



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
 Phone/Fax No : 0712 -2510248, Fax-2510577

Approval No : A/P/HQ/MH/104/7106 (P531035)

Dated : 06/05/2022

To,

M/s. Emerson - Rosemount Micro Motion Inc,
12001 Technology Drive , Eden 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. **OIN1059498** 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** 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 8600D Vortex Flowmeter	Ex ia IIC T4 Ga	P531035/1	SGS Baseefa Limited	IECEX BAS 12.0053X Issue No 9	11/04/2019	AS per test report

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 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 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 Test report and is identical with the one tested and certified at SGS Baseefa Limited 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 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 M/s. Emerson Process Management (India) Private Limited, Plot No. A-145/4, T.T.C. Industrial Area, M.I.D.C. Pawane, Near Koparkhairne, Navi Mumbai - 400 710 (Maharashtra)

Conditions of the Approval:-

The approval for above equipment is subject to validity of IECEx Quality Assessment Report
NO/PRE/QAR16.0019

This approval also covers the permissible variations as approved under the SGS Baseefa Limited 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. M/s. Emerson Process Management (India) Private Limited, Plot No. A-145/4, T.T.C. Industrial Area, M.I.D.C. Pawane, Near Koparkhairne, Navi Mumbai - 400 710 (Maharashtra)

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

Certificate No.:	IECEx BAS 12.0053X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 9	Issue 8 (2018-02-12)
Date of Issue:	2019-04-11		Issue 7 (2017-10-20)
Applicant:	Emerson - Rosemount, Micro Motion Inc. 12001 Technology Drive Eden Prairie MN 55344 United States of America		Issue 6 (2017-05-05)
Equipment:	Model 8600D Vortex Flowmeter		Issue 5 (2016-02-18)
Optional accessory:			Issue 4 (2015-03-09)
Type of Protection:	Intrinsic Safety		Issue 3 (2014-05-28)
Marking:	Ex ia IIC T4 Ga (-60°C ≤ Ta ≤ +70°C)		Issue 2 (2013-06-06)
			Issue 1 (2012-11-05)
			Issue 0 (2012-05-08)

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 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 12.0053X**

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Date of issue: 2019-04-11

Issue No: 9

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

Additional manufacturing locations:

F-R Tecnologías De Flujo, S.A. De C.V. Rosemount Flow Business Unit Ave. Miguel de Cervantes 111 31136 Chihuahua Mexico	Emerson Process Management Flow Technologies Co., Ltd. 111, Xing Min South Road Jiangning District, Nanjing Jiangsu Province 211100 China	SC Emerson SRL Emerson Street No. 4 400641 Cluj-Napoca Romania
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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 Reports:

[GB/BAS/ExTR12.0102/00](#)
[GB/BAS/ExTR15.0055/00](#)
[GB/BAS/ExTR17.0223/00](#)

[GB/BAS/ExTR12.0266/00](#)
[GB/BAS/ExTR16.0044/00](#)
[GB/BAS/ExTR17.0375/00](#)

[GB/BAS/ExTR14.0123/00](#)
[GB/BAS/ExTR17.0041/00](#)
[GB/BAS/ExTR19.0066/00](#)

Quality Assessment Reports:

[NO/PRE/QAR15.0018/01](#)

[NO/PRE/QAR15.0031/01](#)

[NO/PRE/QAR16.0019/01](#)



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Date of issue: 2019-04-11

Issue No: 9

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

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

It consists of a sensor board, 4-20mA HART 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 contain the piezoelectric sensor. The transmitter converts the sensor input to a 4-20mA HART digital output or pulse totalizer signal output.

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.

Input Parameters

$U_i = 30V$

$I_i = 185mA$

$P_i = 1W$

$C_i = 0$

$L_i = 0.97mH$

SPECIFIC CONDITIONS OF USE: YES as shown below:

- 1) When fitted with the 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; however, care should be taken to protect it from impact or abrasion when located in Zone 0.
- 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.



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Certificate No.: **IECEx BAS 12.0053X**

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Variation 9.1

To permit minor circuit and drawing changes not affecting the previous assessment.

Variation 9.2

To confirm the current designs of the Model 8600D Vortex Flowmeter have been reviewed against the requirements of IEC 60079-0: 2017 Edition 7 in respect of the differences from IEC 60079-0: 2011 Edition 6, and none of the differences affect the equipment. The standards listed on page 2 of the certificate were updated.

ExTR: **GB/BAS/ExTR19.0066/00**

File Reference: **19/0148**