



# 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.: **IECEX FMG 23.0019X** Page 1 of 4 Certificate history:  
Status: **Current** Issue No: 2 [Issue 1 \(2024-11-14\)](#)  
[Issue 0 \(2023-09-18\)](#)  
Date of Issue: 2025-04-14  
Applicant: **Sierra Instruments Inc.**  
20 Ryan Ranch Rd  
Ste 109  
Monterey CA 93940  
**United States of America**  
Equipment: **645S, 745S and TM100 Series Thermal Mass Gas Flow Meter and Temperature Transmitter**  
Optional accessory:  
Type of Protection: **Flameproof, d; Enclosure, t**  
Marking: IECEx FMG 23.0019X  
Ex db IIB+H2 T4 Gb Ta = -40°C to +70°C, IP66/67  
Ex tb IIIC T135°C Db Ta = -40°C to +70°C, IP66/67

Approved for issue on behalf of the IECEx  
Certification Body:

**J. E. Marquedant**

Position:

**VP, Manager - Electrical Systems**

Signature:  
(for printed version)

Date:  
(for printed version)

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.
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Certificate issued by:

**FM Approvals LLC**  
**One Technology Way**  
**Norwood MA 02062**  
**United States of America**

**FM Approvals**



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Page 2 of 4

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Manufacturer: **Sierra Instruments Inc.**  
20 Ryan Ranch Rd  
Ste 109  
Monterey CA 93940  
**United States of America**

Manufacturing locations: **Sierra Instruments Inc.**  
20 Ryan Ranch Rd  
Ste 109  
Monterey CA 93940  
**United States of America**

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 60079-1:2014](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

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:

[US/FMG/ExTR23.0020/00](#)

[US/FMG/ExTR23.0020/01](#)

[US/FMG/ExTR23.0020/02](#)

Quality Assessment Report:

[GB/FME/QAR25.0004/00](#)



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Certificate No.: **IECEX FMG 23.0019X**

Page 3 of 4

Date of issue: 2025-04-14

Issue No: 2

## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

### ***a-bcde-f-g-h. Thermal Mass Gas Flow Meter and Temperature Transmitter (Insertion).***

a = Model: 645S or TM100.

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

c = Retractor: I, R or C.

d = Crank retractor diameter: BLANK, 1 or 2.

e = Crank retractor flange: BLANK, A1, A2, A3, N1, N2, J1 or J2.

f = Sensor diameter and material: BLANK, H3, J3, L3, S2, H2, J2 or L2.

g = Display: D0 or DD.

h = Output: P1, BH or RS.

### ***a-bcde-f-ghij-k-l-m. Thermal Mass Gas Flow Meter and Temperature Transmitter (Inline).***

a = Model: 745S or TM100.

b = Flowbody size: 025, 05, 075, 10, 125, 15, 20, 25, 30, 40, 60 or 80.

c = Flowbody type: P, F, G, H, D, E, J or K.

d = Flowbody material: BLANK or C.

e = Flowbody conditioner: BLANK or X.

f = Flowbody pipe schedule: BLANK, S05, S10 or S80.

g = Retractor length: BLANK, 15, 18, 24, 30 or 36.

h = Retractor: BLANK, R or C.

i = Crank retractor diameter: BLANK, 1 or 2.

j = Crank retractor flange: BLANK, A1, A2, A3, N1, N2, J1 or J2.

k = Sensor diameter and material: BLANK, H3, J3, L3, S2, H2, J2 or L2.

l = Display: D0 or DD.

m = Output: P1, BH or RS.

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

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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Certificate No.: **IECEX FMG 23.0019X**

Page 4 of 4

Date of issue: 2025-04-14

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

Updating company address and QAR.