



**Marine & Offshore  
Division**

**Certificate number:** 44636/A0 BV

**File number:** AP 4675

**Product code:** 4206I

*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*

**GAI-TRONICS**

Burton-upon-Trent - UNITED KINGDOM

*for the type of product*

**PUBLIC ADDRESS AND GENERAL ALARM SYSTEMS**

ELEMEC 3 Public Address and General Alarm System

### Requirements:

Bureau Veritas Rules for the Classification of Steel Ships  
SOLAS 74 as amended Reg. III/6, LSA Code, IMO MSC/Circ. 808, IMO Res. A.1021(26),  
IEC 60533 (2015), IEC 60092-504 (2001) incl. /Corr.1 (2011).

EC Code: 41B

*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: 05 Jul 2021**

**For BUREAU VERITAS,**

At BV LONDON, on 05 Jul 2016,

Spencer Yule



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 & Offshore Division available on the internet site [www.veristar.com](http://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.

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BV Mod. Ad.E 530 October 2014

This certificate consists of 3 page(s)

## **THE SCHEDULE OF APPROVAL**

### **1. PRODUCT DESCRIPTION:**

Product model or type designation:  
**ELEMEC 3**

Product description:  
Public Address and General Alarm

#### **1.1 - Description:**

<b>Description</b>	<b>Part Number</b>	<b>Remarks</b>
Control and Matrix switching unit	<b>Elemec 3</b>	Architecture such as single, N+1 and A/B levels of redundancy.
Power Amplifier unit	<b>D600i, D550i, D300i</b>	Class D Intelligent Power Amplifier
Input unit	<b>MIM</b>	Eight input circuits
Output Unit	<b>MRM</b>	Eight relay circuits
Hmi access unit	<b>19" Console Panel</b>	Ex ib IIB T4 Gb -20°C to +58°C
Hmi access unit	<b>Desktop Panel</b>	Ex ib IIB T4 Gb -20°C to +58°C
Hmi access unit	<b>Indoor Bulkhead Panel</b>	Ex ib IIB T4 Gb -20°C to +58°C
Hmi access unit	<b>Outdoor Bulkhead Panel</b>	Ex ib IIB T4 Gb -20°C to +58°C , IP66
Hmi access unit	<b>GRP</b>	IP66

#### **1.2 - Technical Specifications:**

Enclosures	Industrial 19" rackmount, Ex enclosures
Areas / Zones	Safe, Ex Zone 1
Power Supply	1 x AC inputs
No of Inputs/Outputs	256
PA address zones	64
Max Amplifiers	64
Max Hmi Panels	16

### **2. DOCUMENTS AND DRAWINGS:**

#### **Gai-Tronics:**

- Technical specification Elemec 3 PA/GA Ref.: B209-2-1015B/CN39678-001
- Functional Test Procedure Elemec 3 Ref.: E3 Demo (Type Test) FTP P01 Iss.1, dated Jun 2014.

#### **IECEX:**

- EC Certificate No. IECEX BAS 08.0066X Issue No.3 , dated 2014-03-10

#### **SGS:**

- EC Certificate No. Baseefa03ATEX0005X - Issue 7, dated Mar 10, 2014

### **3. TEST REPORTS:**

#### **MS Testing:**

- Environmental Test Report No. TL14060-ENV, dated Dec 8, 2015
- EMC Test Report No. TL14060-EMC, dated Dec 8, 2015..

**4. APPLICATION / LIMITATION:**

- 4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships and Offshore Units.
- 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, all products **EC Code: 41B.**
- 4.4 - The equipment fulfils the EMC requirements for installation on the Bridge and deck Zone.
- 4.5 - Each application and configuration is to be submitted to the Society's examination prior to fitting on board.
- 4.6 - The equipment, once installed on board ship, is to be tested in accordance with the above referred Regulations under the supervision of a Society's Surveyor.
- 4.7 - Only Hardware successfully tested in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer are covered by this certificate.
- 4.8 - Factory Acceptance and On-board Tests are to be performed in accordance with requirements for Category II Equipment.
- 4.9 - The minimum safe distance at which the equipment may be mounted from a standard or a steering magnetic compass is not to be less than 1 m.
- 4.10 - HMI unit systems may be installed in hazardous areas according to the Rules and Conditions for Safe Use specified in a valid Ex-Certificate issued by a Notified or Recognised Certification Body.
- 4.11 - Ex-certification is not covered by this certificate, Applications in hazardous areas are to be approved in each case according to the Rules and Conditions for Safe Use specified in a valid Ex-Certificate issued by a Notified or Recognised Certification Body.

**5. PRODUCTION SURVEY REQUIREMENTS:**

- 5.1 - The above products are to be supplied by **Gai-Tronics** in compliance with the type and the requirements described in this certificate.
- 5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.
- 5.3 - BV product certificate is required.

**6. MARKING OF PRODUCT:**

- 6.1 - According to IEC / EN 60945.
- 6.2 - @ or \ conformity marking, as relevant.

**7. OTHERS:**

It is **Gai-Tronics - UK**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

\*\*\* END OF CERTIFICATE \*\*\*