



# Certificate of Compliance

**Certificate:** 1097923

**Master Contract:** 187869

**Project:** 2578467

**Date Issued:** May 16, 2013

**Issued to:** Crystal Engineering Corp.

708 Fiero Lane, Suite 9  
San Luis Obispo, CA 93401  
USA  
Attention: Janine White

*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.*



*John Yam*

**Issued by:** John Yam

## **PRODUCTS**

**CLASS 2258 04** - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations

**CLASS 2258 84** - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - - For Hazardous Locations - Certified to US Standards

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

### **Part A:**

Model 3x, IS3x, PC3xis, IS9x, and PCL3x, Pressure Calibrator; Intrinsically Safe; Battery Powered (Eveready P/N 216 & Duracell P/N 1604); Temperature Code T4; Maximum pressure 36 PSI (low) & 3000 PSI (High). The mA connectors have the following Entity Parameters:

V <sub>max</sub> = 30V	V <sub>oc</sub> = 5V
I <sub>max</sub> = 100mA	I <sub>sc</sub> = 400mA
C <sub>i</sub> = 2.3uF	C <sub>a</sub> = 0.135uF
L <sub>i</sub> = 0mH	L <sub>a</sub> = 100uH



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Note: The x in the Model number designates changes in the internal pressure sensors, membrane keypad, mA connector option, and different pressure sensors.

**Part B:**

30 Series, 90 Series Digital Pressure Calibrator, Intrinsically Safe; Temperature Code T4/T3C, Ta= +50°C max.; Maximum pressure: 36 PSI (low) & 5000 PSI (High).

Battery Powered by:

Varta High Energy Alkaline; 9V; 4922 – Temperature Code T3C

Duracell Pile Alkaline; 9V; MN 1604 – Temperature Code T4

Energizer/Eveready Alkaline 9V; 522 – Temperature Code T4

Energizer/Eveready Industrial Lithium 9V; 522FP – Temperature Code T4

The mA connectors have the following Entity Parameters:

$U_i = 30V$

$U_o = 9.9V$

$I_i = 100mA$

$I_o = 2.62mA$

$P_i = 0.75W$

$P_o = 6.5mW$

$C_i = 0\mu F$

$C_a = 3.2\mu F$

$L_i = 0mH$

$L_a = 100\mu H$

Note: The series family can be customized through the use of disable, enable software, or modify a variety of features that has either 1 or 2 pressure ports, and changes in the internal pressure sensors, membrane keypad, and different pressure sensors.

**APPLICABLE REQUIREMENTS**

CSA Standard C22.2 No. 0-10 - General Requirements  Canadian Electrical Code Part II.

CSA Standard C22.2 No. 157-M1992 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations.

UL 913, Seventh Edition - Intrinsically Safe Apparatus and Associated Apparatus for use in Class I, II, III, Division 1, Hazardous (Classified) Locations.