



Marine & Offshore

Certificate number: 10528/E0 BV

File number: ACE 08/160/01

Product code: 2898H

*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 S.A.**

QUIMPER - FRANCE

*for the type of product*

**BATTERY CHARGER ASSEMBLIES**

INVERTERS GMDSS - UNINTERRUPTIBLE POWER SYSTEM

**Requirements:**

BV 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: 11 Sep 2022**

**For Bureau Veritas Marine & Offshore,**

At BV SAINT-NAZAIRE, on 11 Sep 2017,

Francois Lopinot



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](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 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 SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

- Product model or type designation:

**GMDSS POWER SUPPLIES**

- Product description:

Intended for sea areas A1+A2+A3+A4

#### **1.1 - Standard Range for 115/230V A.C. Network**

##### **1.1.1 - Supply**

Type	Type
FCA-GMDSS-25/30	ICA-GMDSS-30RAE I
FCA-GMDSS-50/50	ICA-GMDSS-30RAE D
FCA-GMDSS-60/70	ICA-GMDSS-30
FCA-GMDSS-100/100	ICA-GMDSS-60RAE ICA-GMDSS-75RAE
ICA-GMDSS-30/30	ALMIV-ICA-GMDSS
ICA-GMDSS-60/60	UPS 500 VA up to 10k VA

##### **1.1.2 - Control Panel**

Type	Type
ICA-GMDSS-IND	ICA-GMDSS-IND-SH

#### **1.2 - Standard Range for Direct Current Network**

##### **1.2.1 - Supply Panel**

Type	Type
FCC-GMDSS-30RAE	FCC-GMDSS-30

##### **1.2.2 - Control Panel**

Type	Type
ICC-GMDSS-IND	ICC-GMDSS-IND-SH

#### **1.3 - Dedicated Range for 115/230V A.C. Network**

Type	Type
PS 9099 - 16/16	PS 9099 - 60/16
PS 9099 - 30/16	PS 9099 - 60/60
PS 9099 - 30/30	PS 9098 - 40

#### **1.4 - Dedicated Range for Direct Current Network**

Type	Type
CCC 12/24/XX	CCC 24/12/30

### 2. DOCUMENTS AND DRAWINGS:

According to:

- Specifications: 03436DFG, 03790DFA, 03358DFB, 0343604A, 03436H, 0343605A.

- Drawings: 0352205 A, 0342502B, 0342501B, 0352206A, 0335801B.

All documents are filed in ACE 08/160/01.

### 3. TEST REPORTS:

3.1 - LNE (Laboratoire National d'Essais) N° 9050782 dated 05/05/2000.

3.2 - ENAG test report referenced GMDSM01A dated 18/09/2000. The tests were witnessed by a Society's Surveyor.

3.3 - NCE (Laboratoire de Mesure et d'Essais en Compatibilité Electromagnétique, Radio et Sécurité Electrique) test report N° R98112002C.

3.4 - KENTA Test Report N° 203 893 EMC dated June 2007

**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.**

**5. PRODUCTION SURVEY REQUIREMENTS:**

5.1 - The above products are to be supplied by **ENAG S.A.** 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 - **ENAG S.A.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products :

**ENAG S.A.**  
**31, rue Marcel Paul**  
**Z.I. de 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.A.**'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. 10528/D1 BV issued on 10 Dec 2015 by the Society.

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