



Certificate of Compliance

Certificate: 70167237

Master Contract: 217005

Project: 70183757

Date Issued: May 10, 2018

Issued to: RAE Systems, Inc.
1349 Moffett Park Drive
Sunnyvale, California 94089
USA
Attention: James Pan

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: 
Andrew Sargent

PRODUCTS

Class 4818 03 - SIGNAL APPLIANCES-Miscellaneous - For Hazardous Locations

Ex ia IIC T4 Ga -40°C ≤ Ta ≤ 55°C

Wireless IR to Bluetooth Transceiver.

Permanently sealed, disposable type. Model BWC-1001, or provided with external switch, model BWC-1003.

With replaceable coin cell battery, Renata CR2450N or muRata CR2450W. Model BWC-1004, or provided with external switch, model BWC-1002.

Class 4818 83 - SIGNAL APPLIANCES-Miscellaneous-For Hazardous Locations-Certified to U.S. Standards

Class I, Zone 0, AEx ia IIC T4 Ga -40°C ≤ Ta ≤ 55°C

Wireless IR to Bluetooth Transceiver.

Permanently sealed, disposable type. Model BWC-1001, or provided with external switch, model BWC-1003.

With replaceable coin cell battery, Renata CR2450N or muRata CR2450W. Model BWC-1004, or provided with external switch, model BWC-1002.



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APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 0-10 (r 2015)	General requirements — Canadian Electrical Code, Part II
CAN/CSA-C22.2 No. 61010-1-12 (r 2017)	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use — Part 1: General Requirements
CAN/CSA-C22.2 No. 60079-0:15	Explosive atmospheres – Part 0: Equipment – General requirements
CAN/CSA-C22.2 No. 60079-11:14	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i”
ANSI/UL 61010-1-2016	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use — Part 1: General Requirements
ANSI/UL 60079-0-2013 (r2017)	Explosive atmospheres – Part 0: Equipment – General requirements
ANSI/UL 60079-11 Sixth Edition (March 28, 2014)	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.

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 Polycarbonate/ABS, at a maximum service temperature of 55°C or higher. Nameplate is affixed to front of housing and completely covered with a 4 mil thick static dissipative adhesive-backed clear polyester film overlay, manufactured by SiCron Technologies, designated ABF-300 ESD Control Film.

- Manufacturer’s name: "RAE Systems", or CSA Master Contract Number “217005”, adjacent to the CSA Mark in lieu of manufacturer’s name.
- Model number: As specified in the PRODUCTS section, above.
- Manufacturing date in MMY format, or serial number, traceable to year and month of manufacture.
- The CSA Mark with or without “C” and “US” indicators, as shown on the Certificate of Conformity.



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- Optional marking - Hazardous Location designation and temperature code: "Class I, Division 1, Groups A, B, C, D T4". May be abbreviated "CL I, DIV 1, GP A, B, C, D T4"
- Ambient temperature rating: $-40^{\circ}\text{C} \leq \text{Ta} \leq 55^{\circ}\text{C}$
- The words "INTRINSICALLY SAFE" and "SECURITE INTRINSEQUE"
- Method of Protection markings and temperature code: "Ex ia IIC T4 Ga" for Canada, and "Class I, Zone 0, AEx ia IIC T4 Ga", or "CL I, ZN 0 AEx ia IIC T4 Ga" for USA.
- CSA Certificate year and number: "CSA18.70167237". Note - The identification "CSA" may be omitted if placed adjacent to the CSA mark.
- (*only on models with replaceable battery*) The following words:
 - "WARNING – USE ONLY muRata CR2450W or Renata CR2450N BATTERIES"
 - "WARNING: BATTERIES MUST ONLY BE CHANGED IN AN AREA KNOWN TO BE NONHAZARDOUS." and "AVERTISSEMENT: NE CHANGER LES BATTERIES QUE DANS DES EMPLACEMENTS DESIGNES NON DANGEREUX."

An installation manual or data sheet shall be supplied with each unit, containing the following minimum marking information:

- Manufacturer's name and address.
- A description of the intended use of the equipment.
- A statement that if the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Mounting and installation instructions, including dimensions.
- Specification for the Weight (g).
- Specification for replacement battery type.
- Specifications for the range of environmental conditions for which the equipment is designed including specification for ambient temperature rating, as specified the PRODUCTS section, above.
- Specifications of limits for optical radiation output power: "Class I per IEC/EN 60825-1.
- Specifications of frequency and maximum RF radiation power.
- Specific commissioning instructions and, if necessary for safety, warnings against hazards which could arise during installation or commissioning of the equipment.
- A statement that the safety of any system incorporating the equipment is the responsibility of the assembler of the system.
- Explanation of symbols related to safety which are used on the equipment;
- ISO 3864 Symbol B.3.1  or ISO 7000 symbol 0434  (triangle with exclamation point) with a statement that the manual must be consulted in all cases where this symbol is marked, in order to find out the nature of the potential HAZARDS and any actions which have to be taken to avoid them.
- The following Warning text in English and French languages (*only on models with replaceable battery*):
 - "WARNING – USE ONLY muRata CR2450W or Renata CR2450N BATTERIES"
 - "WARNING: BATTERIES MUST ONLY BE CHANGED IN AN AREA KNOWN TO BE NONHAZARDOUS." and "AVERTISSEMENT: NE CHANGER LES BATTERIES QUE DANS DES EMPLACEMENTS DESIGNES NON DANGEREUX."
- Instructions for interconnection to other equipment, including indication of suitable accessories, detachable parts and any special materials.
- Identification and description of operating controls and their use in all operating modes.
- Instructions for cleaning and decontamination of the equipment.



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- Guidance on how to determine that the equipment is functioning correctly when used in applications where a hazard could be caused by an incorrect reading when measuring, indicating or detecting harmful or corrosive substances.
- Instructions in sufficient detail to permit safe maintenance and inspection of the equipment, and to ensure continued safety of the equipment after the maintenance and inspection procedure.
- Specification of any parts which are required to be examined or supplied only by the manufacturer or his agent.
- Instructions on the following subjects shall be provided for service personnel, as necessary to permit safe servicing and continued safety of the equipment after servicing if the equipment is suitable to be serviced:
 - a) product-specific risks that may affect the service personnel.
 - b) protective measures for these risks.
 - c) verification of the safe state of the equipment after repair.



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
70183757	2018-05-10	Continuation of project 70167237. Original assessment of Model BWC-100x for CSAc-us Certification as Intrinsically safe for Class I, Zone 0: Ex/AEx ia IIC T4 Ga.