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

Certificate No.:	IECEx BVS 13.0045X issue No.:0	Certificate history:
Status:	Current	
Date of Issue:	2013-04-19 Page 1 of 4	

Applicant: **Cooper Crouse-Hinds GmbH**
Neuer Weg-Nord 49
69412 Eberbach
Germany

Electrical Apparatus: **Terminal box type GHG 731 ** *** ****
Optional accessory:

Type of Protection: **Equipment protection by intrinsic safety "i", Equipment dust ignition protection by enclosure "t", Equipment protection by increased safety "e"**

Marking: Ex e * IIC T4 / T5 / T6 Gb
*) Optional the marking can be amplified with the types of protection of the separately certified components, for example "d" and/or "ib".
Ex tb IIIC T80°C / T95°C Db IP6*
*)„Parameters"

Approved for issue on behalf of the IECEx Certification Body: Dr. F. Eickhoff

Position: Deputy Head of Certification Body

Signature:
(for printed version)

Date: 2013-04-18

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.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 13.0045X

Date of Issue: **2013-04-19** Issue No.: **0**

Manufacturer: **Cooper Crouse-Hinds GmbH**
Neuer Weg-Nord 49
69412 Eberbach
Germany

Additional Manufacturing location (s):
S.C. Cooper Industries Romania S.R.L
ARAD, Zona Industrial NV, str III, no,12
Romania

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 electrical 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:

IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-31 : 2008 Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by 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

Test Report:
DE/BVS/ExTR13.0049/00

Quality Assessment Report:

DE/BVS/QAR11.0006/02 DE/BVS/QAR11.0009/01

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 13.0045X

Date of Issue: **2013-04-19** Issue No.: **0**

Schedule

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

Subject and Type

Terminal box type GHG 731 **[1)] *** ****[2)]
[1)] Version
Plastic version (l x w x d)
01 = (85 x 85 x 77.5) mm
02 = (125 x 85 x 77.5) mm
03 = (165 x 85 x 77.5) mm
11 = (120 x 140 x 95) mm
12 = (182 x 140 x 95) mm
[2)] not Ex-relevant

Description

The Terminal box type GHG 731 ** *** **** is used as a connection or junction box in type of protection increased safety "e" and type of protection by enclosure "t". The terminal box enclosure could be executed in plastic material.

The electrical connection can be realized with separately certified terminals in type of protection "e" increased safety and / or "i" intrinsic safety. The maximum numbers of the terminals, numbers of single leads, size of cross-section and the maximum rated current must be designed according the permitted current / cable size table resp. acc. to the maximum power dissipation (see table in Parameters).

In addition other components (apart from components in type of protection "i" intrinsic safety) separately certified for this purpose can be used (e.g. fuses) with a max. power dissipation of 1 W according to the table listed in "Parameters".

To be continued on page 4

CONDITIONS OF CERTIFICATION: YES as shown below:

When mounting the separately certified terminals, the clearance and creepage distance must be observed in accordance to table 1 of EN/IEC 60079-7.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 13.0045X

Date of Issue: **2013-04-19** Issue No.: **0**

EQUIPMENT(continued):

Parameters

Electrical parameter

Type GHG 731 01, GHG 731 02, GHG 731 03

Nominal voltage[1)]	up to	690	V AC / DC
Nominal current[2)]	up to	25	A
Terminal cross-section	up to	4	mm^2

Type GHG 731 11, GHG 731 12

Nominal voltage[1)]	up to	690	V AC / DC
Nominal current[2)]	up to	80	A
Terminal cross-section	up to	25	mm^2

1) Dependent on the used terminals, as well as the relevant creepage distances and clearances according table 1 of EN/IEC 60079-7.
2) Dependent on the used terminals, as well as terminal cross-section and the number of single leads.

Power Dissipation

Rated current	Power Dissipation / Terminal cross-section					
	1.5 mm^2	2.5 mm^2	4 mm^2	6 mm^2	10 mm^2	16 mm^2
2 A	0.020 W	---	---	---	---	---
3 A	0.025 W	0.015 W	---	---	---	---
4 A	0.040 W	0.025 W	0.015 W	---	---	---
5 A	0.055 W	0.080 W	0.025 W	0.015 W	---	---
10 A	0.250 W	0.200 W	0.080 W	0.060 W	0.035 W	0.025 W
15 A	---	0.350 W	0.200 W	0.130 W	0.080 W	0.050 W
20 A	---	---	0.350 W	0.230 W	0.150 W	0.080 W
25 A	---	---	---	0.350 W	0.230 W	0.150 W
30 A	---	---	---	---	0.320 W	0.200 W
40 A	---	---	---	---	0.550 W	0.350 W
50 A	---	---	---	---	0.550 W	

Degree of IP-Protection IP6*

* The degree of IP Protection could be changed depending on the enclosure for use with special assembly parts.

Thermal data

The temperature range is depending on the used enclosure assembly parts.

Ambient temperature range	-55 °C up to +40 °C (T6)
	-55 °C up to +55 °C (T5)
	-55 °C up to +55 °C (T4)*

* only for use of terminals in type of protection intrinsic safety "i".

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

Certificate No.: IECEx BVS 13.0045X issue No.:1

Certificate history:
Issue No. 1 (2014-6-11)
Issue No. 0 (2013-4-19)

Status: **Current**

Date of Issue: **2014-06-11** Page 1 of 5

Applicant: **Cooper Crouse-Hinds GmbH**
Neuer Weg-Nord 49
69412 Eberbach
Germany

Electrical Apparatus: **Terminal box type GHG 731 ** *** ****
Optional accessory:

Type of Protection: **Equipment protection by intrinsic safety "i", Equipment dust ignition protection by enclosure “t”, Equipment protection by increased safety "e"**

Marking: Ex e * IIC T4 / T5 / T6 Gb
*) Optional the marking can be amplified with the types of protection of the separately certified components, for example “d” and/or “ib”.
Ex tb IIIC T80°C / T95°C Db IP6*
*)„Parameters“

Approved for issue on behalf of the IECEx Certification Body: Dr. F. Eickhoff

Position: Deputy Head of Certification Body

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.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 13.0045X

Date of Issue: **2014-06-11** Issue No.: **1**

Manufacturer:

Cooper Crouse-Hinds GmbH
Neuer Weg-Nord 49
69412 Eberbach
Germany

Additional Manufacturing location(s):

Cooper Electric (Changzhou) Co. Ltd.
No. 189 Liuyanghe Road
Xinbei District
Changzhou, Jiangsu
China 213031
China

Cooper Crouse-Hinds PTE Ltd
No 2 Serangoon North Avenue
06-01 Fu Yu Building
Singapore
554911
Singapore

S.C. Cooper Industries Romania S.R.L
ARAD, Zona Industrial NV, str III, no,12
Romania

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 electrical 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:

IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-31 : 2008 Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by 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

Test Report:
DE/BVS/ExTR13.0049/00

Quality Assessment Report:

GB/BAS/QAR07.0041/05
GB/BAS/QAR11.0007/02
DE/BVS/QAR11.0006/02
DE/BVS/QAR11.0009/01

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 13.0045X

Date of Issue: **2014-06-11** Issue No.: **1**

Schedule

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

Subject and Type

Terminal box type GHG 731 **[1)] *** ****[2)]
[1)] Version
Plastic version (l x w x d)
01 = (85 x 85 x 77.5) mm
02 = (125 x 85 x 77.5) mm
03 = (165 x 85 x 77.5) mm
11 = (120 x 140 x 95) mm
12 = (182 x 140 x 95) mm
[2)] not Ex-relevant

Description

The Terminal box type GHG 731 ** *** **** is used as a connection or junction box in type of protection increased safety "e" and type of protection by enclosure "t". The terminal box enclosure could be executed in plastic material.

The electrical connection can be realized with separately certified terminals in type of protection "e" increased safety and / or "i" intrinsic safety. The maximum numbers of the terminals, numbers of single leads, size of cross-section and the maximum rated current must be designed according the permitted current / cable size table resp. acc. to the maximum power dissipation (see table in Parameters).

In addition other components (apart from components in type of protection "i" intrinsic safety) separately certified for this purpose can be used (e.g. fuses) with a max. power dissipation of 1 W according to the table listed in "Parameters".

To be continued on page 4

CONDITIONS OF CERTIFICATION: YES as shown below:

When mounting the separately certified terminals, the clearance and creepage distance must be observed in accordance to table 1 of EN/IEC 60079-7.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 13.0045X

Date of Issue: **2014-06-11** Issue No.: **1**

EQUIPMENT(continued):

Parameters

Electrical parameter

Type GHG 731 01, GHG 731 02, GHG 731 03

Nominal voltage[1)]	up to	690	V AC / DC
Nominal current[2)]	up to	25	A
Terminal cross-section	up to	4	mm^2

Type GHG 731 11, GHG 731 12

Nominal voltage[1)]	up to	690	V AC / DC
Nominal current[2)]	up to	80	A
Terminal cross-section	up to	25	mm^2

1) Dependent on the used terminals, as well as the relevant creepage distances and clearances according table 1 of EN/IEC 60079-7.
2) Dependent on the used terminals, as well as terminal cross-section and the number of single leads.

Power Dissipation

Rated current	Power Dissipation / Terminal cross-section					
	1.5 mm^2	2.5 mm^2	4 mm^2	6 mm^2	10 mm^2	16 mm^2
2 A	0.020 W	---	---	---	---	---
3 A	0.025 W	0.015 W	---	---	---	---
4 A	0.040 W	0.025 W	0.015 W	---	---	---
5 A	0.055 W	0.080 W	0.025 W	0.015 W	---	---
10 A	0.250 W	0.200 W	0.080 W	0.060 W	0.035 W	0.025 W
15 A	---	0.350 W	0.200 W	0.130 W	0.080 W	0.050 W
20 A	---	---	0.350 W	0.230 W	0.150 W	0.080 W
25 A	---	---	---	0.350 W	0.230 W	0.150 W
30 A	---	---	---	---	0.320 W	0.200 W
40 A	---	---	---	---	0.550 W	0.350 W
50 A	---	---	---	---	---	0.550 W

Degree of IP-Protection IP6*

* The degree of IP Protection could be changed depending on the enclosure for use with special assembly parts.

Thermal data

The temperature range is depending on the used enclosure assembly parts.

Ambient temperature range	-55 °C up to +40 °C (T6)
	-55 °C up to +55 °C (T5)
	-55 °C up to +55 °C (T4)*

* only for use of terminals in type of protection intrinsic safety "i".

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 13.0045X

Date of Issue: **2014-06-11** Issue No.: **1**

Page 5 of 5

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

Two new manufacturing locations (in Singapore and in China) were added.

The old locations in Germany and Romania are still valid.

Therefore two additional QAR's were linked to this Certificate.

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

Certificate No.:	IECEx BVS 13.0045X	issue No.:2
Status:	**Current**	
Date of Issue:	**2015-08-25**	Page 1 of 4

Certificate history:
Issue No. 2 (2015-8-25)
Issue No. 1 (2014-6-11)
Issue No. 0 (2013-4-19)

Applicant: **Cooper Crouse-Hinds GmbH**
Neuer Weg-Nord 49
69412 Eberbach
Germany

Electrical Apparatus: **Terminal box type GHG 731 ** *** ****
Optional accessory:

Type of Protection: **Equipment protection by intrinsic safety "i", Equipment dust ignition protection by enclosure "t", Equipment protection by increased safety "e"**

Marking: Ex e* IIC T4 / T5 / T6 Gb
Ex tb IIIC T80°C / T95°C Db
* Optional the marking can be amplified with the types of protection of the separately certified components, for example "d", "e", "mb" and/or "ia/ib".

Approved for issue on behalf of the IECEx Certification Body: H.-Ch. Simanski

Position: Head of Certification Body

Signature:
(for printed version)

Date: 25.8.2015

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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.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA EXAM GmbH

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 13.0045X

Date of Issue: **2015-08-25** Issue No.: **2**

Manufacturer:

Cooper Crouse-Hinds GmbH
Neuer Weg-Nord 49
69412 Eberbach
Germany

Additional Manufacturing location(s):

S.C. Cooper Industries Romania S.R.L
ARAD, Zona Industrial NV, str III, no,12
Romania

Cooper Electric (Changzhou) Co. Ltd.
No. 189 Liuyanghe Road
Xinbei District
Changzhou, Jiangsu
China 213031
China

Cooper Crouse-Hinds PTE Ltd
No 2 Serangoon North Avenue
06-01 Fu Yu Building
Singapore
554911
Singapore

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 electrical 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:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-31 : 2013 Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by 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

Test Report:
DE/BVS/ExTR13.0049/01

Quality Assessment Report:

DE/BVS/QAR11.0009/04 GB/BAS/QAR07.0041/06 GB/BAS/QAR11.0007/03

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 13.0045X

Date of Issue: **2015-08-25** Issue No.: **2**

Schedule

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

Description

The Terminal box type GHG 731 ** *** **** is used as a connection or junction box in type of protection Increased Safety "e" and type of protection by enclosure "t". The terminal box enclosure could be executed in plastic material.
The electrical connection can be realized with separately certified terminals in type of protection "e" Increased Safety and / or "i" Intrinsic Safety. The maximum numbers of the terminals, numbers of single leads, size of cross-section and the maximum rated current must be designed according the permitted current / cable size table resp. acc. to the maximum power dissipation (see table in parameters).
In addition other components (apart from components in type of protection "i" Intrinsic Safety) separately certified for this purpose can be used (e.g. fuses) with a max. power dissipation of 1 W.

The reason for this supplement is the updating to the new standard.

Listing of all components used referring to older standards

Subject and type	Certificate	Standards
Terminal	Fixed in "List of Components" GHG 902 5018 F0001	
Several components which can be built in	Fixed in "List of Components" GHG 902 5018 F0002	

Subject and type

See Annex

Parameters

See Annex

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The used empty enclosure made from the material SMC 0190 RAL 7035 is only permitted to use in Zone 1 and has to carry the following warning "Clean with moist cloth only".
2. When mounting the separately certified terminals into the separately certified empty enclosure, the clearances and creepage distances in accordance with table 1 of IEC 60079-7 have to be fulfilled.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 13.0045X

Date of Issue: **2015-08-25** Issue No.: **2**

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

The reason for this supplement is the updating to the new standard.

Annex: BVS_13_0045X_CCH_Annex_issue2.pdf

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 13.0045 X issue No.: 2**
Annex

Subject and Type

Terminal box type GHG 731 **[1] *** ****[2]

[1] Version

Plastic version (l x w x d)

01 = (85 x 85 x 77.5) mm

02 = (125 x 85 x 77.5) mm

03 = (165 x 85 x 77.5) mm

11 = (120 x 140 x 95) mm

12 = (182 x 140 x 95) mm

[2] not Ex-relevant

Parameters

Electrical parameter

Type GHG 731 01, GHG 731 02, GHG 731 03			
Nominal voltage [1]	up to	690	V AC / DC
Nominal current [2]	up to	25	A
Terminal cross-section	up to	4	mm^2
Type GHG 731 11, GHG 731 12			
Nominal voltage [1]	up to	690	V AC / DC
Nominal current [2]	up to	80	A
Terminal cross-section	up to	25	mm^2

[1] Dependent on the used terminals, as well as the relevant creepage distances and clearances according table 1 of IEC 60079-7.

[2] Dependent on the used terminals, as well as terminal cross-section and the number of single leads.

Max. Power dissipation version 01 = (85 x 85 x 77.5) mm:

Max. ambient temp.	T6	T5
40 °C	4.7 W	6.4 W
55 °C	2.9 W	4.7 W

Max. Power dissipation version 02 = (125 x 85 x 77.5) mm:

Max. ambient temp.	T6	T5
40 °C	5.8 W	8.0 W
55 °C	3.5 W	5.8 W

Max. Power dissipation version 03 = (165 x 85 x 77.5) mm:

Max. ambient temp.	T6	T5
40 °C	7.0 W	9.6 W
55 °C	4.3 W	7.0 W

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 13.0045 X issue No.: 2**

Annex

Max. Power dissipation version 11 = (120 x 140 x 95) mm

Max. ambient temp.	T6	T5
40 °C	9.3 W	12 W
55 °C	5.8 W	9.3 W

Max. Power dissipation version 12 = (182 x 140 x 95) mm:

Max. ambient temp.	T6	T5
40 °C	12 W	17 W
55 °C	8.0 W	12 W

Degree of IP-Protection IP6*

* The degree of IP Protection could be changed depending on the enclosure for use with special assembly parts .

Thermal data

The temperature range is depending on the used enclosure assembly parts.

Ambient temperature range

-55 °C up to +55 °C (T6)
-55 °C up to +55 °C (T5)
-55 °C up to +55 °C (T4)*

* Only for use of terminals in type of protection Intrinsic Safety "i".

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

Certificate No.:	IECEx BVS 13.0045X	issue No.:3
Status:	**Current**	
Date of Issue:	**2018-02-20**	Page 1 of 4

Certificate history:
Issue No. 3 (2018-2-20)
Issue No. 2 (2015-8-25)
Issue No. 1 (2014-6-11)
Issue No. 0 (2013-4-19)

Applicant: **Cooper Crouse-Hinds GmbH**
Neuer Weg-Nord 49
69412 Eberbach
Germany

Equipment: **Terminal box type GHG 731 ** *** ****
Optional accessory:

Type of Protection: **Equipment protection by intrinsic safety "i", Equipment dust ignition protection by enclosure "t", Equipment protection by increased safety "e"**

Marking: Ex e* IIC T4 / T5 / T6 Gb
Ex tb IIIC T80°C / T95°C Db
* Optional the marking can be amplified with the types of protection of the separately certified components, for example 'd', 'e', 'mb' and/or 'ia/ib'.

Approved for issue on behalf of the IECEx Certification Body: Dr Franz Eickhoff

Position: Deputy Head of Certification Body

Signature:
(for printed version) Eickhoff

Date: 2018-02-20

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.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
On the safe side.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 13.0045X

Date of Issue: **2018-02-20** Issue No.: **3**

Manufacturer:

Cooper Crouse-Hinds GmbH
Neuer Weg-Nord 49
69412 Eberbach
Germany

Additional Manufacturing location(s):

Eaton Electric (Singapore) PTE Ltd.
100G Pasir Panjang Road
#07-08/ #02-09 Interlocal Centre
Singapore
118523
Singapore

Cooper Electric (Changzhou) Co. Ltd.
No. 189 Liuyanghe Road
Xinbei District
Changzhou, Jiangsu
China 213031
China

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 electrical 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:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-31 : 2013 Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by 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

Test Report:
DE/BVS/ExTR13.0049/02

Quality Assessment Report:

DE/BVS/QAR11.0009/08 GB/BAS/QAR07.0041/07 GB/BAS/QAR11.0007/05

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 13.0045X

Date of Issue: **2018-02-20** Issue No.: **3**

Schedule

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

Description

The terminal box type GHG 731 ** *** **** is used as a connection or junction box in type of protection Increased Safety 'e' and type of protection by enclosure 't'. The terminal box enclosure could be executed in plastic material.

The electrical connection can be realized with separately certified terminals in type of protection 'e' Increased Safety and / or 'I' Intrinsic Safety. The maximum numbers of the terminals, numbers of single leads, size of cross-section and the maximum rated current must be designed according the permitted current / cable size table resp. acc. to the maximum power dissipation (see table in parameters).

In addition other components (apart from components in type of protection 'I' Intrinsic Safety) separately certified for this purpose can be used (e.g. fuses) with a max. power dissipation of 1 W.

Subject and Type

See Annex

Parameters

See Annex

Listing of all components used referring to older standards

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The used empty enclosure made from the material SMC 0190 RAL 7035 is only permitted to use in Zone 1 and has to carry the following warning "Clean with moist cloth only".
2. When mounting the separately certified terminals into the separately certified empty enclosure, the clearances and creepage distances in accordance with table 1 of IEC 60079-7 have to be fulfilled.

IECEx Certificate of Conformity

Certificate No.: IECEx BVS 13.0045X

Date of Issue: **2018-02-20** Issue No.: **3**

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

The manufacturing location "Eaton Electric (Singapore) PTE Ltd." changed.

Annex: BVS_13_0045X_Cooper_Annex_issue3.pdf

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 13.0045X issue No.: 3**
Annex

Subject and Type

Terminal box type GHG 731 **[1] *** ****[2]

[1] Version

Plastic version (l x w x d)
01 = (85 x 85 x 77.5) mm
02 = (125 x 85 x 77.5) mm
03 = (165 x 85 x 77.5) mm
11 = (120 x 140 x 95) mm
12 = (182 x 140 x 95) mm

[2] not Ex-relevant

Listing of all components used referring to older standards

Subject and type	Certificate	Standards
Terminal [1]	Fixed in 'List of Components' GHG 902 5018 F0001	
Several components which can be built in [1]	Fixed in 'List of Components' GHG 902 5018 F0002	

1 No applicable technical differences
2 Technical differences evaluated and found satisfactory

Parameters

Electrical parameter

Type GHG 731 01, GHG 731 02, GHG 731 03

Nominal voltage [1]	up to	690	V AC / DC
Nominal current [2]	up to	25	A
Terminal cross-section	up to	4	mm^2

Type GHG 731 11, GHG 731 12

Nominal voltage [1]	up to	690	V AC / DC
Nominal current [2]	up to	80	A
Terminal cross-section	up to	25	mm^2

[1] Dependent on the used terminals, as well as the relevant creepage distances and clearances according table 1 of IEC 60079-7.
[2] Dependent on the used terminals, as well as terminal cross-section and the number of single leads.

Max. power dissipation version 01 = (85 x 85 x 77.5) mm:

Max. ambient temp.	T6	T5
40 °C	4.7 W	6.4 W
55 °C	2.9 W	4.7 W

Max. power dissipation version 02 = (125 x 85 x 77.5) mm:

Max. ambient temp.	T6	T5
40 °C	5.8 W	8.0 W
55 °C	3.5 W	5.8 W

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 13.0045X issue No.: 3**
Annex

Max. power dissipation version 03 = (165 x 85 x 77.5) mm:

Max. ambient temp.	T6	T5
40 °C	7.0 W	9.6 W
55 °C	4.3 W	7.0 W

Max. power dissipation version 11 = (120 x 140 x 95) mm

Max. ambient temp.	T6	T5
40 °C	9.3 W	12 W
55 °C	5.8 W	9.3 W

Max. power dissipation version 12 = (182 x 140 x 95) mm:

Max. ambient temp.	T6	T5
40 °C	12 W	17 W
55 °C	8.0 W	12 W

Degree of IP-Protection IP6*

* The degree of IP Protection could be changed depending on the enclosure for use with special assembly parts .

Thermal data

The temperature range is depending on the used enclosure assembly parts.

Ambient temperature range -55 °C up to +55 °C (T6)
-55 °C up to +55 °C (T5)
-55 °C up to +55 °C (T4)*

* Only for use of terminals in type of protection Intrinsic Safety 'i'.

IECEx Certificate of Conformity

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 13.0045X**	Page 1 of 5	Certificate history:
Status:	**Current**	Issue No: 4	Issue 3 (2018-02-20) Issue 2 (2015-08-25) Issue 1 (2014-06-11) Issue 0 (2013-04-19)
Date of Issue:	2023-02-01		

Applicant: **Cooper Crouse-Hinds GmbH**
Neuer Weg-Nord 49
69412 Eberbach
Germany

Equipment: **Terminal box type GHG 731 ** ** * ****

Optional accessory:

Type of Protection: **Intrinsic Safety "i", Protection by Enclosure “t”, Increased Safety "e"**

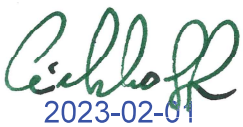
Marking: Ex eb * IIC T4 / T5 / T6 Gb
Ex tb IIIC T80°C / T95°C Db

*) Optional the marking can be amplified with the types of protection of the separately certified components, for example “db”, “eb”, “mb” and/or “ia/ib”.

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

Position: **Senior Lead Auditor, Certification Manager and officially recognised expert**

Signature:
(for printed version)



Date:
(for printed version) 2023-02-01

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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

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

DEKRA
On the safe side.

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 13.0045X**

Date of issue: 2023-02-01

Issue No: 4

Manufacturer: **Cooper Crouse-Hinds GmbH**
Neuer Weg-Nord 49
69412 Eberbach
Germany

Manufacturing locations: **Cooper Crouse-Hinds GmbH**
Neuer Weg-Nord 49
69412 Eberbach
Germany

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 60079-11:2011 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/ExTR13.0049/03

Quality Assessment Report:

DE/BVS/QAR11.0009/11

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Subject and Type

Terminal box type GHG 731 **[1)] ** * ****[2)]
[1)] Version
Plastic version (l x w x d)
01 = (85 x 85 x 77.5) mm
02 = (125 x 85 x 77.5) mm
03 = (165 x 85 x 77.5) mm
11 = (120 x 140 x 95) mm
12 = (182 x 140 x 95) mm
[2)] not Ex-relevant

Description

The Terminal box type GHG 731 ** ** * **** is used as a connection or junction box in type of protection Increased Safety “e” and type of protection by enclosure “t”. The terminal box enclosure could be executed in plastic material.

The electrical connection can be realized with separately certified terminals in type of protection “e” Increased Safety and / or “i” Intrinsic Safety. The maximum numbers of the terminals, numbers of single leads, size of cross-section and the maximum rated current must be designed according the permitted current / cable size table resp. acc. to the maximum power dissipation (see table in parameters).

In addition other components (apart from components in type of protection “i” Intrinsic Safety) separately certified for this purpose can be used (e.g. fuses) with a max. power dissipation of 1 W.

The reason for this supplement is the updating to the new standard.

Listing of all components used referring to older standards

Subject and type	Certificate	Standards
Terminal	Fixed in “List of Components” GHG 902 5018 F0001	
Several components which can be built in	Fixed in “List of Components” GHG 902 5018 F0002	

Listing of all components used referring to older standards

Subject and type	Certificate	Standards
Fuse type 8560	IECEx PTB 06.0056U[1]	IEC 600790:2004 Ed. 4.0 IEC 60079-7:2001 Ed. 3.0 IEC 60079-18:1992 Ed. 1.0
P.B. EX41 GHG417	IECEx IBE 14.0005U[1]	IEC 600790:2011 Ed. 6.0 IEC 60079-7:2015 Ed. 5.0
Terminal type MSLKG 5	IECEx KEM 07.0035U[1]	IEC 60079-0:2004 Ed. 4.0 IEC 60079-7:2006 Ed. 4.0

[1] No applicable technical differences

SPECIFIC CONDITIONS OF USE: YES as shown below:
The plastic enclosure GHG 731 ** ** * ****can alternatively be made of different materials. Material "A" is conductive with a surface resistance of < 10^9 Ω.
Material "B" is non-conductive with a surface resistance > 10^9 Ω and has to carry the following warning “Clean with moist cloth only”.
The code letters are given with a preceding "Mat.:" on the type label.
With regard to the possible risk of electrostatic discharge, the relevant information in the operating instructions must be observed.

IECEx Certificate of Conformity

Equipment (continued):

Parameters

Electrical parameter

Type GHG 731 01, GHG 731 02, GHG 731 03

Nominal voltage [1]	up to	690	V AC / DC
Nominal current [2]	up to	25	A
Terminal cross-section	up to	4	mm^2

Type GHG 731 11, GHG 731 12

Nominal voltage [1]	up to	690	V AC / DC
Nominal current [2]	up to	80	A
Terminal cross-section	up to	25	mm^2

[1] Dependent on the used terminals, as well as the relevant creepage distances and clearances according table 1 of IEC 60079-7.

[2] Dependent on the used terminals, as well as terminal cross-section and the number of single leads.

Max. Power dissipation version 01 = (85 x 85 x 77.5) mm:

Max. ambient temp.	T6	T5
40 °C	4.7 W	6.4 W
55 °C	2.9 W	4.7 W

Max. Power dissipation version 02 = (125 x 85 x 77.5) mm:

Max. ambient temp.	T6	T5
40 °C	5.8 W	8.0 W
55 °C	3.5 W	5.8 W

Max. Power dissipation version 03 = (165 x 85 x 77.5) mm:

Max. ambient temp.	T6	T5
40 °C	7.0 W	9.6 W
55 °C	4.3 W	7.0 W

Max. Power dissipation version 11 = (120 x 140 x 95) mm

Max. ambient temp.	T6	T5
40 °C	9.3 W	12 W
55 °C	5.8 W	9.3 W

Max. Power dissipation version 12 = (182 x 140 x 95) mm:

Max. ambient temp.	T6	T5
40 °C	12 W	17 W
55 °C	8.0 W	12 W

Degree of IP-Protection IP6*

* The degree of IP Protection could be changed depending on the enclosure for use with special assembly parts.

Thermal data

The temperature range is depending on the used enclosure assembly parts.

Ambient temperature range -55 °C up to +55 °C (T6)
-55 °C up to +55 °C (T5)
-55 °C up to +55 °C (T4)*

* only for use of terminals in type of protection Intrinsic Safety “i”.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
- Updating to the standards IEC 60079-0:2017 and IEC 60079-7:2017
- Introduction of code letters for enclosure materials