



TYPE APPROVAL CERTIFICATE

Certificate No:
TAA0000225
Revision No:
2

This is to certify:

That the Programmable Electronic System

with type designation(s)
SIMATIC S7-300

Issued to

Siemens AG SIMATIC Type Test
Amberg, Bayern, Germany

is found to comply with

DNV 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.

Location classes:

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

Issued at **Hamburg** on **2023-11-07**

for **DNV**

This Certificate is valid until **2028-11-06**.

DNV local station: **Augsburg**

Approval Engineer: **Heinz Scheffler**

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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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

SIMATIC S7

Power Supply Modules:

Article Number	Product Description
6ES7 307-1BA01-0AA0	SIMATIC PS307, 120/230VAC/DC24V/2A
6ES7 307-1EA01-0AA0	SIMATIC PS307, 120/230VAC/DC24V/5A
6ES7 307-1KA02-0AA0	SIMATIC PS307, 120/230VAC/DC24V/10A

Interface Modules

Article Number	Product Description
6ES7 174-0AA10-0AA0	IM174
6ES7 360-3AA01-0AA0	IM360
6ES7 361-3CA01-0AA0	IM361
6ES7 365-0BA01-0AA0	IM365

Central Processing Modules:

Article Number	Product Description
6ES7 312-1AE14-0AB0	CPU312
6ES7 312-5BF04-0AB0	CPU312C
6ES7 313-5BG04-0AB0	CPU313C
6ES7 313-6BG04-0AB0	CPU313C-2 PTP
6ES7 313-6CG04-0AB0	CPU313C-2 DP
6ES7 314-1AG14-0AB0	CPU314
6ES7 314-6BH04-0AB0	CPU314C-2 PTP
6ES7 314-6CH04-0AB0	CPU314C-2 DP
6ES7 314-6EH04-0AB0	CPU314C-2 PN/DP
6ES7 315-2AH14-0AB0	CPU315-2 DP
6ES7 315-2EH14-0AB0	CPU315-2 PN/DP
6ES7 315-7TJ10-0AB0	CPU315T-3 PN/DP
6ES7 317-2AK14-0AB0	CPU317-2 DP
6ES7 317-2EK14-0AB0	CPU317-2 PN/DP
6ES7 317-7TK10-0AB0	CPU317T-3 PN/DP
6ES7 318-3EL01-0AB0	CPU319-3 PN/DP

Simulator Module:

Article Number	Product Description
6ES7 374-2XH01-0AA0	SM374

Digital Input Modules:

Article Number	Product Description
6ES7 321-1BH02-0AA0	SM321
6ES7 321-1BH10-0AA0	SM321
6ES7 321-1BH50-0AA0	SM321
6ES7 321-1BL00-0AA0	SM321
6ES7 321-1BP00-0AA0	SM321
6ES7 321-1CH00-0AA0	SM321
6ES7 321-1CH20-0AA0	SM321
6ES7 321-7BH01-0AB0	SM321
6ES7 321-1EL00-0AA0	SM321
6ES7 321-1FF01-0AA0	SM321
6ES7 321-1FF10-0AA0	SM321
6ES7 321-1FH00-0AA0	SM321

Digital Output Modules:

Article Number	Product Description
6ES7 322-1BF01-0AA0	SM322
6ES7 322-1BH01-0AA0	SM322
6ES7 322-1BH10-0AA0	SM322
6ES7 322-1BL00-0AA0	SM322
6ES7 322-1BP00-0AA0	SM322
6ES7 322-1BP50-0AA0	SM322
6ES7 322-5GH00-0AB0	SM322
6ES7 322-5HF00-0AB0	SM322
6ES7 322-8BF00-0AB0	SM322
6ES7 322-1CF00-0AA0	SM322
6ES7 322-1FF01-0AA0	SM322
6ES7 322-1FH00-0AA0	SM322
6ES7 322-1FL00-0AA0	SM322
6ES7 322-1HF01-0AA0	SM322
6ES7 322-1HF10-0AA0	SM322
6ES7 322-1HH01-0AA0	SM322
6ES7 322-5FF00-0AA0	SM322

Digital Input/Output Modules:

Article Number	Product Description
6ES7 323-1BH01-0AA0	SM323
6ES7 323-1BL00-0AA0	SM323
6ES7 327-1BH00-0AB0	SM327

Analog Input Modules:

Article Number	Product Description
6ES7 331-1KF02-0AB0	SM331
6ES7 331-7HF01-0AB0	SM331
6ES7 331-7KB02-0AB0	SM331
6ES7 331-7KF02-0AB0	SM331
6ES7 331-7NF00-0AB0	SM331
6ES7 331-7NF10-0AB0	SM331
6ES7 331-7PE10-0AB0	SM331
6ES7 331-7PF01-0AB0	SM331
6ES7 331-7PF11-0AB0	SM331
6ES7 338-4BC01-0AB0	SM338

Analog Output Modules:

Article Number	Product Description
6ES7 332-5HB01-0AB0	SM332
6ES7 332-5HD01-0AB0	SM332
6ES7 332-5HF00-0AB0	SM332
6ES7 332-7ND02-0AB0	SM332

Analog Input/Output Modules:

Article Number	Product Description
6ES7 334-0CE01-0AA0	SM334
6ES7 334-0KE00-0AB0	SM334
6ES7 335-7HG02-0AB0	SM335

Dummy Module:

Article Number	Product Description
6ES7 370-0AA01-0AA0	DM370

Communication Modules:

Article Number	Product Description
6ES7 340-1AH02-0AE0	CP340
6ES7 340-1BH02-0AE0	CP340
6ES7 340-1CH02-0AE0	CP340
6ES7 341-1AH02-0AE0	CP341
6ES7 341-1BH02-0AE0	CP341
6ES7 341-1CH02-0AE0	CP341

Function Modules:

Article Number	Product Description
6ES7 350-1AH03-0AE0	FM350
6ES7 350-2AH01-0AE0	FM350
6ES7 351-1AH02-0AE0	FM351
6ES7 352-1AH02-0AE0	FM352
6ES7 352-5AH01-0AE0	FM352
6ES7 352-5AH11-0AE0	FM352
6ES7 355-0VH10-0AE0	FM355
6ES7 355-1VH10-0AE0	FM355
6ES7 355-2CH00-0AE0	FM355
6ES7 355-2SH00-0AE0	FM355

Application/limitation

Location class EMC:

- S7-300 Modules SM 321 (64 DI) and SM 322 (64 DO) are to be installed in an RF shielded enclosure with minimum 30 dB shielding in the range 156 – 165 MHz to satisfy the EMC requirements for radiated emissions.
- 24V power supply lines are to be protected by Dehn Blitzductor order No. 918402.

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.

Certified safe modules Ex II 3 (2) G EEx nA [Ib] IIC T4 according to following Ex-certificates:

- KEMA 99ATEX2671 X (Digital input: 6ES7 326-1RF01-0AB0)

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 classification of 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 DNV for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

Type Approval documentation

Test reports: TAA0000225 List of Test Report, Rev.02

Documents: Manual A5E00105504-07; Manual A5E00048969-11; A5E00105505-AJ; Internal Drawing No. A5E46063256A, Rev.001

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021

Place of manufacture

- Siemens AG, Elektronikwerk Amberg
- Siemens AG, Breslauer Strasse 5, 90766 Fürth
- Siemens AG, Ind. Automation Products Ltd. Chen

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