DNV·GL

Certificate No:
TAA000029E

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Programmable Controller

with type designation(s)
SIMATIC ET 200SP HA

Issued to
Siemens AG - Digital Industries - Process Automation
Karlsruhe, Baden-Württemberg, Germany

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

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	**B***
Enclosure	**Required protection according to the Rules shall be provided upon installation on board.**

*** see Application/Limitation**

Issued at **Hamburg** on **2019-05-02**
This Certificate is valid until **2024-05-01**.
DNV GL local station: **Augsburg**

for **DNV GL**

Approval Engineer: **Heinz Scheffler**

Joannis Papanuskas
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

The SIMATIC ET 200SP HA distributed I/O system is a scalable and highly flexible I/O system that enables you to connect process signals to a higher-level controller via PROFINET IO.

SIMATIC ET 200SP HA

IM – Interface Module

• IM 155-6 PN AN	6DL1155-6AU00-XXXX

DI – Digital Input Module

• DI 16x24VDC HA	6DL1131-6BH00-XXXX
• DI 16xNAMUR HA	6DL1131-6TH00-XXXX
• DI 8x24..125VDC HA	6DL1131-6DF00-XXXX
• DI 8x230VAC HA	6DL1131-6GF00-XXXX

DQ – Digital Output Module

• DQ 16x24VDC/0,5A HA	6DL1132-6BH00-XXXX

AI – Analog Input Module

• AI-DI16/DQ16x24VDC HART HA	6DL1133-6EW00-XXXX
• AI 16xI 2-wire HART HA	6DL1134-6TH00-XXXX
• AI16xTC/8xRTD 2-/3-/4-wire HA	6DL1134-6JH00-XXXX

AQ – Analog Output Module

• AQ 8xI HART HA	6DL1135-6TF00-XXXX

RQ – Relay Output Module

• RQ 4x120VDC-230VAC/5A CO HA	6DL1132-6HD50-XXXX

BA – Bus Adapter

• BA 2xRJ45 HA	6DL1193-6AR00-XXXX
• BA 2XFC HA	6DL1193-6AF00-XXXX
• BA 2xLC HA	6DL1193-6AG00-XXXX

Servermodule

• Server module HA	6DL1193-6PA00-XXXX

Accessories

Carrier Module

• Carrier module IM redundant	6DL1193-6BH00-0RM0
• Carrier module IM single	6DL1193-6BH00-0SM0
• 2-module carrier	6DL1193-6GA00-0NN0
• 8-module carrier	6DL1193-6GC00-0NN0

TB – Terminal Block

• TB22-P32+A0+4D/T	6DL1193-6TP00-0DH1
• TB22-P32+A0+4B/T	6DL1193-6TP00-0BH1
• TB45R-P32+A0+4D/T	6DL1193-6TP00-0DM1
• TB45R-P32+A0+4B/T	6DL1193-6TP00-0BM1
• TB22-P16+A0+4D	6DL1193-6TP00-0DK0
• TB22-P16+A0+4B	6DL1193-6TP00-0BK0

XXXX suffix extension means a variant described in e.g. firmware, process image, measuring range or default. (HW version and FW version are part of the Type Approval documentation)

Application/Limitation

Location class EMC B: The power supply lines are to be protected by filter type B84113C (manufacturer by Epcos or equivalent) Tested with: I=3A, C=2x0,47µF+2x4700pF, L=4x4,7mH.

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNVGL, 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 DNVGL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.
If the control system is intended for remote software maintenance the functionality shall be part of the system documentation as required in DNV GL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Product certificate
If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. 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 DNVGL for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

Type Approval documentation

Test reports: 19-E007858-BM-B02 List of Test Reports SIMATIC ET 200SP HA, dated 13-03-2019
Documents: 19-E007858-BM-C02 List of Technical datasheets/equipment manuals SIMATIC ET 200SP HA, dated 18-03-2019. Module Checklist ET 200SP HA_DNVGL, dated 18.03.2019

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- Serial number

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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE