



Marine & Offshore
Division

Certificate number: 38814/A0 BV

File number: AP4522

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
Eaton Power Quality Oy
ESPOO - FINLAND

for the type of product
INVERTERS
9x55 5-15kVA series

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

EC Code: 31B.

IEC 62040 (2002).

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: 23 Mar 2020

For BUREAU VERITAS,
At BV HELSINKI, on 23 Mar 2015,
Tommy Andersson



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 :

9x55 5-15kVA products are UPS for Marine and Offshore applications.

1.1 - Approval's range:

Type	Rated input voltage	Rated output power	Rated output voltage
9x55-xx-xxx-M... TA	100 to 690V 1 or 3 phases	5 to 15 kVA	100 to 690V

Designation:

- x: Number of phases (1 or 3)
- xx: Rated output power (8, 10, 12, 15)
- xxx: Options (S: single phase input, N: three phased input, T: internal transformer, L: batteries)
- M stands for "Marine" product.
- TA stands for "Type approved" product.

1.1.1 - Battery designation:

Type	Batteries' number	Batteries' capacity
X-NxCAh	32, 64 & 96	7Ah or 9Ah

Designation:

- X: Battery's life (empty, 5, 10)
- N: Batteries' number
- C: Batteries' capacity

2. DOCUMENTS AND DRAWINGS :

9155-8kVA to 9355-15kVA technical specifications, dated 16.Mar.2007.

3. TEST REPORTS :

IECEE:

- CB Scheme certificate No. FI 3079, dated 27.Dec.2004.

SGS:

- Tests report No. 235169, dated Aug.2003.

Nemko:

- Tests report No. 158646, dated 27.Oct.2010.
- Tests report No. 111912A, dated 25.Aug.2008.

Centria:

- Tests report No. 23092010.21 Ver. 1.01, dated 07.Oct.2010.

Finas:

- Test report No. VTT-S-00897-15, dated 04.Mar.2015.

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 - BUREAU VERITAS Environmental Category, **EC Code: 31B**

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

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The **9x55 5-15kVA product** are to be supplied by **Eaton Power Quality Oy** 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 - **Eaton Power Quality Oy** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products :

Eaton Power Quality Oy
Koskelontie 13
02921 ESPOO
FINLAND

6. MARKING OF PRODUCT :

6.1 - Trade name.

6.2 - Date of manufacture and serial number.

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

7. OTHERS :

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 **Eaton Power Quality Oy**, 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.

*** END OF CERTIFICATE ***