



## (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 98 ATEX 1040 U**

(4) Component: Signal light GHG 41 . . . . R...

(5) Manufacturer: CEAG Sicherheitstechnik GmbH

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

(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 98-18023.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 50014: 1997                      EN 50018: 1994                      EN 50019: 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 and construction of the specified component in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this component.

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

II 2 G EEx de IIC

Zertifizierungsstelle Explosionsschutz

Braunschweig, October 05, 1998

By order:

Dr.-Ing. U. Klausmeyer  
Oberregierungsrat



## SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE No. PTB 98 ATEX 1040 U**

(15) Description of component

The signal light of type GHG 41 . . . . R...., of the types of protection flameproof enclosure "d" and increased safety "e", is suitable for installation in housings or control cabinets.

<b>Technical data</b>	Rated voltages:	AC	12, 24, 42, 48, 60, 110, 125, 230, 240, 400, 415, 500 V
		DC	12 – 30 V, 19 V (250 mA) 40 – 70 V, 56 – 88 V, 80 – 120 V
		AC/DC	15 – 250 V
	Rated cross-section:		2,5 mm <sup>2</sup>
	Service temperature range:		-55 °C bis 80 °C (T6)

(16) Report PTB Ex 98-18023

(17) Special conditions for safe use


not applicable

(18) Essential health and safety requirements

met by standards

Zertifizierungsstelle Explosionsschutz

By order:



Dr.-Ing. U. Klausmeyer  
Oberregierungsrat



Braunschweig, October 05, 1998

## 1. SUPPLEMENT

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

### to EC-TYPE-EXAMINATION CERTIFICATE PTB 98 ATEX 1040 U

(Translation)

Equipment: Signal light type GHG 41 . . . . R....

Marking:  II 2 G EEx de IIC

Manufacturer: CEAG Sicherheitstechnik GmbH

Address: Neuer Weg Nord 49  
69412 Eberbach

#### Description of supplements and modifications

The signal light type GHG 41. . . . R.... is supplemented by an a.c./d.c.-variant.

#### **Technical Data**

Rated isolating voltage .....	up to	550 V
Rated operating voltage .....	up to	20 up to 250 V
Current consumption . . . . .	max.	10 mA

The signal light is designed for application in the range of temperature class T6.

Test report: PTB Ex 00-10256

Zertifizierungsstelle Explosionsschutz  
By order:

Braunschweig, January 12, 2001

Dr.-Ing. Klausmeyer  
Regierungsdirektor



## 2. SUPPLEMENT

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

### to EC-TYPE-EXAMINATION CERTIFICATE PTB 98 ATEX 1040 U

(Translation)

Equipment: Signal lamp, type GHG 41. . . . R....

Marking:  II 2 G EEx de IIC

Manufacturer: CEAG Sicherheitstechnik GmbH

Address: Neuer Weg Nord 49  
69412 Eberbach, Deutschland

#### Description of supplements and modifications

The modifications concern the internal construction, the „Electrical data“, the type code as well as the type of protection and therefore the marking of the signal lamp, type GHG 41. . . . R.... .

The type series will be supplemented by an intrinsically safe variant with LED-lamp. The type designation of the universal current variants with LED-lamps will be changed in comparison with the original type code.

#### Built-in device, socket type:

GHG 417 1805 R0001 LED-lamp for connection to circuits in type of protection Increased Safety (universal current)

GHG 417 1805 R0002 LED-lamp for connection to intrinsically safe circuits

#### Panel-mounted device

GHG 418 1806 R0001 LED-lamp for connection to circuits in type of protection Increased Safety (universal current)

GHG 418 1806 R0002 LED-lamp for connection to intrinsically safe circuits

The marking of the signal lamps, type GHG 417 1805 R0002 and type GHG 418 1806 R0002 will be as follows:

 II 2 G EEx d ia IIC

## 2. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 98 ATEX 1040 U

The „technical data“ for the signal lamps, type GHG 417 1805 R0002 and type GHG 418 1806 R0002 will be as follows:

### Technical data

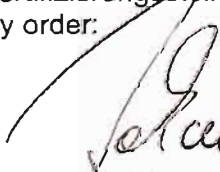
Supply circuit ..... type of protection Intrinsic Safety EEx ia IIC / IIB  
(terminals X1 and X2) only for connection to certified intrinsically safe circuits  
Maximum values:  
 $U_i = 30 \text{ V}$   
 $I_i = 100 \text{ mA}$   
 $P_i = 750 \text{ mW}$   
 $C_i \approx 0$   
 $L_i \approx 0$

The permissible range of the ambient temperature for the signal lamps, type GHG 417 1805 R0002 and type GHG 418 1806 R0002 is  $-55 \text{ }^\circ\text{C}$  up to  $+55 \text{ }^\circ\text{C}$  for application in temperature class T6.

Test report: PTB Ex 02-21228

Zertifizierungsstelle Explosionsschutz  
By order:

Braunschweig, May 23, 2002

  
Dr.-Ing. U. Johannsmeyer  
Regierungsdirektor



## 3rd SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 98 ATEX 1040 U

(Translation)

Equipment: Signal lamp, type GHG 41. . . . R....

Marking:  II 2 G EEx de IIC and EEx d ia IIC

Manufacturer: Cooper Crouse-Hinds GmbH

Address: Neuer Weg Nord 49, 69412 Eberbach, Germany

### Description of supplements and modifications

1. The type series is supplemented to include a universal-current version with LED luminaires with modified connection for 12-24 V AC/DC voltages and the following technical data:

Rated insulation voltage:	500 V
Rated voltage:	12-24 V AC/DC
Rated current:	max. 25 mA
Ambient temperature range:	-55 °C to +55 °C
Temperature class:	T6

2. Conversion to the current generation of standards (see below). The additional tests required under the new generation of standards have been performed. Test records are included in the documentation prepared for the Test Report specified below.

### Applied standards

EN 60079-0:2006

EN 60079-1:2004

EN 60079-7:2007

EN 60079-11:2007

With the application of the Standards shown above, the marking changes to:

 II 2 G Ex de IIC and Ex d ia IIC

Test report: PTB Ex 08-18154

Zertifizierungssektor Explosionsschutz

By order:

  
Dr.-Ing. U. Klausmeier  
Direktor und Professor



Braunschweig, July 7, 2008

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Sheet 1/1

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.