



# Certificate of Compliance

**Certificate:** 1963889

**Master Contract:** 155570

**Project:** 70006809

**Date Issued:** July 3, 2014

**Issued to:** Invensys Systems, Inc.

33 Commercial St  
Foxboro, MA 02035  
USA

Attention: Steven Carreiro

*The products listed below are eligible to bear the CSA Mark shown*



*James Cotton*

**Issued by:** James Cotton

## **PRODUCTS**

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

**Class I, Division 1, Groups A, B, C and D; Class II, Division 1, Groups E, F and G; Class III; Ex ia; Type 4X:**

**Ex ia IIC T4, -40°C <= Ta <= +80°C; IP66; Dual Seal:**

- Model 84F-abcdefghij Flanged Vortex Flowmeter, with integral or remote-mount sensor, with Entity parameters – Loop Interface: Vmax or Ui = 30 V, Imax or Ii = 110 mA, Pi = 800 mW, Ci = 5.5 nF and Li = 0, Pulse Interface: Vmax or Ui = 30 V, Imax or Ii = 110 mA, Pi = 800 mW, Ci = 284 pF, Li = 0; MWP 9997 kPa (1450 PSI); T4 at 80 °C ambient; intrinsically safe when installed per control drawing MI 019-177.
- Model 84W-abcdefghij Wafer Vortex Flowmeter, with integral or remote-mount sensor, with Entity parameters – Loop Interface: Vmax or Ui = 30 V, Imax or Ii = 110 mA, Pi = 800 mW, Ci = 5.5 nF and Li = 0, Pulse Interface: Vmax or Ui = 30 V, Imax or Ii = 110 mA, Pi = 800 mW, Ci = 284 pF, Li = 0; MWP 9997 kPa (1450 PSI); T4 at 80 °C ambient; intrinsically safe when installed per control drawing MI 019-177.
- Model 84S-abcdefg Sanitary Vortex Flowmeter, with integral or remote-mount sensor, with Entity parameters – Loop Interface: Vmax or Ui = 30 V, Imax or Ii = 110 mA, Pi = 800 mW, Ci = 5.5 nF and Li = 0, Pulse Interface: Vmax or Ui = 30 V, Imax or Ii = 110 mA, Pi = 800 mW, Ci = 284 pF, Li = 0; MWP 9997 kPa (1450 PSI); T4 at 80 °C ambient; intrinsically safe when installed per control drawing MI 019-177.



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Where:

a = Electronic Type: L (Hart Low Power with Pulse Output), M (Hart Low Power without Pulse Output), T (HART with Pulse Output) or U (HART without Pulse Output).

See descriptive report for full model numbering system. Other variables are non-safety related.

**CLASS 2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations**

**Class I, Div 1, Groups A, B, C and D; Class II, Div 1, Groups E, F and G; Class III; [Ex ia]; T5 at 60°C; Type4X:**

**Ex d [ia] IIC T5, -40°C ≤ Ta ≤ +80°C, IP66; Dual Seal:**

- Model 84F-abcdefghij Flanged Vortex Flowmeter (explosion-proof located in Class I, Div 1, Groups B, C and D and provides intrinsically safe output to integral sensor only. Group IIC is applicable for Zone rating only); input rated 24 VDC, 22 mA; MWP 9997 kPa (1450 PSI).
- Model 84W-abcdefghij Wafer Vortex Flowmeter (explosion-proof located in Class I, Div 1, Groups B, C and D and provides intrinsically safe output to integral sensor only. Group IIC is applicable for Zone rating only); input rated 24 VDC, 22 mA; MWP 9997 kPa (1450 PSI).
- Model 84S-abcdefg Sanitary Vortex Flowmeter, (explosion-proof located in Class I, Div 1, Groups B, C and D and provides intrinsically safe output to integral sensor only. Group IIC is applicable for Zone rating only), input rated 24 VDC, 22 mA; MWP 9997 kPa (1450 PSI).

Where:

a = Electronic Type: L (Hart Low Power with Pulse Output), M (Hart Low Power without Pulse Output), T (HART with Pulse Output) or U (HART without Pulse Output).

See descriptive report for full model numbering system. Other variables are non-safety related.



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Note: For Models 84F, 84W and 84S, remote mount versions are not rated as explosion-proof.

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

**Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups E, F and G; Class III; Type 4X; Dual Seal:**

- Model 84F-abcdefghij Flanged Vortex Flowmeter, with integral or remote-mount sensor, input rated 24 VDC, 22 mA; MWP 9997 kPa (1450 PSI); temperature code T4 at +80 °C ambient.
- Model 84W-abcdefghij Wafer Vortex Flowmeter, with integral or remote-mount sensor, input rated 24 VDC, 22 mA; MWP 9997 kPa (1450 PSI); temperature code T4 at +80 °C ambient.
- Model 84S-abcdefg Sanitary Vortex Flowmeter, with integral or remote-mount sensor, input rated 24 VDC, 22 mA; MWP 9997 kPa (1450 PSI); temperature code T4 at +80 °C ambient.

Where:

a = Electronic Type: L (Hart Low Power with Pulse Output), M (Hart Low Power without Pulse Output), T (HART with Pulse Output) or U (HART without Pulse Output).

See descriptive report for full model numbering system. Other variables are non-safety related.

**APPLICABLE REQUIREMENTS**

CAN/CSA C22.2 No. 0-M91	General Requirements - Canadian Electrical Code, Part II
CSA STD C22.2 No. 25-1966	Enclosures for Use in Class II, Groups E, F and G Hazardous Locations
CSA STD C22.2 No.30-M1986	Explosion-Proof Enclosures for Use in Class I Hazardous Locations
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 STD C22.2 No. 213-M1987	Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations



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CAN/CSA E60079-0: 02	Electrical Apparatus for Explosive Gas Atmospheres – General Requirements
CAN/CSA E60079-1: 02	Electrical Apparatus for Explosive Gas Atmospheres – Flame-proof enclosure “d”
CAN/CSA E60079-11: 02	Electrical Apparatus for Explosive Gas Atmospheres – Intrinsic Safety “i”
CAN/CSA C22.2 No.60529:05	Degree of Protection by Enclosure
ANSI/ISA 12.27.01-2003	Requirements for Process Sealing Between Electrical Systems and Flammable or Combustible Process Fluids

**MARKINGS**

See Descriptive Report



## *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>
70006809	Jul 3, 2014	Update to report 1963889 to include NPT process connections for model 84F only.
2515539	Jun 14, 2012	Update to Report 1963889 to document changes to model 84 series of vortex flow meters. Changes include: removal of communication modules, addition of communication module, modification of PCBs, addition of alternative potting material and drawing updates.
2341449	Nov 9, 2010	Update report to include Low Power version Electronic types L and M.
2052772	Jun 25, 2008	Update to include Dual Seal marking per ISA 12.27.01 for models: 84F, 84W & 84S.
1963889	Oct 16, 2007	Original Certification - Continuation of 1841258 and addition of -40C ambient for Zone Explosion-proof certification