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 ETL 21.0021X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 3	Issue 2 (2025-05-13) Issue 1 (2024-01-19) Issue 0 (2021-04-30)
Date of Issue:	2026-01-26		

Applicant: **Advanced Micro Instruments, Inc.**
15501 Red Hill Ave Ste. 100
Tustin, CA 92780
United States of America

Equipment: **Gas Analyzer, models 4010LX-AC, 4010LX-DC**

Optional accessory:

Type of Protection: **Intrinsically Safe "ia", Flameproof "db", Optical Radiation "op is"**

Marking: Ex ia op is IIB+H2 T4 Ga/Ex db IIB+H2 T4 Gb

-20°C ≤ Tamb ≤ +65°C

Approved for issue on behalf of the IECEx Certification Body: **Hope Alm**

Position: **Certification Officer**

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.
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:

Intertek
3933 US Route 11 South
Cortland NY 13045-2995
United States of America

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Certificate No.: **IECEx ETL 21.0021X**

Date of issue: 2026-01-26

Issue No: 3

Manufacturer: **Advanced Micro Instruments, Inc.**
15501 Red Hill Ave Ste. 100
Tustin, CA 92780
United States of America

Manufacturing locations:

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 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1:2014 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-11:2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26:2021 Edition:4.0	Explosive atmospheres - Part 26: Equipment with Separation Elements or combined Levels of Protection
IEC 60079-28:2015 Edition:2	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation

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/ETL/ExTR21.0024/00 US/ETL/ExTR21.0024/01 US/ETL/ExTR21.0024/02
US/ETL/ExTR21.0024/03

Quality Assessment Report:

US/ETL/QAR20.0008/04

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The product covered by this report is a gas analyser. The analyser is used to measure the moisture content in process gas lines.

The equipment incorporates Flameproof, Intrinsic Safety (IS) and Optical Radiation protection methods. An equipment back plate provides mounting means for both flameproof (left) and analytical measurement (right) enclosures and equipment bonding connector.

The flameproof enclosure houses the circuitry that makes up the IS barrier and a laser. The IS circuits leave the flameproof enclosure to connect to electrical circuits in the analytical measurement enclosure through an electrical bushing. The laser is connected to a fiber optic cable which leaves the flameproof enclosure through a second bushing and into the analytical enclosure. The electrical bushings have been evaluated as flameproof entry devices. Field wired mains and alarm relay connections, located on bottom of flameproof enclosure, are required to be properly sealed to complete flameproof protection method.

The IS barrier, located inside the flameproof enclosure, supplies the sensor and other circuits with power/data connections to/from the analytical measurement enclosure. The Intrinsically safe housing has two bushing entries (described above) and three separate process tube ports included in the enclosure: bypass outlet, sample gas inlet and exhaust gas. The incoming gas enter directly into the cell block part of the analytical measurement enclosure. Process gas lines do not pass through or into the flameproof enclosure.

The fiber optic system begins in the flameproof housing at the laser. The light is transmitted to the fiber optic bushing and into the analytical housing. Inside the analytical housing, the fiber optic cable terminates at the cell block which allows for the light to pass through the process gas and terminate at a sensor which connects to the analytical board.

Model Nomenclature:

4010BX- followed by AC or DC.

Model Similarity:

4010LX-AC and 4010LX-DC are mechanically same. The difference between a DC unit vs an AC unit is that 4PCB147 (Relay board for DC powered analyzer board) is replaced by 4PCB150 (Relay board for AC powered analyzer board).DC unit uses 4BRK225 but AC unit uses 4BRK221.

4010LX-AC: 100-240 VAC, 0.50A Max
4010LX-DC: 10-24 VDC, 1A Max

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The product is intended to be used in an industrial environment with fixed installation and grounded.
2. Electrostatic hazard warning – refer to equipment instruction manual for techniques to mitigate risk of electrostatic discharge.
3. Equipment shall only be installed and operated in the upright orientation with the mounting plate vertical.
4. Flameproof joints are not intended to be repaired.
5. Equipment utilizes an aluminium housing. The end user shall perform a risk assessment whilst installing this equipment in an EPL Ga environment and it only be utilized where the risk of impact has been determined to be negligible.
6. The maximum Um value to the Intrinsically safe side shall be as follows:
    1. For AC models: 240VAC
    2. For DC models: 24VDC
7. Electrical and fiber optic bushings separating the Flameproof and Analytical enclosures shall not be subject to environmental conditions which adversely affect the properties of the cement.