



Certificate of Compliance

Certificate: 70054084

Master Contract: 264512

Project: 70220457

Date Issued: 2019-06-06

Issued To: Emerson - Rosemount, Micro Motion Inc.
12001 Technology Dr.
Eden Prairie, Minnesota, 55344
United States

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 (indicating that products have been manufactured to the requirements of both Canadian and US Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only



Issued by: *Lucas Nieuwenhout*
Lucas Nieuwenhout

PRODUCTS

CLASS 2252-05 - PROCESS CONTROL EQUIPMENT

CLASS 2252-85 - 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.

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; Temp Code T6; Type 4X

Class I, Zone 1, Ex db [ia] IIC T6...T1 Gb ; IP66 (8800D)

Class I, Zone 1, Ex db [ia] IIC T6...T2 Gb ; IP66 (8600D)



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Ambient Temperature: (-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; Temp Code T4; Type 4X:

Class I, Division 2, Groups A, B, C and D; Temp Code T4; Type 4X;

Ambient Temperature: (-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 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; Temp Code T4; Type 4X:

Ambient Temperature: (-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 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; Class II, Groups E, F, G; Class III; Temp Code T6; Type 4X

Class I, Zone 1, AEx db [ia] IIC T6...T1 Gb ; IP66 (8800D)

Class I, Zone 1, AEx db [ia] IIC T6...T2 Gb ; IP66 (8600D)

Ambient Temperature: (-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.



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

IS: Class I, Division 1, Groups A, B, C and D; Temp Code T4; Type 4X:

Class I, Division 2, Groups A, B, C and D; Temp Code T4; Type 4X;

Ambient Temperature: (-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 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; Temp Code T4; Type 4X

Class I, Zone 0, AEx ia IIC T4 Ga; IP66;

Ambient Temperature: (-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.

Ui = 30V Ci = 0
Ii = 185mA Li = 0.97mH
Pi = 1.0W

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

Fieldbus Version:

Ui = 30V Ci = 0
Ii = 300mA Li = 20μH
Pi = 1.3W

FISCO Version:

Ui = 17.5V Ci = 0
Ii = 380mA Li = ≤10μH
Pi = 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.



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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

h = Calibration: 0 or 1

i = Options: Any Alpha-Numeric characters representing product options up to forty-eight digits. Includes Safety Approval Code Options E5, E6, I5, I6, IE, IF, K5, 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 II.
2. Mode of operation: Continuous
3. Environmental Conditions: Extended: -50°C to +70°C, 2000 m max, 0-95% rH as specified by manufacturer.

APPLICABLE REQUIREMENTS

- | | |
|--|---|
| CAN/CSA C22.2 No. 0-10 | - General Requirements - Canadian Electrical Code, Part II |
| CAN/CSA-C22.2 No. 0.4-04
(<i>Reaffirmed 2013</i>) | - Bonding of Electrical Equipment |
| CAN/CSA-C22.2 No. 25-1966 | - Enclosures for Use in Class II, Group E, F, G Hazardous Locations |



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(Reaffirmed 2014)

- CAN/CSA-C22.2 No. 30-M1986 - Explosion-Proof Enclosures for Use in Class I Hazardous Locations
(Reaffirmed 2012)
- CAN/CSA-C22.2 No. 94-M91 - Special Purpose Enclosures
(Reaffirmed 2011)
- CAN/CSA-C22.2 No. 157-92 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
(Reaffirmed 2012)
- CAN/CSA-C22.2 No. 213-M1987 - Non-Incendive Electrical Equipment for USE in Class I, Division 2 Hazardous Locations
(Reaffirmed 2013)
- 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"

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
70220457	2019-06-06	Update to project 70054084 to add the multivariable output options with pressure compensation 'MPA', and temperature and pressure compensation 'MCA', as well as make changes to the descriptive documents. Documents are updated to reflect the addition of 'MPA' and 'MCA' options, to update labels, and to create a new approvals document by splitting the quick start guides into two documents and removing the QSG from the descriptive document list.
000070171274	2018-05-18	Update to CSA Report 70054084X to capture the following changes: 1. Drawing revisions to capture the updated nomenclature and formatting changes. 2. The LCD display board now uses a lower capacitance in the circuit to increase the drive frequency, resulting in improved stability of the visual display. 3. Update of flameproof marking (method of protection, and T-code) for both 8800D and 8600D models. None of the changes above required additional assessment or testing of the product.
000070155585	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.
000070149457	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 .
000070124973	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.



000070054084

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.