



Marine & Offshore  
Division

Certificate number: 06352/E1 BV

File number: AP 2768

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**

Types: CDMV 16, 25, 30, 40, 50, 60, 80, 100, 120

CDTV 50, 60, 80, 100, 120, 150

CDS3 60, 75.

**Requirements:**

BV Rules for the Classification of Steel Ships.

*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: 09 Oct 2020**

**For BUREAU VERITAS,**

At BV NANTES, on 22 Apr 2016,

Joel Gaurin



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. 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.

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

- Product model or type designation :  
**CDMV, CDTV & CDS3 series**

- Product description:  
Switch Mode Type Battery Charger

CDMV	CDTV	CURRENT Is
CDMV 16		16 A
CDMV 25		25 A
CDMV 30		30 A
CDMV 40		40 A
CDMV 50	CDTV 50	50 A
CDMV 60	CDTV 60	60 A
CDMV 80	CDTV 80	80 A
CDMV 100	CDTV 100	100 A
CDMV 120	CDTV 120	120 A
	CDTV 150	150 A

CDS3V	VOLTAGE VS	CURRENT IS
CDS3V60	24VDC	60A
CDS3V75	24VDC	75A

### 2. DOCUMENTS AND DRAWINGS:

According to documents filed in AP 2768.

According to drawing CDT 24/150 ENAG N°10312 02A, dated 09-03-05.

According to drawing CDM 24/120 ENAG N°10311 02A, dated 09-03-05.

#### **For modification E1 version:**

##### **Enag:**

- According to drawing CDS3V ENAG No.: 13010 20B, dated Dec 3, 2015

### 3. TEST REPORTS:

According to test report N° 1641, home Laboratory, dated 15/11/95 for Type tests.

According to test report N° 0222, P.M.M. Laboratory, dated 19/07/95 for EMC tests.

According to test report N° 0243, P.M.M. Laboratory, dated 24/07/95 for EMC tests.

According to test report filed in ACE 08/160/01.

### 4. APPLICATION / LIMITATION:

4.1 - BUREAU VERITAS Rules and Regulations 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 - For CDS3V range, the IP level is limited to IP22.

### 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 and as such does not require a BV product certificate.

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.

5.4 - **ENAG S.A.**, has declared to Bureau Veritas the following production site(s):

**ENAG S.A.**  
**31, rue Marcel Paul**  
**Z.I. Kerdroniou Est**  
**29000 QUIMPER**  
**FRANCE**

**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 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time, and that **ENAG S.A., Quimper - France**, will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate No.: 06352/E0 BV issued on 09 Oct 2015 by the Society.

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