20 R30 R33 R50 Rxx Blank	10 ft (3 m) cable 20 ft (6.1 m) cable 30 ft (9.1 m) cable 33 ft (10 m) cable 50 ft (15.2 m) cable Customer specified cable length, up to 75 ft (23 m) Integral mount electronics
VI	Ground screw	V5	External ground screw
Note: ***** Other types of protection that appear on the marking of the equipment are not relevant to this certificate.			

Thermal data

Ambient temperature range: -50 °C to +70 °C
Process temperature range: -50 °C to +250 °C

Temperature class transmitter: T6
Temperature class sensor: see table below

Ambient Temperature [°C]	Process Temperature [°C]	T–Class Sensor
-50 to +70	-50 to +75	T6
-50 to +70	-50 to +95	T5
-50 to +70	-50 to +130	T4
-50 to +70	-50 to +195	T3
-50 to +70	-50 to +250	T2

Electrical data

Power supply: 42 Vdc max (4-20 mA HART analog and pulse outputs), U_m = 250 V.