



Certificate of Compliance

Certificate: 1569421

Master Contract: 225996

Project: 70219779

Date Issued: 2019-06-21

Issued To: SpectraSensors, Inc.
11027 Arrow Route
Rancho Cucamonga, California, 91730
United States

Attention: Paulo Silva

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: Sorin Tat
Sorin Tat



PRODUCTS

CLASS - C225802 - PROCESS CONTROL EQUIPMENT For Hazardous Locations

PART A:

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

Moisture and Carbon Dioxide monitors for Natural Gas models SS2000 (Single Head), SS500 (Single Head) and SS3000 (Dual Head) rated at 100-240Vac, 50/60Hz, 20W (max). May also be used with alternate DC power supplies rated at 9-16Vdc or 18-32Vdc. Temperature Code T3C. For use in an ambient range of -20°C to 50°C.

PART B:



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

Models: SS500e Single Analyzer System
 SS2000e Single Analyzer System
 SS3000e Dual Analyzer System

Input Ratings: 100-240Vac, 50/60Hz, 20W max; 18-24VDC, 20W max.
Sample System Input ratings: 100 – 240Vac, 50/60Hz, 100W

Temperature Code T3. For use with heaters SpectraSensors P/N 5300002017, P/N 5300002018, P/N 5300002015 and P/N 5300002016. Tamb -20°C to +60°C

Temperature Code T3C without heaters. Tamb -20°C to +60°C

CLASS - C225882 - PROCESS CONTROL EQUIPMENT For Hazardous Locations - Certified to US Standards

PART A:

**Class I, Division 2, Groups A, B, C and D;
Class I, Zone 2 IIC T3/T3C**

Moisture and Carbon Dioxide monitors for Natural Gas models SS2000 (Single Head), SS500 (Single Head) and SS3000 (Dual Head) rated at 100-240Vac, 50/60Hz, 20W (max). May also be used with alternate DC power supplies rated at 9-16Vdc or 18-32Vdc. Temperature Code T3C. For use in an ambient range of -20°C to 50°C.

PART B:

**Class I, Division 2, Groups B, C and D;
Class I, Zone 2 IIB+H₂ T3/T3C**

Models: SS500e Single Analyzer System
 SS2000e Single Analyzer System
 SS3000e Dual Analyzer System

Input Ratings: 100-240Vac, 50/60Hz, 20W; 18-24VDC, 20W max.
Sample System Input ratings: 100 – 240Vac, 50/60Hz, 100W

Temperature Code T3. For use with heaters SpectraSensors P/N 5300002017, P/N 5300002018, P/N 5300002015 and P/N 5300002016. Tamb -20°C to +60°C

Temperature Code T3C without heaters. Tamb -20°C to +60°C



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Condition of Acceptability:

-Interconnection of the Analyzer system enclosures as described above shall be accomplished using wiring methods approved for Class I, Division 2 hazardous locations as per the Canadian Electrical Code (CEC) Appendix J and Section 18-150 and the National Electrical Code (NEC) Article 501 and 505.

APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 0-M91	General Requirements - Canadian Electrical Code, Part II
CAN/CSA C22.2 No. 0.4-2004	Bonding and Grounding of Electrical Equipment (Protective Grounding)
CAN/CSA C22.2 No. 94-M91	Special Purpose Enclosures 2, 3, 4 and 5
CAN/CSA C22.2 No. 213-M1987	Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
UL 50 11 th Edition	Enclosures for Electrical Equipment
CAN/CSA C22.2 No. 61010-1-12	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements
UL 61010-1-12 (3 rd Edition)	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements
ANSI/ISA 12.12.01:2007	Non-Incendive Electrical Equipment for Use in Class I and II, Division 2, Class III Divisions 1 and 2 Hazardous (Classified) Locations

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.

Nameplate adhesive label material approval information:

The following markings appear on the Nelson Nameplates materials listed below:



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Pressure Sensitive “468” computer imprintable brush serrated aluminum, 5 mil to 25 mil with screen process printing

- Submitter’s Name or Master Contract Number 225996
- Model number
- Complete electrical ratings.
- Input terminals identified as Line, Neutral and Ground. Use Earth ground symbol IEC 60417-5017.
- Replacement fuse type and rating marked adjacent to fuse holder.
- Hazardous Locations area marking.
- Temperature Code
- The following caution markings shall appear on the product
 - WARNING - EXPLOSION HAZARD – DO NOT DISCONNECT WHILE CIRCUIT IS ALIVE UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS.
 - AVERTISSEMENT - RISQUE D'EXPLOSION - NE PAS DÉBRANCHER LORSQUE LE CIRCUIT EST VIVANT SAUF SI LA ZONE N'EST PAS DANGEREUSE.
 - WARNING – EXPLOSION HAZARD – SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2
 - AVERTISSEMENT - RISQUE D'EXPLOSION - LA SUBSTITUTION DE COMPOSANTS POURRAIT ÊTRE INAPPROPRIÉE À L'ADÉQUATION À LA CLASSE I, SECTION 2
 - WARNING – USE DAMP CLOTH TO CLEAN DISPLAY AND KEYPAD TO AVOID POTENTIAL STATIC ELECTRIC DISCHARGE
 - AVERTISSEMENT – UTILISEZ UN CHIFFON HUMIDE POUR NETTOYER L’AFFICHAGE ET LE CLAVIER AFIN D’ÉVITER UNE ÉVENTUELLE DÉCHARGE ÉLECTRIQUE STATIQUE.
 - CLASS 1 LASER PRODUCT. REFER SERVICING TO MANUFACTURER QUALIFIED PERSONNEL
 - PRODUIT LASER DE CLASSE 1. RÉFÉRER L'ENTRETIEN AU PERSONNEL QUALIFIÉ DU FABRICANT
 - CAUTION – INVISIBLE LASER RADIATION WHEN OPEN. (*on optical head assembly*)
 - ATTENTION - RAYONNEMENT LASER INVISIBLE LORS DE L’OUVERTURE. (*sur la tête optique*)



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
70219779	2019-06-21	Update report 1569421 project 70047683 to include three new power supplies tested before and replace some electronic boards with RoHS compliant boards and display (no design change).
000070217651	2019-03-27	Update of CSA report 1569421 to include Class I, Zone 2 IIC markings on the nameplate as per the CEC and NEC allowances.
000070047683	2015-12-07	Update the report 1569421 including drawings update and revision to C22.2 No 61010-1-12
0002543727	2012-07-25	Update to include revised schematics due to the addition of previously certified relays to the SS500, SS2000 and SS3000 models.
0002524707	2012-06-01	Update to cover minor report changes and addition of alternative Cell Tube assemblies.
0002406157	2011-03-22	Update of Report 1569421 to include alternate sealants used to seal keypad ribbon cable on enclosure door.
0002327754	2010-08-12	Update of Report 1569421 Part A to include an alternate 4-20mA Low Noise PCB and Sample Cell 0.1M.
0002212697	2010-01-12	update of report 1569421 to include new Models SS500e, SS2000e and SS3000e analyzer systems.
0001848087	2007-04-02	Update to 1569421 to include addition of Groups A and B for use in Class I, Division 2 locations for Models SS500, SS2000 and SS3000
0001701487	2005-09-01	Update to 1569421 to include addition of Model SS500 for use in Class I, Division 2 Locations.
0001569421	2005-03-09	Certification of Moisture Analyzers SS2000 and SS3000 to CSA_C_US, Class I, Division 2, Groups C and D.