



# 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](http://www.iecex.com)

Certificate No.: IECEx BKI 04.0003

Issue No: 1

Certificate history:

Issue No. 4 (2014-06-16)

Issue No. 3 (2014-06-06)

Issue No. 2 (2011-09-19)

Issue No. 1 (2005-12-20)

Status: **Current**

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Date of Issue: **2005-12-20**

Applicant: **Cooper Crouse-Hinds GmbH previously CEAG Sicherheitstechnik GmbH**  
Neuer Weg Nord 49  
D-69412 Eberbach, Germany  
**Germany**

Equipment: **Control unit of types GHG 41. ....R.... and GHG 43. ....R....**

*Optional accessory:*

Type of Protection: **General requirements, Flameproof enclosures, Increased safety, Intrinsic safety**

Marking: Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6  
-20 °C ≤ Tamb ≤ +40 °C (normal) or  
-55 °C ≤ Tamb ≤ +55 °C (extended)

*Approved for issue on behalf of the IECEx  
Certification Body:*

János HANKÓ

*Position:*

Director

*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:

**Testing Station for Explosion Proof Equipment**  
H 1037 BUDAPEST  
MIKOVINY S.u. 2-4  
Hungary



**Ex**



# IECEX Certificate of Conformity

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Date of Issue: 2005-12-20 Page 2 of 4  
Manufacturer: **Cooper Crouse-Hinds GmbH previously CEAG Sicherheitstechnik GmbH**  
Neuer Weg Nord 49  
D-69412 Eberbach, Germany  
**Germany**

Additional 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 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:

<b>IEC 60079-0 : 2000</b> Edition:3.1	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2001</b> Edition:4	Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosures 'd'
<b>IEC 60079-11 : 1999</b> Edition:4	Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 'i'
<b>IEC 60079-7 : 2001</b> Edition:3	Electrical apparatus for explosive gas atmospheres - Part 7: Increased safety 'e'

*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*

IECEX ATR:	File Reference:
HU/BKI/04/P-002-04/2-1, HU/BKI/04/P-002-04/2-2,	P-002-04/2
HU/BKI/04/P-002-04/2-3, HU/BKI/04/P-002-04/2-4	P-008-05/14
HU/BKI/05/P-008-05/14-1	



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

Control units of type GHG 41. ....R.... and type GHG 43. ....R.... consist of the bottom part and the cover with separately approved internal sealing device and they are made of polyamide or of light or non ferrous heavy metal or VA4 sheet steel. Designs of one, two, three or four units are available. Rail-type webs or top-hat rails intended to take up parts to be built in have been grooved (plastic enclosure) or riveted (metal enclosure) into the bottom of the enclosure. The assembly of control units is possible. If required, components covered by separate EC-type-examination certificates, e.g. pushbuttons, signal lamps, measuring instruments and/or terminals, are built in.

The identification with the symbols of the types of protection is to be adapted to the components actually installed.

#### Identification for the types of protection

fitted with moving-iron ammeter and/or terminals	Ex e II T6
fitted with moving-iron ammeter, terminal/signal lamp/pushbutton	Ex ed IIC T6
fitted with moving-coil ammeter and terminals, if necessary	Ex e ib IIC T6
fitted with moving-coil ammeter, terminals/signal lamp/pushbutton	Ex ed ib IIC T6
Rated voltage: max. 750 V	
Rated current: max. 35 A	
Rated cross-sectional area: max. $2 \times 2,5 \text{ mm}^2$ per clamping point	
Ingress protection: IP66 to IEC 60529 (moulded plastic enclosure)	
IP54 to IEC 60529 (V4A sheet steel enclosure)	

SPECIFIC CONDITIONS OF USE: NO



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

See details in addendum to 1st amendment of IECEX BKI 04.0003

**Annex:**

[Addendum to 1st Amendment of IECEXBKI 04.0003.pdf](#)



# ADDENDUM TO IECEx CERTIFICATE OF CONFORMITY

IECEX BKI 04.0003

1<sup>st</sup> Amendment

Electrical Apparatus: DSEA Control Stations  
Types: DSEA.....  
( only in Australia)

Marking: Ex tD A21 IP66 T80 °C  
Ex ibD A21 IP66 T80°C  
(apply to both of the types)

STANDARDS: IEC 61241-0:2004-07 Electrical apparatus for use in the presence of combustibile dust  
Edition: 1 Part 0: General requirements  
IEC 61241-1:2004-05 Part 1: Protection by enclosures „tD”  
Edition: 1

## 1. Description

These equipment are exactly equivalent versions of the GHG 43 Control Stations but they have got a new designation: DSEA Control Stations.

DSEA Control Stations consist of a base part and a cover with separately approved internal sealing device. They are made of polyamide. Design of two types are available: DSEA1 is a small enclosure may consist max. 2 devices and DSEA2 is a large one may consist max. 4 devices. Either ones can combining by doubling. If an enclosure of these types is made of materials with a surface resistance ≥ 1 GΩ, it is provided with a warning label.

The cable connecting is possible either via attached Ex cable entries or conduit entries. Both are covered by separate certificates. Metallic Ex cable and conduit entries are incorporated in the grounding system through a metal plate. Both variants are suitable for different components setting-in e.g. pushbuttons, signal lamps, measuring instruments and/or terminals.

The identification with the symbols of the types of protection is to be adapted to the components actually installed.

### Identification for the types of protection

fitted with moving-iron ammeter and/or terminals	Ex e II T6
fitted with moving-iron ammeter, terminal/signal lamp/pushbutton	Ex ed IIC T6
fitted with moving-coil ammeter and terminals, if necessary	Ex e ib IIC T6
fitted with moving-coil ammeter, terminals/signal lamp/pushbutton	Ex ed ib IIC T6

## 2. Type catalogue number analysis

### 2.1 DSEA ..-..... legend of the signs from left to right

- |                     |     |  |
|---------------------|-----|--|
| 1._, 2._, 3._       | 4._ | Family type  |
| 5._, 6._            |     | Enclosure sizes<br>1 = small enclosure<br>2 = large enclosure<br>11 = two small combined<br>12 = S/L combined<br>21 = L/S combined<br>22 = two large combined  |
| 7._, 8._, 9._, 10._ |     | Operator types<br>1 = push button C/W 1-N/O 1-N/C.<br>2 = mushroom head push button, momentary contact<br>3 = mushroom head push button, maintained off, pull to reset<br>4 = mushroom head push button, maintained off, key reset<br>5 = selector switch 2 position 2 circuit, maintained.<br>6 = selector switch 3 position 2 circuit & off, maintained.<br>6SL = selector switch 3 position 2 circuit spring return from left<br>6SR = selector switch 3 position 2 circuit spring return from right<br>6SLR = selector switch 3 position 2 circuit spring return to centre<br>7 = meter (ammeter/voltmeter)<br>8 = pilot light 240V 50/60Hz (optional other voltages)<br>9 = rotary switch Ex 23 ( corresponding to GHG23 series)<br>10 = double push button C/W 1-N/O 1-N/C |
| 11._                |     | Optional colours for lens or disc<br>R = red<br>G = green  |



**ADDENDUM TO IECEx CERTIFICATE OF CONFORMITY**  
**IECEX BKI 04.0003**  
**1<sup>st</sup> Amendment**

- B = black**
- A = amber**
- 12.\_13.\_14.\_15.\_                    **Operator types (see above)**
- 16.\_                                        **Optional colours for lens or disc (see above)**
- 17.\_18.\_19.\_20.\_                    **Operator types (see above)**
- 21.\_                                        **Optional colours for lens or disc (see above)**
- 22.\_23.\_24.\_25.\_                    **Operator types (see above)**
- 26.\_                                        **Optional colours for lens or disc (see above)**
- 27.\_                                        **Padlock (option)**
- 28.\_                                        **Entry quantities**
- 29.\_                                        **Entry location T for top, B for bottom**
- 30.\_

Code	Entry sizes		Short side	Long side
	Metric	Imperial		
1	M20x1.5 Pitch	½" NPT	2XM20	4XM20
2	M25x1.5 Pitch	¾" NPT	2XM25	4XM25
3	M32x1.5 Pitch	1" NPT	1XM32	3XM32

- 31.\_                                        **Entry thread form M for metric, N for NPT (typical)**

**3. General parameters**

**Electrical data**

- Rated voltage:**                        **max. 500 V**
- Rated current:**                        **max. 6 A**
- Rated cross-sectional area:**        **max. 4 mm<sup>2</sup> per clamping point**

The electrical data for the built-in components can be gathered from the respective certificates.

When terminals are installed the following applies:

- Rated voltage:**                        **max. 500 V (depending on range of working voltage of terminal used)**
- Rated current:**                        **max. 16 A**
- Rated cross-sectional area:**        **max. 4 mm<sup>2</sup> per clamping point**
- Rated cross-sectional area:**        **max. 4 mm<sup>2</sup> per clamping point (earthing wire)**
- Terminal population (WDU2.5/WDU4):**    **DSEA1: 20/16**  
**DSEA2: 35/26**

- Power dissipations:**                    **8W for DSEA1**  
**13W for DSEA2**

**4. Ambient temperature**

	Ambient temperature range	Temperature class
moulded plastic enclosure/normal	-20 °C ... +40 °C	T6
extended	-55 °C ... +55 °C	T6

temperature ranges is made evident by special marking. Only such separately approved sealing devices and built-in and built-on components – covered by a separate certificate – have been used, which are suitable for these temperatures. Additional hints of the manufacturer must be observed.

- 5. Ingress protection:**                **IP66 to IEC 60529 (moulded plastic enclosure)**

**Drawings**

- Drawing No.:**    **57-148-GA002 (sheet 1 of 2)            26.09.1996**
- 57-148-GA002 (sheet 2 of 2)            26.09.1996**