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 13.0031X**

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Certificate history:

Issue 2 (2015-08-06)
Issue 1 (2014-06-11)
Issue 0 (2013-02-26)

Status: **Current**

Issue No: 3

Date of Issue: 2018-02-13

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

Equipment: **Terminal box GHG 72 ** *** ****

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)

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 www.iecex.com or use of this QR Code.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
On the safe side.

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Certificate No.: **IECEx BVS 13.0031X**

Date of issue: 2018-02-13 Issue No: 3

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

Additional manufacturing locations:

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

Eaton Electric (Singapore) PTE Ltd.
100G Pasir Panjang Road,, #07-08/ #02-09
Interlocal Centre, Singapore, 118523
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 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 60079-11:2011 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:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

DE/BVS/ExTR13.0030/02

Quality Assessment Reports:

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

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

Description

The terminal box type GHG 72 ** *** **** 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 or aluminium (only for EPL Gb).

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'.

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:
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”.

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.

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Equipment (continued):

Subject and Type

Terminal box type GHG 72 **1) *** ****2)
1) Version
Plastic version (l x w x d)
10 = (165 x 165 x 131) mm
11 = (285 x 165 x 131) mm
Aluminium version (l x w x d)
30 = (220 x 120 x 80) mm
31 = (280 x 230 x 90) mm
32 = (400 x 230 x 90) mm
2) not Ex-relevant

Parameters

See Annex

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
The manufacturing location “Eaton Electric (Singapore) PTE Ltd.” changed.

Annex:

Annex to BVS_13_0031X_Cooper_Annex_issue3.pdf

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Certificate No.: **IECEx BVS 13.0031X issue No.: 3**
Annex

Subject and Type

Terminal box type GHG 72 **[1)] *** ****[2)]

[1)] Version

Plastic version (l x w x d)

10 = (165 x 165 x 131) mm
11 = (285 x 165 x 131) mm
Aluminium version (l x w x d)

30 = (220 x 120 x 80) mm
31 = (280 x 230 x 90) mm
32 = (400 x 230 x 90) 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

Nominal voltage [1)]	up to	690	V AC / DC
Nominal current [2)]	up to	200	A
Terminal cross-section	up to	95	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 for enclosure plastic version 10 = (165 x 165 x 131) mm:

Max. ambient temp.	T6	T5
40 °C	16 W	22 W
55 °C	10 W	16 W

Max. power dissipation for plastic version 11 = (285 x 165 x 131) mm:

Max. ambient temp.	T6	T5
40 °C	24 W	33 W
55 °C	15 W	24 W

Max. power dissipation for aluminium version 30 = (220 x 120 x 80) mm:

Max. ambient temp.	T6	T5
40 °C	19 W	26 W
55 °C	11 W	19 W

Max. power dissipation for aluminium version 31 = (280 x 230 x 90) mm:

Max. ambient temp.	T6	T5
40 °C	42 W	58 W
55 °C	25 W	42 W

Max. power dissipation for aluminium version 32 = (400 x 230 x 90) mm:

Max. ambient temp.	T6	T5
40 °C	56 W	77 W
55 °C	35 W	56 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

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’.