



Marine & Offshore

Certificate number: 22589/B0 BV

File number: ACE2/158/1

Product code: 2671H

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 - GWA
 Amberg - GERMANY

for the type of product
ELECTRICAL MOTOR STARTERS
 SIRIUS 3RA6

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships
 IEC 60947-5-1:2009, IEC 60947-6-2:2007
 EC Code: 31

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: 21 Nov 2022

For Bureau Veritas Marine & Offshore,
 At BV HAMBURG, on 21 Nov 2017,
 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 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. 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:

SIRIUS 3RA6x series are Compact Starter including accessories 3RA68, 3RA69, 3RV1915, 3RV1925, 3RV1928 & 8US1.

1.1 - Main characteristics:

Rated Voltage U_e and insulation voltage U_i : [Vac]	690V
Rated operational Frequency: [Hz]	50/60
Limited Short Circuit I_{cs} (400V): [kA]	53
Rated Short circuit breaking capacity (400V): [kA]	53
Rated Short circuit breaking capacity (690V up to 12A): [kA]	3
Rated Short circuit breaking capacity (690V , 32A for 3RA61 and 3RA64): [kA]	1
Rated Short circuit breaking capacity (690V , 32A for 3RA62 and 3RA65): [kA]	-
Limited Short Circuit I_{cs} : [kA]	53
Rated Impulse Voltage U_{imp} : [kV]	6
No. of poles:	3
Degree of protection:	IP20

1.2 - Variants:

Type: 3RA6 a b c -c d e ff g (Starter)

a = Basic type

1, 2, 4, 5

b = Integrated auxiliary contacts

0, 2, 5

c = Auxiliary contacts

0

d = Type of terminal

0, 1, 2

e = Setting range

A - 0.1 to 0.4 A

B - 0.32 to 1.25 A

C - 1 to 4 A

D - 3 to 12 A

E - 8 to 32 A

ff = Operating voltage

B3, E3, P4, B4

g = Terminals and Mounting

0, 2, 3, 4

2. DOCUMENTS AND DRAWINGS:

As per Manufacturer's catalogue N° LV1N Compat Sirius Starters January 2008.

3. TEST REPORTS :

- Siemens tests report 08067YMd dated May 7th, 2009
- Siemens EMC Test Report 08-E003169-BM-A01/B01 dated December 12th, 2007.
- Siemens EMC Test Report 08-E003531-BM-B02/D02 dated April 4th, 2009.
- Senton EMC Test Report 51968-070584 dated July 25th, 2007.
- Senton EMC Test Report 51968-070584-2 dated December 14th, 2007.
- Senton EMC Test Report 51968-080932 dated August 11th, 2008.

For B0 version:

- 2916d dated 2017-07-19

4. APPLICATION / LIMITATION:

4.1 - Bureau Veritas Rules for the Classification of Steel Ships and IEC 60947 specifications

4.2 - Bureau Veritas Environmental Category, **EC Code: 31.**

4.3 - The manufacturer should be consulted if a starter is to be located where the ambient air temperature may fall below $-25\text{ }^{\circ}\text{C}$ for an indoor or circuit-breaker, and below $-40\text{ }^{\circ}\text{C}$ for an outdoor circuit-breaker, or where the temperature may exceed $40\text{ }^{\circ}\text{C}$ (or if the 24 h average value exceeds $35\text{ }^{\circ}\text{C}$).

4.4 - Each system is to be able to be operated manually from a position located so as to enable visual control of operation.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned motor starters are to be supplied by **Siemens AG - GWA** 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 - **Siemens AG - GWA** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

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CZECH REPUBLIC

6. MARKING OF PRODUCT:

According to IEC 60947 specifications.

7. OTHERS :

7.1 - It is the responsibility of **Siemens AG - GWA** 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 N° 22589/A0 BV issued on 09 Mar 201028 Nov 2008 by the Society.

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