EXAM
BBG Prüf- und Zertifizier GmbH

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
Certification body

Signed: Dr. Wittler
Special services unit

Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 201 172-3947 Fax +49 201 172-3948
(until 31.05.2003: Deutsche Montan Technologie GmbH Am Technologiepark 1 45307 Essen)

(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

numeral 1, 3 or 4 for output signal

numeral 1 or 2 for channel

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			0/4 - 20	mA
max. voltage	Um	AC	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	Uo	DC	15,7	V
Current	Io		60	mA
Power	Po		233	mW
linear output characteristic				
effective internal capacitance	Ci	neglgible		
effective internal inductance	Li	neglgible		

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

	IIB	IIC
Lo	41 mH	10 mH
Co	2950 nF	487 nF

Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 201 172-3947 Fax +49 201 172-3948
(until 31.05.2003: Deutsche Montan Technologie GmbH Am Technologiepark 1 45307 Essen)

15.3.2.2 Ttype 9167/*3-11-00

Values for each channel

Voltage	Uo	DC	25	V
Current	Io		99	mA
Power	Po		613	mW
linear output characteristic				
effective internal capacitance	Ci	neglgible		
effective internal inductance	Li	neglgible		

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	Uo	DC	18,8	V
Current	Io		107	mA
Power	Po		503	mW
linear output characteristic				
effective internal capacitance	Ci	neglgible		
effective internal inductance	Li	neglgible		

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 Ta -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

Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 201 172-3947 Fax +49 201 172-3948
(until 31.05.2003: Deutsche Montan Technologie GmbH Am Technologiepark 1 45307 Essen)

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 for type 9167/**-11-00
II (1) D [Ex iaD]
II 3G Ex nA nC II T4 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 enclosures which is in accordance with EN 60079-15.

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com
(until 31.03.2007 EXAM BBG Prüf- und Zertifizier GmbH)

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.

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com
(until 31.03.2007 EXAM BBG Prüf- und Zertifizier GmbH)

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

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

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com
(until 31.03.2007 EXAM BBG Prüf- und Zertifizier GmbH)

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

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com
(until 31.03.2007 EXAM BBG Prüf- und Zertifizier GmbH)

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 *(under; avec)* **EG-Baumusterprüfbescheinigung:**
EC-Type Examination Certificate:
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 Qualitée 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