



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. **A-13556**

This is to certify that the
Peripheral Equipment

with type designation(s)
SIMATIC ET 200SP

Issued to
Siemens AG I IA AS R&D ST TT
AMBERG, 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
Location classes:

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

* See Application/Limitation

This Certificate is valid until **2017-12-31**.

Issued at **Høvik** on **2013-12-04**

DNV local station: **Essen CMC Southern Germany**

Approval Engineer: **Nils Jarem**



for **Det Norske Veritas AS**

Digitally Signed By: Sneen, Ståle
Location: DNV Høvik, Norway
Signing Date: 2013-12-04, on behalf of

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.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.

Product description

Programmable Logic Controller SIMATIC ET 200SP

ET200SP:

6ES7 155-
6ES7 131-
6ES7 132-
6ES7 134-
6ES7 135-
6ES7 137-
6ES7 193-

Place of manufacture

Siemens Elektronikwerk Amberg

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.

Application/Limitation

24V power supply lines are to be protected by Dehn Blitzductor order No. 918402 (tested) or equivalent.
System for use on bridge and deck zone, the power supply lines are to be protected by filter type B84113C (manufactured by Epcos) or equivalent. Tested with: I=3A, C=2x0,47uF+2x4700pF, L=4x4,7mH
Except: Energy Meter 6ES7 134... only for installation in general power distribution zone (EMC class A).

Type Approval documentation

Specifications for Type Tests and Test Report of Marine Electrical Equipment:
I IA AS RD ST Type Test - 2013-02

DNV Essen initial assessment report, dated 2013-07-25.

Tests carried out

Applicable tests according to DNV Standard for Certification No. 2.4, April 2006.

Marking of product

The products to be marked with model name, manufacturer name and 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 at least every second year and at renewal of this certificate.

END OF CERTIFICATE