



1. EU-TYPE EXAMINATION CERTIFICATE

2. Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU

3. EU-Type Examination Certificate No: FM21ATEX0050X

4. Equipment or protective system:
(Type Reference and Name) InnovaMass 240S and InnovaMass 241S
Multivariable Mass Vortex Flowmeters

5. Name of Applicant: Sierra Instruments Inc

6. Address of Applicant 20 Ryan Ranch Road, Ste 109, Monterey, California
93940, United States of America

7. This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8. FM Approvals Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number:

PR459655 dated 29th July 2022

9. Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-31:2014, EN 60529:1991+A1:2000+A2:2013

10. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

11. This EU-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

Certificate issued by:

FM Approvals

9 June 2026

Certification Manager, FM Approvals Europe Ltd.

Date

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12. The marking of the equipment or protective system shall include:



(ST Versions)

II 2 G Ex db IIB+H2 T6...T2 Gb

II 2 D Ex tb IIIB T85°C Db

-40°C ≤ Tamb ≤ 60°C

(HT Versions)

II 2 G Ex db IIB+H2 85°C...405°C Gb

II 2 D Ex tb IIIB T85°C Db

-40°C ≤ Tamb ≤ 60°C

13. Description of Equipment or Protective System:

General – Sierra Instrument's Multivariable Mass Vortex Flowmeters InnovaMass 240S and InnovaMass 241S utilize three primary sensing elements (a vortex shedding velocity sensor, an RTD temperature sensor and a solid-state pressure transducer) to measure the mass flow rate of gases, liquids and steam. The meters are available for in-line (InnovaMass 240S) and Insertion (InnovaMass 241S) applications. The InnovaMass 240S, in-line meter can be configured for pipe sizes from ½ inch to 12 inches while the InnovaMass 241S insertion meter can be installed in any pipe two inches in diameter or greater. The InnovaMass 240S in-line meter incorporates a new split adapter design which allows the pressure transducer to be field serviceable.

Construction – The InnovaMass 240S and InnovaMass 241S Multivariable Mass Vortex Flowmeters InnovaMass 240S and InnovaMass 241S flowmeter enclosures is a cylindrical shaped housing constructed of aluminium with a powder coat finish. Each end of the enclosure is closed via threaded covers (blank or windowed). The enclosure is provided with two ¾ inch-14 NPT entries. The joint between the meter body enclosure and process connection adapter is threaded. O-rings are provided on the threaded covers, in-line split adapter, and insertion adapter for environmental protection.

Ratings – The InnovaMass 240S and InnovaMass 241S Multivariable Mass Vortex Flowmeters operate from 12-36 VDC or 100-240 VAC, 4-20 ma. The InnovaMass 240S and InnovaMass 241S Multivariable Mass Vortex Flowmeters Models are for use in process temperatures of -40°C to 260°C with a high temperature option (HT) for process temperatures -40°C to +400°C.

The enclosures have an ingress protection rating of IP66.

Refer to the Annex for model codes.

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14. Specific Conditions of Use:

1. Contact Manufacturer regarding flamepath information.
2. Clean with a Damp cloth only to avoid build-up of electrostatic charge.
3. The InnovaMass 240S and InnovaMass 241S Multivariable Mass Vortex Flowmeters standard temperature option (ST) process temperature range is -40°C to 260°C. The high temperature option (HT) process temperature range is -40°C up to +400°C.

InnovaMass 240S and InnovaMass 241S Multivariable Mass Vortex Flowmeters

Tmax (Process)	Temperature Class Value (Gas)	
	ST Version	HT Version
80°C	T6	85°C
95°C	T5	100°C
130°C	T4	135°C
195°C	T3	200°C
260°C	T2	300°C
400°C	N / A	405°C

15. Essential Health and Safety Requirements:

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16. Test and Assessment Procedure and Conditions:

This EU-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX Certification Scheme.

17. Schedule Drawings

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body. The documents are maintained under project 3061361.

18. Certificate History

Details of the supplements to this certificate are described below:

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SCHEDULE

EU-Type Examination Certificate No. FM21ATEX0050X

Date	Description
2 August 2022	Original Issue.
1 December 2022	<u>Supplement 1:</u> Report Reference: RR234388 dated 29 th November 2022. Description of the Change: Minor documentation changes not affecting the equipment safety. Model codes moved to the certificate Annex.
23 March 2026	<u>Supplement 2:</u> Report Reference: PR475910 dated 23 rd March 2026. Description of the Change(s): Model code revisions. Company address updated.
9 June 2026	<u>Supplement 3:</u> Report Reference: RR251394 dated 8 June 2026. Description of the Change(s): Document list correction to include only applicable trade agent documents.

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ANNEX

InnovaMass 240S

Description of Equipment:

InnovaMass 240S-a-b-c-d-e-f. In-line Multivariable Mass Vortex Flowmeter.

a = Multiparameter options: V, VT, VTP, VETEP, VETEP-EMS, VTEP, VTEP-EMS, VT-EMS or VTP-EMS.

b = Flow body: F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, G2, G3, G4, G5, G6, G7, G8, G9, G10, G11, G12, H2, H3, H4, H5, H6, H7, H8, H9, H10, H11, H12, I2, I3, I4, I5, I6, I7, I8, I9, I10, I11, I12, FC5, FC6, FC7, FC8, FC9, FC10, FC11, FC12, GC5, GC6, GC7, GC8, GC9, GC10, GC11, GC12, HC5, HC6, HC7, HC8, HC9, HC10, HC11, HC12, IC5, IC6, IC7, IC8, IC9, IC10, IC11, IC12, FD2, FD3, FD4, FD5, FD6, FD7, FD8, FD9, FD10, FD11, FD12, GD2, GD3, GD4, GD5, GD6, GD7, GD8, GD9, GD10, GD11, GD12, HD2, HD3, HD4, HD5, HD6, HD7, HD8, HD9, HD10, HD11, HD12, FJ2, FJ3, FJ4, FJ5, FJ6, FJ7, FJ8, FJ9, FJ10, FJ11, FJ12, GJ2, GJ3, GJ4, GJ5, GJ6, GJ7, GJ8, GJ9, GJ10, GJ11, GJ12, HJ2, HJ3, HJ4, HJ5, HJ6, HJ7, HJ8, HJ9, HJ10, HJ11, HJ12, W2, W3, W4, W5, W6, W7 or W8.

c = Electronics enclosure: E2-DD or E4(*)-DD. *Specify cable length.

d = Input/Output: PV1L-V4LH, PV1-V4H, PV1-V4M, PV1-V4B, PV1-V6H, PV1-V6M, PV1-V6B, PV1-V4M-IP, PV1-V4B-IP, PV1-V6M-IP, PV1-V6B-IP, PS-V4H, PS-V4M, PS-V4B, PS-V6H, PS-V6M or PS-V6B.

e = Process temperature: ST or HT.

f = Process pressure: MP0, MP1, MP2, MP3, MP4 or MP5.

InnovaMass 240S-R

Description of Equipment:

InnovaMass 240S-R-a-b-c-d-e-f. In-line Multivariable Mass Vortex Flowmeter.

a = Multiparameter options: V, VT, VTP, VETEP, VETEP-EMS, VTEP, VTEP-EMS, VT-EMS or VTP-EMS.

b = Flow body: R-F3, R-F4, R-F5, R-F6, R-F7, R-F8, R-F9, R-F10, R-F11, R-F12, R-G3, R-G4, R-G5, R-G6, R-G7, R-G8, R-G9, R-G10, R-G11, R-G12, R-H3, R-H4, R-H5, R-H6, R-H7, R-H8, R-H9, R-H10, R-H11, R-H12, R-I3, R-I4, R-I5, R-I6, R-I7, R-I8, R-I9, R-I10, R-I11, R-I12, R-W3, R-W4, R-W5, R-W6, R-W7 or R-W8.

c = Electronics enclosure: E2-DD or E4(*)-DD. *Specify cable length.

d = Input/Output: PV1L-V4LH, PV1-V4H, PV1-V4M, PV1-V4B, PV1-V6H, PV1-V6M, PV1-V6B, PV1-V4M-IP, PV1-V4B-IP, PV1-V6M-IP, PV1-V6B-IP, PS-V4H, PS-V4M, PS-V4B, PS-V6H, PS-V6M or PS-V6B.

e = Process temperature: ST or HT.

f = Process pressure: MP0, MP1, MP2, MP3, MP4 or MP5.

InnovaMass 241S

Description of Equipment:

InnovaMass 241S-a-b-c-d-e-f-g. Insertion Multivariable Mass Vortex Flowmeter.

a = Multiparameter options: V, VT, VTP, VETEP, VETEP-EMS, VTEP, VTEP-EMS, VT-EMS or VTP-EMS.

b = Probe length: LS, LC or LE.

c = Electronics enclosure: E2-DD or E4(*)-DD. *Specify cable length.

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d = Input/Output: PV1L-V4LH, PV1-V4H, PV1-V4M, PV1-V4B, PV1-V6H, PV1-V6M, PV1-V6B, PV1-V4M-IP, PV1-V4B-IP, PV1-V6M-IP, PV1-V6B-IP, PS-V4H, PS-V4M, PS-V4B, PS-V6H, PS-V6M or PS-V6B.

e = Process temperature: ST or HT.

f = Process pressure: MP0, MP1, MP2, MP3, MP4 or MP5.

g = Process connection: CM, CF, CG, CH, CI, CFD, CGD, CHD, CMJ, CFJ, CGJ, CHJ, PM, PF, PG, PFD, PGD, PMJ, PFJ, PGJ, PMR, PMHR, PFR, PGR, PHR, PIR, PFDR, PGDR, PHDR, PMJR, PMJHR, PFJR, PGJR, PHJR, PMR-LE, PMHR-LE, PFR-LE, PGR-LE, PHR-LE, PIR-LE, PFDR-LE, PGDR-LE, PHDR-LE, PMJR-LE, PMJHR-LE, PFJR-LE, PGJR-LE or PHJR-LE.



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