



Marine & Offshore

Certificate number: 23685/C1 BV

File number: AP4182

Product code: 4501H

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 Industry Inc.

Johnson City, TN - UNITED STATES OF AMERICA

for the type of product

PROGRAMMABLE LOGIC CONTROL UNITS

SIMATIC S7-1200

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 31B (see item 4.5)

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: 23 Feb 2026

For Bureau Veritas Marine & Offshore,

At BV PORT EVERGLADES CENTRE, on 09 Dec 2022,

Flavio Rosas

This certificate was created electronically and is valid without signature



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 electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=6hut3watyr>

BV Mod. Ad.E 530 June 2017

This certificate consists of 4 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The **SIMATIC S7-1200** is a modular programmable logic control and I/O system with dedicated I/O Board for the installation on a DIN rail. The system may consist of following components:

| Order no. | Designation | Main characteristic |
|--|--|--|
| Central Processing Unit: (Firmware version: V04.04) | | |
| 6ES7 211 | CPU 1211C AC/DC/Relay CPU 1211C DC/DC/Relay CPU 1211C DC/DC/DC | Power Supply: 230V AC; I/O: 6x DI; 2x AI; 4x Relay Power Supply: 24V DC; I/O: 6x DI; 2x AI; 4x Relay Power Supply: 24V DC; I/O: 6x DI; 2x AI; 4x DO |
| 6ES7 212 | CPU 1212C AC/DC/Relay CPU 1212C DC/DC/Relay CPU 1212C DC/DC/DC | Power Supply: 230V AC; I/O: 8x DI; 2x AI; 6x Relay Power Supply: 24V DC; I/O: 8x DI; 2x AI; 6x Relay Power Supply: 24V DC; I/O: 8x DI; 2x AI; 6x DO |
| 6ES7 214 | CPU 1214C AC/DC/Relay CPU 1214C DC/DC/Relay CPU 1214C DC/DC/DC | Power Supply: 230V AC; I/O: 14x DI; 2x AI; 10x Relay Power Supply: 24V DC; I/O: 14x DI; 2x AI; 10x Relay Power Supply: 24V DC; I/O: 14x DI; 2x AI; 10x DO |
| 6ES7 215 | CPU 1215C AC/DC/Relay CPU 1215C DC/DC/Relay CPU 1215C DC/DC/DC | Power Supply: 230V AC; I/O: 14x DI; 2x AI/AO; 10x Relay Power Supply: 24V DC; I/O: 14x DI; 2x AI/AO; 10x Relay Power Supply: 24V DC; I/O: 14x DI; 2x AI/AO; 10x DO |
| 6ES7 217 | CPU 1217C DC/DC/DC | Power Supply: 24V DC; I/O: 10x DI; 4x DI RS422/485; 2x AI/AO; 6xDO; 4x DO RS422/485 |

Signal module:

| | | |
|----------|--|--|
| 6ES7 221 | SM 1221 DI 8x24VDC SM 1221 DI 16x24VDC | I/O: 8x DI I/O: 16x DI |
| 6ES7 222 | SM 1222 DQ 8x24VDC SM 1222 DQ 16x24VDC SM 1222 DQ 8xRelay SM 1222 DQ 16xRelay | I/O: 8x DO I/O: 16x DO I/O: 8x Relay I/O: 16x Relay |
| 6ES7 223 | SM 1223 DI 8x24VDC, DQ 8x24VDC SM 1223 DI 16x24VDC, DQ 16x24VDC SM 1223 DI 8x24VDC, DQ 8xRelay SM 1223 DI 16x24VDC, DQ 16xRelay | I/O: 8x DI; 8x DO I/O: 16x DI; 16x DO I/O: 8x DI; 8x Relay I/O: 16x DI; 16x Relay |
| 6ES7 231 | SM 1231 AI 4x13bit SM 1231 AI 8x13bit | I/O: 4x AI I/O: 8x AI |
| 6ES7 232 | SM 1232 AQ 2x14bit SM 1232 AQ 4x14bit | I/O: 2x AO I/O: 4x AO |
| 6ES7 234 | SM 1234 AI 4x13bit, AQ 2x14bit | I/O: 4x AI; 2x AO |

Signal board:

| | | |
|----------|--|---|
| 6ES7 221 | SB 1221 DI 4x5VDC 200 kHz SB 1221 DI 4x24VDC 200 kHz | I/O: 4x DI I/O: 4x DI |
| 6ES7 222 | SB 1222 DQ 4x5VDC 200 kHz SB 1222 DQ 4x24VDC 200 kHz | I/O: 4x DO I/O: 4x DO |
| 6ES7 223 | SB 1223 DI 2x24VDC, DQ 2x24VDC SB 1223 DI 2x / DQ 2x5VDC 200kHz SB 1223 DI 2x /DQ 2x24VDC 200kHz | I/O: 2x DI; 2x DO I/O: 2x DI; 2x DO I/O: 2x DI; 2x DO |
| 6ES7 231 | SB 1231 AI 1x12bit SB 1231 AI 1x16bit Thermocouple SB 1231 AI 1x16bit RTD | I/O: 1x AI I/O: 1x AI I/O: 1x AI |
| 6ES7 232 | SB 1232 AQ 1x12bit SB 1232 AQ 1x12bit | I/O: 1x AO I/O: 1x AO |

Accessories:

| | | |
|----------|------------------|---------------------------|
| 6ES7 954 | MMC Memory Cards | 2MB - 2GB |
| 6ES7 297 | Battery board | Backup via CR1025 battery |

Communication module:

| | | |
|----------|--|--|
| 6ES7 241 | CM 1241 RS-422/485 CM 1241 RS-232 CB 1241 RS-485 | |
|----------|--|--|

Degree of protection: IP20

2. DOCUMENTS AND DRAWINGS:

- System Manual A5E02486680-AN dated 11/2019

3. TEST REPORTS:

- Siemens AG: SIMATIC Type Test - 2014-02 dated 17.08.2015; 14-E006085-BM-A01 dated 2014/04/03;
I IA AS RD ST Type Test - 2012-05 dated 24.05.2013; I IA AS RD ST Type Test – 2010-05 dated 25.06.2010

For C0 version:

- SIAC Test Lab: 190726_DTC2_S71200 dated 06 Feb 2020; 191016G_DTC3_1212C_ACDCLY dated 20 Jul 2020;
191016H_DTC3_1214C_ACDCLY dated 20 Jul 2020; 191016I_DTC3_1215C_ACDCLY dated 20 Jul 2020;
191016J_DTC3_1217C_DCDCDC dated 20 Jul 2020; 180905A_MAP2_2_CM1241 dated 15 Apr 2019;
180905B_MAP2_2_SM1221 dated 15 Apr 2019; 180905C_MAP2_2_SM1222 dated 15 Apr 2019;
180905D_MAP2_2_SM1223 dated 15 Apr 2019; 190219_SinkingDQ dated 6 Aug 2019
- SGS: 4577246EMC01 Rev:0 dated 9 Jan 2020; 4627137EMC01 dated 4 Jun 2020; 4434403EMC01 dated 1 Apr 2019;
4471649EMC01 dated 7 Jun 2019
- SGS: 4822889EMC01; 4822889EMC02; 4822889EMC03; 4822889EMC04 all dated 12 Oct 2021
- SIAC Test Lab: 191016A_DTC3_1212FC_DCDCDC dated 30 Apr 2020;
191016B_DTC3_1212FC_DCDCRLY dated 30 Apr 2020; 191016C_DTC3_1214FC_DCDCDC 30 Apr 2020;
191016D_DTC3_1214FC_DCDCRLY dated 30 Apr 2020; 191016E_DTC3_1215FC_DCDCDC 30 Apr 2020;
191016F_DTC3_1215FC_DCDCRLY dated 30 Apr 2020
- SGS: 4587542EMC01 dated 14 Feb 2020

4. APPLICATION/LIMITATION:

4.1 - Bureau Veritas Rules 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 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev7

4.5 - The equipment fulfils the EMC requirements for installation in the Bridge & Deck Zone and the General Power Distribution Zone when the modules are installed in a suitable EMI enclosure of appropriate dimension, when a filter of type B84113-C or equivalent with ratings $C=2x\ 0.47\mu F + 2x\ 4700pF$, $L=4x\ 4.7mH$ is used on the power supply lines, and when shielded cables are grounded on both sides.

4.6 - The Manufacturer's installation recommendation described in A5E02486680-AJ dated 06/2015 regarding surge protection is to be considered.

4.7 - In accordance with IACS UR E22 and as applicable to programmable devices for computer based systems of Category II or III, for each ship application:

- Ship specific documentation is to be submitted including software documentation and categorization of the computer based system.

- Inspection and testing before installation onboard is to be performed under the surveillance of the Society.

4.8 - Only Hardware and Firmware successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer is covered by this certificate.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned products are to be supplied by **SIEMENS Industry Inc.** 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 Industry Inc.** 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
Werner-von-Siemens-Strasse 50
92224 Amberg
Germany

Siemens Industrial Automation Products Ltd.
No. 99, Tian Yuan Road
Sichuan Province
611731 Chengdu City
CHINA

6. MARKING OF PRODUCT:

- Maker's name or trademark

- Equipment type or model identification

- Date of manufacture and/or serial number

- The title and version of each software element included in the installed software system shall be marked on the equipment.

7. OTHERS:

7.1 - It is the responsibility of **SIEMENS Industry Inc.** 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° 23685/C0 BV issued on 10 Dec 2021 by the Society.

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