

# 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 00 ATEX 1091**

(4) Equipment: Load interrupter, master, motor protection and safety switch type GHG 264 .... R....

(5) Manufacturer: CEAG Sicherheitstechnik GmbH

(6) Address: Neuer Weg Nord 49, 69412 Eberbach

(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 00-19180.

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

**EN 50014:1997    EN 50018:1994    EN 50019:1994    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 and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

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

 **II 2 G    EEx e d ia IIC T6**

Zertifizierungsstelle Explosionsschutz

Braunschweig, November 22, 2000

By order:

Dr.-Ing. U. Klausmeyer  
Regierungsdirektor



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EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.



## SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1091**

(15) Description of equipment

The load interrupter, master, motor protection and safety switch of type GHG 264 .... R.... comprises a housing designed to type of protection Increased Safety "e" with integrated flush-mounting switch of type of protection Flameproof Enclosure "d", and, depending on the size of the housing, with integrated auxiliary switch of type of protection Flameproof Enclosure "d", as well as terminals of type of protection Increased Safety "e".

If required, wafers bearing the required marking may also be used for actuating circuits designed to type of protection Intrinsic Safety "i".

Connection proceeds by means of cable entries.

All integrated elements and extension elements have been tested and certified under a separate test certificate.

### Technical data

#### **Flush-mounting switch GHG 264 ....R..... (PTB 00 ATEX 1069 U)**

Rated insulating voltage	690 V		
Utilization category	AC 1	AC 3	
Rated voltage ..... up to	690 V	500 V	690 V
Rated current..... max.	80 A	80 A	63 A
Rated cross section ..... max.	16 mm <sup>2</sup> or 25 mm <sup>2</sup> stranded		
with cable lug or terminal ..... max.	25 mm <sup>2</sup> or 35 mm <sup>2</sup> stranded		

#### **Flush-mounting switch GHG 2.. ...R.... (PTB 98 ATEX 1117 U)**

Rated insulating voltage	500 V			
Utilization category	AC 1	AC 3		
Rated voltage ..... up to	690 V	400 V	500 V	690 V
Rated current..... max.	20 A	20 A	16 A	10 A

Utilization category	AC 11		
Rated voltage ..... up to	230 V	400 V	500 V
Rated current..... max.	8 A	6 A	6 A

Utilization category	DC 11		
Rated voltage ..... up to	24 V	110 V	230 V
Rated current..... max.	6 A	0.6 A	0.4 A
L/R.....	60 ms	30 ms	20 ms
Rated cross section ..... max.	2.5 mm <sup>2</sup> single-core or 4 mm <sup>2</sup> finely stranded		

Ambient temperature range -36 °C ... 55 °C

Provided the making and breaking capacity complies with the relevant conditions, rated values other than those specified above are accepted and will be defined by the manufacturer on the basis of the operating mode, utilization category, etc.

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# Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

## SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1091

It will be the manufacturer's responsibility to specify the characteristic values of the intrinsically safe circuits.

The composition of the symbol used for the type of protection will be based on the types of protection of the components actually used.

(16) Test report PTB Ex 00-19180

(17) Special conditions for safe use

**None**

Notes for manufacture and operation

When combined with circuits of type of protection Intrinsic Safety "i", installation has to proceed in such a way that the clearance and creepage distances between intrinsically safe and non-intrinsically safe circuits as set forth in EN 50020 are met.

If the clearance requirements for the connectors as specified in EN 50020 cannot be safeguarded with the installation, wiring that meets the quality criteria Increased Safety "e" shall be used, or the wiring shall be of the fail-safe type.

When using more than one intrinsically safe circuit, the regulations for interconnection shall duly be observed.

(18) Essential health and safety requirements

The tests and the favourable results these have produced reveal that the load interrupter, master, motor protection and safety switch of type GHG 264 .... R.... meets the requirements of directive 94/9/EC as well as those of the standards quoted on the cover sheet.

Zertifizierungsstelle Explosionschutz

By order:



Dr.-Ing. U. Klausmeyer  
Regierungsdirektor



Braunschweig, November 22, 2000

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## 1st SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1091

(Translation)

Equipment: Load interrupter, master, motor protection and safety switch  
type GHG 264 .... R....

Marking: II 2 G EEx ed ia IIC T6

Manufacturer: CEAG Sicherheitstechnik GmbH

Address: Neuer Weg Nord 49  
69412 Eberbach, Germany

### Description of supplements and modifications

The load interrupter, master, motor protection and safety switch, type Typ GHG 264 .... R.... may now also be used in areas where potentially explosive atmospheres with dust/air mixtures may occasionally occur.

The marking is, therefore, changed to read:

II 2 G/D EEx ed ia IIC T6 IP 66 T 53 °C

Test report: PTB Ex PTB Ex 01-11072

Zertifizierungsstelle Explosionsschutz

By order:

Dr.-Ing. U. Klausmeyer  
Regierungsdirektor



Braunschweig, March 22, 2001

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