



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 BKI 07.0011**

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Certificate history:

Status: **Current**

Issue No: 1

[Issue 0 \(2007-03-06\)](#)

Date of Issue: 2011-09-19

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

Equipment: **Control switch with measuring instrument**

Optional accessory: GHG 292R.... and GHG 293R....

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

Marking: Ex ed ia IIC T5 or T6
-55 °C ≤ Tamb ≤ +47 °C for T6 (16 A)
-55 °C ≤ Tamb ≤ +55 °C for T5 or T6 (10 A)
Ex tD A21 IP66 T49 °C

Approved for issue on behalf of the IECEx
Certification Body:

János FEJES

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



Certificate issued by:

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





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

Additional
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 60079-0:2004 Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
Edition:4.0

IEC 60079-1:2001 Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosures 'd'
Edition:4

IEC 60079-11:1999 Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 'i'
Edition:4

IEC 60079-7:2001 Electrical apparatus for explosive gas atmospheres - Part 7: Increased safety 'e'
Edition:3

IEC 61241-0:2004 Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
Edition:1

IEC 61241-1:2004 Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"
Edition: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:

[HU/BKI/ExTR07.0010/00](#)

Quality Assessment Reports:

[DE/BVS/QAR11.0009/00](#)

[HU/BKI/QAR06.0005/00](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

See details in Addendum to IECEx BKI 07.0011 Certificate of Conformity

SPECIFIC CONDITIONS OF USE: NO



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
new QAR

Annex:

[Addendum to IECEx BKI 07.0011.pdf](#)



1. Description

of type of protection Increased Safety „e”, with integrated control switch (type of protection Flameproof Enclosure „d”) and, depending on the size of the housing, with integrated measuring unit and terminals of type of protection Increased Safety „e” or Intrinsic Safety „i”.

Connection proceeds from outside using cable entries protected for use in explosive atmospheres.

All integrated elements and extension elements have been tested and certified under a separate test certificate.

The control switch type GHG 293.... R.... may now also be used in areas where potentially explosive atmospheres with dust/air mixtures may occasionally occur.

2. Type assortment

GHG 293R....

Legend of the signs from left to right

1._, 2._, 3._	Code for manufacturer
4._, 5._	Type of apparatus (switch)
6._	Enclosure size 3 = Switch with measuring instruments in moulded plastic enclosures with series terminals 2 = Switch in moulded plastic enclosure
7._	Number of poles of circuit arrangement 1 = 2-pole new 4 = 2 pole GHG old 2 = 4-pole new 5 = 3 pole GHG old 3 = 6 pole new 6 = 6 pole GHG old
10._	Type of protection 1 = intrinsically safe circuit in switch
8._, 9._, 11._, 12._, 13._, 14._, 15._	Code for design variants with no influence on the explosion protection or special designs

3. General parameters

Technical data

Using flush-mounting switch GHG 2...

Utilization category AC-1

Rated voltage U_e up to 690 V

Rated current I_e max. 20 A

Utilization category AC-3

Rated voltage U_e up to 400 V 500 V 690 V

Rated current I_e max. 20 A 16 A 10 A

Rated cross section: max. 4 mm² single-core or 2.5 mm² fine stranded wire

Using flush-mounting switch GHG 291

Utilization category AC-3

Rated voltage U_e up to 400 V 500 V

Rated current I_e max. 10 A 10 A

Utilization category AC-13

Rated voltage U_e up to 230 V 400 V 500 V

Rated current I_e max. 10 A 6 A 6 A

Utilization category DC-13

Rated voltage U_e up to 24 V 60 V 110 V 230 V

Rated current I_e max. 6 A 0.8 A 0.5 A 0.3 A

Rated cross section: max. 6 mm² single-core or 4 mm² fine strand wire

Provided the making and breaking capacity complies with the relevant conditions, rated values other than those specified above are accepted and will be defined by the manufacturer on the basis of the operating mode, utilization category, etc.

It will be the manufacturer's responsibility to specify the characteristic values of the intrinsically safe circuits.

The composition of the symbol used for the type of protection will be based on the types of protection of the components actually used.

4. Ambient temperature

Ambient temperature range: -55 °C to +47 °C or +55 °C

Temperature class	T6	T5	T6	T6
Ambient temperature	max. +47 °C	+55 °C	+55 °C	+40 °C
Thermal rated current	max. 16 A	16 A	10 A	20 A
Rated cross section	max. 2.5 mm ²	2.5 mm ²	1.5 mm ²	2.5 mm ²



5. Ingress protection IP66 IEC 60529

Conditions of Certification: No

Notes for manufacture and operation

When combined with circuits of type of protection Intrinsic Safety „i“, installation has to proceed in such a way that the clearance and creepage distances between intrinsically safe and non-intrinsically safe circuits as set forth in IEC 60079-11:1998 are met.

If the clearance requirements for the connectors as specified in IEC 60079-11:1998 cannot be safeguarded with the installation, wiring that meets the quality criteria Increased Safety „e“ shall be used, or the wiring shall be of the fail-safe type.

When using more than one intrinsically safe circuit, the regulations for interconnection shall duly be observed.

Drawing

Description	No. 4191	(7 sheets)	1999.04.26
Annex to description	No. 4191	(2 sheets)	1999.04.26
Operating instructions	GHG 290 7001 P0001 D/E/F(F)	(7 sheets)	2002.02.05
Drawing No. Z. Nr.	GHG 291-1-3930		1999.04.26
	GHG 29-0-3936		1999.04.26
	GHG 26-2-3942		1999.04.26
Test protocol	PTB Ex 00-20349	(4 sheets)	2000.11.22
1. Supplement to Description No. 4191		(1 sheet)	2001.04.10
Test protocol	No. BVS PP 01.2027 EG		2001.03.20
Drawing No Z. Nr.	GHG 29-2-4367		2001.12.01
Test protocol	Nr. 02-M54-B1-251001		2001.10.25
IEC Ex Certificate of Conformity (IECEX BKI 07.0004 U)			
IEC Ex Certificate of Conformity (IECEX BKI 07.0007 U)			