



# Certificate of Compliance

**Certificate:** 70016396

**Master Contract:** 217005

**Project:** 70175861

**Date Issued:** 2018-03-30

**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:** Semyon Baum  
Semyon Baum

## **PRODUCTS**

**CLASS - C482801 - SIGNAL APPLIANCES --Combustible Gas Detection Instruments-For Hazardous Locations**

**CLASS - C482802 - SIGNAL APPLIANCES-Toxic Gas Detection Instruments - For Hazardous Locations**

**CLASS - C482881 - SIGNAL APPLIANCES-Combustible Gas Detection Instruments-For Hazardous Location-Certified to U.S. Standards**

**CLASS - C482882 - SIGNAL APPLIANCES-Toxic Gas Detection Instruments-For Hazardous Locations. Certified to U.S. Standards**

### **Class I, Division 1, Groups A, B, C and D**

Model PGM-26XX: intrinsically safe, portable, four-gas monitor, measuring toxic and oxygen gas concentrations, with separately-certified LEL sensor, RAE Systems model 014-06-series (UL 20141129-E187829, dated 2015-11-29); battery-operated, comprising one Narada NLP883759LT20 3.8V, 1900mAh polymer Li-ion cell plus one Panasonic MLS621S 3 V lithium coin cell for memory back-up; temperature code T4;  $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq +60^{\circ}\text{C}$ .

### **Conditions of acceptability**

1. The above instrument was also checked for performance for  $T_a = -20$  to  $60^{\circ}\text{C}$  (without filter or with  $\text{H}_2\text{S}$  filter or  $\text{H}_2\text{S}$ +silicone filter) and has been found to be acceptable as an indicator of the presence of the



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flammable gases and vapors within the scope of the certification when used in accordance with the manufacturer's instructions.

2. The PGM-26XX shall only be charged using a charger specifically supplied for use with the unit (for example part number 3A-066WPxx or 3A-401WP12, manufactured by ENG Electric), approved as SELV or Class 2 equipment against CSA/UL 60950 or an equivalent standard. The maximum voltage from the charger shall not exceed 6.0 Vdc and the maximum charging current is 1900 mA.
3. The unit may only be connected to the charger cradle in a non-hazardous location.

### **APPLICABLE REQUIREMENTS**

CAN/CSA-C22.2 No. 60079-0:2011 (IEC 60079-0:2007, MOD)	Explosive atmospheres — Part 0: Equipment — General requirements
CAN/CSA-C22.2 No. 60079-11:2014 (IEC 60079-11:2011, MOD)	Explosive atmospheres — Part 11: Equipment protection by intrinsic safety "i"
CAN/CSA-C22.2 No. 152-M1984	Combustible Gas Detection Instruments
CAN/CSA C22.2 No. 61010-1-12	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements - Third Edition
UL 60079-0:2013 (6 <sup>th</sup> Ed.)	Explosive atmospheres — Part 0: Equipment — General requirements
UL 60079-11:2013 (6 <sup>th</sup> Ed.)	Explosive atmospheres — Part 11: Equipment protection by intrinsic safety "i"
UL 913 (7 <sup>th</sup> Ed.)	Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, Hazardous Locations
ANSI/ISA 12.13.01-2000	Performance Requirements for Combustible Gas Detectors
ANSI/ISA-61010-1 (3 <sup>rd</sup> Ed.)	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements - Third Edition

### **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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The marking is applied by means of a self-adhesive label onto the equipment and shall include the following, either on the marking label or in the instruction manual:

- The CSA Mark with adjacent C\_US qualifiers, plus the master contract number or the manufacturer's name (RAE Systems) in lieu of the master contract number
- Model designation (PGM-26XX)
- Serial number including a date code that is traceable to year of manufacture
- The hazardous location designation, temperature code and ambient temperature rating as specified in the 'PRODUCT' section above
- The words 'Intrinsically safe/Sécurité intrinsèque'
- Battery pack type number (M03-3004-000)
- **WARNING:** substitution of components may impair intrinsic safety/**AVERTISSEMENT:** la substitution de composants peut compromettre la sécurité intrinsèque.
- **WARNING:** to prevent ignition of a hazardous atmosphere, batteries must only be charged in an area known to be non-hazardous. Um = 6.0V. Use only an approved charger/**AVERTISSEMENT:** afin de prévenir l'inflammation d'atmosphères dangereuses, ne changer le jeu de batteries que dans des emplacements designés non dangereux. Um = 6.0V. Utilisez uniquement un chargeur approuvé.

In addition to the Ex protection markings for the PGM-26XX, the following markings are required C22.2 No. 152/ ISA 12.13.01 (performance testing), as detailed in Attachment 2.

- The caution on the marking labels shall be at least 3 mm high, and the balance of the wording shall be in capital letters at least 2.5 mm high. **CAUTION: READ AND UNDERSTAND INSTRUCTION MANUAL BEFORE OPERATING OR SERVICING/AVERTISSEMENT: LIRE ET COMPRENDRE MANUEL D'INSTRUCTIONS AVANT D'UTILISER OU SERVICE.**
- The PGM-26XX gas monitor label to include the marking "CSA 152/ISA 12.13.01"

Any warnings and cautions on the marking must be in English and French. However, as an alternative to the warning markings appearing on the label, which has limited space, it has been previously accepted that, if a warning is omitted from the label, then the label should have wording (in English and French) to direct the user to read the instruction manual. In this case, all applicable cautions and warnings required by the CSA standards can be in in manual in English and French wording. As shown below, the marking includes this warning. It was confirmed that the instruction manual contains the required warnings.





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At the manufacturer's request, the equipment is certified for divisions only, not zones, see section **Error! Reference source not found.**



*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**

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<b>Project</b>	<b>Date</b>	<b>Description</b>
70175861	2018-03-30	Evaluation for update of report 70016396 to update schematic M03-1012-SCH and Track layout M03-1002-000 for Wi-Fi (wireless module) board. Quote assumes no testing is considered necessary
70016396	2016-01-11	Original certification of the PGM-26XX. cCSAus certification of 4gas portable gas monitor 4GL, PGM-26xx Standards marking AEx ia IIC T4 Ga Ambient temperature -20°C to 60°C