



Marine & Offshore

Certificate number: 20790/C0 BV

File number: AP3926

Product code: 3992H

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
KSB SEIL CO., LTD.
 BUSAN - KOREA (REPUBLIC OF)

for the type of product
SUB-ALARM SYSTEMS
 Group Annunciators
 Type: SSGA-6P, SSGA-10P and SSGA-15P

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships.

This certificate is issued to attest that Bureau Veritas Marine & Offshore 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: 02 Oct 2023

For Bureau Veritas Marine & Offshore,

At BV PUSAN, on 02 Oct 2018,

Chang-uk HONG



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 Marine & Offshore. 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 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 Marine & Offshore 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 electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfType.jsp?id=nr17wdaeae>
 BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Group Annunciators - SSGA Series.

Providing visible and audible alarm according to input signal.

Models:

- SSGA-6P (6 points alarm unit)
- SSGA-10P (10 points alarm unit)
- SSGA-15P (15 points alarm unit)

Main Specifications:

- Supply Voltage: 24 VDC
- Operating Temp. range: -20°C to +55°C
- Alarm input: "NO" or "NC" contact
- Output signal: "NO" or "NC" contact (30 VDC-1A, 110 VAC-0.3A)
- Alarm delay range: Adjustable from 0.5 to 30 seconds
- Flickering time range: Adjustable from 0.5 to 2 seconds

2. DOCUMENTS AND DRAWINGS:

KSB SEIL:

- Specification, Unreferenced Data Sheet
- Drawings No PBA-SS-0010/0020/0030 Rev. 0 dated July 01, 2008
- Drawings No PBA-SV-0040/0070/0080 Rev. 0 dated 2008-07-01
- Drawings No PBA-SM-0050/0060/0070 Rev. 0 dated 2008-07-01
- Inspection Document. No. SSGA-01 dated 2008-07-01.

3. TEST REPORTS:

KOMERI (Korea Marine Equipment Research Institute):

Three Test Reports No. KOMERI-08T061 all dated June 2008 (Mechanical and Climatic Tests).

ERI (EMC Research Institute):

Test Report No. ERI-EN08-01130353 dated 2008-06-03 (EMC Tests).

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: 31.**
- 4.4 - The equipment fulfils the EMC requirements for installation on the Bridge and Deck Zone.
- 4.5 - 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.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The above products are to be supplied by **KSB SEIL CO., LTD.** in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320.
- 5.3 - **KSB SEIL CO., LTD.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.
- 5.4 - For information, **KSB SEIL CO., LTD.** has declared to Bureau Veritas the following production site(s):

KSB SEIL CO., LTD.
1597-3, SONGJEONG-DONG, GANGSEO-GU
BUSAN
KOREA (REPUBLIC OF)

- 5.5 - Each equipment is to be supplied with manual(s) for installation, use and maintenance.

6. MARKING OF PRODUCT:

- Maker's name or trademark,
- Serial number of the units,
- Equipment type number or model identification under which it was type-tested.

7. OTHERS:

7.1 - It is **KSB SEIL CO., LTD.**'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.

7.2 - This Certificate supersedes the Type Approval Certificate n° 20790/B0 BV issued on 09 Sep 2013 by the Society.

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