



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Certificate No.:	IECEX KEM 05.0017X	Page 1 of 5	<u>Certificate history:</u>
Status:	Current	Issue No: 12	Issue 11 (2021-10-20)
Date of Issue:	2022-05-05		Issue 10 (2021-06-07)
Applicant:	Emerson – Rosemount, Micro Motion Inc. 12001 Technology Drive Eden Prairie, MN 55344 United States of America		Issue 9 (2019-11-12)
Equipment:	Vortex Flowmeter Model 8800D		Issue 8 (2019-05-17)
Optional accessory:			Issue 7 (2018-07-11)
Type of Protection:	Ex db and Ex ia		Issue 6 (2018-01-26)
Marking:	Ex db [ia] IIC T6 ... T1 Ga/Gb (integral transmitter) Ex db [ia Ga] IIC T6 Gb (remote transmitter) Ex ia IIC T6 ... T1 Ga (remote sensor)		Issue 5 (2017-05-09)
			Issue 4 (2016-06-16)
			Issue 3 (2015-09-28)
			Issue 2 (2015-01-13)

Approved for issue on behalf of the IECEx
Certification Body:

R. Schuller

Position:

Certification Manager

Signature:
(for printed version)

Date:
(for printed version)

2022-05-05

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Meander 1051
6825 MJ Arnhem
Netherlands





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Issue No: 12

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

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

Emerson Process Management FlowF-R Tecnologías De Flujo, S.A. de C.V
111, Xing Min South Road, Jiangning District, Nanjing
Jiangsu Province
211100
China

**Ave. Miguel de Cervantes 111
Complejo Industrial
Chihuahua, Chihuahua, 31136
Mexico**

See following pages for more locations

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 equipment 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 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

[IEC 60079-26:2014-10](#) Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga
Edition:3.0

This Certificate **does not** indicate compliance with 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/ExTR11.0057/10](#)

Quality Assessment Report:

[NO/PRE/QAR15.0018/03](#)

IECEX ATR:

File reference:



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Model 8800D Vortex Flowmeter 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, pulse, Modbus RS-485, or Foundation Fieldbus output signal.

Remote mounted sensor: in type of protection intrinsic safety Ex ia IIC, is only to be connected to the associated Model 8800D Vortex Flowmeter electronics. The maximum allowable length of the interconnecting cable is 152 m (500 ft.).

Degree of Protection per IEC 60529: IP 66

Ambient Temperature Range: -50 °C to +70 °C

For the type designation, thermal and electrical data see Annex 1 to report NL/DEK/ExTR11.0057/10.

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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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Increase the upper end of the maximum process temperature range for T1.

Update of Ingress Protection Rating to IP 66.



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Additional manufacturing locations:

Flow Measurement Emerson SRL
Cluj Flow Technology Center
Str. Emerson, nr. 4
Parcul Industrial Tetarom 2
400641, Cluj-Napoca
Romania

Annex:

[383070500-ExTR11.0057.10-Annex 1.pdf](#)



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

Description

The Model 8800D Vortex Flowmeter 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, pulse, Modbus RS-485, or Foundation Fieldbus output signal.

Remote mounted sensor: in type of protection Ex ia IIC, is only to be connected to the associated Model 8800D Vortex Flowmeter electronics. The maximum allowable length of the interconnecting cable is 152 m (500 ft.).

Type designation

8800D **E** **6** **D** **MTA** **GN** **M5** **A20** **V5**
I **II** **III** **IV** **V** **VI** **VII** **VIII** **IX**

Designation	Explanation	Value	Explanation
I	Model	8800D	Vortex flowmeter
II	Sensor temperature range	N E S	Standard: -40 °C to +232 °C Extended: -200 °C to +450 °C Severe service: -200 °C to + 450 °C
III	Conduit entry	1 2 6 7	½-14 NPT – aluminum housing M20x1.5 – aluminum housing ½-14 NPT – SST housing M20x1.5 – SST housing
IV	Output	D P F C M	4-20 mA digital HART 4-20 mA digital HART with pulse FOUNDATION FIELDBUS One 4-20 mA digital HART with scaled output and one FOUNDATION FIELDBUS MODBUS RS-485
V	Multivariable	MTA MPA MCA Blank	Multivariable output with integral temperature sensor Multivariable output with pressure compensation Multivariable output with pressure and temperature compensation with integral temperature sensor No multivariable output
VI	Electrical connector	GN Blank	ATEX flameproof A size, mini connector (minifast) No connector
VII	Display	M5 Blank	LCD display No display
VIII	Remote Electronics	R10 R20 R30 R33 R50 R75 Rxx A10 A20 A33 A50 A75 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 75 ft. (22.9 m) cable Customer specified cable length in feet ** 10 ft. (3 m) armored cable 20 ft. (6.1 m) armored cable 33 ft. (10 m) armored cable 50 ft. (15.2 m) armored cable 75 ft. (22.9 m) armored cable Integral mount electronics
IX	Ground screw	V5	External ground screw

Note: ** Consult manufacturer for additional lengths up to 500 ft (152 m)

Model Type Designation – QUAD Configuration

8800D Q E 6 D D D F M5 A20 V5
 I II III IV V VI VII VIII IX X XI

Designation	Explanation	Value	Explanation
I	Model	8800D	Vortex flowmeter
II	Meter Type	Q	Quad Transmitter Configuration
III	Sensor Temperature Range	N E S	Standard: -40 °C to +232 °C Extended: -200 °C to +450 °C Severe service: -200 °C to + 450 °C
IV	Conduit entry	1 2 6 7	½-14 NPT – aluminum housing M20x1.5 – aluminum housing ½-14 NPT – SST housing M20x1.5 – SST housing
V	Transmitter 1 Output	D P F M	4-20 mA digital HART 4-20 mA digital HART with pulse FOUNDATION FIELDBUS MODBUS RS-485
VI	Transmitter 2 Output	D P F M	4-20 mA digital HART 4-20 mA digital HART with pulse FOUNDATION FIELDBUS MODBUS RS-485
VII	Transmitter 3 Output	D P F M	4-20 mA digital HART 4-20 mA digital HART with pulse FOUNDATION FIELDBUS MODBUS RS-485
VIII	Transmitter 4 Output	D P F M	4-20 mA digital HART 4-20 mA digital HART with pulse FOUNDATION FIELDBUS MODBUS RS-485
IX	Display	M5 Blank	LCD display No display
X	Remote Electronics	R10 R20 R30 R33 R50 R75 Rxx A10 A20 A33 A50 A75 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 75 ft. (22.9 m) Customer specified cable length in feet ** 10 ft. (3 m) armored cable 20 ft. (6.1 m) armored cable 33 ft. (10 m) armored cable 50 ft. (15.2 m) armored cable 75 ft. (22.9 m) armored cable Integral mount electronics
XI	Ground screw	V5	External ground screw
Note ** Consult manufacturer for additional lengths up to 500 ft (152 m)			



Thermal data

Ambient temperature range: -50 °C to +70 °C
 Process temperature range: -200 °C to +450 °C

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

Ambient Temperature [°C]	Process Temperature [°C]	T-Class Sensor
-50 to +70	-200 to +75	T6
-50 to +70	-200 to +95	T5
-50 to +70	-200 to +130	T4
-50 to +70	-200 to +195	T3
-50 to +70	-200 to +290	T2
-50 to +70	-200 to +450*	T1
*The user is responsible for ensuring the surface temperature does not exceed 450°C in their specific installation		

Electrical data

Power supply: 32 Vdc max (Fieldbus, digital output), $U_m = 250\text{ V}$
 42 Vdc max (4-20 mA HART analog and pulse outputs, MODBUS RS-485), $U_m = 250\text{ V}$