DNV·GL

Certificate No:
TAA000000K

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Programmable Electronic System

with type designation(s)
SIMATIC S7-1200

Issued to
Siemens AG DF FA AS SIMATIC Type Test
Amberg, Bayern, Germany

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Location classes:

Temperature	**D**
Humidity	**B**
Vibration	**A**
EMC	**A/B***
Enclosure	**Required protection according to DNV Rules shall be provided upon installation on board**

***See page 2 for more details**

This Certificate is valid until **2018-12-31**.

Issued at **Høvik** on **2015-07-03**

for **DNV GL**

DNV GL local station: **Augsburg**

Approval Engineer: **Nils Jarem**

Odd Magne Nesvåg
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Product description

Programmable Logic Controller SIMATIC S7-1200
Including:

Type of equipment	**Type designation**
CPU – Central Processing Units	
CPU 1211C	6ES7 211-...
CPU 1212C	6ES7 212-...
CPU 1214C	6ES7 214-...
CPU 1215C	6ES7 215-...
SB - Signal Modules	
SM 1221	6ES7 221-…
SM 1222	6ES7 222-…
SM 1223	6ES7 223-…
SM 1231	6ES7 231-...
SM 1232	6ES7 232-…
SM 1234	6ES7 234-…
CM - Communication Modules	
CB/CM 1241	6ES7 241-…
Signal boards	
SB 1221	6ES7 221-…
SB 1222	6ES7 222-…
SB 1223	6ES7 223-...
SB 1231	6ES7 231-...
SB 1232	6ES7 232-…
Power supply module	
PM 1207	6EP1 332-…
Accessories	
Memory Cards	6ES7 954-…
BB1297	6ES7 297-…

Place of manufacture

Siemens Elektronikwerk Amberg, Germany
Siemens Elektronikwerk Chengdu, China

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Product certificate
Each delivery of the application system is to be certified according to Pt.4 Ch.9 Sec.1. The certification test is to be performed at the manufacturer of the application system according to an approved test program before the system is shipped to the yard. After the certification the clause for application software control will be put into force.

Clause for application software control
All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

Application/Limitation

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

24V power supply lines are to be protected by Dehn Blitzductor order No. 918 402 (tested) or equivalent.

The system fulfils the EMC requirements without filter for installation in General Power Distribution zone and with appropriate filter for installation on the Bridge and Deck Zone. Rating: I=3A, C=2x0.47µF, C=2x4700pF, L=4x4.7mH, manufactured by Epcos, type B84113-C-B30 or equivalent.

Type Approval documentation

Tests carried out

Applicable tests according to Standard for Certification No. 2.4, April 2006.
Cold test carried out for 16h at -25°C.
Dry Heat test carried out for 16h at +70°C.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE