



Certificate of Compliance

Certificate: 70054084

Master Contract: 264512

Project: 70155585

Date Issued: 2017-12-14

Issued to: Emerson - Rosemount, Micro Motion Inc.
12001 Technology Dr.
Eden Prairie, Minnesota 55344
USA
Attention: Paul Schilke

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: *Waleed Irfan*
Waleed Irfan, E.I.T

PRODUCTS

CLASS - C225883 - PROCESS CONTROL EQUIPMENT-Intrinsically Safe and Non-Incendive-Systems-For Hazardous Locations-Certified to U.S. Standards

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

CLASS - C225804 - PROCESS CONTROL EQUIPMENT-Intrinsically Safe, Entity - For Hazardous Locations-

CLASS - C225803 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations

CLASS - C225882 - PROCESS CONTROL EQUIPMENT-For Hazardous Locations - Certified to US Standards

CLASS - C225802 - PROCESS CONTROL EQUIPMENT-For Hazardous Locations-

CLASS - C225205 - PROCESS CONTROL EQUIPMENT

CLASS - C225285 - PROCESS CONTROL EQUIPMENT-Certified to US Standards

Vortex Flowmeter, Model 8800D and 8600D with integral or remote mount flow sensor, with or without LCD meter, with or without transient protection, with or without temperature option (see model number structure below), permanently connected, rated 42 Vdc max, 4-20 mA output or 32 Vdc max Fieldbus output. The 8800D is rated "Single Seal" up to a MWP 3600PSI and the 8600D is rated "Dual Seal" up to a MWP 740PSI.



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

EX: Class I, Division 1, Groups B, C and D; Class II, Groups E, F, G; Class III; Class I, Div. 2, Groups A, B, C and D; Type 4X, Factory Sealed; Class I, Zone 1, Ex d [ia] IIC T6 (-50°C ≤ Ta ≤ + 70°C):

Vortex Flowmeter, Model 8800D and 8600D with integral or remote mount flow sensor, with or without LCD meter, with or without transient protection, with or without temperature option (see model number structure below), permanently connected, rated 42 Vdc max, 4-20 mA output or 32 Vdc max Fieldbus output. The 8800D is rated "Single Seal" up to a MWP 3600PSI and the 8600D is rated "Dual Seal" up to a MWP 740PSI.

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

IS: Class I, Division 1, Groups A, B, C and D; Type 4X:

Vortex Flowmeter, Model 8800D and 8600D with integral or remote mount flow sensor, with or without LCD meter, with or without transient protection, with or without temperature option (see model number structure below), permanently connected, rated 30 Vdc max, 4-20 mA or Fieldbus output, intrinsically safe when connected per drawing 08800-0112. The 8800D is rated "Single Seal" up to a MWP 3600PSI and the 8600D is rated "Dual Seal" up to a MWP 740PSI.

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

IS with Entity: Class I, Division 1, Groups A, B, C and D; Type 4X:

Vortex Flowmeter, Model 8800D and 8600D with integral or remote mount flow sensor, with or without LCD meter, with or without transient protection, with or without temperature option (see model number structure below), permanently connected, rated 30 Vdc max, 4-20 mA or Fieldbus (including FISCO) output, temperature code T4, intrinsically safe when connected per drawing 08800-0112. The 8800D is rated "Single Seal" up to a MWP 3600PSI and the 8600D is rated "Dual Seal" up to a MWP 740PSI.

CLASS 2258 82 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations – To US Requirements

EX: Class I, Division 1, Groups B, C and D; Type 4X, Factory Sealed;

Class I, Zone 1, Ex d [ia] IIC T6 Gb (-50°C ≤ Ta ≤ + 70°C):

Vortex Flowmeter, Model 8800D and 8600D with integral or remote mount flow sensor, with or without LCD meter, with or without transient protection, with or without temperature option (see model number structure below), permanently connected, rated 42 Vdc max, 4-20 mA output or 32 Vdc max Fieldbus output. The 8800D is rated "Single Seal" up to a MWP 3600PSI and the 8600D is rated "Dual Seal" up to a MWP 740PSI.

CLASS 2258-83 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations – To US Requirements

IS: Class I, Division 1, Groups A, B, C and D; Type 4X:

Vortex Flowmeter, Model 8800D and 8600D with integral or remote mount flow sensor, with or without LCD meter, with or without transient protection, with or without temperature option (see model number structure



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below), permanently connected, rated 30 Vdc max, 4-20 mA or Fieldbus output, intrinsically safe when connected per drawing 08800-0112. The 8800D is rated “Single Seal” up to a MWP 3600PSI and the 8600D is rated “Dual Seal” up to a MWP 740PSI.

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

Class I, Division 1, Groups A, B, C and D; Class I, Division 2, Groups A, B, C, and D; Class II, Division 1, Groups E, F, G; Class III; Class I, Zone 0, AEx ia IIC T4 Ga

Vortex Flowmeter, Model 8800D and 8600D with integral or remote mount flow sensor, with or without LCD meter, with or without transient protection, with or without temperature option (see model number structure below), permanently connected.

$U_i = 30V$ $C_i = 0$
 $I_i = 185mA$ $L_i = 0.97mH$
 $P_i = 1.0W$

When fitted with the Fieldbus Output Board and Fieldbus Terminal Board, the Input Parameters are as follows:

Fieldbus Version:

FISCO Version:

$U_i = 30V$ $C_i = 0$
 $I_i = 300mA$ $L_i = 20\mu H$
 $P_i = 1.3W$

$U_i = 17.5V$ $C_i = 0$
 $I_i = 380mA$ $L_i = \leq 10\mu H$
 $P_i = 5.32W$

The transmitter converts the sensor input to a 4-20 mA, Fieldbus (including FISCO) output, temperature code T4, TYPE 4X, intrinsically safe when connected per drawing 08800-0112. The 8800D is rated “Single Seal” up to a MWP 3600PSI and the 8600D is rated “Dual Seal” up to a MWP 740PSI.

Model Number Structure

Reference Controlled Rosemount Drawings:

8800D: 08800-0019

8600D: 08600-0019

8800D-abcdefghi Vortex Flowmeter

a = Meter Style: F, W, D, E, R or T.

b = Line Size: 005 (0.5 inch) up to 120 (12 inch) and 140 (14 inch – reducer only).

c = Wetted Materials: S, H, C, L, or D

d = Flange/Alignment Ring Code: any two-digit alpha numeric characters.

e = Sensor Process Temperature Range: N, E, or S

f = Conduit Entry and Housing Material: 1, 2, 3, 4, 5, 6, or 7

g = Transmitter Output: D, P, F, or C



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h = Calibration: 0 or 1

i = Options: Any Alpha-Numeric characters representing product options up to forty-eight digits. Includes Safety Approval Code Options E6, I6, IF, K6, KB or blank (ordinary location).

8600D-abcdefghi Vortex Flowmeter

a = Meter Style: F.

b = Line Size: 010 (1.0 inch) up to 080 (8 inch).

c = Wetted Materials: S

d = Flange/Alignment Ring Code: any two-digit alpha numeric characters.

e = Sensor Process Temperature Range: N

f = Conduit Entry and Housing Material: 1, or 2

g = Transmitter Output: D, P, or F

h = Calibration: 0 or 1

i = Options: Any Alpha-Numeric characters representing product options up to forty-eight digits. Includes Safety Approval Code Options E6, I6, IF, K6, or blank (ordinary location).

Notes:

1. The above model is permanently connected, Pollution Degree 2, Installation Category 2.
2. Mode of operation: Continuous
3. Environmental Conditions: Extended: -50°C to +70°C, 2000 m max, 0-95% rH as specified by manufacturer.



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APPLICABLE REQUIREMENTS

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| CAN/CSA C22.2 No. 0-10 | - General Requirements - Canadian Electrical Code, Part II |
| CAN/CSA-C22.2 No. 0.4-04
(Reaffirmed 2013) | - Bonding of Electrical Equipment |
| CAN/CSA-C22.2 No. 25-1966
(Reaffirmed 2014) | - Enclosures for Use in Class II, Group E, F, G Hazardous Locations |
| CAN/CSA-C22.2 No. 30-M1986
(Reaffirmed 2012) | - Explosion-Proof Enclosures for Use in Class I Hazardous Locations |
| CAN/CSA-C22.2 No. 94-M91
(Reaffirmed 2011) | - Special Purpose Enclosures |
| CAN/CSA-C22.2 No. 157-92
(Reaffirmed 2012) | - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations |
| CAN/CSA-C22.2 No. 213-M1987
(Reaffirmed 2013) | - Non-Incendive Electrical Equipment for USE in Class I, Division 2 Hazardous Locations |
| CAN/CSA-C22.2 No. 61010-1:04 | - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements (Includes Amendment 1) |
| CAN/CSA-C22.2 No. 60079-0:11 | - Electrical Apparatus for Explosive Gas Atmospheres – Part 0: General Requirements |
| CAN/CSA-C22.2 No. 60079-1:11 | - Electrical apparatus for Explosive Gas Atmospheres – Part 1: Flameproof enclosure “d” |
| CAN/CSA-C22.2 No. 60079-11:14 | - Electrical apparatus for Explosive Gas Atmospheres – Part 11: Intrinsic Safety “i” |
| UL Std. No. 61010-1 (2nd Edition) | - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements |
| FM 3600: 2011 | - Electrical Equipment for Use in Hazardous (Classified) Locations – General Requirements |
| FM 3610: 2010 | - Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, Hazardous Locations |
| FM 3615: 2006 | - Explosion-Proof Electrical Equipment General Requirements |
| ANSI/ISA - 12.27.01 - 2011 | - Requirements for Process Sealing Between Electrical Systems and Flammable or Combustible Process Fluids |
| ANSI/ISA-60079-0 (12.00.01) – 2013 | - Electrical apparatus for explosive gas atmospheres; Part 0: General requirements |
| ANSI/ISA-60079-1 (12.22.01) – 2009 (R2013) | - Electrical apparatus for explosive gas atmospheres; Part 1: Equipment Protection by Flameproof Enclosures Type "d" |
| ANSI/ISA-60079-11 (12.02.01) – 2013 | - Electrical apparatus for explosive gas atmospheres; Part 11: Intrinsic safety "i" |



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MARKINGS

See descriptive report for complete details.



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

Project	Date	Description
70155585	2017-12-14	Update to report 70054084 to reflect change in piezoelectric sensor vendor. The project captures Impact testing done in accordance with ANSI/ISA 60079-11 and CSA C22.2 60079-11 clause 10.7, which was witnessed by CSA Certifiers at Rosemount's testing facility in Eden Prairie, MN. As a result of this change, 2 of the descriptive documents were revised (08600-0019 and 08800-0019). Furthermore, a new remote cable was added as per descriptive document 08800-5058 which changed the L/R ratio. However, this did not impact the inductance of the cable. Hence, no further testing was performed.
70149457	2017-09-27	Update to Report 70054084X to update 13 drawings . Price assumes no testing . Additional funds will be required if any testing is deemed necessary .
70124973	2017-06-13	Update to Report 70054084 to add Dual Seal ratings for the Model 8600D which includes evaluation and testing and add omitted class numbers 2252-05/85 and 2258-83/84 in SAP.
70054084	2016-01-22	Update to Report 1674267 to include New Model 8600D for North America with same ratings as model 8800D, add US Division Certification for the for both models based off of testing and evaluations witnessed by FM, as well as add Zone Certification for both models based off of testing and evaluations witnessed by Baseefa and DEKRA.