



Marine & Offshore

Certificate number: 23685/B1 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 AG - DF FA AS
 Amberg - GERMANY

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.x)

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 2021

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 14 Jan 2019,

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.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 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:		
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: 8x 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
Power supply module and Accessories:		
6EP1 332	PM 1207 power supply	Power Supply: 120/230V AC; Output 24V DC
6ES7 954	MMC Memory Cards	2MB - 2GB
6ES7 297	Battery board	Backup via CR1025 battery
Communication module:		
6ES7 241	CM 1241 RS485 CM 1241 RS232 CM/CB 1241 RS422/485	

Degree of protection: IP20
Firmware version: V1.0; V3.0; V4.0

2. DOCUMENTS AND DRAWINGS:

- System Manual A5E02486680-AJ dated 06/2015
- Operating instructions C98130-A7569-A1-04-6419 dated June 2009
- Product Information A5E02808525-01 dated 01/2010

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

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 by using a filter on power supply lines of type: B84113-C or equivalent with ratings $C=2x\ 0.47\mu F + 2x\ 4700pF$, $L=4x\ 4.7mH$ and when shielded cables are grounded on both sides.
- 4.5 - The Manufacturer's installation recommendation described in A5E02486680-AJ dated 06/2015 regarding surge protection is to be considered.
- 4.6 - Documents relating to each application are to be submitted to the Society's examination prior fitting on board.
- 4.7 - 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.
- 4.8 - Depending on the application, Factory Acceptance and On-board Tests are to be performed in accordance with requirements for Category II or III Equipment.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The above mentioned products are to be supplied by **SIEMENS AG-DF FA AS** 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-DF FA AS** 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-DF FA AS
Werner-von-Siemens-Str. 50
92224 Amberg
GERMANY

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

- 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
- 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 AG-DF FA AS - GERMANY** 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/B0 BV issued on 15 Feb 2016 by the Society.

*** END OF CERTIFICATE ***