



# Certificate of Compliance

**Certificate:** 2493476

**Master Contract:** 161047 (111518\_0\_000)

**Project:** 70167574

**Date Issued:** 2018-01-08

**Issued to:** Computational Systems, Inc.  
835 Innovation Dr  
Knoxville, Tennessee 37932  
USA  
**Attention:** Jonathan Clemons

*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:** *Konstantin Rybalko*  
Konstantin Rybalko

## PRODUCTS

**CLASS - C225804** - PROCESS CONTROL EQUIPMENT-Intrinsically Safe, Entity - For Hazardous Locations  
**CLASS - C225884** - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity-- For Hazardous Locations  
- Certified to US Standards

**Ex ia IIB T4 Ga:**

**Class I, Zone 0, AEx ia IIB T4 Ga:**

**Class I, Division 1, Groups C & D:**

- Vibration Monitor Model CSI 9420. Intrinsically Safe when powered by Battery Pack Model 701PBKKF or A0701PBU or Power Module Model A9000Px and installed per Control Drawing No. D25418.  
Ambient temperature range: -40°C to +85°C; Type 4X Enclosure.  
May be used with Emerson Hart Communicator Model 375 or 475 or Trex Device Communicator.



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Entity parameters:

Hart Connector				Accelerometer Connector	
Voc/Uo	7.8 V	Vmax/Ui	7.8 V	Voc/Uo	7.8 V
Isc/Io	155 mA	Imax/Ii	5 mA	Isc/Io	158 mA
Po	303 mW	Pmax/Pi	9.75 mW	Po	309 mW
Ca/Co	2 $\mu$ F	Ci	54 $\mu$ F	Ca/Co	2 $\mu$ F
La/Lo	5 mH	Li	5.1 mH	La/Lo	5 mH

**Ex ic IIC T4 Gc**

**Class I, Zone 2, AEx ic IIC T4 Gc**

**Class I, Division 2, Groups A, B, C & D**

- Vibration Monitor Model CSI 9420. Intrinsically Safe when powered by Battery Pack Model 701PBKKF or A0701PBU or Power Module Model A9000Px and installed per Control Drawing No. D25418. Ambient temperature range: -40°C to +85°C; Type 4X Enclosure. May be used with Emerson Hart Communicator Model 375 or 475 or Trex Device Communicator.

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Hart Connector				Accelerometer Connector	
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Po	303 mW	Pmax/Pi	9.75 mW	Po	309 mW
Ca/Co	2 $\mu$ F	Ci	54 $\mu$ F	Ca/Co	2 $\mu$ F
La/Lo	3 mH	Li	3.1 mH	La/Lo	3 mH

Note:

The enclosure may be opened to operate the push buttons, rotate the display or change the battery pack despite the following warning which appears on the cover “IN EXPLOSIVE ATMOSPHERE KEEP TIGHT WHEN CIRCUIT ALIVE”. This warning is present as it is required for other products, which use the same enclosure.



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### **APPLICABLE REQUIREMENTS**

- CAN/CSA C22.2 No. 0-M91 - General Requirements - Canadian Electrical Code, Part II
- CAN/CSA-C22.2 No. 94-M91 - Special Purpose Enclosures
- CSA Std. C22.2 No. 142-M1987 - Process Control Equipment
- CAN/CSA-C22.2 No. 157-92 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
- CSA C22.2 No. 213-M1987 - Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
- CAN/CSA-C22.2 No. 60079-0:11 - Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
- CAN/CSA-C22.2 No. 60079-11:11 - Electrical Apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i"
- UL 50:2007 - Enclosures for Electrical Equipment, Non-Environmental Considerations
- 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
- UL 916:2007 - Energy Management Equipment
- ANSI/UL 60079-0:2009 - Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
- ANSI/UL 60079-11:2009 - Electrical Apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i"



## *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>
70167574	2018-01-08	Update to report 2493476 for addition of A9000Px power module and drawings update.
70130439	2017-04-19	Update to CSA report 2493476 to include RoHS compliance, minor construction changes and addition of Trex Device Communicator.
70081468	2016-06-14	Update to CSA Report 2493476 to include optional battery cover material, clarification of antenna options and documentation updates.
70041103	2016-03-22	Update to CSA Report 2493476 to include the revised power module (from IECEx component certificate) and to assess the new enclosure for a Type 4X rating.
70050369	2015-11-11	Update to Report 2493476 to Update nameplate drawing and antenna details.
70037210	2015-10-14	Update report 2493476 to revised document list based on mechanical and note changes to new version of drawings.
70018091	2015-05-28	Update to include the evaluation of Vibration Monitor Model CSI 9420 to Class I Div.2 Gr. A, B, C & D; Ex ic IIC, AEx ic IIC, CSA-us mark for North America.
70008234	2015-03-31	Update to include revised bill of material documents that show only the safety critical components rather than all components.
2582041	2012-11-29	Update to include revised control drawing.
2537311	2012-07-13	Update to include revised schematics, layouts and assembly documents.
2493476	2012-04-16	cCSAus Certification of Vibration Monitor, Model CSI 9420; Intrinsically Safe for Class I, Zone 0 and Class I, Div. 1 hazardous locations.