

### INTERNATIONAL ELECTROTECHNICAL COMMISSION **IEC Certification System for Explosive Atmospheres**

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx BVS 19.0042X** Page 1 of 3 Certificate history:

Issue No: 0 Status: Current

2019-07-15 Date of Issue:

Applicant: Cooper Crouse-Hinds GmbH

Neuer Weg-Nord 49 69412 Eberbach Germany

Equipment: Power and safety switch type GHG 262 \* \* \*\* \* \*\*\*\*

Optional accessory:

Flameproof Enclosures "d", Intrinsic Safety "i", Protection by Enclosure "t", Increased Safety "e" Type of Protection:

Marking: Ex eb db ia IIB/IIC T6 / T5 Gb

Ex tb IIIC T80°C Db

Approved for issue on behalf of the IECEx Jörg Koch

Certification Body:

Position: **Head of Certification Body** 

Signature:

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Certificate issued by:

**DEKRA Testing and Certification GmbH Certification Body** Dinnendahlstrasse 9 44809 Bochum Germany





Certificate No.: IECEx BVS 19.0042X Page 2 of 3

Date of issue: 2019-07-15 Issue No: 0

Manufacturer: Cooper Crouse-Hinds GmbH

Neuer Weg-Nord 49 69412 Eberbach **Germany** 

Manufacturing locations:

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 equipment 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

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements

Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

Edition:6.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

Edition:5.1

This Certificate **does not** indicate compliance with 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:

Test Report:

DE/BVS/ExTR19.0044/00

**Quality Assessment Report:** 

DE/BVS/QAR11.0009/09



Certificate No.: IECEx BVS 19.0042X Page 3 of 3

Date of issue: 2019-07-15 Issue No: 0

#### **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

#### **Subject and Type**

See Annex

#### Description

The power and safety switch type GHG 262 \* \* \* \* \* \* \* \*\*\*\* is used for switch and disconnect of a rated current up to 20 A. The power and safety switch type GHG 262 \* \* \* \* \* \* \* \*\*\*\* is built in type of protection "eb" Increased Safety or "tb" Protection by Enclosure.

Optionally, circuits in type of protection Intrinsic Safety being connected to the separately certified terminals or components.

The enclosure is made of plastic. Alternatively, separately certified enclosure (IECEx PTB 11.0030U - made of plastic or metal) can be used. The switch enclosure is equipped with a separately certified switch socket (IECEx BVS 14.0047U) in type of protection "d" Flameproof Enclosure. Optionally, equipped with an auxiliary switch (IECEx EPS 14.0038U), light module (IECEx IBE 13.0031U resp. IECEx EPS 14.0038U), Ex-d component (IECEx IBE 14.0005U) and / or separately certified terminal block (IECEx PTB11.0029U) or terminal

IECEx EPS 14.0038U), Ex-d component (IECEx IBE 14.0005U) and / or separately certified terminal block (IECEx PTB11.0029U) or terminal strip (IECEx PTB 15.0028U).

Optionally, separately certified terminals can be used according "List of components".

#### **Parameters**

See Annex

Listing of all components used referring to older standards See Annex

#### SPECIFIC CONDITIONS OF USE: YES as shown below:

The dimensions of the flameproof joints are in parts other than the relevant minimum or maximum values of IEC 60079-1:2014. For information on the dimensions of the flameproof joints contact the manufacturer.

For the combination with circuits in type of protection Intrinsic Safety "i" the creepage and clearance distances between the intrinsically and non-intrinsically circuits must be fulfil the requirements according IEC 60079-0:2017.

### Annex:

BVS\_19\_0042X\_Cooper\_Annex\_1.pdf





Certificate No.: IECEx BVS 19.0042X

Annex Page 1 of 3

### **Subject and Type**

Power and safety switch type GHG 2621) \*2) \*3) \*\*4) \* \*\*\*\*

- 1) Switch 20 A
- 2) Switch and enclosure version
  - 1 = Main current switch plastic version
  - 2 = Safety switch plastic version
  - 3 = Main current swtich metal version
  - 4 = Safety switch metal version
- 3) Number of switch contacts
  - 3 = 3- poles
  - 4 = 4- poles
  - 5 = 5- poles
  - 6 = 6- poles
- 4) Equipment version
  - 01 = Standard version
  - 02 = Special version
  - 51-99 = Without influence to the type of protection

Listing of all components used referring to older standards

Subject and type	Certificate	Standards
Empty Enclosure type GHG 60* **** R ****	IECEx PTB 11.0030U	IEC 60079-0 (Ed.5), IEC 60079-31 (Ed.1), IEC 60079-7 (Ed.4)
Switch base type GHG 2** ** ** R ****	IECEx BVS 14.0047U	IEC 60079-0 (Ed.6.0), IEC 60079-1 (Ed.6), IEC 60079-7 (Ed.4)
Built-in switch mini type 07-1501-***/****	IECEx EPS 14.0038U	IEC 60079-0 (Ed.6.0), IEC 60079-1 (Ed.7.0)
Signal lamp	IECEx IBE 13.0031U	IEC 60079-0 (Ed.6.0), IEC 60079-1 (Ed.7.0), IEC 60079-11 (Ed.6.0), IEC 60079-7 (Ed.5.0)
Switch block	IECEx IBE 14.0005U	IEC 60079-0 (Ed.6.0), IEC 60079-1 (Ed.7.0), IEC 60079-7 (Ed.5.0)
Terminal block type GHG 790 110. R	IECEx PTB 11.0029U	IEC 60079-0 (Ed.5), IEC 60079-7 (Ed.4)
Terminal blocks, type AKG 4-EX and type EK 135	IECEx KIWA 14.0005U	IEC 60079-0 (Ed.6.0), IEC 60079-7 (Ed.4)
Feed-through terminal block, type MXK4	IECEx PTB 06.0100U	IEC 60079-0 (Ed.6.0), IEC 60079-7 (Ed.4)
Terminal block	IECEx SEV 13.0003U	IEC 60079-0 (Ed.6.0), IEC 60079-7 (Ed.4)





Certificate No.: IECEx BVS 19.0042X

Annex Page 2 of 3

1 agc 2 01 3		
Terminal Blocks types UK 10N, UK 16N, UK 35, UKH 50, UKH 50-IB and UKH 95 and Pick-off Terminal Blocks types AGK 10-UKH 50, AGK 10-UKH 150/240	IECEx KEM 06.0029U	IEC 60079-0 (Ed.6.0), IEC 60079-7 (Ed.4)
Terminal blocks	IECEx SEV 13.0012U	IEC 60079-0 (Ed.6.0), IEC 60079-7 (Ed.4)
Terminal block type GHG 240 130* R****	IECEx PTB 15.0028U	IEC 60079-0 (Ed.6.0), IEC 60079-7 (Ed.4)
Terminal blocks	IECEx SEV 12.0008U	IEC 60079-0 (Ed.6.0), IEC 60079-7 (Ed.4)
Terminal blocks, type AKG 4-EX and type EK 13	IECEx KIWA 14.0005U	IEC 60079-0 (Ed.6.0), IEC 60079-7 (Ed.4)
SAK K range of rail mounted feedthrough terminals	IECEx SIR 05.0032U	IEC 60079-0 (Ed.4.0), IEC 60079-7 (Ed.3)
Feedthrough terminal blocks, type PT 2,5*** and PTTB 2,5***, Protective conductor terminal blocks, type PT 2,5***-PE and PTTB 2,5-PE	IECEx PTB 10.0021U	IEC 60079-0 (Ed.6.0), IEC 60079-7 (Ed.4)
Feedthrough terminal blocks, type PT 4***, PTTB 4***, Protective conductor terminal blocks, type PT 4***-PE, PTTB 4-PE	IECEx PTB 10.0046U	IEC 60079-0 (Ed.6.0), IEC 60079-7 (Ed.4)
Weidmüller Terminal blocks, W-Reihe, type feed-through and PE	IECEx ULD 05.0008U	IEC 60079-0 (Ed.4.0), IEC 60079-7 (Ed.3)

<sup>&</sup>lt;sup>1</sup> No applicable technical differences

### **Parameters**

Rated voltage up to 690 V Rated current up to 20 A

Rated cross-section up to 4 mm² (fine-stranded and stranded)

Ambient temperature range -45 °C up to +55 °C (IIC) -55 °C up to +55 °C (IIB/IIIC)

-20 °C up to +55 °C (IIB/IIC only security switch for converter mode)

Cross-		Temperature class at T <sub>amb</sub>		
section	Rated current	+40 °C	+50 °C	+55 °C
1.5 mm <sup>2</sup>	≤ 10 A	T6 / T80 °C	T6 / T80 °C	T6 / T80 °C
_	≤ 16 A	T6 / T80 °C	T5 / T80 °C	
2.5 mm <sup>2</sup>	≤ 20 A	T6 / T80 °C		
4 mm <sup>2</sup>	≤ 20 A	T6 / T80 °C	T6 / T80 °C	T5 / T80 °C
6 mm <sup>2</sup>	≤ 20 A	T6 / T80 °C	T6 / T80 °C	T6 / T80 °C





Certificate No.: IECEx BVS 19.0042X

Annex Page 3 of 3

Intrinsically safe circuits	
Signal lamp Type GHG 417 1805 R	IECEx IBE 13.0031U
Voltage	$U_i \leq 30  V$
Current	l <sub>i</sub> ≤ 120 mA
Power	P <sub>i</sub> ≤ 750 mW
Effective internal inductance	negligible
Effective internal capacity	negligible



### INTERNATIONAL ELECTROTECHNICAL COMMISSION **IEC Certification System for Explosive Atmospheres**

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx BVS 19.0054X** Page 1 of 4 Certificate history:

Issue No: 0 Status: Current

2019-09-30 Date of Issue:

Applicant: Cooper Crouse-Hinds GmbH

Neuer Weg-Nord 49 69412 Eberbach Germany

Equipment: Load-, Main- and Safety switch type GHG 263 \* \* \*\* \* \*\*\*\*

Optional accessory:

Flameproof Enclosure "d", Increased Safety "e", Intrinsic Safety "i", Protection by Enclosure "t" Type of Protection:

**Dr Franz Eickhoff** 

Marking: Ex db eb ia IIC/IIB T6/T5 Gb

Ex tb IIIC T80°C Db

Approved for issue on behalf of the IECEx

Certification Body:

Position: **Head of Certification Body** 

Signature:

(for printed version)

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Certificate issued by:

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Certificate No.: IECEx BVS 19.0054X Page 2 of 4

Date of issue: 2019-09-30 Issue No: 0

Manufacturer: Cooper Crouse-Hinds GmbH

Neuer Weg-Nord 49 69412 Eberbach **Germany** 

Manufacturing locations:

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#### **STANDARDS**:

The equipment 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

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements

Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

Edition:6.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

Edition:2

IEC 60079-7:2017 Edition:5.1 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

This Certificate **does not** indicate compliance with 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:

Test Report:

DE/BVS/ExTR19.0062/00

**Quality Assessment Report:** 

DE/BVS/QAR11.0009/09



Certificate No.: IECEx BVS 19.0054X Page 3 of 4

Date of issue: 2019-09-30 Issue No: 0

#### **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

### **Subject and Type**

Load-, Main-, and Safety switch type GHG 263 \*1) \*2) \*\*3) \*4) \*\*\*\*5)

GHG Manufacturers marking

263 Switch 40 A

\*1) Switch and enclosure version

1 = Main current switch / load switch – plastic version

2 = Safety switch – plastic version

3 = Main current switch / load switch – metal version

4 = Safety switch - metal version

\*2) Number of switch contacts

3 = 3-pole

4 = 4-pole

5 = 5-pole

6 = 6-pole

\*\*<sup>3)</sup> Equipment version

01 = Standard version

02 = Variant version

\*\* = Specification by "Local-Assembly-Partner"

<sup>\*4)</sup> Identification marking (country code) - Without influence on explosion protection

R = Standard version

\* = Variant version (e.g. "X")

\*\*\*\*<sup>5)</sup> Alphanumeric string - Without influence on explosion protection

#### SPECIFIC CONDITIONS OF USE: YES as shown below:

The gap lengths of the flameproof gaps of the switching base are partly longer and the gap widths of the flameproof gaps are partly smaller than required in Table 2 and 3 of IEC 60079-1:2014. Information on the dimensions can be obtained from the manufacturer.

When combined with circuits of ignition protection type "i" - intrinsic safety, the clearances and creepage distances between intrinsically safe and non-intrinsically safe circuits in accordance with IEC 60079-11:2011 must be maintained.



Certificate No.: IECEx BVS 19.0054X Page 4 of 4

Date of issue: 2019-09-30 Issue No: 0

#### Equipment (continued):

#### Description

The load, main and safety switch type GHG 263 \* \* \*\* \* \*\*\*\* is used for switching and disconnecting rated currents up to 40A. The main and safety switch type GHG 263 \* \* \*\* \* \*\*\*\* is designed in type of protection "eb", Increased safety or "tb" protection by enclosure. Alternatively, circuits with intrinsic safety "i" protection can also be connected to the separately certified terminals or components.

The enclosure is made of plastic. Alternatively, a separately certified empty enclosure (IECEx PTB 11.0030U) made of plastic or metal can be used.

The enclosure is equipped with a separately certified load switch (IECEx BVS 14.0055U) in type of protection "db" flameproof enclosure and can optionally be equipped with an auxiliary switch

(IECEx EPS 14.0038U), indicator lamp (IECEx IBE 13.0031U), Ex-d component (IECEx IBE 14.0005U) and/or separately certified terminal block (IECEx PTB11.0029U) or terminal strip (IECEx PTB 15.0028U).

Optionally, further separately certified terminals can be used according to the "List of components".

#### **Parameters**

Nominal voltage up to 690 V Nominal current up to 40 A

Nominal cross-section:

main contact 16 mm<sup>2</sup> fine-stranded and stranded wire

25 mm<sup>2</sup> stranded wire

25 mm<sup>2</sup> flexible with special cable lug or additional clamping bracket 35 mm<sup>2</sup> stranded with special cable lug or additional clamping bracket

auxiliary contact up to 4 mm<sup>2</sup> fine wire and stranded wire

Intrinsically safe parameters for signal lamp GHG 417 1805 R...

#### Ambient temperature range

IIC  $-20 \,^{\circ}\text{C} \le T_{amb} \le +55 \,^{\circ}\text{C}$ IIB / IIIC  $-55 \,^{\circ}\text{C} \le T_{amb} \le +55 \,^{\circ}\text{C}$ 

IIB  $-20 \text{ °C} \le T_{amb} \le +55 \text{ °C}$  (only safety switch for inverter drives)

#### Annex:

BVS\_19\_0054X\_Cooper\_Annex.pdf





Certificate No.: IECEx BVS 19.0054X

Annex Page 1 of 2

### Temperature class and surface temperature

### ≤ 4-pole version

connection cross-section	rated current	Ambient temperature and temperature class / surface temperature		
		+40 °C	+50 °C	+55 °C
6 mm <sup>2</sup>	I <sub>n</sub> up to 35 A	T6 / T80°C	T6 / T80°C	T6 / T80°C
10 mm <sup>2</sup>	In up to 35 A	T6 / T80°C	T6 / T80°C	T6 / T80°C
10 11111-	In up to 40 A	T6 / T80°C	T6 / T80°C	T5 / T80°C
16 mm <sup>2</sup>	In up to 40 A	T6 / T80°C	T6 / T80°C	T6 / T80°C

### > 4-pole version

connection cross-section	rated current	Ambient temperature and temperature class / surface temperature		
		+40 °C	+50 °C	+55 °C
6 mm²	In up to 35 A	T6 / T80°C	T5 / T80°C	T5 / T80°C */**
10 mm <sup>2</sup>	In up to 40 A	T6 / T80°C	T6 / T80°C	T5 / T80°C **
16 mm <sup>2</sup>	In up to 40 A	T6 / T80°C	T6 / T80°C	T6 / T80°C

<sup>\*</sup>Use cables and wires with a temperature resistance of more than 80 °C.

<sup>\*\*</sup>Use cable glands with a temperature resistance of more than 70 °C.





Certificate No.: IECEx BVS 19.0054X

Annex Page 2 of 2

Listing of all components used referring to older standards

Empty Enclosure GHG 60* **** R ****  Ex-d switch base GHG 263  Ex-d switch base  IECEX BVS 14.0055U  IEC 60079-0 (Ed.6 IEC 60079-1 (Ed.7 IEC 60079-1 (Ed.7 IEC 60079-1 (Ed.7 IEC 60079-1 (Ed.7 IEC 60079-31 (Ed. IEC 60079-31 (Ed. IEC 60079-31 (Ed. IEC 60079-31 (Ed. IEC 60079-0 (Ed.6 IEC 60079-0 (Ed.6 IEC 60079-1 (Ed.7 IEC 6	1) <sup>1</sup> 1) <sup>1</sup> .0) <sup>1</sup> .0) <sup>1</sup>
IEC 60079-31 (Ed.     Ex-d switch base	1) <sup>1</sup> .0) <sup>1</sup> .0) <sup>1</sup>
Ex-d switch base  GHG 263  Built-in switch mini  07-1501-****/****  IEC 60079-0 (Ed.6 IEC 60079-0 (Ed.6 IEC 60079-1 (Ed.7 IEC 60079-1 (Ed.7 IEC 60079-1 (Ed.7 IEC 60079-1 (Ed.7 IEC 60079-31 (Ed.7 IEC 60079-31 (Ed.7 IEC 60079-31 (Ed.7 IEC 60079-0 (Ed.6 IEC 60079-1 (Ed.7 IEC 60	.0) <sup>1</sup>
GHG 263 IEC 60079-1 (Ed.7 IEC 60079-7 (Ed.5 IEC 60079-11 (Ed. IEC 60079-11 (Ed. IEC 60079-31 (Ed. IEC 60079-31 (Ed. IEC 60079-31 (Ed. 07-1501-****/**** IEC 60079-0 (Ed.6 IEC 60079-1 (Ed.7	.0) <sup>1</sup>
IEC 60079-7 (Ed.5   IEC 60079-11 (Ed.   IEC 60079-31 (Ed.   IEC 60079-31 (Ed.   IEC 60079-31 (Ed.   IEC 60079-0 (Ed.6   IEC 60079-0 (Ed.6   IEC 60079-1 (Ed.7   IEC	
IEC 60079-11 (Ed.   IEC 60079-31 (Ed.   IEC 60079-31 (Ed.   IEC 60079-31 (Ed.   IEC 60079-0 (Ed.6   IEC 60079-0 (Ed.6   IEC 60079-1 (Ed.7   IEC	.0) <sup>1</sup>
IEC 60079-31 (Ed.   Built-in switch mini   IECEx EPS 14.0038U   IEC 60079-0 (Ed.6   07-1501-****/****   IEC 60079-1 (Ed.7	
Built-in switch mini IECEx EPS 14.0038U IEC 60079-0 (Ed.6 07-1501-****/**** IEC 60079-1 (Ed.7	6.0) <sup>1</sup>
07-1501-***/**** IEC 60079-1 (Ed.7	2) 1
	.0) <sup>1</sup>
	.0) 1
Signal lamp     IECEx IBE 13.0031U     IEC 60079-0 (Ed.6	.0) <sup>1</sup>
IEC 60079-1 (Ed.7	.0) <sup>1</sup>
IEC 60079-7 (Ed.5	.0) <sup>1</sup>
IEC 60079-11 (Ed.	6.0) <sup>1</sup>
Switch block IECEx IBE 14.0005U IEC 60079-0 (Ed.6	.0) <sup>1</sup>
IEC 60079-1 (Ed.7	.0) <sup>1</sup>
IEC 60079-7 (Ed.5	.0) <sup>1</sup>
Terminal block IECEx PTB 11.0029U IEC 60079-0 (Ed.5	) 1
GHG 790 110. R	) 1
Terminal block IECEx PTB 15.0028U IEC 60079-0 (Ed.6	
GHG 240 130* R**** IEC 60079-7 (Ed.4	
Terminal blocks, type AKG 4-EX and type EK 135 IECEx KIWA 14.0005U IEC 60079-0 (Ed.6	
IEC 60079-7 (Ed.4	
Feed-through terminal block, type MXK4 IECEx PTB 06.0100U IEC 60079-0 (Ed.6	
IEC 60079-7 (Ed.4	
Terminal block IECEx SEV 13.0003U IEC 60079-0 (Ed.6	
IEC 60079-7 (Ed.4	
Terminal Blocks types UK 10N, UK 16N, UK 35, UKH 50, IECEx KEM 06.0029U IEC 60079-0 (Ed.6	
UKH 50-IB and UKH 95 and Pick-off Terminal Blocks types IEC 60079-7 (Ed.4	
,	,
AGK 10-UKH 50, AGK 10-UKH 95 and AGK 10-UKH	
150/240	
Terminal blocks IECEx SEV 13.0012U IEC 60079-0 (Ed.6	
IEC 60079-7 (Ed.4	
Terminal blocks IECEx SEV 12.0008U IEC 60079-0 (Ed.6	,
IEC 60079-7 (Ed.4	
Terminal blocks, type AKG 4-EX and type EK 13 IECEx KIWA 14.0005U IEC 60079-0 (Ed.6	
IEC 60079-7 (Ed.4	
SAK K range of rail mounted feedthrough terminals IECEx SIR 05.0032U IEC 60079-0 (Ed.4	
IEC 60079-7 (Ed.3	
Feedthrough terminal blocks, type IECEx PTB 10.0021U IEC 60079-0 (Ed.6	,
PT 2,5*** and PTTB 2,5***, IEC 60079-7 (Ed.4	) 1
Protective conductor terminal blocks, type PT 2,5***-PE	
and PTTB 2,5-PE	
Feedthrough terminal blocks, type PT 4***, PTTB 4***, IECEx PTB 10.0046U IEC 60079-0 (Ed.6	.0) 1
Protective conductor terminal blocks, type PT 4***-PE,	
· · · · · · · · · · · · · · · · · · ·	
PTTB 4-PE	0) 1
Weidmüller Terminal blocks, W-Reihe, type feed-through	
and PE IEC 60079-7 (Ed.3	) '

<sup>&</sup>lt;sup>1</sup> No applicable technical differences

<sup>&</sup>lt;sup>2</sup> Technical differences evaluated and found satisfactory



### INTERNATIONAL ELECTROTECHNICAL COMMISSION **IEC Certification System for Explosive Atmospheres**

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx BVS 15.0103X** Page 1 of 5 Certificate history:

Issue No: 0 Status: Current

Date of Issue: 2015-11-13

Applicant: Cooper Crouse-Hinds GmbH

Neuer Weg-Nord 49 69412 Eberbach Germany

Equipment: Load- and safety switch type GHG 264 00 \*\* \* \* \*\*\*

Optional accessory:

Equipment protection by flameproof enclosures "d", Equipment protection by intrinsic safety "i", Equipment Type of Protection:

dust ignition protection by enclosure "t", Equipment protection by increased safety "e"

Dr. F. Eickhoff

Ex db e IIB/IIC T5/T6 Gb Marking:

Ex db e [ia/ib] IIB/IIC T5/T6 Gb

Ex tb III C T80°C Db

Approved for issue on behalf of the IECEx

Certification Body:

Position: **Deputy Head of Certification Body** 

Signature:

(for printed version)

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Certificate issued by:

**DEKRA EXAM GmbH** Dinnendahlstrasse 9 44809 Bochum **Germany** 





Certificate No.: IECEx BVS 15.0103X Page 2 of 5

Date of issue: 2015-11-13 Issue No: 0

Manufacturer: Cooper Crouse-Hinds GmbH

Neuer Weg-Nord 49 69412 Eberbach **Germany** 

Manufacturing locations:

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#### **STANDARDS**:

The equipment 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

IEC 60079-0:2011 Explosive atmospheres - Part 0: General requirements

Edition:6.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

Edition:6.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

Edition:2

IEC 60079-7:2006-07 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

Edition:4

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

#### **TEST & ASSESSMENT REPORTS:**

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Test Report:

DE/BVS/ExTR15.0090/00

**Quality Assessment Report:** 

DE/BVS/QAR11.0009/05



Certificate No.: IECEx BVS 15.0103X Page 3 of 5

Date of issue: 2015-11-13 Issue No: 0

#### **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

#### **Subject and Type**

Load- and safety switch type GHG 264 00 \*\*1) \* \*2) \*\*\*

1) Switching mode

17 = Load- and safety switch 6-pole version with terminals (plastic version)

20 = Load- and safety switch 3-/4-pole version (plastic version)

21 = Load- and safety switch 6-pole version (plastic version)

23 = Load- and safety switch 3-/4-pole version (metal version)

24 = safety switch for converter supply (plastic version)

2) Equipment version

0 = standard

9 = special version

#### SPECIFIC CONDITIONS OF USE: YES as shown below:

The used enclosure made from the material SMC 0190 RAL 7035 is only permitted to use in Zone 1 and has to carry the following warning "WARNING – CLEAN ONLY WITH DAMP CLOTH".

The dimensions of the flameproof joints are in parts other than the relevant minimum or maximum values of IEC 60079-1:2014. For information on the dimensions of the flameproof joints contact the manufacturer.

For the combination with circuits in type of protection intrinsic safety "i" the creepage and clearance distances between the intrinsic and non-intrinsic circuits must be fulfil the requirements according IEC 60079-11:2011.



**IECEx BVS 15.0103X** Certificate No.: Page 4 of 5

Date of issue: 2015-11-13 Issue No: 0

#### Equipment (continued):

#### Description

The Load- and safety switch GHG 264 00 \*\* \* \* \* \*\*\* is used for the switching of rated currents up to 80 A and/or for curcuits in type of protection intrinsic safety "i" built in a 3-/4- or 6 pole version.

The standard version load- and safety switch GHG 264 00 \*\* \* \* \*\*\* consist of a separately certified empty enclosure in type of protection increased safety "e" or protection by enclosure "t" with a switch base type GHG 264 \*\*\*\* R \*\*\*\* installed inside.

Additional, the version type GHG 264 00 24 \* \* \*\*\*\* is used with a separately certified mounting Switch

type 07-1501-6420/01. Optionally, a switch block type GHG 41 . . . . R...., signal lamp type GHG41. . . . R...., terminal block type GHG 240 130. R .... or terminal block

type GHG 790 110.R .... can be installed.

Listing of all components used referring to standards

Subject and type	Certificate	Standards
Empty enclosure GHG 60	IECEx PTB 11.0030U	IEC 60079-0:2007 Ed. 5 <sup>1</sup> IEC 60079-7:2006 Ed. 4 IEC 60079-31:2008 Ed. 1 <sup>1</sup>
Switch base GHG 264 **** R ****	IECEx BVS 12.0083U	IEC 60079-0:2007 Ed. 5 <sup>1</sup> IEC 60079-1:2007 Ed. 6 <sup>1</sup> IEC 60079-7:2006 Ed. 4 IEC 60079-11:2006 Ed. 5 <sup>1</sup>
Miniature insert switch 07-1501/	IECEx EPS 14.0038U	IEC 60079-0:2011 Ed. 6 IEC 60079-1:2007 Ed. 6 <sup>1</sup>
Signal lamp	IECEx IBE 13.0031U	IEC 60079-0:2011 Ed. 6 IEC 60079-1:2007 Ed. 6 <sup>1</sup> IEC 60079-7:2006 Ed. 4 IEC 60079-11:2011 Ed. 6
Ex-d component GHG 417/418	IECEx IBE 14.0005U	IEC 60079-0:2011 Ed. 6 IEC 60079-1:2007 Ed. 6 <sup>1</sup> IEC 60079-7:2006 Ed. 4
Terminal block GHG 240 130. R	IECEx PTB 15.0028U	IEC 60079-0:2011 Ed. 6 IEC 60079-7:2006 Ed. 4
Terminal block GHG 790 110. R	IECEx PTB 11.0029U	IEC 60079-0:2007 Ed. 5 <sup>1</sup> IEC 60079-11:2011 Ed. 6

No applicable Technical Differences



Certificate No.: IECEx BVS 15.0103X Page 5 of 5

Date of issue: 2015-11-13 Issue No: 0

### Additional information: Parameters

Electrical parameter

Rated voltage up to 690 V Rated current up to 80 A

Cross-section up to 16 mm<sup>2</sup> (fine wire), up to 25 mm<sup>2</sup> (multi wire),

(main contact) up to 25 mm<sup>2</sup> (fine wire with special cable lug),

up to 35 mm<sup>2</sup> (multi wire with special cable lug)

Cross-section up to 4 mm<sup>2</sup> (fine wire and multi wire)

(auxiliary contact)

Thermal parameters:

Ambient temperature range  $-20 \,^{\circ}\text{C}$  up to  $+40 \,^{\circ}\text{C}$  /  $+50 \,^{\circ}\text{C}$  /+55  $^{\circ}\text{C}$  (IIC)

-36 °C up to +40 °C / +50 °C /+55 °C (IIB) -35 °C up to +40 °C / +50 °C /+55 °C (IIB) (only for safety switch of converter supply )

-35 °C up to +55 °C (IIIC)

Cross-section	Rated current	Temperature class at T <sub>amb</sub>		
		+40 °C	+50 °C	+55 °C
16 mm <sup>2</sup>	≤ 63 A	Т6	Т6	Т6
	≤ 80 A	Т6	T5	
25 mm <sup>2</sup>	≤ 80 A	Т6	Т6	Т6
35 mm <sup>2</sup>	≤ 80 A	Т6	Т6	Т6