



MARINE DIVISION

Certificate number: 12359/C0 BV

File number: ACE 4/841/2

Product code: 2584H

*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*

**Siemens AG, I DT LD**  
NUREMBERG - GERMANY

*for the type of product*

### ASYNCHRONOUS MACHINES (Power below 100kW)

1LA5/1PP5, 1LA7/1PP7 and 1LA9/1PP9 series  
Low-Voltage Squirrel-Cage Motors with aluminium enclosure.

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships.  
IEC 60034 series, IEC 60092-301.

*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 is a renewal of certificate N° 12359/B0 BV, which expires on 19/09/2013*

**This certificate will expire on: 14 Jul 2019**

For BUREAU VERITAS,

At BV HAMBURG, on 14 Jul 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 1LA5/1PP5, 1LA7/1PP7 and 1LA9/1PP9 series are 3 phase cage Induction MARINE motors with aluminium enclosure.

#### 1.1 - Types:

	1LA5/1PP5	1LA7/1PP7	1LA9/1PP9
Frame size:	180M - 180L - 200L - 225S - 225M	56M - 63M - 71M - 80M - 90S - 90L - 100L - 112M - 132S - 132M - 160M - 160L.	56M - 63M - 71M - 80M - 90S - 90L - 100L - 112M - 132S - 132M - 160M - 160L - 180M - 180L - 200L.
Rated power	at S1: 11kW to 52kW	at S1: 0.06kW to 21.3kW	at S1: 0.06kW to 60kW

#### 1.2 - Main characteristics:

Rated voltage: 200 to 690V

Rated frequency: 50/60Hz

Ambient temperature: 45°C

Synchronous speed: 750 to 3600RPM

Number of poles: 2 to 8, pole - changing motors

Insulation class: F

Temperature rise class: F

Degree of protection: IP55 and IP56 (non heavy sea)

### 2. DOCUMENTS AND DRAWINGS:

- Siemens Low voltage motors Catalogue M11 2000 - 1999 and preisliste M19-11/1999.

Note: Documents filed in ACE4/841/2.

### 3. TEST REPORTS:

**SIEMENS AG:**

- Type Tests

### 4. APPLICATION/LIMITATION:

4.1 - Bureau Veritas Rules and Regulations for the Classification of Steel Ships and IEC 60092 Series.

### 5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned products are to be supplied by **Siemens AG, I DT LD** 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 - **Siemens AG, I DT LD** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

**Siemens AG, I DT LD P MF-EWN**

Siemensstraße 15  
97616 Bad Neustadt  
GERMANY

**Siemens s.r.o. - Odštipný závod Elektromotory Mohelnice**

Nádražní 25  
789 85 Mohelnice  
CZECH REPUBLIC

### 6. MARKING OF PRODUCT:

6.1 - According to IEC 60034 specification

### 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 **Siemens AG, I DT LD - GERMANY**, 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.

7.2 - This certificate supersedes the Type Approval Certificate N° 12359/B0 BV issued on 19 Sep 2008 by the Society.

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