



# Certificate of Compliance

**Certificate:** 2117478 (LR 67663)

**Master Contract:** 155493

**Project:** 2716125

**Date Issued:** July 9, 2014

**Issued to:** ABB Inc.

Analytical PRU  
843 N Jefferson St,  
Lewisburg, WV 24901  
USA  
Attention: Scott Kiddle

*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.*



*Jack Chin*

Issued by: Jack Chin

## **PRODUCTS**

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

**CLASS 2258 02** - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

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

- PGC5000B Process Gas Chromatograph Isothermal Oven with Type Y pressurizing
  - Input Rated: 120V or 240 Vac, 50/60 Hz, 1200 VA maximum; Operating Ambient Temperature Range: 0°C to 50°C. Temperature Code: T4, T3 or T2
- PGC5000C Process Gas Chromatograph Isothermal Oven with Type Y pressurizing
  - Input Rated: 120V or 240 Vac, 50/60 Hz, 1600 VA maximum; Operating Ambient Temperature Range: 0°C to 50°C. Temperature Code: T4, T3 or T2.
- PGC5000B Process Gas Chromatograph Isothermal Oven with Type X pressurizing
  - Input Rated: 120V or 240 Vac, 50/60 Hz, 1200 VA maximum; Operating Ambient Temperature Range: 0°C to 50°C. Temperature Code: T4, T3 or T2.
- PGC5000C Process Gas Chromatograph Isothermal Oven with Type X pressurizing
  - Input Rated: 120V or /240 Vac, 50/60 Hz, 1600 VA maximum; Operating Ambient Temperature Range: 0°C to 50°C. Temperature Code: T4, T3 or T2.
- PGC5007 Process Gas Chromatograph Isothermal Oven with standard Type Y or optional Type X pressurization



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- Input Rated: 120Vac 60Hz or 240 Vac 50Hz, 1400 VA maximum; Operating Ambient Temperature Range: 0°C to 50°C. Temperature Code: T3 or T2.
- PGC5009 Process Gas Chromatograph Column Oven with standard Type X pressurization.
  - Input Rated: 120Vac 60Hz or 240 Vac 50Hz, 1200 VA maximum; Operating Ambient Temperature Range: 0°C to 50°C. Temperature Code: T3 or T2.

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

- PGC5000B Process Gas Chromatograph Isothermal Oven without pressurizing
  - Input Rated: 120V or 240 Vac, 50/60 Hz, 1200 VA maximum; Operating Ambient Temperature Range: 0°C to 50°C. Temperature Code: T4, T3, T2.
- PGC5000C Process Gas Chromatograph Isothermal Oven without pressurizing
  - Input Rated: 120V or 240 Vac, 50/60 Hz, 1600 VA maximum; Operating Ambient Temperature Range: 0°C to 50°C. Temperature Code: T4, T3, T2.
- PGC5000B Process Gas Chromatograph Isothermal Oven with Type Z pressurizing
  - Input Rated: 120V or 240 Vac, 50/60 Hz, 1200 VA maximum; Operating Ambient Temperature Range: 0°C to 50°C. Temperature Code: T4, T3, T2.
- PGC5000C Process Gas Chromatograph Isothermal Oven with Type Z pressurizing
  - Input Rated: 120V or 240 Vac, 50/60 Hz, 1600 VA maximum; Operating Ambient Temperature Range: 0°C to 50°C. Temperature Code: T4, T3, T2.
- PGC5007 Process Gas Chromatograph Isothermal Oven with or without optional Type Z pressurization.
  - Input Rated: 120Vac 60Hz or 240 Vac 50Hz, 1400 VA maximum; Operating Ambient Temperature Range: 0°C to 50°C. Temperature Code: T3 or T2.

**APPLICABLE REQUIREMENTS**

CAN/CSA Standard C22.2 No. 0-M91(R2006)	General Requirements - Canadian Electrical Code, Part II
CSA Standard C22.2 No. 30-M1986(R2012)	Explosion-Proof Enclosures for Use in Class I Hazardous Locations
CSA Standard C22.2 No. 142-M1987(R2009)	Process Control Equipment
CSA Standard C22.2 No. 213-M1987(R2013)	Non-incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
NFPA 496 (2008 Edition)	Standard for Purged and Pressurized Enclosures for Electrical Equipment
UL Standard 916 (Fourth Edition, Dated December 17, 2007)	Energy Management Equipment
ANSI/UL Standard 1203 (Fourth Edition, September 2006)	Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations
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



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## **MARKINGS**

Marking method: Markings are legible and permanently silk-screened/engraved on to enclosures or silk-screened/engraved onto aluminum containing less than 6% magnesium or stainless steel nameplates then attached to enclosure with screws, rivets or drive screws.

- Listee name: “ABB” or CSA Master Contract Number “155493” adjacent to the CSA Mark in lieu of the manufacturer’s name.
- Model number: as specified in the PRODUCTS section, above.
- Serial Number.
- Electrical Rating: as specified in the PRODUCTS section, above.
- Temperature Code Rating: as specified in the PRODUCTS section, above.
- Hazardous Locations Designation: “Class I, Division 1, Groups B, C and D” or “CL I, DIV 1, GPS B,C,D” or equivalent.
- Hazardous Locations Designation (optional): “Class I, Zone 1, Group IIB+H2” or “CL I, ZN 1, GP IIB+H2” or equivalent.
- CSA Mark with “C” and “US” indicator, as shown on the Certificate of Compliance.
- Maximum Operating Ambient: as specified in the PRODUCTS section, above.
- Purge Type
- The statement: “WARNING: REMOVE POWER BELOW 50 PA (5MM OR 0.2 INCH OF WATER COLUMN.)”.
- The statement: “WARNING: ENCLOSURE SHALL NOT BE OPENED UNLESS THE AREA IS KNOWN TO BE NON-HAZARDOUS, OR UNLESS ALL DEVICES WITHIN THE ENCLOSURE HAVE BEEN DE-ENERGIZED. POWER MUST NOT BE RESTORED UNTIL AFTER THE ENCLOSURE HAS BEEN PURGED FOR 18.2 MINUTES AT A FLOW RATE OF 1.39 SCFM (39.36 LPM) FOR OVEN ELECTRONICS AND A FLOW RATE OF 3.76 SCFM (106.47 LPM) FOR THE ISOTHERMAL OVEN COMPARTMENT”.
- The statement: “WARNING: THE SAFETY OF THIS EQUIPMENT RELIES ON THE PROVISION OF PROPER PURGING AND PRESSURIZING WHEN USED IN HAZARDOUS LOCATIONS. IT MUST NOT BE PUT INTO USE WITHOUT "SPECIAL PERMISSION" FROM THE INSPECTION AUTHORITY HAVING JURISDICTION.” (This warning does not apply to units without a pressurizing system.)

*Note - Jurisdictions in Canada may require these markings to also be provided in French language. It is the responsibility of the manufacturer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the manufacturer to determine this requirement and have bilingual wording added to the "Markings".*



## *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>
2716125	Jul 9, 2014	Update report 2117478 to add the Type 883 Airless Oven module, Type 882 FID, an alternate power supply, FID Amp board, TCD Amp board, Detector Digital board, Zone board, Model PGC5009, Type 888 Temperature Program module, and updated Type 868 Furnace
2389704	Sep 30, 2011	Update to Report 2117478 to include the new model PGC5007 with the new 868 Furnace Assembly.
2343185	Dec 7, 2010	Update to Report 2117478 to include alternate DTC boards.
2278431	Aug 20, 2010	Update to Report 2117478 to include alternate gas sample valve.
2220574	Nov 20, 2009	Update of Report 2117478 to include PGC5000C and to add optional Type X and Type Z pressurizing.
2147996	Nov 19, 2009	Update of Report 2117478 for PGC5000B to add Type 867 FPD.
2226474	Oct 2, 2009	Update to Report 2117478 to include the use of the Malema M50 or M100 Series Flow Switch with the model PGC5000B Process Gas Chromatograph.
2194383	Aug 24, 2009	Update of Report 2117478 to include Type 865-2 TCD as alternate component to Type 002A or Type 865 for Model PGC5000B.
2117478	Dec 22, 2008	Certification of PGC5000B as Class I, Groups B, C, and D, Div 1 Type Y Purge & Class I, Div 2, Groups B, C, D and IP54