



Marine & Offshore

Certificate number: 43378/A1 BV

File number: AP4640

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 - PD PA

Karlsruhe - GERMANY

for the type of product

PROGRAMMABLE LOGIC CONTROL UNITS

SIMATIC S7-400 series

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

EC Code: 31 (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: 21 Oct 2020

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 22 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:

SIMATIC S7-400 series comprising the following modules:

Module	Order No.	Module description
PS405	6ES7405-0..	Power supply for S7-400 modules
PS407	6ES7407-0..	Power supply for S7-400 modules
IM460	6ES7460-..	Interface module, for centralized connection
IM461	6ES7461-..	Interface module, for centralized connection
IM463	6ES7463-2AA..	Interface module for distributed connection to S5
CPU412	6ES7412-..	Central Processing Unit with 1x MPI/DP, 1x Profibus DP
CPU414	6ES7414-..	Central Processing Unit with 1x MPI/DP, 1x Profibus DP or 1x Ethernet/Profinet
CPU416	6ES7416-..	Central Processing Unit with 1x MPI/DP, 1x Profibus DP or 1x Ethernet/Profinet
CPU417	6ES7417-..	Central Processing Unit with 1x MPI/DP, 1x Profibus DP, 1x Profinet
SM421	6ES7421-..	Digital input module
SM422	6ES7422-..	Digital output module
SM431	6ES7431-..	Analogue input module
SM432	6ES7432-1HF..	Analogue output module
FM450	6ES7450-1..	Function module: 2 channel counter
FM451	6ES7451-3..	Function module: 3 channel positioning
FM452	6ES7452-1..	Function module: Electronic CAM Controller
FM453	6ES7453-3..	Function module: Positioning with servo and stepper motors
FM455	6ES7455-0..	Control module: 16 channels
CP440	6ES7440-1..	Communication module for 1 channel point to point connection
CP441	6ES7441-2..	Communication module for 1 or 2 channel point to point connection
CP443	6GK7443-1..	Communication module for Industrial Ethernet
CP443	6GK7443-5..	Communication module for Profibus
CP444	6ES7444-1..	Communication module for connection to Industrial Ethernet
IF963	6ES7963-1..	Interface module - RS232
IF964-DP	6ES7964-2..	Interface module - DP Master
MC952	6ES7952-..	Flash Card or RAM
UR1	6ES7400-1TA..	Rack centralized and distributed with 18 Slots 2 redundant PS pluggable
UR2	6ES7400-1JA..	Rack centralized and distributed with 9 Slots 2 redundant PS pluggable
UR2H	6ES7400-2JA..	Rack centralized and distributed with 2x 9 Slots
CR2	6ES7401-2TA..	Rack centralized with 18 Slots, 2 Segments 2 redundant PS pluggable
CR3	6ES7401-1DA..	Rack centralized with 4 Slots
ER1/2	6ES7403-1TA..	Expansion rack with 18 Slots for signal modules only 2 redundant PS pluggable
ER2	6ES7403-1JA..	Expansion rack with 9 Slots for signal modules only 2 redundant PS pluggable
FAN	6ES7408-1T..	Fan subassembly with 3 fans for subrack with 18 Slots

2. DOCUMENTS AND DRAWINGS:

- Catalogue CA 01 04 / 00 SED; A5E00850746-10 dated 08/2011; A5E00850736-07 dated 08/2011

Note: documents filed in AP 3040.

3. TEST REPORTS:

Siemens AG:

- A&D AS RD ST Type Test - 10/2006 dated 24.01.07; A&D ATS 6 / 05-M0601893-A1;

- A&D AS E423-0103 dated 28.05.2001; 03-M484 dated 2003; 03-M282 dated 2003; 03-M281 dated 2003

Note: Documents filed in AP 3040.

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: 31.**
4.4 - The equipment fulfils the EMC requirements for installation in General Power Distribution Zone only.
4.5 - 24V Power Supply Line is to be equipped with lightning protection element (Dehn, Type 918402 or equivalent).
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 - PD PA AE** 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 - PD PA AE** has to make the necessary arrangements to have its works recognized by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

Siemens AG - PD PA AE
Östliche Rheinbrückenstraße 50
78187 Karlsruhe
GERMANY

- 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

7. OTHERS:

- 7.1 - It is the responsibility of **Siemens AG - PD PA AE** 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° 43378/A0 BV issued on 21 Oct 2015 by the Society.

*** END OF CERTIFICATE ***