



**Government of India**  
**Ministry of Commerce & Industry**  
**Petroleum & Explosives Safety Organisation (PESO)**  
**5th Floor, A-Block, CGO Complex, Seminary Hills,**  
**Nagpur - 440006**

E-mail : [explosives@explosives.gov.in](mailto:explosives@explosives.gov.in)  
 Phone/Fax No : 0712 -2510248, Fax-2510577

**Approval No : A/P/HQ/MH/104/7108 (P531014)**

**Dated : 06/05/2022**

To,

**M/s. Emerson - Rosemount Micro Motion Inc,**  
**12001 TECHNOLOGY DRIVE , EGEN PRAIRIE , MN 55344 , USA,**

**U.S.A**

**Sub :** Approval of Intrinsically Safe Type Electrical Equipment. under Petroleum Rules 2002- Regarding.

Sir(s),

Please refer to your letter No. **OIN1058568** dated **23/04/2022** on the subject.

The following Ex electrical equipment(s) manufactured by you according to **IEC 60079-0 : 2017, IEC 60079-11 : 2011**, standards and covered under **SGS Baseefa Limited , UK** Test reports mentioned below is/are approved for use in **Zone 1** of Gas **IIC** hazardous areas coming under the the Petroleum Rules, 2002 administered by this Organization.

Sr. No	Description	Safety Protection	Equipment reference Number	Test Agency			Drawing no
				Name	Certificate No.	Certificate Date	
1	MODEL 8800D VORTEX FLOWMETER	Ex ia IIC T4 Ga	<b>P531014/1</b>	SGS Baseefa Limited , UK	IECEX BAS 05.0028X Issue No. 16	27/08/2019	0880- 0101

This Approval is granted subject to observance of the following conditions:-

- 1)The design and construction of the equipment shall be strictly in accordance with description, condition and drawings as mentioned in the SGS Baseefa Limited , UK Test Reports referred to above.
- 2)The equipment shall be used only with approved type of accessories and associated apparatus.
- 3)Each equipment shall be marked either by raised lettering cast integrally or by plate attached permanently to the main structure to indicate conspicuously:-
  - (a) Name of the manufacturer
  - (b) Name and number by which the equipment is identified.
  - (c) Number & date of the test report of the SGS Baseefa Limited , UK applicable to the equipment.
  - (d) Equipment reference number of this letter by which use of apparatus is approved.
  - (e) Protection level.
- 4) A certificate to the effect that the equipment has been manufactured strictly in accordance with the drawing referred to in the SGS Baseefa Limited , UK Test report and is identical with the one tested and certified at SGS Baseefa Limited , UK shall be furnished with each equipment.
- 5) The customer shall be supplied with a copy of this letter, an extract of the conditions and maintenance schedule, if any, recommended by SGS Baseefa Limited , UK in their test reports and copy of instructions booklet detailing operation & maintenance of the equipment so as to maintain its Flame Proof characteristics.
- 6) The After sales service and maintenance of subject equipment shall be looked after by your representative EPMI, EMERSON PROCESS MANAGEMENT (INDIA) PVT LTD

**Conditions of the Approval:-**

The approval for above equipment is subject to validity of IECEx Quality Assessment Report NO/PRE/QAR15.0018.

This approval also covers the permissible variations as approved under the SGS Baseefa Limited , UK test reports referred above. This approval is liable to be cancelled if any of the conditions of the approval is violated or not complied with . The approval may also be amended or withdrawn at any time, if considered necessary in the interest of safety.

The field performance report from actual users/your customers of the subject equipment may please be collected and furnished to this office for verification and record on annual basis.

The Approval is Valid upto **31/12/2026**

Yours faithfully,

**(A.B. Tamgadge)**  
**Controller of Explosives**  
**For Chief Controller of Explosives**  
**Nagpur**

Copy to :

1. Jt. Chief Controller of Explosives, West Circle, MUMBAI
2. EPMI,EMERSON PROCESS MANAGEMENT (INDIA) PVT LTD

**for Chief Controller of Explosives**  
**Nagpur**

(For more information regarding status,fees and other details please visit our website <http://peso.gov.in>)

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# 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](http://www.iecex.com)

Certificate No.:	<b>IECEx BAS 05.0028X</b>	Page 1 of 4	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 16	Issue 15 (2019-04-11)
Date of Issue:	2019-08-27		Issue 14 (2018-02-12)
Applicant:	<b>Emerson - Rosemount, Micro Motion Inc.</b> 12001 Technology Drive Eden Prairie MN 55344 <b>United States of America</b>		Issue 13 (2017-10-20)
Equipment:	<b>Model 8800D Vortex Flowmeter</b>		Issue 12 (2017-05-05)
Optional accessory:			Issue 11 (2016-02-18)
Type of Protection:	<b>Intrinsic Safety</b>		Issue 10 (2015-03-09)
Marking:	<b>Ex ia IIC T4 Ga (-60°C ≤ Ta ≤ +70°C) - 4-20mA HART Versions</b> <b>Ex ia IIC T4 Ga (-60°C ≤ Ta ≤ +60°C) - Fieldbus &amp; FISCO Versions</b>		Issue 9 (2014-10-03)
			Issue 8 (2014-05-28)
			Issue 7 (2013-06-06)
			Issue 6 (2011-10-12)

Approved for issue on behalf of the IECEx  
Certification Body:

**R S Sinclair**

Position:

**Technical Manager**

Signature:  
(for printed version)

Date:

\_\_\_\_\_  
\_\_\_\_\_

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 [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**SGS Baseefa Limited**  
**Rockhead Business Park**  
**Staden Lane**  
**Buxton, Derbyshire, SK17 9RZ**  
**United Kingdom**





# IECEx Certificate of Conformity

Certificate No.: **IECEx BAS 05.0028X**

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Date of issue: 2019-08-27

Issue No: 16

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

Additional manufacturing locations:

<b>F-R Tecnologías De Flujo, S.A. De C.V.</b> Rosemount Flow Business Unit Ave. Miguel de Cervantes 111 31136 Chihuahua <b>Mexico</b>	<b>Emerson Process Management Flow Technologies Co., Ltd.</b> 111, Xing Min South Road Jiangning District, Nanjing Jiangsu Province 211100 <b>China</b>	<b>SC Emerson SRL</b> Emerson Street No. 4 400641 Cluj-Napoca <b>Romania</b>
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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 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

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:

Quality Assessment Report:

#### IECEx ATR:

UK/BAS/05/0045, GB/BAS/ExTR06.0136/00, GB/BAS/ExTR07.0037/00, GB/BAS/ExTR08.0164/00, GB/BAS/ExTR09.0002/00, GB/BAS/ExTR10.0212/00, GB/BAS/ExTR11.0205/00, GB/BAS/ExTR14.0125/00, GB/BAS/ExTR15.0055/00, GB/BAS/ExTR16.0044/00, GB/BAS/ExTR17.0041/00, GB/BAS/ExTR17.0223/00, GB/BAS/ExTR17.0375/00, GB/BAS/ExTR19.0066/00, GB/BAS/ExTR19.0207/00

#### File reference:

05/0045, 06/0751, 07/0217, 08/0361, 08/0859, 10/0705, 11/0360, 14/0235, 14/0907, 15/0765, 16/0753, 17/0526, 17/0626, 19/0148, 19/0417



# IECEx Certificate of Conformity

Certificate No.: **IECEx BAS 05.0028X**

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Date of issue: 2019-08-27

Issue No: 16

## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The Model 8800D Vortex Flowmeter is a two-wire, piezoelectric-based flowmeter designed to measure the flow of a 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 & FISCO 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 point.

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 on the certificate annex.

See Certificate Annex for model details and input parameters.

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

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 and given a protective polyurethane paint finish; however, care should be taken to protect it from impact or abrasion when located in Zone 0. 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.



# IECEx Certificate of Conformity

Certificate No.: **IECEx BAS 05.0028X**

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Date of issue: 2019-08-27

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## **DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**

### **Variation 16.1**

To permit 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, Foundation Fieldbus or FISCO variants of the equipment. The certification and input parameters to each Model 8800D remain as previously assessed.

The Equipment Schedule on page 3 of the certificate was revised to detail the Model 8800DQ variant.

ExTR: **GB/BAS/ExTR19.0207/00**

File Reference: **19/0417**

### **Annex:**

[IECEx BAS 05.0028X Annex Issue 2.pdf](#)

### **Model 8800D Vortex Flowmeters**

#### **8800D HART Vortex Flowmeter**

Ex ia IIC T4 Ga (-60°C ≤ T<sub>a</sub> ≤ +70°C)

#### **Input Parameters**

$$\begin{array}{ll} U_i = 30V & C_i = 0 \\ I_i = 185mA & L_i = 0.97mH \\ P_i = 1.0W & \end{array}$$

#### **8800D Fieldbus Vortex Flowmeter**

Ex ia IIC T4 Ga (-60°C ≤ T<sub>a</sub> ≤ +60°C)

#### **Input Parameters**

$$\begin{array}{ll} U_i = 30V & C_i = 0 \\ I_i = 300mA & L_i = < 10\mu H \\ P_i = 1.3W & \end{array}$$

#### **8800D FISCO Vortex Flowmeter**

Ex ia IIC T4 Ga (-60°C ≤ T<sub>a</sub> ≤ +60°C)

#### **Input Parameters**

$$\begin{array}{ll} U_i = 17.5V & C_i = 0 \\ I_i = 380mA & L_i = < 10\mu H \\ P_i = 5.32W & \end{array}$$