

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

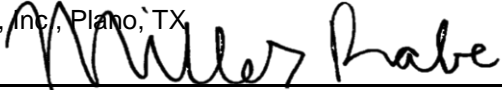
This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant: Advanced Micro Instruments Inc
225 Paularino Avenue
Address: Costa Mesa,
CA 92626
Country: USA

Manufacturer: Advanced Micro Instruments Inc
225 Paularino Avenue
Address: Costa Mesa,
CA 92626
Country: USA

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Intertek Testing Services NA, Inc, Plano, TX

Control Number: 5015616

Authorized by: 
for L. Matthew Snyder, Certification Manager



This document supersedes all previous Authorizations to Mark for the noted Report Number.

This Authorization to Mark is for the exclusive use of Intertek's Client and is provided pursuant to the Certification agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Authorization to Mark. Only the Client is authorized to permit copying or distribution of this Authorization to Mark and then only in its entirety. Use of Intertek's Certification mark is restricted to the conditions laid out in the agreement and in this Authorization to Mark. Any further use of the Intertek name for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. Initial Factory Assessments and Follow up Services are for the purpose of assuring appropriate usage of the Certification mark in accordance with the agreement, they are not for the purposes of production quality control and do not relieve the Client of their obligations in this respect.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Electrical Equipment for Measurement, Control, and Laboratory Use; Part 1: General Requirements [UL 61010-1:2012 Ed.3+R:19Jul2019]

Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use Part 1: General Requirements [CSA C22.2#61010-1-12:2012 Ed.3+U1;U2;A1]

Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations [UL 1203:2013 Ed.5+R:19Aug2020]

Explosion-proof Equipment [CSA C22.2#30:2020 Ed.4]

Explosive Atmospheres – Part 0: Equipment – General Requirements [UL 60079-0:2019 Ed.7+R:15Apr2020]

Standard for Safety Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures "d"

Standard(s):	[UL 60079-1:2015 Ed.7+R:23Jan2020] Explosive Atmospheres - Part 11: Equipment Protection by Intrinsic Safety "i" [UL 60079-11:2013 Ed.6+R:14Sep2018] Explosive Atmospheres – Part 28: Protection Of Equipment And Transmission Systems Using Optical Radiation [UL 60079-28:2017 Ed.2] Explosive Atmospheres — Part 0: Equipment — General Requirements [CSA C22.2#60079-0:2019 Ed.4] Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures "d" (R2021) [CSA C22.2#60079-1:2016 Ed.3] Explosive Atmospheres - Part 11: Equipment Protection by Intrinsic Safety "i" (R2018) [CSA C22.2#60079-11:2014 Ed.2] Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation [CSA C22.2#60079-28:2016 Ed.1]
Product:	Gas Analyzer Class I, Division 1, Groups B-D, T4 Class I, Zone 0/1 AEx ia op is/db IIB+H2 T4 Ga/Gb Ex ia op is/db IIB+H2 T4 Ga/Gb -20°C ≤ Ta ≤ +65°C
Brand Name:	AMI or Advanced Micro Instruments
Models:	4010LX-AC 4010LX-DC



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:](#)
Issue 0 (2021-04-30)

Status: **Current** Issue No: 1

Date of Issue: 2024-01-19

Applicant: **Advanced Micro Instruments, Inc.**
225 Paularino Avenue
Costa Mesa, CA 92626
United States of America

Equipment: **Gas Analyzer**

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:

Todd L. Relyea

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

intertek



IECEX Certificate of Conformity

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

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Date of issue: 2024-01-19

Issue No: 1

Manufacturer: **Advanced Micro Instruments, Inc.**
225 Paularino Avenue
Costa Mesa, CA 92626
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](#) 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 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

[IEC 60079-26:2021](#) Explosive atmospheres - Part 26: Equipment with Separation Elements or combined Levels of Protection
Edition:4.0

[IEC 60079-28:2015](#) Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
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/ETL/ExTR21.0024/00](#)

[US/ETL/ExTR21.0024/01](#)

Quality Assessment Report:

[US/ETL/QAR20.0008/02](#)



IECEX Certificate of Conformity

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

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Date of issue: 2024-01-19

Issue No: 1

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:
 - For AC models: 240VAC
 - 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.

UK-TYPE EXAMINATION CERTIFICATE

Product or Protective Systems Intended for Use in Potentially Explosive Atmospheres

UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

- UK-Type Examination Certificate Number:** ITS21UKEX0125X **Issue 01**
- Product:** Gas Analyzer (Models 4010LX-AC, 4010LX-DC)
- Manufacturer:** Advanced Micro Instruments, Inc.
- Address:** 225 Paularino Avenue
Costa Mesa, CA 92626
USA
- This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- Intertek Testing and Certification Limited, Approved Body number 0359, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential report 105247054DAL-002.
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-0:2018, EN 60079-1: 2014, EN 60079-26:2015 and EN 60079-28:2015 except in respect of those requirements referred to within item 14 of the Schedule.
- If the sign “X” is placed after the certificate number, it indicates that the product is subject to the special conditions of use specified in the Schedule to this certificate.
- This UK-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- The marking of the product shall include the following:

II 1 G Ex ia op is IIB + H2 T4 Ga



II 2 G Ex db IIB + H2 T4 Gb

-20°C ≤ Ta ≤ +65°C

Certification Officer:



Todd L. Relyea

Date:

19 January 2024

EU TYPE-EXAMINATION CERTIFICATE

1. EU type-examination Certificate (Module B)
2. Equipment or Protective System intended for use in potentially explosive atmospheres (Directive 2014/34/EU)



3. EU type examination certificate Nr **ITS-I21ATEX28884X R.1**

4. **Product:** Gas Analyzer (Models 4010LX-AC, 4010LX-DC)

5. **Manufacturer:** Advanced Micro Instruments, Inc. **Applicant:** Advanced Micro Instruments, Inc.

6. **Address:** 225 Paularino Avenue **Address:** 225 Paularino Avenue,
Costa Mesa, CA 92626 Costa Mesa, CA 92626
USA USA

7. This product and any acceptable variation thereto are specified in the schedule to this certificate and therein referred to.
8. INTERTEK ITALIA S.p.A., Notified Body n° 2575 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and Council of the 26 February 2014, certifies that the equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmosphere, given in Annex II of the Directive.

The examination and tests results are recorded in confidential technical evaluation Intertek Report Nr. 105247054DAL-002.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-0:2018, EN 60079-1: 2014, EN 60079-11: 2012, EN 60079-26:2015 and EN 60079-28:2015 except in respect of those requirements referred to at item 16 of the Schedule.
10. If the sign X is placed after the certificate number, it indicates that the product 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 and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
12. The marking of the product shall include the following:



II 1G Ex ia op is IIB + H2 T4 Ga
II 2 G Ex db IIB + H2 T4 Gb
Tamb: -20°C ÷ +65°C

19 January 2024

Certificate issue date

Todd L. Relyea
105247054

Todd L. Relyea
Certification Officer
Intertek Italia S.p.A. (NB 2575)



PDR N° 277B

Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC

Signatory of EA, IAF and ILAC Mutual Recognition Agreements



This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

Intertek Italia S.p.A. Via Miglioli, 2/A - 20063 Cernusco sul Naviglio, Milano - Italy

LFT-EMEA-IT-ATEX-OP-23a (8 March 2022)

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