



Marine & Offshore

Certificate number: 07671/F0 BV

File number: AP 3018

Product code: 2897H

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

ENAG
QUIMPER - FRANCE

for the type of product

INVERTERS

Uninterruptible Power Supply (UPS) AC/AC, Type ALMIV and Inverter DC/AC, Type ONS.

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: 07 Jul 2028

For Bureau Veritas Marine & Offshore,

At BV SAINT-NAZAIRE, on 07 Jul 2023,

Francois LOPINOT

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=libch0d0kr>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

- Product model or type designation:

UPS AC/AC

- Product description:

50/60Hz Single or three phase UPS

Type	Power (VA) Cos ϕ 0.7	Type	Power (VA) Cos ϕ 0.8
ALMIV 500	500 VA	ALMIV 2600	2600 VA
ALMIV 700	700 VA	ALMIV 3500	3500 VA
ALMIV 900	900 VA	ALMIV 5000	5000 VA
ALMIV 1200	1200 VA	ALMIV 7500	7500 VA
ALMIV 1500	1500 VA	ALMIV 10000	10000 VA
ALMIV 2000	2000 VA	ALMIV 12500	12500 VA
		ALMIV 15000	15000 VA
		ALMIV 20000	20000 VA

Inverter DC/AC - 50 Hz / 60 Hz - Single or three phases

Type	Puissance (VA) Cos ϕ 1	Type	Puissance (VA) Cos ϕ 1
ONS 400	400 VA	ONS 6000	6000 VA
ONS 750	750 VA	ONS 8000	8000 VA
ONS 1200	1200 VA	ONS 10000	10000 VA
ONS 2300	2300 VA	ONS 12000	12000 VA
ONS 3000	3000 VA	ONS 15000	15000 VA
ONS 4000	4000 VA	ONS 20000	20000 VA

2. DOCUMENTS AND DRAWINGS:

In accordance with specification and drawing DL 1501 B dated 05 March 1996.

3. TEST REPORTS:

KENTA Test Report N° 203 895 EMC dated July 2007.

ENAG Test Report N° INVERTERS, rev.B, dated 17 May 2023.

EMITECH Test Report N° RCE-EMIESS22L306ENA-03Av0, dated 12 Aug 2022.

4. APPLICATION / LIMITATION:

4.1 - BV Rules for the Classification of Steel Ships.

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

4.3 - The Dry Heat test has been performed at 55°C. Product is a priori not suitable for mounting in consoles, housings, etc. together with other heat dissipating power equipment.

4.4 - 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 products are to be supplied by **ENAG** 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 - **ENAG** 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, **ENAG** has declared to Bureau Veritas the following production site:

ENAG
31 rue Marcel Paul
Z.I. Kerdroniou Est
29000 QUIMPER
FRANCE

6. MARKING OF PRODUCT:

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

7. OTHERS:

7.1 - It is **ENAG**'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° 07671/E0 BV issued on 07 Nov 2017 by the Society.

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