

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM16US0005X
3. **Equipment:** FT Series Thermal Mass Gas Flow Meter and Temperature Transmitter
(Type Reference and Name)
4. **Name of Listing Company:** Fox Thermal Instruments Inc.
5. **Address of Listing Company:** 399 Reservation Road
Marina, CA 93933
USA
6. The examination and test results are recorded in confidential report number:

3052981 dated 9th March 2016
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2018, FM Class 3615:2018, FM Class 3616:2011, FM Class 3810:2018,
ANSI/ISA 60079-0:2013, ANSI/UL 60079-1:2015, ANSI/NEMA 250:1991,
ANSI/IEC 60529:2004, 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; Flameproof for Class I, Zone 1, AEx db IIB+H2 T4 Gb hazardous (classified) locations, indoors and outdoors (Type 4X, IP66/67) with an ambient temperature rating of -40°C to +70°C.

Certificate issued by:

1 November 2019

J. E. Marquedant
VP, Manager - Electrical Systems

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. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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SCHEDULE



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11. The marking of the equipment shall include:

Class I Division 1, Groups B, C, D; T4 Ta = -40°C to +70°C; Type 4X, IP66/67

Class II, Division 1, Groups E, F, G, Class III, Division 1; T4 Ta = -40°C to +70°C; Type 4X, IP66/67

Class I, Zone 1, AEx db IIB+H2 T4 Gb Ta = -40°C to +70°C, Type 4X, IP66/67

12. **Description of Equipment:**

General - The FT Series Thermal Gas Mass Flow Meter and Temperature Transmitters are used for measuring the mass flow of gases as well as the process gas temperature all in one package. The flowmeters are available for inline or insertion applications. The product features 4-20mA and/or pulse outputs and is also available with an optional display/configuration panel. Digital communications options include USB, HART and RS485 Modbus.

Construction - The FT Series Thermal Gas Mass Flow Meter and Temperature Transmitter consists of a single compartment electronics housing with thread-on window cover and a probe inserted through the housing base forming a cylindrical joint. The enclosures are provided with two (2) ¼ inch NPT openings.

Ratings - The FT Series Thermal Gas Mass Flow Meter and Temperature Transmitters operate at 12-28 Vdc (6W). The transmitters are rated for use in an ambient temperature range of -40°C to +70°C. The transmitter probes are rated for use in a process temperature range of -40°C to +121°C at a maximum pressure of 740 psi.

FTa-b-c-d-e. Thermal Mass Gas Flow Meter and Temperature Transmitter (Insertion).

a = Model 1 or 4A.

b = Probe 04I, 05I, 06I, 07I, 08I, 09I, 10I, 11I, 12I, 13I, 14I, 15I, 16I, 17I, 18I, 19I, 20I, 21I, 22I, 23I, 24I, 25I, 26I, 27I, 28I, 29I, 30I, 31I, 32I, 33I, 34I, 35I, 36I, 15R, 18R, 24R, 30R or 36R.

c = Sensor material SH, SJ, SL or BLANK.

d = Display D0 or DD.

e = Output BH, P1 or RS.

FTa-b-c-d-e. Thermal Mass Gas Flow Meter and Temperature Transmitter (Inline).

a = Model 1 or 4A.

b = Flow body 075F, 10F, 15F, 20F, 25F, 30F, 40F, 60F, 125F, 10FC, 15FC, 20FC, 25FC, 30FC, 40FC, 60FC, 125FC, 075P, 10P, 15P, 20P, 25P, 30P, 40P, 125P, 10PC, 15PC, 20PC, 25PC, 30PC, 40PC or 125PC.

c = Sensor material SH or BLANK.

d = Display D0 or DD.

e = Output BH, P1 or RS.

13. **Specific Conditions of Use:**

1. The flamepaths of the equipment are not intended to be repaired. Consult the manufacturer if repair of the flamepath joints is necessary.
2. Refer to the manufacturer's instructions to reduce the potential of an electrostatic charging hazard on the equipment enclosure.

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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
9 th March 2016	Original Issue.
18 th May 2016	<u>Supplement 1:</u> Report Reference: RR205202 dated 18 th May 2016. Description of the Change: The certificate has been updated to the most recent format.
5 th December 2016	<u>Supplement 2:</u> Report Reference: RR207246 dated 5 th December 2016. Description of the Change: Model code and documentation changes to add alternate software version (no hardware changes).
15 th May 2018	<u>Supplement 3:</u> Report Reference: RR213483 dated 15 th May 2018. Description of the Change: Minor documentation revisions, and updated FM 3600,3615 and 3810 standards to 2018 editions due to non-technical changes.
1 st November 2019	<u>Supplement 4:</u> Report Reference: PR454023 dated 1 st November 2019. Description of the Change: Testing for revised enclosure coating for added corrosion resistance. Other minor documentation revisions.

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