

CERTIFICATE OF CONFORMITY



1. HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS

2. Certificate No: FM25US0096

3. Equipment:
(Type Reference and Name) VortiFox Vortex Shedding Flowmeter

4. Name of Listing Company: Fox Thermal Instruments Inc

5. Address of Listing Company: 399 Reservation Rd, Marina, California 93933,
United States of America

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

PR472261 dated 22 May 2025

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM 3600:2022, FM 3615:2022, FM 3616:2022, FM 3810:2021, ANSI/NEMA 250:2020, ANSI/IEC 60529:2020,
ANSI/UL 61010-1:2012

8. 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.

9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

10. Equipment Ratings:

Explosionproof for Class I, Division 1, Groups B, C and D; Dust-ignitionproof for Class II, Division 1, Groups E, F and G; Class III, Division 1; hazardous (classified) locations, indoors and outdoors (Type 4X, IP66) with an ambient temperature rating of -40°C to +60°C.

11. The marking of the equipment shall include:

Class I, Division 1, Groups B, C, D T6;
Class II / III, Division 1, Groups E, F, G T6;
Type 4X, IP66 ; Ta = -40°C to +60°C;

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

22 May 2025

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. One Technology Way, Norwood, MA 02062 USA

T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmaprovals.com www.fmaprovals.com

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SCHEDULE

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12. Description of Equipment:

General – The VortiFox Vortex Shedding Flowmeters Models VF3, VF4 and VF4-R 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 and insertion applications. The VF4 and VF4-R in-line meters can be configured for pipe sizes from ½ inch to 12 inches while the VF3 insertion meter can be installed in any pipe two inches in diameter or greater. The VF4 in-line meters incorporate a split adapter design which allows the pressure transducer to be field serviceable.

Construction – The VortiFox flowmeter enclosure 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 VortiFox Vortex Shedding Flowmeters operate from 12-36 VDC or 100-240 VAC, 4-20 ma. The VortiFox Vortex Shedding Flowmeters 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.

See Annex for model codes.

13. Specific Conditions of Use:

None

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
22 May 2025	Original Issue.

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ANNEX

Model VF3

Description of Equipment:

VF3abcdefghijkl. Insertion VortiFox Vortex Shedding Flowmeter.

a = Multivariable options: V, VT, VTP, VTEP, VETEP, VT-EM, VTP-EM, VTEP-EM or VETEP-EM.

b = Probe length: SL, CL or EL.

c = Electronics enclosure: L or R(*). *Specify cable length.

d = Display options: DD.

e = Input power: DCL, DCH, DCHPOE or AC.

f = Output signal: 1AB, 1ABIP, 1AH, 1AHL, 1AM, 1AMIP, 3AB, 3ABIP, 3AH, 3AM or 3AMIP.

g = Temperature options: ST or HT.

h = Pressure options: P0, P1, P2, P3, P4 or P5.

j = Process connections: CNPT, C150, C16, C300, C40, C600, C63, CJ10, CJ20, CJ30, C900, PNPT, P150, P16, P300, P40, PJ10, PJ20, PNPTR, P150R, P16R, P300R, P40R, P600R, P63R, PJ10R, PJ20R, or PJ30R.

Model VF4

Description of Equipment:

VF4abcdefghijkl. In-Line VortiFox Vortex Shedding Flowmeter.

a = Multivariable options: V, VT, VTP, VTEP, VETEP, VT-EM, VTP-EM, VTEP-EM or VETEP-EM.

b = Flow body: 04, 06, 08, 12, 16, 24, 32, 48, 64, 80, 96.

c = Meter body material: C, S or H.

d = Process connection: 150, 300, 600, 900, W, 16, 40, 63, 100, J10, J20 or J30.

e = Electronics enclosure: L or R(*). *Specify cable length.

f = Display options: DD.

g = Input power: DCL, DCH, DCHPOE or AC.

h = Output: 1AB, 1ABIP, 1AH, 1AHL, 1AM, 1AMIP, 3AB, 3ABIP, 3AH, 3AM or 3AMIP.

j = Process: ST or HT.

k = Process pressure: P0, P1, P2, P3, P4 or P5.

Model VF4-R

Description of Equipment:

VF4-Rabcdefghijkl. In-Line VortiFox Vortex Shedding Flowmeter.

a = Multivariable options: V, VT, VTP, VTEP, VETEP, VT-EM, VTP-EM, VTEP-EM or VETEP-EM.

b = Flow body: 04, 06, 08, 12, 16, 24, 32, 48, 63, 80, or 96.

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c = Meter body material: C, S or H.

d = Process connection: 150, 300, 600, 900, W, 16, 40, 63, 100, J10, J20 or J30.

e = Electronics enclosure: L or R (*). *Specify cable length

f = Display options: DD.

g = Input power: DCL, DCH, DCHPOE or AC.

h = Output: 1AHL, 1AH, 1AM, 1AMIP, 1AB, 1ABIP, 3AH, 3AM, 3AMIP, 3AB or 3ABIP.

j = Process: ST or HT.

k = Process pressure: P0, P1, P2, P3, P4 or P5.



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