



# Certificate of Compliance

**Certificate:** 2583152

**Master Contract:** 217005

**Project:** 70008934

**Date Issued:** February 20, 2015

**Issued to:** RAE Systems, Inc.  
3775 North First St  
San Jose, California 95134  
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:** Gary Benden  
Gary Benden

## PRODUCTS

- |                                    |  |
|------------------------------------|--|
| <b>4828-01 – SIGNAL APPLIANCES</b> | <b>– Combustible Gas Detection Instruments for Hazardous Locations</b>   |
| <b>4828-02 – SIGNAL APPLIANCES</b> | <b>– Toxic Gas Detection Instruments for Hazardous Locations</b>   |
| <b>4828-81 – SIGNAL APPLIANCES</b> | <b>– Combustible Gas Detection Instruments for Hazardous Locations</b><br><b>– Certified to U.S. Standards</b> |
| <b>4828-82 – SIGNAL APPLIANCES</b> | <b>– Toxic Gas Detection Instruments for Hazardous Locations</b><br><b>– Certified to U.S. Standards</b>       |

**Class I; Division 1; Group A, B, C, D; T4**  
**Class I, Zone 0 AEx ia IIC T4**  
**Ex ia IIC T4**

Portable Combustible Gas Detector, Ambient -20 °C to +50 °C, Intrinsically safe when powered by RAE Battery Pack p/n G02-3004-000:

- Pump Model PGM-2500, PGM-2560
- Diffusion Model PGM-2500D, PGM-2560D



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#### Conditions of Acceptability

- i. The PGM-2500/PGM-2500D, PGM-2560/PGM-2560D shall only be fitted with RAE Systems Battery Pack type G02-3004-000.
- ii. The PGM-2500/PGM-2500D, PGM-2560/PGM-2560D shall only be charged outside the hazardous area.
- iii. 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.

#### **APPLICABLE REQUIREMENTS**

CSA C22.2 No. 0-10	General requirements – Canadian Electrical Code, Part II
CSA C22.2 No. 142-M1987	Process Control Equipment (reaffirmed 2000)
CSA-C22.2 No. 152-M1984	Combustible Gas Detection Instruments
CSA C22.2 No. 157-92	Intrinsically Safe and Non-Incendive Equipment (reaffirmed 1997)
CSA-C22.2 No. 60079-0:11	Explosive atmospheres – Part 0: Equipment – General requirements
CSA-C22.2 No. 60079-11:11	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i”
ISA 12.13.01-2000	Performance Requirements for Combustible Gas Detectors
ISA 60079-0: 2009	Explosive atmospheres – Part 0: Equipment – General Requirements
ISA 60079-11: 2011	Explosive Atmospheres – Part 11: Equipment protection by intrinsic safety “i”
ISA 60079-26: 2008	Electrical Apparatus for Use in Class I, Zone 0 Hazardous (Classified) Locations
UL 913 Ed. 7	Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division 1, Hazardous (Classified) Locations
UL 916:1998	Energy Management Equipment

Note: ISA and CSA have adopted IEC standards for Zone evaluation. Therefore, references will be made to the applicable adopted IEC standard throughout the report.

#### **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.



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- CSA Monogram with or without adjacent 'C' and / or 'US' indicators;
- Certificate number adjacent to CSA Monogram (12.2583152);
- "C22.2 No. 152-M1984" and "ANSI/ISA-12.13.01-2000" adjacent to CSA Monogram;
- Manufacturer's Name or Master Contract number;
- Permitted battery packs;
- Model or catalogue designation;
- Date code, serial number, or equivalent;
- Hazardous location designations;
- Temperature Code;
- Intrinsically Safe / Sécurité Intrinsèque / Exia;
- WARNING: Substitution of components may impair intrinsic safety.
- AVERTISSEMENT: La substitution de composants peut compromettre la sécurité intrinsèque.
- CAUTION: READ AND UNDERSTAND INSTRUCTION MANUAL BEFORE OPERATING OR SERVICING.
- ATTENTION: LIRE ET COMPRENDRE MANUEL AVANT FONCTIONNEMENT ET D'ENTRETIEN.

Most markings are on a CSA accepted Flexcon Pressure-sensitive 21830. The label material was previously evaluated for chemical compatibility in Report 1647478.

All units are provided with an instruction manual.



## *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**

<b>Project</b>	<b>Date</b>	<b>Description</b>
70008934	Feb 20, 2015	Update to Report 2583152 to include alternate analog board with minor modification for bias of one EC channel (Socket 4); and associated nomenclature change.
70012743	Nov 13, 2014	Update to the report 2583152 to include changes in model number nomenclature. The change removes reference to the #a# and #b# designation to signify different sensor options. One single model number will be used for all sensor configurations.
2583152	May 24, 2013	Original certification of models PGM-25xx & PGM-25xxD for Class I, Division 1, Groups A,B,C,D T4 and Class I, Zone 0 Ex ia IIC.