



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:  issue No.:

Status:

Date of Issue: **2010-07-12** Page 1 of 3

Applicant: **R. STAHL Schaltgeräte GmbH**  
Am Bahnhof 30  
74638 Waldenburg  
Germany

Electrical Apparatus: **Field device coupler type 9411/34-3\*\*-\*0**  
*Optional accessory:*

Type of Protection: **Equipment protection by intrinsic safety "i", Construction, test and Marking of Type of Protection "n" electrical apparatus, Fieldbus intrinsically safe concept (FISCO)**

Marking: **Ex nAc [ic] IIC T4**

*Approved for issue on behalf of the IECEx  
Certification Body:* H.-Ch. Simanski

*Position:* Head of Certification Body

*Signature:*  
*(for printed version)*

\_\_\_\_\_

*Date:*

\_\_\_\_\_

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**DEKRA EXAM GmbH**  
Dinnendahlstrasse 9  
44809 Bochum  
Germany





# IECEX Certificate of Conformity

Certificate No.: IECEx BVS 10.0061X

Date of Issue: 2010-07-12

Issue No.: 0

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Manufacturer: **R. STAHL Schaltgeräte GmbH**  
Am Bahnhof 30  
74638 Waldenburg  
**Germany**

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2007-10</b> Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
<b>IEC 60079-11 : 2006</b> Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-15 : 2005-03</b> Edition: 3	Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and Marking of Type of Protection "n" electrical apparatus
<b>IEC 60079-27 : 2008</b> Edition: 2.0	Explosive atmospheres - Part 27: Fieldbus intrinsically safe concept (FISCO)

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

[DE/BVS/ExTR10.0082/00](#)

Quality Assessment Report:

[DE/BVS/QAR10.0002/00](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

#### Description:

The Field Device Coupler (FDC) serves for coupling between a fieldbus trunk line (TRUNK) and 4 resp. 8 spur lines (SPUR).

The 4 or 8 output circuits comply with the FISCO Model for connection of field devices with Foundation Fieldbus H1 or Profibus PA interface with IEC 61158-2 topology. The devices are powered from the incoming fieldbus.

The FDC with type nomenclature 9411/34-3\*a-\*0, where a = 1 for a plastic enclosure according to IECEx PTB 06.0090 or a = 2 for metal enclosure according to IECEx PTB 06.0079 is assembled in the respective enclosure.

The FDC with type nomenclature 9411/34-3\*0-\*0 has to be assembled into an enclosure in acc. with IEC 60079-15.

#### Type designation:

See Annex

#### Electrical data:

See Annex

### CONDITIONS OF CERTIFICATION: YES as shown below:

The Field Device Coupler (FDC) with type nomenclature 9411/34-3\*0-\*0 has to be assembled into an enclosure in acc. with IEC 60079-15.



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**Annex**  
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**Type designation:**

Field Device Coupler	Type 9411 / 3 4 - 3 * * - * 0
	3
	4
Device Zone 2	3
Design: Screw	1
Cage clamp	2
No Enclosure	0
Plastic enclosure	1
Metal enclosure	2
Number of channels (SPURs):	4 3
	8 4
	0

**Electrical data**

- 1 Use in accordance with type of protection Ex nAc
  - 1.1 Input (terminals TRUNK IN and TRUNK OUT, +, -)
 

Nominal voltage	$U_{in}$	DC	24	V
Range of nominal voltage		DC	9-32	V
Nominal current			2	A
  - 1.2 Output circuits (terminals SPUR 1 up to 4 or 1 up to 8: +, -, S)
 

Nominal voltage	$U_{n\ out} = U_{in}$	DC	9-32	V
Nominal current	$I_n$		41	mA
- 2 Use in accordance with type of protection Ex nAc [ic]
 

Supply from a circuit with voltage limitation in accordance with type of protection Ex ic

  - 2.1 Input terminals TRUNK IN and TRUNK OUT, +, -)
 

Input voltage	$U_i$	DC	$\leq 25$	V
Nominal current			2	A
  - 2.2 Output circuits type of protection Ex ic (terminals SPUR 1 up to 4 or 1 up to 8: +, -, S)
 

Voltage	$U_o = U_i$	DC	$\leq 25$	V
Current	$I_o$		54	mA
Power	$P_o$		1.35	W

Rectangular output characteristic

For maximum values of external inductance and capacitance see the following table:

	IIC
Lo [ $\mu$ H]	270
Co [nF]	80



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- 3 Use in accordance with type of protection Ex nAc [ic] and FISCO
- 3.1 Input (terminals TRUNK IN and TRUNK OUT, +, -)  
Input voltage  $U_i$  DC 17.5 V
- 3.2 Output circuits in acc. with IEC 60079-27 FNICO (terminals SPUR 1 up to 4 or 1 up to 8: +, -, S)  
Voltage  $U_o = U_i$  DC 17.5 V  
Current  $I_o$  54 mA  
Rectangular output characteristic

These output circuits constitute a FISCO Power Supply for connection to field bus systems as per IEC 60079-27. The external cable used for this application have to be in accordance with the specification of IEC 60079-27 in respect to its design (cable parameter).

- 4 Ambient temperature range  $T_a$   
for type 9411/34-3\*0-\*0 -40 °C up to +75 °C  
for type 9411/34-3\*1-\*0 and 9411/34-3\*2-\*0 -20 °C up to +70 °C