



MARINE DIVISION

Certificate number: 36243/A0 BV

File number: AP4450

Product code: 2592I

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

Schneider Electric Power Drives GmbH
VIENNA - AUSTRIA

for the type of product

FREQUENCY CONVERTERS

Altivar 61/71 Plus-Marine
90 - 800kW

Requirements:

Bureau Veritas 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: 11 Feb 2018

For BUREAU VERITAS,

At BV HAMBURG, on 17 Jan 2014,

Dirk Hoepfner



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 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:

The **Altivar 61/71 Plus-Marine** series are frequency converters installed in a metal enclosure and supported on rubber buffers. The power part of converter is directly air cooled or has an internal water cooling circuit which is connected to a heat exchanger. ATV61EM... is dedicated to variable torque applications and ATV71EM... is dedicated to constant torque applications.

ATV61EM... ,

Supply voltage	Output power	Output current	Type, Air Cooled IP54	Type, Water Cooled IP55
400V	90kW	179A	ATV61EMS5D90N4	-
400V	110kW	215A	ATV61EMS5C11N4	ATV61EMQ5C11N4
400V	132kW	259A	ATV61EMS5C13N4	ATV61EMQ5C13N4
400V	160kW	314A	ATV61EMS5C16N4	ATV61EMQ5C16N4
400V	200kW	387A	-	ATV61EMQ5C20N4
400V	220kW	427A	ATV61EMS5C22N4	-
400V	250kW	481A	ATV61EMS5C25N4	ATV61EMQ5C25N4
400V	315kW	616A	ATV61EMS5C31N4	ATV61EMQ5C31N4
400V	400kW	759A	ATV61EMS5C40N4	ATV61EMQ5C40N4
400V	500kW	941A	ATV61EMS5C50N4	ATV61EMQ5C50N4
400V	630kW	1188A	ATV61EMS5C63N4	ATV61EMQ5C63N4
690V	110kW	125A	ATV61EMS5C11Y	-
690V	132kW	150A	ATV61EMS5C13Y	ATV61EMQ5C13Y
690V	160kW	180A	ATV61EMS5C16Y	ATV61EMQ5C16Y
690V	200kW	220A	ATV61EMS5C22Y	ATV61EMQ5C22Y
690V	250kW	290A	ATV61EMS5C25Y	ATV61EMQ5C25Y
690V	315kW	355A	ATV61EMS5C31Y	ATV61EMQ5C31Y
690V	400kW	420A	ATV61EMS5C40Y	ATV61EMQ5C40Y
690V	500kW	543A	ATV61EMS5C50Y	ATV61EMQ5C50Y
690V	630kW	675A	ATV61EMS5C63Y	ATV61EMQ5C63Y
690V	800kW	840A	ATV61EMS5C80Y	ATV61EMQ5C80Y

ATV71EM...,

Supply voltage	Output power	Output current	Type, Air Cooled IP54	Type, Water Cooled IP55
400V	90kW	179A	ATV71EMS5D90N4	ATV71EMQ5D90N4
400V	110kW	215A	ATV71EMS5C11N4	ATV71EMQ5C11N4
400V	132kW	259A	ATV71EMS5C13N4	ATV71EMQ5C13N4
400V	160kW	314A	ATV71EMS5C16N4	ATV71EMQ5C16N4
400V	200kW	387A	ATV71EMS5C20N4	ATV71EMQ5C20N4
400V	250kW	481A	ATV71EMS5C25N4	ATV71EMQ5C25N4
400V	280kW	550A	ATV71EMS5C28N4	-
400V	315kW	616A	ATV71EMS5C31N4	ATV71EMQ5C31N4
400V	400kW	759A	ATV71EMS5C40N4	ATV71EMQ5C40N4
400V	500kW	941A	ATV71EMS5C50N4	ATV71EMQ5C50N4
690V	110kW	125A	ATV71EMS5C11Y	ATV71EMQ5C11Y
690V	132kW	150A	ATV71EMS5C13Y	ATV71EMQ5C13Y
690V	160kW	180A	ATV71EMS5C16Y	ATV71EMQ5C16Y
690V	200kW	220A	ATV71EMS5C22Y	ATV71EMQ5C22Y
690V	250kW	290A	ATV71EMS5C25Y	ATV71EMQ5C25Y
690V	315kW	355A	ATV71EMS5C31Y	ATV71EMQ5C31Y
690V	400kW	420A	ATV71EMS5C40Y	ATV71EMQ5C40Y
690V	500kW	543A	ATV71EMS5C50Y	ATV71EMQ5C50Y
690V	630kW	675A	ATV71EMS5C63Y	ATV71EMQ5C63Y

Software versions: W1.7IExx or V5.x

2. DOCUMENTS AND DRAWINGS:

- Configuration guide: 8 P02 526 EN 01/01 dated 03/2013; 8 P02 527 EN 02/02 dated 07/2013;
- Mkt. 05 Rev. 05 dated 1.8.2012

3. TEST REPORTS:**SOPEMEA:**

- EHL18849 dated June 20, 2012; EHL19319 dated September 5, 2012

Schneider Electric Power Drives GmbH:

- FP16433 dated 23.05.2012; FP16512 dated 13.09.2012

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: 21**.

4.4 - The equipment fulfils the EMC requirements for installation in General Power Distribution Zones.

4.5 - Documents relating to each application are to be submitted to the Society's examination prior fitting on board.

4.6 - Depending on the application, Factory Acceptance and On-board Tests are to be performed in accordance with requirements for system category II or III equipment.

4.7 - The installation shall comply with the Manufacturer's recommendation described in the above-referenced documentation.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned products are to be supplied by **Schneider Electric Power Drives GmbH** in compliance with the type described in this certificate and in compliance with the requirements of Bureau Veritas Rules for the Classification of Steel Ships.

5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.

5.3 - Bureau Veritas product certificate is required.



5.4 - Equipment is to be supplied with manual(s) for installation, use and maintenance.

6. MARKING OF PRODUCT:

- Maker's name or trademark.

- Equipment type or model identification.

- Date of manufacture and/or serial number.

-  or  conformity marking, as relevant.

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 **Schneider Electric Power Drives GmbH - AUSTRIA**, will accept full responsibility for informing shipbuilders, ship owners 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 ***