



(1) EC-TYPE-EXAMINATION CERTIFICATE (Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 02 ATEX 2008



(4) Equipment: Electronic safety barriers type 9004/...-...-...-

(5) Manufacturer: R. STAHL Schaltgeräte GmbH

(6) Address: Am Bahnhof 30, 74638 Waldenburg, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC 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 confidential report PTB Ex 02-21382.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014:1997 + A1 + A2 EN 50020:1994

(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 the 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 (2) G [EEx ib] IIC

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, June 18, 2002

Dr.-Ing. U. Johannsmeyer
Regierungsdirektor



(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 2008

(15) Description of equipment

The electronic safety barriers type 9004/...-...-... are associated apparatus for the purpose of safe decoupling intrinsically safe from non intrinsically safe circuits. They comprise limiting means for voltage limiting with reference to the equipotential bonding connectors and current limiting.

The equipotential bonding connectors are intended to be infallibly connected to the local system of equipotential bonding conductors.

The maximum permissible ambient operating temperature range is $-20^{\circ}\text{C} \leq \delta_a \leq +60^{\circ}\text{C}$.

Electrical Data:

non intrinsically safe circuits

maximum r.m.s. a.c. voltage $U_m=250\text{ V}$

intrinsically safe circuits

type of protection intrinsic safety EEx ib IIB/IIC,
source characteristic rectangular, source data
corresponding to the table below:

Typ	T _a [°C]	U _o [V]	I _o [mA]	P _o [mW]	IIC				IIB				
					Lo / mH	Co / μF	Lo / mH	Co / μF	Lo / mH	Co / μF	Lo / mH	Co / μF	
9004/0.-086-030-001	60	8,6	30	258	Lo / mH	2,5	2,0	1,0	0,2	2,5	2,0	1,0	0,2
					Co / μF	0,79	0,86	1,10	1,70	5,0	5,3	6,4	10,0
9004/0.-086-050-001	60	8,6	50	430	Lo / mH	2,5	2,0	1,0	0,2	2,5	2,0	1,0	0,2
					Co / μF	0,6	0,69	0,94	1,60	4,5	4,9	6,1	10,0
9004/0.-086-100-001	60	8,6	100	860	Lo / mH	2,3	2,0	1,0	0,2	2,5	2,0	1,0	0,2
					Co / μF	0,27	0,32	0,63	1,50	3,4	3,9	5,3	9,7
9004/0.-086-150-001	60	8,6	150	1290	Lo / mH			0,97	0,2	2,5	2,0	1,0	0,2
					Co / μF			0,38	1,3	2,3	3,0	4,6	9,3
9004/0.-168-030-001	60	16,8	30	504	Lo / mH	2,5	2,0	1,0	0,2	2,5	2,0	1,0	0,2
					Co / μF	0,20	0,22	0,26	0,27	1,3	1,4	1,6	1,8
9004/0.-168-050-001	60	16,8	50	840	Lo / mH			0,86	0,2	2,5	2,0	1,0	0,2
					Co / μF			0,16	0,23	1,2	1,3	1,6	1,7
9004/0.-168-100-001	60	16,8	100	1680	Lo / mH						1,6	1,0	0,2
					Co / μF						1,1	1,4	1,5
9004/0.-172-140-001	60	17,2	140	2408	Lo / mH								0,17
					Co / μF								
9004/0.-200-030-001	60	20	30	600	Lo / mH	2,5	2,0	1,0	0,2	2,5	2,0		0,2
					Co / μF	0,079	0,082	0,1	0,17	0,80	0,82		1,0
9004/0.-200-050-001	60	20	50	1000	Lo / mH					2,5	2,0		0,2
					Co / μF					0,68	0,7		0,98
9004/0.-200-095-001	60	20	95	1900	Lo / mH								0,2
					Co / μF								0,88
9004/0.-263-025-001	60	26,3	25	657,5	Lo / mH				0,17	2,5	2,0	1,0	0,2
					Co / μF				0,097	0,33	0,34	0,41	0,64
9004/0.-263-030-001	60	26,3	30	789	Lo / mH					2,5	2,0	1,0	0,2
					Co / μF					0,31	0,33	0,4	0,63

Typ	T _a [°C]	U _o [V]	I _o [mA]	P _o [mW]	IIC				IIB				
					Lo / mH	Co / μF	Lo / mH	Co / μF	Lo / mH	Co / μF	Lo / mH	Co / μF	
9004/0.-263-050-001	60	26,3	50	1315	Lo / mH					1,3	1,0	0,2	
					Co / μF					0,33	0,36	0,61	
9004/0.-280-025-001	60	28	25	700	Lo / mH				2,5	2,0	1,0	0,2	
					Co / μF				0,28	0,3	0,37	0,58	
9004/0.-280-045-001	60	28	45	1260	Lo / mH					1,5	1,0	0,2	
					Co / μF					0,28	0,33	0,56	
9004/0.-315-022-001	60	31,5	22	693	Lo / mH				2,5	2,0	1,0	0,2	
					Co / μF				0,24	0,26	0,31	0,48	
9004/0.-315-025-001	60	31,5	25	787,5	Lo / mH				2,5	2,0	1,0	0,2	
					Co / μF				0,23	0,25	0,31	0,48	
9004/5.-206-030-001	60	20,6	30	618	Lo / mH	2,5	2,0	1,0	0,2	2,5	2,0	0,2	
					Co / μF	0,065	0,072	0,095	0,16	0,72	0,72		0,96
9004/5.-206-050-001	60	20,6	50	1030	Lo / mH					2,5	2,0	1,0	0,2
					Co / μF					0,58	0,58	0,62	0,92
9004/5.-206-085-001	60	20,6	85	1751	Lo / mH						0,37	0,2	
					Co / μF						0,68	0,85	
9004/5.-220-030-001	60	22	30	660	Lo / mH		1,3	1,0	0,2	2,5	2,0	1,0	0,2
					Co / μF		0,073	0,081	0,14	0,55	0,55	0,59	0,84
9004/61-220-035-001	60	22	35	770	Lo / mH				0,05	2,5	2,0	1,0	0,2
					Co / μF					0,165	0,52	0,52	0,57
9004/61-232-028-041	60	23,2	28	649,6	Lo / mH			1,0	0,2	2,5	2,0	1,0	0,2
					Co / μF			0,075	0,13	0,46	0,46	0,52	0,77

$$U_i = 31,5 \text{ V}$$

$$I_i = 40 \text{ mA}$$

the effective internal inductance L_i and capacitance C_i are negligibly small

The intrinsically safe and the non intrinsically safe circuits are galvanically connected together and to the connectors for equipotential bonding via their reference conductors.

(16) Test report PTB Ex 02-21382

(17) Special conditions for safe use

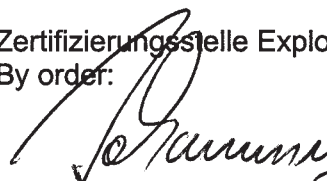
see operating instructions

(18) Essential health and safety requirements

fulfilled by compliance with the standards mentioned above

Zertifizierungsstelle Explosionsschutz

By order:



Dr.-Ing. U. Johannsmeyer
Regierungsdirektor



Braunschweig, June 18, 2002

1. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 2008

(Translation)

Equipment: Electronic Safety barriers, types 9004/...-...-...-...

Marking:  II (2) G [EEx ib] IIC

Manufacturer: R. STAHL Schaltgeräte GmbH

Address: Am Bahnhof 30,
74638 Waldenburg, Germany

Description of supplements and modifications


The electronic Safety barriers, types 9004/...-...-...-... are also manufactured with a modified internal construction. The specification including "Electrical data" and range of ambient temperature remains without changes.

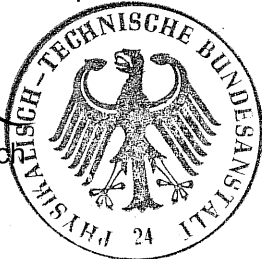
Test report: PTB Ex 03-23243

Zertifizierungsstelle Explosionsschutz

Braunschweig, July 14, 2003

By order:


Dr.-Ing. U. Gerlach




Physikalisch-Technische Bundesanstalt

Braunschweig and Berlin

2 nd A M E N D M E N T

according to Directive 94/9/EG Annex III.6

to EC Type Examination Certificate PTB 02 ATEX 2008

Equipment: Electronic Safety Barrier Type 9004/...-...-...-...
Marking:  II (2) G D [EEx ib] IIB/IIC
Manufacturer: R. STAHL Schaltgeräte GmbH
Address: Am Bahnhof 30, 74638 Waldenburg, GERMANY

Description of supplements and modifications

The Electronic Safety Barriers Type 9004/...-...-...-... may be also used as associated apparatus for hazardous locations endangered by dusts.

All other data remain unchanged.

Remark: For hazardous areas endangered by dust the maximum inductance and capacitance values as given for gas group IIB apply.

Test Report: PTB Ex 04-24072

Zertifizierungsstelle Explosionsschutz
by order

Braunschweig, 26. April 2004

(signature)
Dr.-Ing. U. Johannsmeyer
Regierungsdirektor

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



Wir (*we; nous*)

R. STAHL Schaltgeräte GmbH, Am Bahnhof 30, D-74638 Waldenburg

9004/...-...-...1

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

Sicherheitsbarriere
Safety Barrier
Barrière de Sécurité

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

PTB 02 ATEX 2008

auf das sich diese Erklärung bezieht, mit der/den folgenden Norm(en) oder normativen Dokumenten übereinstimmt

which is the subject of this declaration, is in conformity with the following standard(s) 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

Titel und/oder Nr. sowie Ausgabedatum der Norm
title and/or No. and date of issue of the standard
titre et/ou No. ainsi que date d'émission des normes

94/9/EG: Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen
94/9/EC: Equipment and protective systems intended for use in potentially explosive atmospheres
94/9/CE: Appareils et systèmes de protection destinés à être utilisés en atmosphères explosibles

EN 50014: 1997 (+ A1:1999 + A2:1999)
 EN 50020: 1994
 EN 60079-0: 2004
 EN 60079-15: 2005

89/336/EWG: Elektromagnetische Verträglichkeit
89/336/EEC: Electromagnetic compatibility
89/336/CEE: Compatibilité électromagnétique

EN 61326: 1997
 (+ A1:1998 + A2:2001 + A3:2003)

Das Gerät erfüllt die Anforderungen zur Kennzeichnung:
The apparatus fulfils the requirements for the marking:
L'appareil répond aux exigences pour le marquage:

II 3 G Ex nA II T4
T_a = -20°C ... +60°C (+50°C)

Konformitätsaussage: und der technischen Dokumentation hinterlegt unter:
Certificate of Conformity:
And the technical documentation filed under:
Certificat de conformité:
et documentation technique sous:

PTB 02 ATEX 2009
U-Bericht Nr. 4998/06

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, 15.11.2006

Ort und Datum
Place and date
lieu et date

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

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