



Member of the FM Global Group

FM Approvals  
1151 Boston Providence Turnpike  
P.O. Box 9102 Norwood, MA 02062 USA  
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# CERTIFICATE OF COMPLIANCE

## HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS

This certificate is issued for the following equipment:

**P2.2 AMEX (P/N 4271XXXX99), P2.4 AMEX (P/N 4272XXXX99), P2.5 AMEX (P/N 4278XXXX99), P2.82 AMEX (P/N 4273XXXX99) and P2.84 AMEX (P/N 4274XXXX99) Rated 115V/230V AC, 50/60Hz, 1.7A/0.89A. Sample Gas Pumps.**

NI / I / 2 / BCD / T3, T4 Ta = -20 °C to +50 °C

x = denote power supply, position of pump head, material of pump head and material of valves.

### Equipment Ratings:

Nonincendive electric apparatus for use in Class I, II, Division 2, Groups B, C & D indoor hazardous (Classified) locations and for use in ordinary Locations

### FM Approved for:

Bühler Technologies GmbH  
Ratingen D-40880 Germany



This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

CSA	C22.2 No. 213, May 1987	Re-affirmed 2008
CSA	C22.2 No. 61010-1, 2004	Re-affirmed 2009

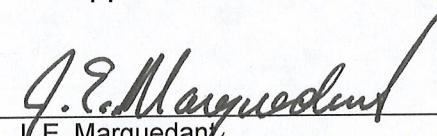
Original Project ID: 3038101  
Canadian Project ID: 3038101C

Approval Granted: *July 24, 2012*

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
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FM Approvals LLC

  
J.E. Marquedant  
Group Manager, Electrical

*21 July 2012*  
Date

# CERTIFICATE OF CONFORMITY



1. **HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS**
2. **Certificate No:** FM21CA0055X
3. **Equipment:** Model P2.2 AMEX, P2.4 AMEX, P2.5 AMEX, P2.82 AMEX and P2.84 AMEX Sample Gas Pumps  
(Type Reference and Name)
4. **Name of Listing Company:** Bühler Technologies GmbH
5. **Address of Listing Company:** Harkortstrasse 29  
Ratingen D-40880  
Germany
6. The examination and test results are recorded in confidential report number:  
3038101C\_Rev120709 dated 24<sup>th</sup> July 2012
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:  
CAN/CSA-C22.2 No. 213:2016, CAN/CSA-C22.2 No. 61010-1:R2009
8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

## Certificate issued by:

J. E. Marquedant  
VP, Manager - Electrical Systems

24 September 2021  
Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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# SCHEDULE



Canadian Certificate of Conformity No: FM21CA0055X

9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

10. Equipment Ratings:

Nonincendive for Class I, Division 2, Groups B, C, D T3/T3C, Ta = -20°C to +40°C, hazardous locations. Refer to manual BX420003 for relationship between temperature class, ambient temperature and process temperature.

11. The marking of the equipment shall include:

Cl. I, Div. 2, Gps. B, C, D. T3/T3C

Temp. max.: see manual BX420003

12. **Description of Equipment:**

**General** – The sample pumps move sample gases from stacks to an analyzer. A sample pump consists of a motor and a pump head, which can be split by an intermediate flange with variable versions.

**Construction** – The sample pumps are of painted metal construction. The motors for the pumps provide a terminal box with an opening suitable for a ½" NPT conduit hub.

**Ratings** – The pumps operate at 115 Vac, 1.5 to 1.6 A, or 230 Vac, 0.7 to 0.8 A, depending upon model type. The pumps are rated for an ambient temperature range of -20°C to +40°C.

**Model types** – Approved model number variants are as defined below. Refer to Installation and Operation Instructions document BE420003 for further details concerning model types.

**42aabcdef9000. Sample Gas Pumps, where:**

aa = Base model: 71, 72, 73, 74, where:

71 = P2.2 AMEX

72 = P2.4 AMEX

73 = P2.82 AMEX

74 = P2.84 AMEX

b = Motor voltage: 7, 8

c = Pump head position: 1, 2

d = Pump head material: 1, 2, 3, 4

e = Valve material: 1, 2

f = Screw-in connections: 9, 1, 2, 3, 5

13. **Specific Conditions of Use:**

It is the responsibility of the installer to ensure that the combination of ambient temperature and process heating does not exceed the maximum specified ambient temperature rating of 40 °C at the motor.

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals Canadian Certification Scheme.

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# **SCHEDULE**



Canadian Certificate of Conformity No: FM21CA0055X

15. **Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

16. **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
24 <sup>th</sup> July 2012	Original Issue.
24 <sup>th</sup> September 2021	<b>Supplement 1:</b> Report Reference: RR228650 dated 24 <sup>th</sup> September 2021. Description of the Change: New motor supplier. Revise ambient temperature range. Update standard CSA C22.2 No. 213 from May 1987, re-affirmed 2009 to 2016. Apply specific condition of use relating to process and ambient temperatures. Re-create certificate in new format. Apply corrections to and reformat Certificate and Approval Guide listing.

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# CERTIFICATE OF CONFORMITY

## 1. HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS

2. **Certificate No:** FM21CA0055X

3. **Equipment:** Model P2.2 AMEX, P2.4 AMEX, P2.5 AMEX, P2.82 AMEX and P2.84 AMEX Sample Gas Pumps  
(Type Reference and Name)

4. **Name of Listing Company:** Bühler Technologies GmbH

5. **Address of Listing Company:** Harkortstraße 29, Ratingen D-40880, Germany

6. The examination and test results are recorded in confidential report number:

3038101C\_Rev120709 dated 24<sup>th</sup> July 2012

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

CSA C22.2 No. 213:2016, CSA C22.2 No. 61010-1:2004

8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

10. **Equipment Ratings:**

See Annex

11. The marking of the equipment shall include:

See Annex

12. **Description of Equipment:**

See Annex

13. **Specific Conditions of Use:**

**Certificate issued by:**



J.E. Marquedant  
VP, Manager - Electrical Systems

19 April 2024

Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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## **SCHEDULE**

Canadian Certificate Of Conformity No: FM21CA0055X



See Annex

### **14. Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals Canadian Certification Scheme.

### **15. Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

### **16. Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
24 July 2012	Original Issue.
24 September 2021	<u>Supplement 1:</u> Report Reference: RR228650 dated 24 <sup>th</sup> September 2021. Description of the Change: New motor supplier. Revise ambient temperature range. Update standard CSA C22.2 No. 213 from May 1987, re-affirmed 2009 to 2016. Apply specific condition of use relating to process and ambient temperatures. Re-create certificate in new format. Apply corrections to and reformat Certificate and Approval Guide listing.
19 April 2024	<u>Supplement 2:</u> Report Reference: RR240898 dated 19 April 2024. Description of the Change(s): Addition of H2 and O2 Options, Update manual for option update and misc.items.

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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## **SCHEDULE**

Canadian Certificate Of Conformity No: FM21CA0055X



# **ANNEX**

## **42aabcdef9000**

### **Equipment Ratings:**

Nonincendive for Class I, Division 2, Groups B, C, D T3/T3C, Ta = -20°C to +40°C, hazardous locations. Refer to manual BX420003 for relationship between temperature class, ambient temperature and process temperature.

### **Markings:**

Cl. I, Div. 2, Gps. B, C, D. T3/T3C  
Temp. max.: see manual BX420003

### **Description of Equipment:**

**General** – The sample pumps move sample gases from stacks to an analyzer. A sample pump consists of a motor and a pump head, which can be split by an intermediate flange with variable versions.

**Construction** – The sample pumps are of painted metal construction. The motors for the pumps provide a terminal box with an opening suitable for a ½" NPT conduit hub.

**Ratings** – The pumps operate at 115 Vac, 1.5 to 1.6 A, or 230 Vac, 0.7 to 0.8 A, depending upon model type. The pumps are rated for an ambient temperature range of -20°C to +40°C.

**Model types** – Approved model number variants are as defined below. Refer to Installation and Operation Instructions document BE420003 for further details concerning model types.

### **42aabcdef9000. Sample Gas Pumps, where:**

aa = Base model: 71, 72, 73, 74, where:

71 = P2.2 AMEX

72 = P2.4 AMEX

73 = P2.82 AMEX

74 = P2.84 AMEX

b = Motor voltage: 7, 8

c = Pump head position: 1, 2

d = Pump head material: 1, 2, 3, 4

e = Valve material: 1, 2

f = Screw-in connections: 9, 1, 2, 3, 5

### **Specific Conditions of Use:**

It is the responsibility of the installer to ensure that the combination of ambient temperature and process heating does not exceed the maximum specified ambient temperature rating of 40 °C at the motor.

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## **SCHEDULE**

Canadian Certificate Of Conformity No: FM21CA0055X



### **42aabcdef9000gg**

#### **Equipment Ratings:**

Nonincendive for Class I, Division 2, Groups B, C, D T3/T3C, Ta = -20°C to +40°C, hazardous locations. Refer to manual BX420003 for relationship between temperature class, ambient temperature and process temperature.

#### **Markings:**

Cl. I, Div. 2, Gps. B, C, D. T3/T3C  
Temp. max.: see manual BX420003

#### **Description of Equipment:**

**General** – The sample pumps move sample gases from stacks to an analyzer. A sample pump consists of a motor and a pump head, which can be split by an intermediate flange with variable versions.

**Construction** – The sample pumps are of painted metal construction. The motors for the pumps provide a terminal box with an opening suitable for a ½" NPT conduit hub.

**Ratings** – The pumps operate at 115 Vac, 1.5 to 1.6 A, or 230 Vac, 0.7 to 0.8 A, depending upon model type. The pumps are rated for an ambient temperature range of -20°C to +40°C.

**Model types** – Approved model number variants are as defined below. Refer to Installation and Operation Instructions document BE420003 for further details concerning model types.

#### **42aabcdef9000gg. Sample Gas Pumps, where:**

aa = Base model: 71, 72, where:

71 = P2.2 AMEX

72 = P2.4 AMEX

b = Motor voltage: 7, 8

c = Pump head position: 1, 2

d = Pump head material: 1, 2, 3, 4

e = Valve material: 1, 2

f = Screw-in connections: 9, 1, 2, 3, 5

g = Option H2, O2.

#### **Specific Conditions of Use:**

It is the responsibility of the installer to ensure that the combination of ambient temperature and process heating does not exceed the maximum specified ambient temperature rating of 40 °C at the motor.

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