



Marine & Offshore

Certificate number: 19829/D0 BV

File number: AP 3719

Product code: 4440H

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

DEIF A/S

Skive - DENMARK

for the type of product

ALARM, MONITORING AND CONTROL SYSTEMS

Alarm Panel

Type: AL8-2

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

EC Code : 31

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: 23 Dec 2027**For Bureau Veritas Marine & Offshore,**

At BV FREDERICIA, on 23 Dec 2022,

Jesper JENSEN

**This certificate was created electronically and is valid without
signature**



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/viewPublicPdfTypepec.jsp?id=cxobelynqk>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The Alarm Panel **AL8-2** has been designed for alarm and control purposes.

Main Characteristics of AL8-2:

Alarm Input:	8 for Connection of Potential Free Contacts (NO or NC Contacts) 6V (Open) - 6 mA (Closed)
Output:	3 Relay Outputs (1xHorn + 2xProgrammable) 250V-2A-400W AC or 250V-1A-50W DC
Power Supply:	12 - 24 - 48 - 110 VDC
Ingress Protection:	IP 40 Front - IP 20 Rear
SW version	2.00.1

2. DOCUMENTS AND DRAWINGS:

DEIF:

Alarm Panels, Type AL8-2, Document No. 4921230002D.

Programming Manual, Alarm Panel Type AL8-2, Document No. 4189320003C.

For D0 version :

- Datasheet of AL8-2 No. 4921230002F
- Software release check list, dated 22.12.19

3. TEST REPORTS:

DEIF: Environmental and EMC Certificates - BV witnessed Type Testing at DEIF A/S dated 12-15/02/2007.

For D0 version:

- Radiated Emission-16A, No. 4910216501M, dated 2020-05-20
- RF E-Field Immunity - Test 02B, No. 4910217502N, dated 2020-05-20

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 in General power Distribution Zones.

4.5 - Each application and configuration is to be submitted to the Society's examination prior to fitting on board.

4.6 - Only Hardware and Firmware / Software successfully tested together in compliance with the regulations as referred to in cover page, according to the declaration of the manufacturer are covered by this certificate.

4.7 - Any modification of the hardware, firmware or software having an impact on the product performance or functionality has to be validated with type testing.

4.8 - In accordance with IACS UR E22 and as applicable to programmable devices for computer based systems of Category II or III, for each ship application:

- Ship specific documentation is to be submitted including software documentation and categorization of the computer based system.
- Inspection and testing before installation onboard is to be performed under the surveillance of the Society.

4.9 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev 8.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above types of product are to be supplied by **DEIF A/S** 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 and as such does not require a BV product certificate.

5.3 - **DEIF A/S** 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, **DEIF A/S** has declared to Bureau Veritas the following production site:

DEIF A/S
Frisenborgvej 33
DK-7800 Skive

DENMARK**6. MARKING OF PRODUCT:**

6.1 - Trade name

Date of manufacture and serial number,

Equipment type or model identification under which it was type-tested.

6.2 - Alternatively, the marking may be presented on a display at equipment start-up.

6.3 - The title and version of each software element included in the installed software system shall be either marked or displayed on command on the equipment.

6.4 - When the marking and the title and version of the software are displayed only on the display, such information shall also be included in the equipment manual.

7. OTHERS:

7.1 - It is **DEIF A/S**'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 No. 19829/C0 BV issued on 21 Dec 2017 by the Society.

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