



MARINE DIVISION

Certificate number: 19262/B0 BV

File number: ACE 02/151/01

Product code: 2617H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

Cooper Crouse-Hinds GmbH

Eberbach - GERMANY

for the type of product

SIGNALING AND CONTROL DEVICES

Explosion-protected control units

type: GHG 41.... and GHG 43....

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

IEC 60529, IEC 60947-1, IEC 60947-5-1, IEC 61508.

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 19 Mar 2018

For BUREAU VERITAS,

At BV HAMBURG, on 19 Mar 2013,

Dirk Hoepfner



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

GHG 41... and GHG 43... series are explosion-protected control units for wall mounting or pipe mounting with mounting plates.

1.1 - Main characteristics:

Rated voltage: up to 690V
 up to 500V (for GHG 432, GHG 434)
 Rated current: up to 16A
 Working range temperature: -25°C to + 45°C
 Degree of protection: IP65 or IP 66 (depending on installed accessories)
 Explosion category: according to PTB 00 ATEX 3117
 not suitable for Zone 0, Zone 20
 Accessories: Push button, switch, signal lamp, potentiometer, terminal block or measuring instrument

1.2 - Variants:

Type:	Dimensions	Housing material
GHG 411 81	85mm x 85mm x 77,5mm	polyamide
GHG 411 82	85mm x 125mm x 77,5mm	polyamide
GHG 411 83	85mm x 165mm x 77,5mm	polyamide
GHG 412 82	95mm x 160mm x 88mm	polyamide
GHG 432	100mm x 156mm x 90mm	polyamide
GHG 434	100mm x 245mm x 90mm	polyamide

2. DOCUMENTS AND DRAWINGS:

- Manufacture's catalogue GHG 430 7001 P0001 D/EF/(E) dated 11.05; GHG 410 7001 P0001 D/EF/(I) dated 02.06;
 - 0033 dated 05/Jun./2007.

3. TEST REPORTS:

PTB Physikalisch-Technische Bundesanstalt:

- PTB 00 ATEX3117 Statements dated 28.07.2008, 18. Februar 2008, 6. Juni 2008; Statement dated 16.03.2011;
 - PTB 00 ATEX 3117; PTB Ex 00-30073; PTB Ex 01-11189;

CEAG:

- MI_ 0640a/b/c dated 06/Oct/2006.

Brunel:

- P2006-0665 dated 14.11.2006.

TÜV:

- 968/EL 277.00/04 dated 17/Mar./2004.

Cooper/CEAG:

- 0473 dated 30/Sept./2004.

4. APPLICATION / LIMITATION:

4.1 - Bureau Veritas Rules for the Classification of Steel Ships.

4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT** and **AUT-IMS**.

4.3 - Bureau Veritas Environmental Category, **EC Code: 41S**.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned products are to be supplied by **Cooper Crouse-Hinds GmbH** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320.

5.3 - **Cooper Crouse-Hinds GmbH** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

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

6. MARKING OF PRODUCT:

- According to IEC 60947-x.
- Ex marking, as relevant

7. OTHERS:

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that **Cooper Crouse-Hinds GmbH - GERMANY**, will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 19262/A0 BV issued on 22 Jun 2007 by the Society.

*** END OF CERTIFICATE ***