



13 Anlage zur
 14 EU-Baumusterprüfbescheinigung

BVS 09 ATEX E 020
Nachtrag 2

15 Beschreibung des Produktes

15.1 Gegenstand und Typ

Durchfluss-Messumformer Typ MID-EX-G*****
 Der Typenschlüssel der Geräteausführung Typ MID-EX-GC***** umfasst nur 8 variable Stellen.
 Anstelle der *** werden in der vollständigen Benennung Buchstaben oder Ziffern eingefügt,
 die die folgenden unterschiedlichen Ausführungen kennzeichnen:

MID-EX-G * * * * * * * *

<u>Position 1: Geräteausführung</u>							
C	Zum Anschluss an ein externes Auswerte- und Anzeigegerät (COMBA-EX)						
L	Messumformer mit integriertem Signalausgang						
<u>Position 2 bis 7: Keine eigensicherheitsrelevante Bedeutung</u>							
<u>Position 8: Elektrischer Anschluss</u>							
A	Klemmen mit einer Kabelverschraubung						
B	Klemmen mit zwei Kabelverschraubungen						
C	Steckverbinder BN4160						
D	Steckverbinder BN4160 + Klemmen mit einer Kabelverschraubung						
E	Steckverbinder Typ ME2A*						
F	Steckverbinder Typ ME2A* + Klemmen mit einer Kabelverschraubung						
G	Steckverbinder Serie 845, Größe 1						
H	Steckverbinder Serie 845, Größe 1 + Klemmen mit einer Kabelverschraubung						
J	Steckverbinder Serie 845, Größe 2						
K	Steckverbinder Serie 845, Größe 2 + Klemmen mit einer Kabelverschraubung						
L	Steckverbinder Typ SKK24M						
M	Steckverbinder Typ SKK24M + Klemmen mit einer Kabelverschraubung						
N	Steckverbinder Typ G4A5M						
O	Steckverbinder Typ G4A5M + Klemmen mit einer Kabelverschraubung						
P	M12-Rundsteckverbinder (5-polig)						
R	M12-Rundsteckverbinder (5-polig) + Klemmen mit einer Kabelverschraubung						
S	Steckverbinder Typ SKK45M						
T	Steckverbinder Typ SKK45M + Klemmen mit einer Kabelverschraubung						
<u>Position 9: Versorgungsspannung (nur Typ MID-EX-GL*****)</u>							
1	max. 13,5 V						
<u>Position 10: Ausgangsfunktion (nur Typ MID-EX-GL*****)</u>							
A	Frequenzausgang						
B	Stromausgang						
<u>Position 11: Ausgangssignal (nur Typ MID-EX-GL*****)</u>							
1	5-15 Hz						
2	4-20 mA						
<u>Position 12: Potenzialtrennung (nur Typ MID-EX-GL*****)</u>							
A	Ausgang nicht potenzialgetrennt						
B	Ausgang potenzialgetrennt						





15.3 Kenngrößen

15.3.1 Versorgungsstromkreis

Typ	Durchfluss-Messumformer			Elektrischer Anschluss		
				Steckverbinderbuchse		Klemmen
				Nr.	Anschluss	KL
MID-EX-GL *****A1***, MID-EX-GL *****B1***, MID-EX-GL *****D1***, MID-EX-GL *****F1***, MID-EX-GL *****H1***, MID-EX-GL *****K1***, MID-EX-GL *****M1***, MID-EX-GL *****O1***, MID-EX-GL *****R1***, MID-EX-GL *****T1***				—	—	1.1 – 1.2
MID-EX-GL *****C1***				1	7 – 5	—
MID-EX-GC *****C				1	7 – 5	—
MID-EX-GC *****E, MID-EX-GL *****E1***, MID-EX-GL *****N1***				1	3 – 4	—
MID-EX-GC *****L, MID-EX-GC *****N, MID-EX-GC *****S, MID-EX-GL *****G1***, MID-EX-GL *****J1***, MID-EX-GL *****L1***				1	1 – 2	—
MID-EX-GL *****P1***				1	2 – 3	—
MID-EX-GL *****S1***				1	1 – 4	—

Maximale Eingangsspannung U_i DC 13,5 V
 Maximaler Eingangsstrom I_i 2,5 A
 Maximale innere Kapazität C_i 36 nF
 Maximale innere Induktivität L_i vernachlässigbar

15.3.2 Signalausgang

15.3.2.1 Frequenzgang, 5 – 15 Hz (nur MID-EX-GL *****)

Typ	Durchfluss-Messumformer			Elektrischer Anschluss		
				Steckverbinderbuchse		Klemmen
				Nr.	Anschluss	KL
MID-EX-GL *****A1A1B, MID-EX-GL *****B1A1B				—	—	2.1 – 2.2
MID-EX-GL *****C1A1A				1	4 *)	—
MID-EX-GL *****D1A1B, MID-EX-GL *****P1A1B, MID-EX-GL *****R1A1B				1	4 – 5	—
MID-EX-GL *****E1A1B, MID-EX-GL *****F1A1B, MID-EX-GL *****N1A1B, MID-EX-GL *****O1A1B				1	1 – 2	—
MID-EX-GL *****G1A1A				1	3 *)	—
MID-EX-GL *****H1A1B				1	3 – 2	—
MID-EX-GL *****J1A1B, MID-EX-GL *****K1A1B, MID-EX-GL *****L1A1B, MID-EX-GL *****M1A1B				1	3 – 4	—
MID-EX-GL *****S1A1B, MID-EX-GL *****T1A1B				1	2 – 3	—

*) : gemeinsame Masse mit der Versorgungsspannung aus 4.1

Maximale Eingangsspannung U_i DC 13,5 V
 Innere wirksame Kapazität C_i vernachlässigbar
 Innere wirksame Induktivität L_i vernachlässigbar

15.3.2.2 Stromausgang (nur MID-EX-GL*****)

Typ	Elektrischer Anschluss		
	Steckverbinderbuchse		Klemmen
	Nr.	Anschluss	KL
MID-EX-GL*****A1B2B, MID-EX-GL*****B1B2B	—	—	2.1 – 2.2
MID-EX-GL*****E1B2B, MID-EX-GL*****F1B2B, MID-EX-GL*****N1B2B, MID-EX-GL*****O1B2B	1	1 – 2	—
MID-EX-GL*****G1B2A	1	3 *)	—
MID-EX-GL*****H1B2B	1	3 – 2	—
MID-EX-GL*****J1B2B, MID-EX-GL*****K1B2B, MID-EX-GL*****L1B2B, MID-EX-GL*****M1B2B	1	3 – 4	—
MID-EX-GL*****P1B2B, MID-EX-GL*****R1B2B	1	4 – 5	—
MID-EX-GL*****S1B2B, MID-EX-GL*****T1B2B	1	2 – 3	—

*) : gemeinsame Masse mit der Versorgungsspannung aus 4.1

Maximale Eingangsspannung	U_i	DC 13,5 V
Innere wirksame Kapazität	C_i	vernachlässigbar
Innere wirksame Induktivität	L_i	vernachlässigbar

15.3.2.3 Serieller Ausgang (nur MID-EX-GC*****)

Durchfluss-Messumformer	Elektrischer Anschluss
Typ	Anschluss an der Steckverbinderbuchse
MID-EX-GC*****C	4*)
MID-EX-GC*****E	1*)
MID-EX-GC*****L, MID-EX-GC*****N, MID-EX-GC*****S	3*)

*) : gemeinsame Masse mit der Versorgungsspannung aus 4.1

Maximale Eingangsspannung	U_i	DC 13,5 V
Maximaler Eingangsstrom	I_i	2,5 A
Maximale innere Kapazität	C_i	36 nF
Maximale innere Induktivität	L_i	vernachlässigbar

15.3.3 Ambient temperature range $-20\text{ °C} \leq T_a \leq +60\text{ °C}$

16 Prüfprotokoll

BVS PP 09.1012 EU, Stand 20.02.2017

17 Besondere Bedingungen für die Verwendung

Keine

18 Wesentliche Gesundheits- und Sicherheitsanforderungen

Die wesentlichen Gesundheits- und Sicherheitsanforderungen sind durch die unter Abschnitt 9 gelisteten Normen abgedeckt.

19 Zeichnungen und Unterlagen

Die Zeichnungen und Unterlagen sind in dem vertraulichen Prüfprotokoll gelistet.



Translation

1

EU-Type Examination Certificate Supplement 2

Change to Directive 2014/34/EU

2

Equipment intended for use in potentially explosive atmospheres
Directive 2014/34/EU

3

EU-Type Examination Certificate Number: **BVS 09 ATEX E 020**

4

Product: **Flow transducer type MID-EX-G*******

5

Manufacturer: **Kirchgaesser Industrieelektronik GmbH**

6

Address: **Am Rosenbaum 6, 40882 Ratingen, Germany**

7

This supplementary certificate extends EC-Type Examination Certificate No. BVS 09 ATEX E 020 to apply to products designed and constructed in accordance with the specification set out in the appendix of the said certificate but having any acceptable variations specified in the appendix to this certificate and the documents referred to therein.

8

DEKRA EXAM GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential Report No. BVS PP 09.1012 EU.

9

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012 + A11:2013 General requirements
EN 60079-11:2012 Intrinsic Safety "i"

Except in respect of those requirements listed under item 18 of the appendix.

10

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Special Conditions for Use specified in the appendix to this certificate.

11

This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12

The marking of the product shall include the following:

 **I M1 Ex ia I Ma**

DEKRA EXAM GmbH
Bochum, 2017-02-20

Signed: Jörg Koch

Certifier

Signed: Dr. Franz Eickhoff

Approver





13 **Appendix**
 14 **EU-Type Examination Certificate**

**BVS 09 ATEX E 020
 Supplement 2**

15 **Product description**

15.1 **Subject and type**

Flow transducer type MID-EX-G*****

The type key of the device type MID-EX-GC ***** comprises only 8 variable digits.

Instead of the *** in the complete denomination letters or numerals will be inserted which characterize the following modifications:

MID-EX-G * * * * * * * *

Position 1: Device version

- C For connection to an external evaluation and display device (COMBA-EX)
- L Transmitter with integrated signal output

Position 2 to 7: Not Ex relevant

Position 8: Electrical connection

- A Terminals with a cable gland
- B Terminals with two cable glands
- C Connector BN4160
- D Connector BN4160 + terminals with a cable gland
- E Connector type ME2A*
- F Connector type ME2A* + terminals with a cable gland
- G Connector series 845, size 1
- H Connector series 845, size 1 + terminals with a cable gland
- J Connector series 845, size 2
- K Connector series 845, size 2 + Terminals with a cable gland
- L Connector type SKK24M
- M Connector type SKK24M + Terminals with a cable gland
- N Connector type G4A5M
- O Connector type G4A5M + Terminals with a cable gland
- P M12- M12 circular connector (5-pin)
- R M12- M12 circular connector (5-pin)+ Terminals with a cable gland
- S Connector type SKK45M
- T Connector type SKK45M + Terminals with a cable gland

Position 9: Supply voltage (type MID-EX-GL***** only)

- 1 max. 13.5 V

Position 10: Output function (type MID-EX-GL***** only)

- A Frequency output
- B Current output

Position 11: Output signal (type MID-EX-GL***** only)

- 1 5-15 Hz
- 2 4-20 mA

Position 12: Electrical isolation (type MID-EX-GL***** only)

- A Output not isolated
- B Output isolated



15.3 Parameters

15.3.1 Power supply circuit

Flow transducer type	Electrical connection		
	Connector socket		Terminals
	No.	Connection	KI
MID-EX-GL *****A1***, MID-EX-GL *****B1***, MID-EX-GL *****D1***, MID-EX-GL *****F1***, MID-EX-GL *****H1***, MID-EX-GL *****K1***, MID-EX-GL *****M1***, MID-EX-GL *****O1***, MID-EX-GL *****R1***, MID-EX-GL *****T1***	—	—	1.1 – 1.2
MID-EX-GL *****C1***	1	7 – 5	—
MID-EX-GC*****C	1	7 – 5	—
MID-EX-GC*****E, MID-EX-GL *****E1***, MID-EX-GL *****N1***	1	3 – 4	—
MID-EX-GC*****L, MID-EX-GC*****N, MID-EX-GC*****S, MID-EX-GL *****G1***, MID-EX-GL *****J1***, MID-EX-GL *****L1***	1	1 – 2	—
MID-EX-GL *****P1***	1	2 – 3	—
MID-EX-GL *****S1***	1	1 – 4	—

Maximum input voltage	U_i	DC	13.5	V
Maximum input current	I_i		2.5	A
Effective internal capacitance	C_i		36	nF
Effective internal inductance	L_i			negligible

15.3.2 Signal output

15.3.2.1 Frequency output, 5 – 15 Hz (MID-EX-GL ***** only)

Flow transducer type	Electrical connection		
	Connector socket		Terminals
	No.	Connection	KI
MID-EX-GL *****A1A1B, MID-EX-GL *****B1A1B	—	—	2.1 – 2.2
MID-EX-GL *****C1A1A	1	4 *)	—
MID-EX-GL *****D1A1B, MID-EX-GL *****P1A1B, MID-EX-GL *****R1A1B	1	4 – 5	—
MID-EX-GL *****E1A1B, MID-EX-GL *****F1A1B, MID-EX-GL *****N1A1B, MID-EX-GL *****O1A1B	1	1 – 2	—
MID-EX-GL *****G1A1A	1	3 *)	—
MID-EX-GL *****H1A1B	1	3 – 2	—
MID-EX-GL *****J1A1B, MID-EX-GL *****K1A1B, MID-EX-GL *****L1A1B, MID-EX-GL *****M1A1B	1	3 – 4	—
MID-EX-GL *****S1A1B, MID-EX-GL *****T1A1B	1	2 – 3	—

*) : Common ground with the supply voltage from 4.1.

Maximum input voltage	U_i	DC	13.5	V
Effective internal capacitance	C_i			negligible
Effective internal inductance	L_i			negligible



15.3.2.2 Current output (MID-EX-GL***** only)

Flow transducer type	Electrical connection		
	Connector socket		Terminals
	No.	Connection	KI
MID-EX-GL*****A1B2B, MID-EX-GL*****B1B2B	—	—	2.1 – 2.2
MID-EX-GL*****E1B2B, MID-EX-GL*****F1B2B, MID-EX-GL*****N1B2B, MID-EX-GL*****O1B2B	1	1 – 2	—
MID-EX-GL*****G1B2A	1	3 *)	—
MID-EX-GL*****H1B2B	1	3 – 2	—
MID-EX-GL*****J1B2B, MID-EX-GL*****K1B2B, MID-EX-GL*****L1B2B, MID-EX-GL*****M1B2B	1	3 – 4	—
MID-EX-GL*****P1B2B, MID-EX-GL*****R1B2B	1	4 – 5	—
MID-EX-GL*****S1B2B, MID-EX-GL*****T1B2B	1	2 – 3	—

*) : Common ground with the supply voltage from 4.1.

Maximum input voltage	U_i	DC	13.5	V
Effective internal capacitance	C_i		negligible	
Effective internal inductance	L_i		negligible	

15.3.2.3 Serial output (MID-EX-GC***** only)

Flow transducer type	Electrical connection Connection to the connector socket
MID-EX-GC*****C	4*)
MID-EX-GC*****E	1*)
MID-EX-GC*****L, MID-EX-GC*****N, MID-EX-GC*****S	3*)

*) : Common ground with the supply voltage from 4.1.

Maximum input voltage	U_i	DC	13.5	V
Maximum input current	I_i		2.5	A
Effective internal capacitance	C_i		36	nF
Effective internal inductance	L_i		negligible	

15.3.3 Ambient temperature range -20 °C ≤ T_a ≤ +60 °C



- 16 **Report Number**
BVS PP 09.1012 EU, as of 2017-02-20
- 17 **Special Conditions for Use**
None
- 18 **Essential Health and Safety Requirements**
The Essential Health and Safety Requirements are covered by the standards listed under item 9.
- 19 **Drawings and Documents**
Drawings and documents are listed in the confidential report.

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

DEKRA EXAM GmbH
Bochum, dated 2017-02-20
BVS-Hil/Schu/Nu A 20160853



Certifier



Approver

