



Translation

(1) **EC-Type Examination Certificate**

- (2) **- Directive 94/9/EC -**
Equipment and protective systems intended for use
in potentially explosive atmospheres

(3) **BVS 04 ATEX E 082 X**

(4) **Equipment: Isolating Repeater Loop Powered type 9167/**-11-00**

(5) **Manufacturer: R. STAHL Schaltgeräte GmbH**

(6) **Address: D 74638 Waldenburg**

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the schedule to this type examination certificate.

(8) The certification body of EXAM BBG Prüf- und Zertifizier GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.
The examination and test results are recorded in the test and assessment report BVS PP 04.2055 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:
EN 50014:1997+A1-A2 General requirements
EN 50020:2002 Intrinsic safety 'i'
EN 50284:1999 Equipment Group II Category 1G
EN 50021:1999 Type of protection 'n'

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate

(12) The marking of the equipment shall include the following:

 **II (1)GD [EEx ia] IIC/IIB** and
II 3G EEx nA II T4

EXAM BBG Prüf- und Zertifizier GmbH

Bochum, dated 14. April 2004

Signed: Dr. Jockers

Signed: Dr. Wittler

Certification body

Special services unit

(13) Appendix to

(14) **EC-Type Examination Certificate**

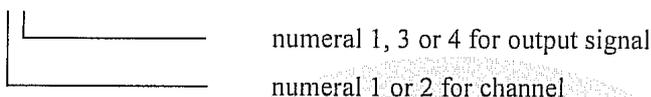
BVS 04 ATEX E 082 X

(15) 15.1 Subject and type

Isolating repeater loop powered type 9167/**-11-00

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

Type 9167/**-11-00



15.2 Description

The isolating repeater, which will be installed outside the hazardous area or in an enclosure which is in accordance with EN 50021, is used for power supply of intrinsically safe apparatus.

15.3 Parameters

15.3.1 non-intrinsically safe signal circuits

Analog input circuits

Input 1: terminals 1 and 2

Input 2: terminals 5 and 6

Nominal current

max. voltage U_m AC 0/4 - 20 mA

253 V

15.3.2 Intrinsically safe output circuits type of protection

Terminals channel 1: 10 (+) and 11 (-)

Terminals channel 2: 14 (+) and 15 (-), only for type 9167/2*-11-00

15.3.2.1 Type 9167/*1-11-00

Values for each channel

Voltage U_o DC 15,7 V

Current I_o 60 mA

Power P_o 233 mW

linear output characteristic

effective internal capacitance C_i negligible

effective internal inductance L_i negligible

The values for the external capacitances C_o and inductances L_o are shown in the following table:

	IIB	IIC
L_o	41 mH	10 mH
C_o	2950 nF	487 nF

15.3.2.2 Ttype 9167/*3-11-00

Values for each channel

Voltage	U _o	DC	25	V
Current	I _o		99	mA
Power	P _o		613	mW
linear output characteristic				
effective internal capacitance	C _i	negligible		
effective internal inductance	L _i	negligible		

The values for the external capacitances Co and inductances Lo are shown in the following table:

	IIB	IIC
Lo	11 mH	2,5 mH
Co	840 nF	110 nF

15.3.2.3 Type 9167/*4-11-00

Values for each channel

Voltage	U _o	DC	18,8	V
Current	I _o		107	mA
Power	P _o		503	mW
linear output characteristic				
effective internal capacitance	C _i	negligible		
effective internal inductance	L _i	negligible		

The values for the external capacitances Co and inductances Lo are shown in the following table:

	IIB	IIC
Lo	12 mH	3 mH
Co	1620 nF	266 nF

15.3.4 Ambient temperature range

 T_a -20 °C up to +70 °C

 (16) Test and assessment report

BVS PP 04.2055 EG as of 14.04.2004

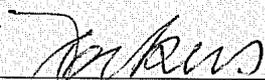
 (17) Special conditions for safe use

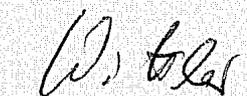
For installation of the isolating repeater in areas, where category 3G equipment is required, the module has to be mounted in an enclosures which is in accordance with EN 50021.

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.

44809 Bochum, 14.04.2004

BVS-Schu/Mi A 20040102

EXAM BBG Prüf- und Zertifizier GmbH

 Certification body


 Special services unit



Translation

1st Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate BVS 04 ATEX E 082 X

Equipment: Isolating Repeater Loop Powered type 9167/**-11-*0
Manufacturer: R. STAHL Schaltgeräte GmbH
Address: 74638 Waldenburg, Germany

Description

The isolating repeater has been assessed in acc. with the standards EN 60079-** and new variation type 9167/**-11-50 can be manufactured.

The Essential Health and Safety Requirements of the modified equipment are assured by compliance with:

EN 60079-0:2006 General requirements
EN 60079-11:2007 Intrinsic safety 'i'
EN 60079-15:2005 Type of protection 'n'
EN 60079-26:2004 Equipment Group II Category 1G
EN 61241-0:2006 General requirements
EN 61241-11:2004 Protection by intrinsic safety 'iD'

The marking of the equipment shall include the following:



II 3 (1) G Ex nA nC [ia] IIC T4
II (1) D [Ex iaD]
II 3G Ex nA nC II T4

for type 9167/**-11-00

for type 9167/**-11-50

Special conditions for safe use

For installation of the isolating repeater in areas, where category 3 equipment is required, the module has to be mounted in an enclosure which is in accordance with EN 60079-15.

Parameters

- 1 Non-intrinsically safe signal circuits
 Analog input circuits
 Input 1: terminals 1 and 2
 Input 2: terminals 5 and 6

Nominal current			0/4 - 20	mA
Max. voltage	Um	AC	253	V

- 2 Output circuits
 Terminals channel 1: 10 (+) and 11 (-)
 Terminals channel 2: 14 (+) and 15 (-)

2.1 Intrinsically safe circuits level of protection Ex ia and Ex iaD

2.1.1 Type 9167/*1-11-00

Values for each channel

Voltage	Uo	DC	15.7	V
Current	Io		60	mA
Power	Po		233	mW
Linear output characteristic				
Internal capacitance	Ci		negligible	
Internal inductance	Li		negligible	

The values for the external capacitances Co and inductances Lo are shown in the following table:

	IIB		IIC	
Lo	40	mH	10	mH
Co	2950	nF	487	nF

As values for the external inductance and capacitance for dust application the values of Group IIB are valid.

2.1.2 Type 9167/*3-11-00

Values for each channel

Voltage	Uo	DC	25	V
Current	Io		99	mA
Power	Po		613	mW
Linear output characteristic				
Internal capacitance	Ci		negligible	
Internal inductance	Li		negligible	

The values for the external capacitances Co and inductances Lo are shown in the following table:

	IIB		IIC	
Lo	11	mH	2,5	mH
Co	840	nF	110	nF

As values for the external inductance and capacitance for dust application the values of Group IIB are valid.

2.1.3 Type 9167/*4-11-00

Values for each channel

Voltage	Uo	DC	18,8	V
Current	Io		107	mA
Power	Po		503	mW
Linear output characteristic				
Internal capacitance	Ci		negligible	
Internal inductance	Li		negligible	

The values for the external capacitances Co and inductances Lo are shown in the following table:

	IIB		IIC	
Lo	12	mH	3	mH
Co	1620	nF	266	nF

As values for the external inductance and capacitance for dust application the values of Group IIB are valid.

2.2 Non-intrinsically safe circuits

2.2.1 Type 9167/*1-11-50

No load voltage	DC	15.7	V
Short circuit current		≤ 60	mA

2.2.2 Type 9167/*3-11-50

No load voltage	DC	25	V
Short circuit current		≤ 60	mA

2.2.3 Type 9167/*4-11-50

No load voltage	DC	18.8	V
Short circuit current		≤ 60	mA

3 Ambient temperature range

Ta	-20 °C up to +70 °C
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Test and assessment report

BVS PP 04.2055 EG as of 15.11.2007

DEKRA EXAM GmbH

Bochum, dated 15.November 2007

Signed:

Dr. Jockers

Certification body

Signed:

Dr. Eickhoff

Special services unit

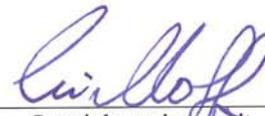
We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 15. November 2007
BVS-Schu/Sz A 20070707

DEKRA EXAM GmbH



Certification body



Special services unit

EG-Konformitätserklärung
EC-Declaration of Conformity
CE-Déclaration de Conformité



Wir (we; nous)

R. STAHL Schaltgeräte GmbH, Am Bahnhof 30, 74638 Waldenburg, Germany

9167/..-11-0

erklären in alleiniger Verantwortung, dass das Produkt
hereby declare in our sole responsibility, that the product
déclarons de notre seule responsabilité, que le produit

Trennübertrager ohne Hilfsenergie
Isolating repeater loop powered
Isolateur sans alimentation

mit der EG-Baumusterprüfbescheinigung:
(under; EC-Type Examination Certificate:
avec) Attestation d'examen CE de type:

BVS 04 ATEX E 082 X

auf das sich diese Erklärung bezieht, mit den folgenden Normen oder normativen Dokumenten übereinstimmt

which is the subject of this declaration, is in conformity with the following standards or normative documents

auquel cette déclaration se rapporte, est conforme aux normes ou aux documents normatifs suivants

Bestimmungen der Richtlinie
terms of the directive
prescription de la directive

Nummer sowie Ausgabedatum der Norm
Number and date of issue of the standard
Numéro ainsi que date d'émission des normes

94/9/EG: ATEX-Richtlinie
94/9/EC: ATEX Directive
94/9/CE: Directive ATEX

EN 60079-0: 2006
 EN 60079-11: 2007
 EN 60079-15: 2005
 EN 60079-26: 2004
 EN 61241-0: 2006
 EN 61241-11: 2006

2004/108/EG: EMV-Richtlinie
2004/108/EC: EMC Directive
2004/108/CE: Directive CEM

EN 61326-1: 2006

Qualitätssicherung Produktion:
Production Quality Assessment:
Assurance Qualité Production:

PTB 96 ATEX Q006-4

Kenn-Nr. der benannten Stelle / Notified Body number / N° de l'organisme de certification: 0102

Waldenburg, 03.03.2008

Ort und Datum
Place and date
lieu et date

i.v.
J.-P. Rückgauer
Leiter Entwicklung und Technik
Director Design and Technology
Directeur Développement et Technique

i.v.
Dr. S. Jung
Leiter Qualitätsmanagement
Director Quality Management Dept.
Directeur Dept. Assurance de Qualité