



Certificate of Compliance

Certificate: 1714037 (LR 105173)

Master Contract: 185562

Project: 2213371

Date Issued: 2009/08/28

Issued to: Emerson Process Management

GmbH & Co. OHG

Industriestrasse 1

Hasselroth, 63594

Germany

Attention: Uwe Schmidt

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.



Rob Kohuch E.I.T.

Issued by: Rob Kohuch E.I.T.

PRODUCTS

CLASS 2258 82 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations - Certified to US Standards

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

CLASS 8721 85 - ELECTRICAL EQUIPMENT FOR LABORATORY USE - Certified to US Standards

CLASS 8721 05 - LABORATORY EQUIPMENT - Electrical

CLASS 8721 05 - LABORATORY ELECTRICAL EQUIPMENT

CLASS 8721 85 - ELECTRICAL EQUIPMENT FOR LABORATORY USE (Certified to U.S. Standards)

Gas analyzer, Model: X-Stream, rated 100-240Vac, 50/60 Hz, 3 - 1.5A, Class I, Pollution Degree II.

- **X-Stream F (XF) or X-STREAM Field Housing Gas Analyzer (X2F):** Wall mounting with field wiring terminals, for outdoor use NEMA 4X and display;
- **X-Stream GP (XGP):** Table Top or Rack Mount with field wiring terminals for indoor use;
- **X-Stream GPS (XGPS):** Table Top or Rack Mount with appliance inlet for indoor use with or without display;
- **X-STREAM General Purpose Gas Analyzer (X2GP):** Table Top or Rack Mount with appliance inlet for indoor use and display (optional with field wiring terminals for indoor use);
- **X-STREAM Gas Analyzer Core (X2CA)** Table Top or Rack Mount with appliance inlet for indoor use and no display (optional with field wiring terminals for indoor use);



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Gas analyzer, Model: X-Stream, rated 24Vdc, 2.5A, Class I, Pollution Degree II.

- **X-STREAM General Purpose Compact Gas Analyzer (X2GC):** Table Top or Rack Mount with 24Vdc in connector and display;
- **X-STREAM Compact Gas Analyzer Core (X2CC):** Table Top or Rack Mount with 24Vdc in connector and no display;

Conditions of Acceptability

- For the X-Stream Models XGP, XGPS, X2GP and X2CA, the equipment is supplied with an approved power supply cord set or power supply cord with plug that is acceptable to the authorities in the country where the equipment is to be used. Units supplied without a power cord and that are not permanently connected are considered as component. Component-type units must be provided with a Fire, Mechanical and Electrical enclosure and must be re-evaluated by CSA.

- The plug/connector is used as the disconnected device. The switch for X2GP/X2CA is not considered the disconnect device. All units must be provided with a disconnect device.

- For the **X-Stream F / 2F** unit, only the unit with the view window and no accessible controls was tested for NEMA 4X. The enclosure with user accessible controls does not have any ingress protection ratings. This new enclosure shall not bear the CSA mark if it is marked with an ingress protection rating (NEMA or IP).

CLASS 2258-02 PROCESS CONTROL EQUIPMENT – For Hazardous Locations

CLASS 2258-82 PROCESS CONTROL EQUIPMENT – For Hazardous Locations – Certified to U.S. Standards.

X-Stream FD (XFD): Flameproof for Hazardous Locations

Class I, Zone 1, Ex d IIB+H2, T3

Class I, Zone 1, AEx d IIB+H2, T3

Gas analyzer, Model: X-Stream, rated 100-240Vac, 50/60 Hz, 2–1 A. Class I, Pollution Degree II; Type 4 & IP66

Ambient Temperature Range: -30oC to +50oC Maximum internal case pressure = 110kpa

XFD-abcdefghijklmnop

a = Language: A, B, C, D or E



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b = Ambient Conditions: 1, 2, 3, 4, 5 or 6

c = Instrument: 1, 2, 3, 4, 5, 6 or 7

d = Bench 1: any combination of 2 or 3 alpha-numeric characters

e = Bench 1 – Special Linearization or Calibration: 0, 1, 2, 3, 4 or 5

f = Bench 2: any combination of 2 or 3 alpha-numeric characters

g = Bench 2 – Special Linearization or Calibration: 0, 1, 2, 3, 4 or 5

h = Enclosure: 1, 2, 3, 4, 5 or 6

i = Hazardous Area Options and Special Approvals: B or D

B = CSA Certification

D = CSA Certification with a Breathing Device for Venting (Same Device as option “p”)

j = Input/Output Options: 1, 2, 5 or 6

k = Communication Interface: A, B, C or D

l = Sample Handling: 0, 1, 3, 5 or 7

m = Gas Path Sensors: 0, 1, 2, 3, 4 or 5

n = Gas Path Tubing: A, B, C, D or E

o = Gas Path Fittings: 3, 4, 5 or 6

p = Flame Arrestors: 2, 3, 4, 5, 6, 7 or 8

X-Stream FD (X2FD): Flameproof for Hazardous Locations

Class I, Zone 1, Ex d IIB+H2, T3

Class I, Zone 1, AEx d IIB+H2, T3

Gas analyzer, Model: X-Stream, rated 100-240Vac, 50/60 Hz, 3 - 1.5A, Class I, Pollution Degree II; Ambient Temperature Range: -30oC to +50oC

X-Stream FD (X2FD) has same electronics as the X-STREAM General Purpose Gas Analyzer (X2GP) with new Hazardous Locations Enclosure.

X2FD-abcdefghijklmnopqrstuv



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a = Language: A, B, C, D, E or F

b = Ambient Conditions: 1, 2, 3, 4, 5 or 6

c = Instrument: 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14 or 15

d = Bench 1: any combination of 2 or 3 alpha-numeric characters

e = Bench 1 – Special Linearization or Calibration: 0, 1, 2, 3, 4, 5, A, B, C or D

f = Bench 2: any combination of 2 or 3 alpha-numeric characters

g = Bench 2 – Special Linearization or Calibration: 0, 1, 2, 3, 4, 5, A, B, C or D

h = Bench 3: any combination of 2 or 3 alpha-numeric characters

i = Bench 3 – Special Linearization or Calibration: 0, 1, 2, 3, 4, 5, A, B, C or D

j = Bench 4: any combination of 2 or 3 alpha-numeric characters

k = Bench 4 – Special Linearization or Calibration: 0, 1, 2, 3, 4, 5, A, B, C or D

l = Enclosure: 1, 2, 3, 4, 5 or 6

m = Hazardous Area Options and Special Approvals: B or D

B = CSA Certification

D = CSA Certification with a Breathing Device for Venting (Same Device as option “v”)

n = Analog Outputs: 1, 2, 3 or 4

o = Digital Inputs/Relay Outputs: 0, 1 or 2

p = Communication Interface: 0, A, B, C or D

q = Spare: 0

r = Sample Handling: 0, 1, 2, 3, 4, 5 or 6

s = Gas Path Sensors: 0, 1, 2, 3, 4, 5, 6, 7 or 8

t = Gas Path Tubing: A, B, C, D, E, F, G, H or I

u = Gas Path Fittings: E, F, G, H, I, J, K or L

v = Flame Arrestors: 2, 3, 4, 5, 6, 7 or 8

APPLICABLE REQUIREMENTS



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CAN/CSA-C22.2 No. 61010-1-04 - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements

UL Std No. 61010-1, 2nd Edition. - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements

CAN/CSA-E60079-0:02 (R2006) - Electric Apparatus for Explosive Gas Atmospheres, Part 0: General Requirements

CAN/CSA-E60079-1:02 (R2006) - Electric Apparatus for Explosive Gas Atmospheres, Part 1: Construction and Verification Test of Flameproof Enclosures of Electrical Apparatus “d”

CAN/CSA-C22.2 No. 94-M91 (R2001) - Special Purpose Enclosures

CAN/CSA C22.2 No. 60529:05 - Degrees of protection provided by enclosure (IP Code)

ANSI/ISA-12.00.01-2002 (IEC 60079-0 Mod) - Electric Apparatus for Use in Class I, Zones 0, 1 & 2 Hazardous (Classified) Locations: General Requirements

ANSI/ISA-12.22.01-2002 (IEC 60079-1 Mod) - Electric Apparatus for Use in Class I, Zones 1 Hazardous (Classified) Locations Type of Protection – Flameproof “d”

IEC 60529 Edition 2.1-2001-02 - Degrees of protection provided by enclosure (IP Code)

UL 50 11th ed - Enclosures for Electrical Equipment



Supplement to Certificate of Compliance

Certificate: 1714037

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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
2213371	2009/08/28	Correction to report and certificate 1714037 to show the correct model number X-Stream FD (X2FD) on the certificate.
2192929	2009/07/15	Update to report 1714037 to include mechanical modifications and additions and a inert purge option
2051233	2008/08/22	Update Report 1714037 to include alt. flameproof enclosure (X2FD) with same electronics as X2GP
2065703	2008/08/13	CSA c/us project update of a gas analyser under witness testing - alternate construction (addition of optional internal temperature controller PCB).
1980978	2008/04/25	CSA c/us project update of a gas analyser - addition of DC powered unit.
1875359	2007/06/18	Update to add Alternate Model XFD Flameproof for Class I, Zone 1, Ex/AEx d IIB +H2 T3 for Hazardous Locations.
1780347	2006/06/01	c/CSA/us Certification project upgrade of a gas analyser, Model X-Stream Series. Alternate construction with new model designation.
1714037	2005/12/01	CSA C/US Certification project of a gas analyser, model: X-Stream Series*.