



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

Certificate No.: **IECEX PTB 08.0057X** issue No.:2

Status: **Current**

Certificate history:
Issue No. 2 (2010-7-20)
Issue No. 1 (2009-5-18)
Issue No. 0 (2008-12-1)

Date of Issue: **2010-07-20** Page 1 of 4

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

Electrical Apparatus: **Safety barrier type 9002**
Optional accessory:

Type of Protection: **intrinsic safety 'i', non sparking 'nA'**

Marking: **Ex nA [ia Ga] IIC T4 Gc AND [Ex ia Da] IIIC**

Approved for issue on behalf of the IECEx Certification Body: Dr.-Ing. U. Johannsmeyer

Position: Department Head "Intrinsic Safety and Safety of Systems"

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:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany





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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:

IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2005-03 Edition: 3	Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and Marking of Type of Protection "n" electrical apparatus
IEC 61241-11 : 2005 Edition: 1	Electrical apparatus for use in the presence of combustible dusts - Part 11: Protection by intrinsic safety 'ID'

*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/PTB/ExTR10.0041/00](#)

Quality Assessment Report:

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



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Safety barrier type 9002/**_**_**_**1

CONDITIONS OF CERTIFICATION: YES as shown below:

no changes



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

see attachment



The Electrical Data of type 9002/22-032-300-111 were - without constructional changes - appended by those for connection to an active intrinsically safe circuit (for example a RS 485 interface) to terminals 3 and 4.

Electrical Data:

non intrinsically safe circuits
(terminals 1 und 2)
thus:

type of protection Non Sparking Ex nA Gc,
safety maximum voltage as an associated apparatus:

$$U_m = 253 \text{ V}$$

intrinsically safe circuit
(terminals 3 und 4)

type of protection Intrinsic Safety Ex ia IIB/IIC Ga,

maximum values:

$$U_o = \pm 3,2 \text{ V}$$

$$I_o = \pm 300 \text{ mA}$$

$$P_o = 120 \text{ mW}$$

$$U_i = \pm 4,2 \text{ V}$$

$$I_i = \pm 150 \text{ mA}$$

$$P_i = 160 \text{ mW}$$

effective internal inductance L_i and capacitance C_i
are negligible small

All circuits are galvanically connected by their reference conductor and to earth.

Additional advice:

An interconnection of the barrier to an interface with active input parameters like above, with respect to permissible inductance L_o and capacitance C_o of the (field) circuit will result in the following values:

	IIC		IIB		
L_o [mH]	0,37	0,1	1,5	0,5	0,1
C_o [μ F]	1,8	3	7,2	11	19

Eventually present internal inductances L_i und capacitances C_i of the interface have to be subtracted.