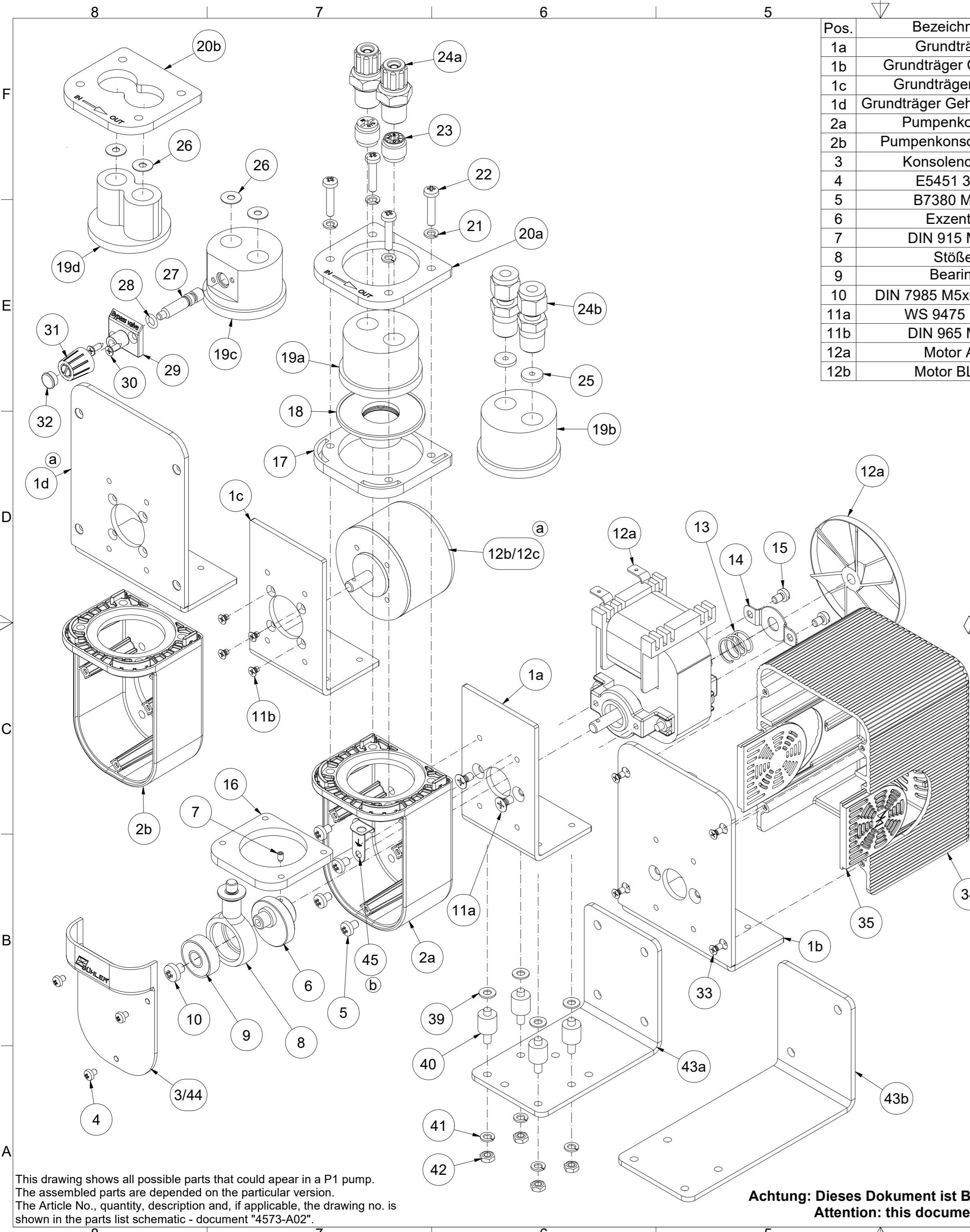
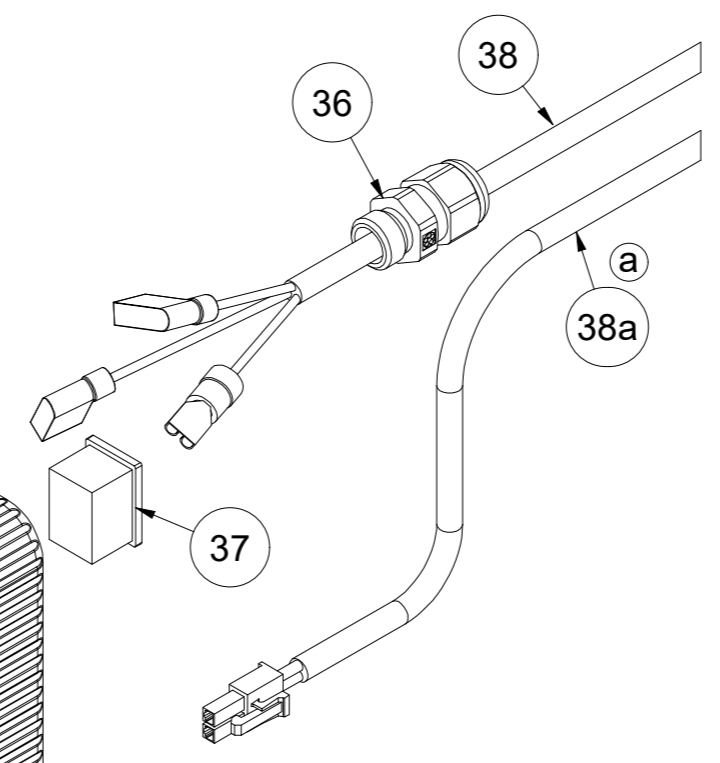


10 Beigefügte Dokumente

- Ersatzteil- und Montagezeichnung: 42/018-Z03-01-2
- Konformitätserklärung: KX420009
- Bescheinigungen: FM16NCA0008, FM16NUS0017
- RMA – Dekontaminierungserklärung



Pos.	Bezeichnung	Description	Pos.	Bezeichnung	Description
1a	Grundträger	base angel	12c	Motor BLDC mit Stecker	motor bldc with plug
1b	Grundträger Gehäuse	base angel enclosure	13	Feder	spring
1c	Grundträger BLDC	base angel bldc	14	Erdungsblech	protective ground sheet
1d	Grundträger Gehäuse BLDC	base angel enclosure bldc	15	DIN 85 M4x6	DIN 85 M4x6
2a	Pumpenkonsole	pump console	16	Gegenring	counter ring
2b	Pumpenkonsole BLDC	pump console bldc	17	Abdeckung	cover
3	Konsolendeckel	cover	18	Faltenbalg	bellow
4	E5451 30x8	E5451 30x8	19a	Pumpenkörper PTFE	pump head PTFE
5	B7380 M4x6	B7380 M4x6	19b	Pumpenkörper VA	pump head SS
6	Exzenter	Eccentric	19c	Pumpenkörper PVDF Bypass	pump head PVDF bypass
7	DIN 915 M3x5	DIN 915 M3x5	19d	Pumpenkörper PVDF	pump head PVDF
8	Stößel	Plunger	20a	Befestigungsring	mounting ring
9	Bearing	Kugellager	20b	Befestigungsring nur PVDF Körper	mounting ring only PVDF head
10	DIN 7985 M5x6 or M5x8	DIN 7985 M5x6 or M5x8	21	DIN 127 B4,1 oder DIN 6796	DIN 127 B4,1 or DIN 6796
11a	WS 9475 M4x8	WS 9475 M4x8	22	B7380 M4x20	B7380 M4x20
11b	DIN 965 M3x6	DIN 965 M3x6	23	Ein- Auslassventil	In- Outletvalve
12a	Motor AC	motor AC	24a	Verschraubung PVDF	Fitting PVDF
12b	Motor BLDC	motor bldc	24b	Verschraubung VA	Fitting SS
			25	Verdränger	displacer
			26	Dichtscheibe	valve sealing
			27	Spindel	spindle
			28	O-Ring	o-ring
			29	Ventilplatte	valve plate
			30	DIN 7982 2,9x9,5	DIN 7982 2,9x9,5
			31	Drehknopf	knob
			32	Abdeckung	cover
			33	E5454 30x8	E5454 30x8
			34	Gehäuseteil 1	enclosure part 1
			35	Gehäuseteil 2	enclosure part 2
			36	Kabelverschraubung	cable gland
			37	Blindstopfen	dummy plug
			38	Anschlusskabel	connection cable
			38a	Anschlusskabel BLDC	connection cable bldc
			39	DIN 125 A4,3	DIN 125 A4,3
			40	Gummi Puffer	vibration damper
			41	DIN 127 B4,1 oder DIN 6796	DIN 127 B4,1 or DIN 6796
			42	DIN 934 M4	DIN 934 M4
			43a	Montagekonsole	Mounting console
			43b	Montagekonsole Gehäuse	Mounting console enclosure
			44	Konsolendeckel mit Lüftungsschlitzen	Cover with ventilation slots
			45	Potentialausgleichsblech	Equipotential bonding sheet



Ersatzteile / Spare parts			
Bezeichnung	Description	Artikel Nr. / Article no.	Pos.Nr. / Pos. no.
Kurbeltrieb	crank assembly	4228065	6/7/8/9/10
Faltenbalg	bellow	4228003	18
Ventil 70°C (1 Stück)	Valve 70°C (1 piece)	4228006	23
Ventil 70°C (2 Stück)	Valve 70°C (2 Stück)	4228066	23/26
O-Ring	O-ring	9009398	28
Montagekonsole	Mounting console	4228060	43a
Montagekonsole Gehäuse	Mounting console enclosure	4228067	43b
Pufferset	Damper set	4228061	39/40/41/42
Montagekonsole & Pufferset	Mounting console & damper set	4228062	39/40/41/42/43a
Montagekonsole & Pufferset	Mounting console & damper set	4228063	39/40/41/42/43b

This drawing shows all possible parts that could appear in a P1 pump. The assembled parts are depended on the particular version. The Article No., quantity, description and, if applicable, the drawing no. is shown in the parts list schematic - document "4573-A02".

Achtung: Dieses Dokument ist Bestandteil der FM-Zulassung
Attention: this document is part of the FM-Approval

Alle Kanten gratfrei	Alle Rechte vorbehalten	Maße ohne Toleranzangabe nach ISO 2768-mK	Maßstab: 1:1,6	Masse:
✓ = √ RøH		Datum: 13.10.2015	Werkstoff:	
✗ = √ Rz 63		Name: Sundergeld	Benennung: Exploded view of the P1.x Pumps	
✓ = √ Rz 16		Gepr.	ZeichnungsNr.: 42/018-Z03-01-2B	
✓ = √ Rz 6,3			Art.Nr.: 42...	
✓ = √ Rz 4			Arbeitsanweisung:	



EG-/EU Konformitätserklärung
EC/EU Declaration of Conformity



Hiermit erklärt Bühler Technologies GmbH,
dass die nachfolgenden Produkte den
wesentlichen Anforderungen der Richtlinie

2006/42/EG
(MRL)

in ihrer aktuellen Fassung entsprechen.

Die Produkte sind Maschinen nach Artikel 2 a).

*Herewith declares Bühler Technologies GmbH
that the following products correspond to the
essential requirements of Directive*

2006/42/EC
(MD)

in its actual version.

*The products are machines according to
article 2 (a).*

Produkt / products: Messgaspumpe / *Sample gas pump*
Typ / type: P 1.x

Das Betriebsmittel ist für den Einbau in Gasanalyse-Systemen bestimmt und für das Fördern von
ausschließlich gasförmigen Medien vorgesehen.

*The equipment is designed for installation in gas analyser systems and is designed to transport only
gaseous media.*

Das oben beschriebene Produkt der Erklärung erfüllt die einschlägigen
Harmonisierungsrechtsvorschriften der Union:

*The object of the declaration described above is in conformity with the relevant Union harmonisation
legislation:*

EN 809:1998+A1:2009 + AC:2010

EN 60204-1:2018

Zusätzlich wurden berücksichtigt:
In addition, the following standards have been used:
EN ISO 12100:2010

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller.
This declaration of conformity is issued under the sole responsibility of the manufacturer.

Dokumentationsverantwortlicher für diese Konformitätserklärung ist Herr Stefan Eschweiler mit
Anschrift am Firmensitz.

*The person authorised to compile the technical file is Mr. Stefan Eschweiler located at the company's
address.*

Ratingen, den 15.09.2022

Stefan Eschweiler
Geschäftsführer – *Managing Director*

Frank Pospiech
Geschäftsführer – *Managing Director*

UK Declaration of Conformity



The manufacturer Bühler Technologies GmbH declares, under the sole responsibility, that the product complies with the requirements of the following UK legislation:

Machinery Safety Regulations 2008

Product: Sample gas pump
Type: P 1.x

The equipment is designed for installation in gas analyser systems and is designed to transport only gaseous media.

The object of the declaration described above is in conformity with the relevant designated standards:

EN 809:1998+A1:2009 + AC:2010

EN 60204-1:2018

In addition, the following standards have been used:

EN ISO 12100:2010

Ratingen in Germany, 01.11.2022

A handwritten signature in black ink, appearing to read 'Stefan Eschweiler', written over a horizontal line.

Stefan Eschweiler
Managing Director

A handwritten signature in blue ink, appearing to read 'Frank Pospiech', written over a horizontal line.

Frank Pospiech
Managing Director



Member of the FM Global Group

FM Approvals
1151 Boston Providence Turnpike
P.O. Box 9102 Norwood, MA 02062 USA
T: 781 762 4300 F: 781-762-9375 www.fmaprovals.com

CERTIFICATE OF COMPLIANCE

ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS

This certificate is issued for the following equipment:

4228abc1def00FM. P1.1 Sample Gas Pump.

- a = Motor voltage: 1, 2, 3 or 4.
- b = Pump head position: 1 or 2.
- c = Pump head material: 1, 2, 3 or 4.
- d = Screw-in connections / pipe fitting: 0, 1, 2, 3, 5 or 6.
- e = Mounting accessories: 0, 1 or 2.
- f = Housing: 0, 1 or 2.

Equipment Ratings:

Electrical Equipment for use indoor unclassified or Ordinary locations.

FM Approved for:

Bühler Technologies GmbH
Ratingen, Germany

To verify the availability of the Approved product, please refer to www.approvalguide.com



Member of the FM Global Group

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

CAN C22.2 No. 213 2012
CAN C22.2 No. 1010.1 2004

Original Project ID: 3057155CGP

Approval Granted: April 11, 2016

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
---------------	------	---------------	------

FM Approvals LLC

J.E. Marquedant
Manager, Electrical Systems

11 April 2016

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

CERTIFICATE OF CONFORMITY



1. **ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS**

2. **Certificate No:** FM16NCA0008

3. **Equipment:** P1.1 Sample Gas Pumps
(Type Reference and Name)

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

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

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

3057155 dated 11th April 2016

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. 213:2012, CAN/CSA-C22.2 No. 61010-1:2004

8. 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.

9. **Equipment Ratings:**

Electrical equipment for use indoor unclassified or Ordinary locations

Certificate issued by:

J. E. Marquedant
Manager, Electrical Systems

9 December 2016

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

SCHEDULE



Member of the FM Global Group

to Canadian Certificate Of Conformity No: FM16NCA0008

10. Description of Equipment:

The P1 sample gas pumps carry gases from various processes to analyzers. The gas circuit typically has additional analysis components such as sample gas probe, filter, flow meter, cooler, etc. The sample gas pump P1 consists of the main components, the pump head and motor. An eccentric converts the rotation of the motor into an up and down motion using a connecting rod, thus producing the pump mechanism. Inside the so-called pump body, above the bellows, which facilitates the pump motion, are inlet and outlet valves. The user connects the gas circuits to the sample gas pump through screw-in connections.

The P1 sample gas pumps are available as 12Vdc, 24Vdc, 115Vac, 60Hz or 230Vac, 50Hz. The 115Vac and 230Vac sample gas pumps are available with or without a cover over the electronics and motor. The 115Vac and 230Vac sample gas pumps have internal self resetting thermal protection built into the motor. The P1.1 sample gas pump is for general purpose non-hazardous locations.

Model Code Structure:

4228abc1def00FM. P1.1 Sample Gas Pump.

a = Motor voltage: 1, 2, 3 or 4.

b = Pump head position: 1 or 2.

c = Pump head material: 1, 2, 3 or 4.

d = Screw-in connections / pipe fitting: 0, 1, 2, 3, 5 or 6.

e = Mounting accessories: 0, 1 or 2.

f = Housing: 0 or 1

11. Test and Assessment Procedure and Conditions:

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

12. Schedule Drawings

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

13. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
11 th April 2016	Original Issue.
9 th December 2016	<u>Supplement 1:</u> Report Reference: – RR207245 dated 9 th December 2016 Description of the Change: Changes per this revision request are for the NI version of the product and don't affect this certificate. This certificate has been put into the new format.

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA

T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmaprovals.com www.fmaprovals.com

CERTIFICATE OF CONFORMITY



1. **ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS**

2. **Certificate No:** FM16NCA0008

3. **Equipment:
(Type Reference and Name)** P1.1 Sample Gas Pumps

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

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

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

3057155 dated 11th April 2016

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. 213:2012, CAN/CSA-C22.2 No. 61010-1:2004

8. 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.

9. **Equipment Ratings:**

Electrical equipment for use indoor unclassified or Ordinary locations

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

2 April 2020

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

SCHEDULE



to Canadian Certificate Of Conformity No: FM16NCA0008

10. Description of Equipment:

The P1 sample gas pumps carry gases from various processes to analyzers. The gas circuit typically has additional analysis components such as sample gas probe, filter, flow meter, cooler, etc. The sample gas pump P1 consists of the main components, the pump head and motor. An eccentric converts the rotation of the motor into an up and down motion using a connecting rod, thus producing the pump mechanism. Inside the so-called pump body, above the bellows, which facilitates the pump motion, are inlet and outlet valves. The user connects the gas circuits to the sample gas pump through screw-in connections.

The P1 sample gas pumps are available as 12Vdc, 24Vdc, 115Vac, 60Hz or 230Vac, 50Hz. The 115Vac and 230Vac sample gas pumps have internal self resetting thermal protection built into the motor. The P1.1 sample gas pump is for general purpose non-hazardous locations.

Model Code Structure:

4228abc1def00FM. P1.1 Sample Gas Pump.

a = Motor voltage: 1, 2, 3 or 4.

b = Pump head position: 1 or 2.

c = Pump head material: 1, 2, 3 or 4.

d = Screw-in connections / pipe fitting: 0, 1, 2, 3, 5 or 6.

e = Mounting accessories: 0, 1 or 2.

f = Housing: 0 or 1

11. Test and Assessment Procedure and Conditions:

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

12. Schedule Drawings

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

13. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
11 th April 2016	Original Issue.
9 th December 2016	<u>Supplement 1:</u> Report Reference: – RR207245 dated 9 th December 2016. Description of the Change: Changes per this revision request are for the NI version of the product and don't affect this certificate. This certificate has been put into the new format.
2 nd April 2020	<u>Supplement 2:</u> Report Reference: – PR455937 dated 2 nd April 2020.

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA

T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmaprovals.com www.fmaprovals.com

SCHEDULE



Member of the FM Global Group

to Canadian Certificate Of Conformity No: FM16NCA0008

Date	Description
	Description of the Change: Add option for gas pump cover DC motors.

FM Approvals

FM Approvals

FM Approvals

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmaprovals.com www.fmaprovals.com



Member of the FM Global Group

FM Approvals
1151 Boston Providence Turnpike
P.O. Box 9102 Norwood, MA 02062 USA
T: 781 762 4300 F: 781-762-9375 www.fmaprovals.com

CERTIFICATE OF COMPLIANCE

ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

4228abc1def00FM. P1.1 Sample Gas Pump.

- a = Motor Voltage: 1, 2, 3 or 4.
- b = Pump head position: 1 or 2.
- c = Pump head material: 1, 2, 3 or 4.
- d = Screw-in connections / pipe fitting: 0, 1, 2, 3, 5 or 6.
- e = Mounting accessories: 0, 1 or 2.
- f = Housing: 0, 1 or 2.

Equipment Ratings:

Electrical Equipment for use indoor unclassified or Ordinary locations.

FM Approved for:

Bühler Technologies GmbH
Ratingen, Germany

To verify the availability of the Approved product, please refer to www.approvalguide.com



Member of the FM Global Group

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

FM3810 2005

Original Project ID: 3057155GP

Approval Granted: April 11, 2016

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
---------------	------	---------------	------

FM Approvals LLC



 J.E. Marquedant
 Manager, Electrical Systems

11 April 2016

 Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

CERTIFICATE OF CONFORMITY



1. **ELECTRICAL EQUIPMENT PER US REQUIREMENTS**

2. **Certificate No:** FM16NUS0017

3. **Equipment:** P1.1 Sample Gas Pumps
(Type Reference and Name)

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

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

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

3057155 dated 11th April 2016

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

FM Class 3810:2005

8. 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.

9. **Equipment Ratings:**

Electrical equipment for use indoor unclassified or Ordinary locations.

Certificate issued by:

J.E. Marquedant
Manager, Electrical Systems

9 December 2016

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

SCHEDULE



Member of the FM Global Group

to US Certificate Of Conformity No: FM16NUS0017

10. Description of Equipment:

The P1 sample gas pumps carry gases from various processes to analyzers. The gas circuit typically has additional analysis components such as sample gas probe, filter, flow meter, cooler, etc. The sample gas pump P1 consists of the main components, the pump head and motor. An eccentric converts the rotation of the motor into an up and down motion using a connecting rod, thus producing the pump mechanism. Inside the so-called pump body, above the bellows, which facilitates the pump motion, are inlet and outlet valves. The user connects the gas circuits to the sample gas pump through screw-in connections.

The P1 sample gas pumps are available as 12Vdc, 24Vdc, 115Vac, 60Hz or 230Vac, 50Hz. The 115Vac and 230Vac sample gas pumps are available with or without a cover over the electronics and motor. The 115Vac and 230Vac sample gas pumps have internal self resetting thermal protection built into the motor. The P1.1 sample gas pump is for general purpose non-hazardous locations.

Model Code Structure:

4228abc1def00FM. P1.1 Sample Gas Pump.

a = Motor voltage: 1, 2, 3 or 4.

b = Pump head position: 1 or 2.

c = Pump head material: 1, 2, 3 or 4.

d = Screw-in connections / pipe fitting: 0, 1, 2, 3, 5 or 6.

e = Mounting accessories: 0, 1 or 2.

f = Housing: 0 or 1

11. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

12. Schedule Drawings

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

13. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
11 th April 2016	Original Issue.
9 th December 2016	<u>Supplement 1:</u> Report Reference: – RR207245 dated 9 th December 2016 Description of the Change: Changes per this revision request are for the NI version of the product and don't affect this certificate. This certificate has been put into the new format.

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA

T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmaprovals.com www.fmaprovals.com

CERTIFICATE OF CONFORMITY



1. **ELECTRICAL EQUIPMENT PER US REQUIREMENTS**

2. **Certificate No:** FM16NUS0017

3. **Equipment:** P1.1 Sample Gas Pumps
(Type Reference and Name)

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

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

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

3057155 dated 11th April 2016

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

FM Class 3810:2005

8. 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.

9. **Equipment Ratings:**

Electrical equipment for use indoor unclassified or Ordinary locations.

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

2 April 2020

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

SCHEDULE



to US Certificate Of Conformity No: FM16NUS0017

10. Description of Equipment:

The P1 sample gas pumps carry gases from various processes to analyzers. The gas circuit typically has additional analysis components such as sample gas probe, filter, flow meter, cooler, etc. The sample gas pump P1 consists of the main components, the pump head and motor. An eccentric converts the rotation of the motor into an up and down motion using a connecting rod, thus producing the pump mechanism. Inside the so-called pump body, above the bellows, which facilitates the pump motion, are inlet and outlet valves. The user connects the gas circuits to the sample gas pump through screw-in connections.

The P1 sample gas pumps are available as 12Vdc, 24Vdc, 115Vac, 60Hz or 230Vac, 50Hz. The 115Vac and 230Vac sample gas pumps have internal self resetting thermal protection built into the motor. The P1.1 sample gas pump is for general purpose non-hazardous locations.

Model Code Structure:

4228abc1def00FM. P1.1 Sample Gas Pump.

a = Motor voltage: 1, 2, 3 or 4.

b = Pump head position: 1 or 2.

c = Pump head material: 1, 2, 3 or 4.

d = Screw-in connections / pipe fitting: 0, 1, 2, 3, 5 or 6.

e = Mounting accessories: 0, 1 or 2.

f = Housing: 0 or 1

11. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

12. Schedule Drawings

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

13. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
11 th April 2016	Original Issue.
9 th December 2016	<u>Supplement 1:</u> Report Reference: – RR207245 dated 9 th December 2016. Description of the Change: Changes per this revision request are for the NI version of the product and don't affect this certificate. This certificate has been put into the new format.
2 nd April 2020	<u>Supplement 2:</u> Report Reference: – PR455937 dated 2 nd April 2020

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA

T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmaprovals.com www.fmaprovals.com

SCHEDULE



Member of the FM Global Group

to US Certificate Of Conformity No: FM16NUS0017

Date	Description
	Description of the Change: Add option for gas pump cover DC motors.

FM Approvals

FM Approvals

FM Approvals

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmaprovals.com www.fmaprovals.com

RMA-Formular und Erklärung über Dekontaminierung

RMA-Form and explanation for decontamination



RMA-Nr./ RMA-No.

Die RMA-Nr. bekommen Sie von Ihrem Ansprechpartner im Vertrieb oder Service. Bei Rücksendung eines Altgeräts zur Entsorgung tragen Sie bitte in das Feld der RMA-Nr. "WEEE" ein./ You may obtain the RMA number from your sales or service representative. When returning an old appliance for disposal, please enter "WEEE" in the RMA number box.

Zu diesem Rücksendeschein gehört eine Dekontaminierungserklärung. Die gesetzlichen Vorschriften schreiben vor, dass Sie uns diese Dekontaminierungserklärung ausgefüllt und unterschrieben zurücksenden müssen. Bitte füllen Sie auch diese im Sinne der Gesundheit unserer Mitarbeiter vollständig aus./ This return form includes a decontamination statement. The law requires you to submit this completed and signed decontamination statement to us. Please complete the entire form, also in the interest of our employee health.

Firma/ Company

Firma/ Company

Straße/ Street

PLZ, Ort/ Zip, City

Land/ Country

Gerät/ Device

Anzahl/ Quantity

Auftragsnr./ Order No.

Ansprechpartner/ Person in charge

Name/ Name

Abt./ Dept.

Tel./ Phone

E-Mail

Serien-Nr./ Serial No.

Artikel-Nr./ Item No.

Grund der Rücksendung/ Reason for return

- Kalibrierung/ Calibration Modifikation/ Modification
 Reklamation/ Claim Reparatur/ Repair
 Elektroaltgerät/ Waste Electrical & Electronic Equipment (WEEE)
 andere/ other

bitte spezifizieren/ please specify

Ist das Gerät möglicherweise kontaminiert?/ Could the equipment be contaminated?

- Nein, da das Gerät nicht mit gesundheitsgefährdenden Stoffen betrieben wurde./ No, because the device was not operated with hazardous substances.
 Nein, da das Gerät ordnungsgemäß gereinigt und dekontaminiert wurde./ No, because the device has been properly cleaned and decontaminated.
 Ja, kontaminiert mit:/ Yes, contaminated with:



explosiv/
explosive



entzündlich/
flammable



brandfördernd/
oxidizing



komprimierte
Gase/
compressed
gases



ätzend/
caustic



giftig,
Lebensgefahr/
poisonous, risk
of death



gesundheitsge-
fährdend/
harmful to
health



gesund-
heitsschädlich/
health hazard



umweltge-
fährdend/
environmental
hazard

Bitte Sicherheitsdatenblatt beilegen!/ Please enclose safety data sheet!

Das Gerät wurde gespült mit:/ The equipment was purged with:

Diese Erklärung wurde korrekt und vollständig ausgefüllt und von einer dazu befugten Person unterschrieben. Der Versand der (dekontaminierten) Geräte und Komponenten erfolgt gemäß den gesetzlichen Bestimmungen.

This declaration has been filled out correctly and completely, and signed by an authorized person. The dispatch of the (decontaminated) devices and components takes place according to the legal regulations.

Falls die Ware nicht gereinigt, also kontaminiert bei uns eintrifft, muss die Firma Bühler sich vorbehalten, diese durch einen externen Dienstleister reinigen zu lassen und Ihnen dies in Rechnung zu stellen.

Should the goods not arrive clean, but contaminated, Bühler reserves the right, to commission an external service provider to clean the goods and invoice it to your account.

Firmenstempel/ Company Sign

Datum/ Date

rechtsverbindliche Unterschrift/ Legally binding signature



Vermeiden von Veränderung und Beschädigung der einzusendenden Baugruppe

Die Analyse defekter Baugruppen ist ein wesentlicher Bestandteil der Qualitätssicherung der Firma Bühler Technologies GmbH. Um eine aussagekräftige Analyse zu gewährleisten muss die Ware möglichst unverändert untersucht werden. Es dürfen keine Veränderungen oder weitere Beschädigungen auftreten, die Ursachen verdecken oder eine Analyse unmöglich machen.

Umgang mit elektrostatisch sensiblen Baugruppen

Bei elektronischen Baugruppen kann es sich um elektrostatisch sensible Baugruppen handeln. Es ist darauf zu achten, diese Baugruppen ESD-gerecht zu behandeln. Nach Möglichkeit sollten die Baugruppen an einem ESD-gerechten Arbeitsplatz getauscht werden. Ist dies nicht möglich sollten ESD-gerechte Maßnahmen beim Austausch getroffen werden. Der Transport darf nur in ESD-gerechten Behältnissen durchgeführt werden. Die Verpackung der Baugruppen muss ESD-konform sein. Verwenden Sie nach Möglichkeit die Verpackung des Ersatzteils oder wählen Sie selber eine ESD-gerechte Verpackung.

Einbau von Ersatzteilen

Beachten Sie beim Einbau des Ersatzteils die gleichen Vorgaben wie oben beschrieben. Achten Sie auf die ordnungsgemäße Montage des Bauteils und aller Komponenten. Versetzen Sie vor der Inbetriebnahme die Verkabelung wieder in den ursprünglichen Zustand. Fragen Sie im Zweifel beim Hersteller nach weiteren Informationen.

Einsenden von Elektroaltgeräten zur Entsorgung

Wollen Sie ein von Bühler Technologies GmbH stammendes Elektroprodukt zur fachgerechten Entsorgung einsenden, dann tragen Sie bitte in das Feld der RMA-Nr. „WEEE“ ein. Legen Sie dem Altgerät die vollständig ausgefüllte Dekontaminierungserklärung für den Transport von außen sichtbar bei. Weitere Informationen zur Entsorgung von Elektroaltgeräten finden Sie auf der Webseite unseres Unternehmens.

Avoiding alterations and damage to the components to be returned

Analysing defective assemblies is an essential part of quality assurance at Bühler Technologies GmbH. To ensure conclusive analysis the goods must be inspected unaltered, if possible. Modifications or other damages which may hide the cause or render it impossible to analyse are prohibited.

Handling electrostatically conductive components

Electronic assemblies may be sensitive to static electricity. Be sure to handle these assemblies in an ESD-safe manner. Where possible, the assemblies should be replaced in an ESD-safe location. If unable to do so, take ESD-safe precautions when replacing these. Must be transported in ESD-safe containers. The packaging of the assemblies must be ESD-safe. If possible, use the packaging of the spare part or use ESD-safe packaging.

Fitting of spare parts

Observe the above specifications when installing the spare part. Ensure the part and all components are properly installed. Return the cables to the original state before putting into service. When in doubt, contact the manufacturer for additional information.

Returning old electrical appliances for disposal

If you wish to return an electrical product from Bühler Technologies GmbH for proper disposal, please enter "WEEE" in the RMA number box. Please attach the fully completed decontamination declaration form for transport to the old appliance so that it is visible from the outside. You can find more information on the disposal of old electrical appliances on our company's website.

