



Certificate of Compliance

Certificate: 70014758

Master Contract: 221524

Project: 80072768

Date Issued: 2021-04-22

Issued to: AMETEK, Inc. Process & Analytical Instruments Div.
150 Freeport Rd
Pittsburgh, Pennsylvania 15238
UNITED STATES
Attention: Bob Fiore

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only



Issued by: Jared Gillespie

PRODUCTS

CLASS 2258 02 PROCESS CONTROL EQUIPMENT - For Hazardous Locations
CLASS 2258 82 PROCESS CONTROL EQUIPMENT - For Hazardous Locations - Certified to US Standards

Class I, Division 2, Groups A, B, C and D

Tunable Diode Laser Absorption Spectroscopy Analyzer (TDLAS) model 5100 HD.

AC Powered Only with heater: 9000-119-VE *, 9000-140-VE *, 95608WE *, 9000-131-VE *, 9000-183-VE *, 9000-184-VE *, 9000-158-VE * Rated 120/240 Vac, 50/60 Hz, 450 VA max, temperature code T3

DC Powered: 9000-118-VE *, 9000-111-VE *, 9000-132-VE *, Rated 24 Vdc, 45 W max, temperature code T5

Dual Powered with heater: 9000-269-VE, 9000-271-VE, 9000-272-VE, 9000-273-VE, Rated 120/240 Vac, 50/60 Hz, 400 VA max and 24 Vdc, 45 W max, temperature code T3



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Ambient temperature range $-20^{\circ}\text{C} \leq T_a \leq 50^{\circ}\text{C}$. The maximum process pressure is 170 kPa (24.7 psia). Type 4; IP65.

*A “/2” suffix at the end of any code denotes the addition of a second sample cell.

9000-119-VE *	5100 HD, SPACE-COUPLED, DIV 2/ZONE 2, AC POWERED
9000-118-VE *	5100 HD, SPACE-COUPLED, DIV 2/ZONE 2, 24 VDC
9000-269-VE	5100 HD, SPACE-COUPLED, DIV 2/ZONE 2, DUAL AC AND DC POWER
9000-140-VE *	5100 HD, SPACE-COUPLED, CO, DIV 2/ZONE 2, AC POWERED
9000-141-VE *	5100 HD, SPACE-COUPLED, CO, DIV 2/ZONE 2, 24 VDC
9000-271-VE	5100 HD, SPACE-COUPLED, CO, DIV 2/ZONE 2, DUAL AC AND DC POWER
95608WE *	5100 HD, DUAL LASER, DIV 2/ZONE 2, AC POWERED
9000-111-VE *	5100 HD, DUAL LASER, DIV 2/ZONE 2, 24 VDC
9000-272-VE	5100 HD, DUAL LASER, DIV 2/ZONE 2, DUAL AC AND DC POWER
9000-131-VE *	5100 HD, SINGLE LASER, DIV 2/ZONE 2, AC POWERED
9000-132-VE *	5100 HD, SINGLE LASER, DIV 2/ZONE 2, 24 VDC
9000-273-VE	5100 HD, SINGLE LASER, DIV 2/ZONE 2, DUAL AC AND DC POWER
9000-183-VE *	5100 HD, FLARE, 0-300 PPMV LOW RANGE, 0-10% BY VOLUME HIGH RANGE, AC POWERED
9000-184-VE *	5100 HD, FLARE, 0-300 PPMV LOW RANGE, 0-60% BY VOLUME HIGH RANGE, AC POWERED
9000-158-VE *	5100 HD, SINGLE, LONG PASS HERRIOTT CELL, AC POWERED

Conditions Of Acceptability

1. The user replaceable mains (line) fuse must be an approved type acceptable to the authorities where the equipment is installed.
2. Proper installation of this instrument requires a secondary process seal if failure of the primary process seal could allow process fluids to enter the conduit or field wiring system.
3. Wiring to or from this device, which enters or leaves the system enclosure, must utilize wiring methods suitable for Class I, Division 2 Hazardous Locations, as appropriate for the installation.
4. Power supplied to the DC power input shall be from a suitably certified power supply, providing Reinforced Insulation, or Double Insulation, as specified in CAN/CSA C22.2 No. 61010-1 and ANSI/UL 61010-1, between MAINS and the input to this equipment.

APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 0-10	General requirements — Canadian Electrical Code, Part II
CSA C22.2 No. 213-M1987	Non-incendive Electrical Equipment for Use in Class I, Division 2 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



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ANSI/ISA-12.12.01-2007	Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Division 1 and 2 Hazardous (Classified) Locations.
ANSI/UL 61010-1 (3 rd Edition)	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements

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.



The following markings are provided on a CSA Accepted (Class 7923.01) or UL Recognized to Canadian requirements (PGJI8) and UL Recognized (PGJI2) or CSA Accepted to US Standards (Class 7923.81) adhesive nameplate, used with the printer and ribbon specified in the Listing, and is suitable for indoor and outdoor use on stainless steel, at a maximum service temperature of 50°C or higher. Nameplate is affixed to the left side of the electronics enclosure.

1. Manufacturer's name: "Ametek", or CSA Master Contract Number "221524", adjacent to the CSA Mark in lieu of manufacturer's name.
2. Model number: As specified in the PRODUCTS section, above including configuration codes.
3. Electrical ratings: As specified in the PRODUCTS section, above.
 - a. ISO 60417, Symbol 5031 --- adjacent to the DC input terminal rating.
 - b. ISO 60417, Symbol 5032 ~ adjacent to the AC input terminal rating.
4. Date of manufacture: Month and year of manufacture or date code. If a serial number is used instead of date of manufacture, a record of serial numbers shall be kept traceable to date of manufacture. (Not related to date of sale).
5. The CSA Mark with or without "C" and "US" indicators, as shown on the Certificate of Conformity.
6. Hazardous Location designation: As specified in the PRODUCTS section, above (may be abbreviated).
7. Temperature code: As specified in the PRODUCTS section, above.
8. Rated maximum working pressure, as specified in the PRODUCTS section, above.
9. The following words:
 - a) WARNING – EXPLOSION HAZARD – DO NOT DISCONNECT WHILE CIRCUIT IS LIVE OR OPERATE THE KEYPAD UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS.
 - b) AVERTISSEMENT – RISQUE D'EXPLOSION – NE PAS DÉBRANCHER TANT QUE LE CIRCUIT EST SOUS TENSION OU UTILISER LE CLAVIER, À MOINS QU'IL NE S'AGISSE D'UN EMPLACEMENT NON DANGEREUX.

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The following markings must appear on the equipment in a permanent manner:

10. Replacement fuse markings; Fuse type(s) and rating(s) (in volts and amperes), adjacent to the fuseholder(s).
11. Protective earthing TERMINAL is identified by the IEC 60417 No 5019 symbol , adjacent to the TERMINAL.
12. Units provided with Laser shall comply with the marking and other requirements of IEC 60825 including the Hazard symbol Radiation of laser apparatus  and of Canadian and U.S. federal regulations;
13. Neutral is identified by the letter "N".



Supplement to Certificate of Compliance

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The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
80072768	2021-04-22	Update of Report 70014758 to add drawing revisions needed in report per FIR dated February 9, 2021.
70192656	2018-11-14	Update report 70014758 to include the addition of new model configurations 9000-269-VE, 9000-271-VE, 9000-272-VE, and 9000-273-VE.
70159430	2017-11-22	Evaluation to update report 70014758 to add alternate keyboard.
70110668	2017-01-10	Evaluation to update Report 70014758 to add a new laser diode and detector type including all circuitry, add a new secondary TEC device with associated circuitry, add an additional fan, and add update the description to identify previously missing items.
70062726	2016-04-08	Update of report 70015758 to include revised drawing.
70028969	2015-05-22	Update to report 70014758 to add sample line boot entry option with Type 4 and IP65 enclosure rating. Testing conducted with satisfactory results by Keystone Compliance documented in Test Report 1504-075N Rev. N/C.
70014758	2015-04-01	Original Certification