



Certificate of Compliance

Certificate: 70043390

Master Contract: 227773

Project: 70043390

Date Issued: April 15, 2016

Issued to: Advanced Micro Instruments Inc.
18269 Gothard Street
Huntington Beach
CA 92648
USA

Attention: Charles Schacht

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and US Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only



Issued by:

A handwritten signature in black ink that reads 'P. Johnson'.

P Johnson

PRODUCTS

CLASS 2258-03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non Incendive Systems – For Hazardous Locations

CLASS 2258-83 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations - Certified to U.S. Standards

Class I, Division 1, Groups B, C and D:

Model 1000RS battery powered portable oxygen analyzer and Model 3000RS battery powered portable hydrogen sulfide analyzer. Built in non-replaceable battery pack. Output rated 0-1V provides intrinsically safe output to attached external measurement device. Temperature code T4, Tamb = -3.8°C to +46.1°C (25°F to 115°F)

For details related to rating, size, configuration, etc. reference should be made to the CSA Certification Record or the descriptive report CSA Hazardous Location Report 70043390.



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Conditions of applicability

The Models 1000RS and 3000RS shall only be charged in a non-hazardous area using a charger specifically supplied for use with the unit (for example part number 3ACA08, type TRG1512-A, manufactured by CINCON Electronics Ltd), approved as SELV or Class 2 equipment against UL 60950 or an equivalent IEC standard. The maximum voltage from the charger shall not exceed 12.0 Vdc.

A data download device may only be connected to the Models 1000RS and 3000RS in a non-hazardous area and shall be approved as SELV or Class 2 equipment against UL 60950 or an equivalent IEC standard. The maximum voltage from a data download device shall not exceed 5.0 Vdc

APPLICABLE REQUIREMENTS

CSA C22.2 No 0-10	General Requirements – Canadian Electrical Code, Part II – Tenth Edition
CAN/CSA C22.2 No. 157-92	Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations.
CAN/CSA-C22.2 No. 61010-1-12	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
UL Std. No. 61010-1 (3rd Edition)	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
ANSI/UL 913 (8th edition)	Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division 1, Hazardous (Classified) Locations
ANSI/UL 60079-0:2013	Explosive Atmospheres - Part 0: General requirements
ANSI/UL 60079-11:2013	Explosive Atmospheres - Part 11: Equipment Protection by Intrinsic Safety "i"

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.



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For the models 1000RS and 3000RS the following markings are permanently painted on a metallic nameplate with a minimum thickness of 0.5mm, which is secured to the flow-meter enclosure by two rivets.

- Manufacturer's name: "Advanced Micro Instruments", or CSA Master Contract Number "227773", adjacent to the CSA Mark in lieu of manufacturer's name.
- Model number: As specified in the PRODUCTS section, above.
- Electrical ratings: As specified in the PRODUCTS section, above.
- Manufacturing date in MMY format, or serial number, traceable to month of manufacture.
- The CSA Mark with or without "C" and "US" indicators, as shown on the Certificate of Conformity.
- Hazardous Location designation: As specified in the PRODUCTS section, above (may be abbreviated).
- Temperature code: As specified in the PRODUCTS section, above.
- Ex ia
- The following words:
 - Warning: Explosion Hazard. Substitution of components may impair intrinsic safety. Do not connect DC charger or USB in hazardous areas. Only connect intrinsically safe equipment to Analog Out when in hazardous area. See instructions.
Potential electrostatic charging hazard, see instructions
 - Avertissement : Danger d'explosion. La substitution de composants peut affecter la sécurité intrinsèque. Ne pas brancher un chargeur CC ou un USB à des endroits dangereux. Raccorder uniquement de l'équipement intrinsèquement sûr à la sortie analogique à un endroit dangereux, voir instructions. Danger potential de charge électrostatique, voir instructions.

The following markings are screen printed on the rear panel of the models 1000RS and 3000RS:
EXPLOSION RISK! DO NOT CONNECT USB OR 12V DC TO THIS UNIT IN A HAZARDOUS LOCATION|. ONLY CONNECT INTRINSICALLY SAFE EQUIPMENT TO ANALOG OUTPUT!

RISQUE D'EXPLOSION! NE PAS RACCORDER USB OU 12V CC ACER APPAREIL A UN EMBLACEMENT DANGEREUX. RACCORDER UNIQUEMENT UN EQUIPMENT INTRINSEQUEMENT SUR A LA SORTIE ANALOGIQUE.

The following warnings are stated in the product user manual:

1. Do not use the USB Interface and/or the 12VDC Input in a Hazardous Area.
2. A data download device may only be connected to the USB connector of this analyzer in a non-hazardous area and shall be approved as SELV or Class 2 equipment against UL 60950 or an equivalent IEC standard. The maximum voltage from a data download device shall not exceed 5.25 VDC.
3. Model 1000RS:
Only connect Intrinsically Safe Equipment to the Analog Out (Parameters $U_o=4.65V$, $I_o=47mA$, $P_o=34.8mW$, $C_i=30.50\mu F$, $L_i=0\mu H$)
Model 3000RS:
Only connect Intrinsically Safe Equipment to the Analog Out (Parameters $U_o=4.65V$, $I_o=47mA$, $P_o=34.8mW$, $C_i=57.76\mu F$, $L_i=0\mu H$)
4. Substitution of any components in this analyzer may affect intrinsic safety.



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5. Potential Electrostatic Charging Hazard:

- a. No precautions against electrostatic discharge are necessary for portable equipment that has an enclosure made of plastic, metal or a combination of the two, except where a significant static-generating mechanism has been identified. Activities such as placing the item in a pocket or on a belt, operating a keypad or cleaning with a damp cloth, do not present a significant electrostatic risk. However, where a static-generating mechanism is identified, such as repeated brushing against clothing, then suitable precautions shall be taken, e.g. the use of anti-static footwear.
 - b. The certification marking plate is aluminum. Care must be exercised during use to avoid causing sparks by impact or friction.
6. The analyzer shall only be charged in a non-hazardous area using a charger specifically supplied for use with the unit (for example part number 3ACA08, type TRG1512-A, manufactured by CINCON Electronics Ltd), approved as SELV or Class 2 equipment against UL 60950-1 or an equivalent IEC standard. The maximum voltage from the charger shall not exceed 12.0 VDC.
7. **Exia** means Intrinsically safe.