Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

(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 01 ATEX 1160 U

(4) Component: Luminous element, type 8010/.-..-.

(5) Manufacturer: R. STAHL Schaltgeräte GmbH

(6) Address: 74638 Waldenburg (Württ.), Germany

(7) This component 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 component 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 02-11328.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014:1997 + A1 + A2 **EN 50018:2000**
EN 50019:2000 **EN 50020:1994**

(10) The sign "U" placed behind the certificate number indicates that this certificate should not be confounded with certificates issued for equipment or protective systems. This Component Certificate only serves as a basis for the issuing of certificates for equipment or protective systems.

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

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

Ex II 2 G EEx de IIC or EEx d ia/ib IIC I M 2 EEx de I or EEx d ia/ib I

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, October 14, 2002

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT 24

(13) # SCHEDULE

(14) ## EC-TYPE-EXAMINATION CERTIFICATE PTB 01 ATEX 1160 U

(15) Description of component

The luminous element of type 8010/.-..-. consists of a flameproof enclosure housing with electronic system, which may be fitted with one or two LEDs differing in the radiation colour.

The luminous element may be rail mounted.

Connection is to the integrated screw-type or cage clamp terminals.

Technical data

Rated insulation voltage ..... up to 500 V

Rated operating voltage

Types 8010/2 and 8010/4..... up to 10.8 ... 24 V DC/AC 10.8 ... 270 VDC/AC

Types 8010/3 and 8010/5..... up to 10.8 ... 28 V DC/AC

For circuits of type of protection EEx ib IIC or EEx ib I

Maximum values:

U_i = 28 V

I_i = 150 mA

P_i = 1 W

The internal inductance and capacitance is negligibly low

Ambient temperature: max. 60 °C

The circuit breakers shall be mounted in the enclosure in such a way that the clearance and creepage distances specified in EN 50 020 for the clearance between intrinsically safe and non-intrinsically safe circuits are complied with.
If system installation and layout does not provide for the clearance requirements for connectors as specified in EN 50020, wiring that meets the quality criteria Increased Safety "e" shall be used, or the wiring shall be mechanically fail-safe as required in EN 50020.
Should the above clearance requirements not be met, local wiring work may be performed only if an explosion risk can positively be excluded along all the lines.
When connecting more than one intrinsically safe circuit, the rules and regulations for interconnection shall duly be observed.

Rated connection ..... max. 2.5 mm²

The luminous element is designed for a temperature resistance of up to 95 °C. It may be used for temperature class T6.

(16) Test report PTB Ex 02-11328

(17) Special conditions for safe use

None

Notes for installation and use

The luminous element shall be installed in an enclosure that meets the requirements of an approved type of protection as specified in EN 50014, section 1.2.

When installing the luminous element in an enclosure designed to type of protection Intrinsic Safety "e" as specified in EN 50019, the clearance and creepage distances specified in section 4.3, section 4.4 and table 1 shall duly be considered.

Since in this case the requirements of the standard are identical, the component can be used in group I and II.

This EC type-examination certificate as well as any future supplements thereto shall at the same time be regarded as supplements for Component Certificate PTB No. Ex-94.C.2080 U.

(18) Essential health and safety requirements

The tests and the favourable results these have produced reveal that the luminous element meets the requirements of directive 94/9/EC as well as those of the standards quoted on the cover sheet.

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

Braunschweig, October 14, 2002

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1. SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 01 ATEX 1160 U

(Translation)

Equipment: Luminous element, type 8010/.-..-.

Marking: ⟨Ex⟩ **II 2G EEx de IIC or EEx d ia/ib IIC I M 2 EEx de I or EEx d ia/ib I**

Manufacturer: R. STAHL Schaltgeräte GmbH

Address: Am Bahnhof 30
74638 Waldenburg (Württ.), Germany

Description of supplements and modifications

The luminous elements of type 8010/3-..-. and type 8010/5-..-. may also be operated according to the data mentioned below.

The maximum permissible ambient temperature and the corresponding temperature class are shown in the following table:

temperature class	ϑ_a [°C]
T4	60
T6	40

All other data remain unchanged.

Electrical data

Indicating circuit

type of protection Intrinsic Safety EEx ib/ia IIC

maximum values:

U_i = 30 V
I_i = 150 mA
P_i = 1 W

the effective internal inductance L_i and capacitance C_i are negligibly low

Test report: PTB Ex 04--23508

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

Braunschweig, February 27, 2004

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT 30

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

Wir *(we; nous)*

R. STAHL Schaltgeräte GmbH, Am Bahnhof 30, 74638 Waldenburg, Germany | **8010/.**

erklären in alleiniger Verantwortung, dass das Produkt **Leuchtelement**
hereby declare in our sole responsibility, that the product *Indicating lamp*
déclarons, sous notre seule responsabilité, que le produit *Voyant lumineux*

mit der **EG-Baumusterprüfbescheinigung:**
(under; *EC-Type Examination Certificate:* **PTB 01 ATEX 1160 U**
avec) *Attestation d'examen CE de type:*

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* *prescriptions de la directive*	**Nummer sowie Ausgabedatum der Norm** *Number and date of issue of the standard* *Numéro ainsi que date d'émission de la norme*
94/9/EG: ATEX-Richtlinie *94/9/EC: ATEX Directive* *94/9/CE: Directive ATEX*	EN 60079-0:2006 EN 60079-1:2007 EN 60079-7:2007 EN 60079-11:2007
2004/108/EG: EMV-Richtlinie *2004/108/EC: EMC Directive* *2004/108/CE: Directive CEM*	EN 55014-2 EN 61000-6-2

Qualitätssicherung Produktion:
Production Quality Assessment: PTB 96 ATEX Q006-6
Assurance Qualité Production:

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

Waldenburg, 01. Sept. 2009 — **Ort und Datum** / *Place and date* / *Lieu et date*

i.V. — **B. Limbacher**
Leiter Entwicklung
Head of Development
Directeur Développement

i.V. — **Dr. S. Jung**
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