



Certificate no.:  
**TAA00003S3**

# TYPE APPROVAL CERTIFICATE

---

## This is to certify:

that the **Programmable Controller**

with type designation(s)  
**S7-1200 G2 PLC family (CPUs; SMs & SDs)**

issued to

**Siemens Industry, Inc.**  
**Johnson City, TN, USA**

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:

|                    |          |
|--------------------|----------|
| <b>Temperature</b> | <b>D</b> |
| <b>Humidity</b>    | <b>B</b> |
| <b>Vibration</b>   | <b>A</b> |
| <b>EMC</b>         | <b>B</b> |
| <b>Enclosure</b>   | <b>A</b> |

**\* see Application/Limitation**

Issued at **Hamburg** on **2025-11-17**

This Certificate is valid until **2030-11-16**.

for **DNV**

DNV local unit: **Certification & Inspection Services**

Approval Engineer: **Heinz Scheffler**

.....

---

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 USD 300 000.

## Product description

The S7-1200 G2 PLC family is the second generation of the S7-1200 and includes the following models in this certificate:

| CPU models (CPUs)    |                      | Article number     | Description                                                                                           |
|----------------------|----------------------|--------------------|-------------------------------------------------------------------------------------------------------|
| CPU 1212C            | CPU 1212C AC/DC/RLY  | 6ES7212-1BG50-0XB0 | Compact CPU 1212C onboard I/O: 8x DI 24 V DC; 6x DQ; Memory: program 150 kB, data: 500 kB             |
|                      | CPU 1212C DC/DC/DC   | 6ES7212-1AG50-0XB0 |                                                                                                       |
|                      | CPU 1212C DC/DC/RLY  | 6ES7212-1HG50-0XB0 |                                                                                                       |
| CPU 1214C            | CPU 1214C AC/DC/RLY  | 6ES7214-1BH50-0XB0 | Compact CPU 1214C onboard I/O: 14x DI 24 V DC; 10x DQ; Memory: program 250 kB, data: 750 kB           |
|                      | CPU 1214C DC/DC/DC   | 6ES7214-1AH50-0XB0 |                                                                                                       |
|                      | CPU 1214C DC/DC/RLY  | 6ES7214-1HH50-0XB0 |                                                                                                       |
| Fail-safe CPU models |                      | Article number     |                                                                                                       |
| CPU 1212FC           | CPU 1212FC DC/DC/DC  | 6ES7212-1AF50-0XB0 | Failsafe Compact CPU 1212FC onboard I/O: 8x DI 24 V DC; 6x DQ; Memory: program 200 kB, data: 500 kB   |
|                      | CPU 1212FC DC/DC/RLY | 6ES7212-1HF50-0XB0 |                                                                                                       |
| CPU 1214FC           | CPU 1214FC DC/DC/DC  | 6ES7214-1AF50-0XB0 | Failsafe Compact CPU 1214FC onboard I/O: 14x DI 24 V DC; 10x DQ; Memory: Program 300 kB, data: 750 kB |
|                      | CPU 1214FC DC/DC/RLY | 6ES7214-1HF50-0XB0 |                                                                                                       |

| Signal modules (SMs)   |                                                                       | Article number     |
|------------------------|-----------------------------------------------------------------------|--------------------|
| Digital input          | SM 1221 16 x 24 V DC Input (Sink/Source)                              | 6ES7221-1BH50-0XB0 |
| Digital output         | SM 1222 16 x 24 V DC Output (Source)                                  | 6ES7222-5BH50-0XB0 |
|                        | SM 1222 16 x RLY Output                                               | 6ES7222-5HH50-0XB0 |
| Digital input / output | SM 1223 8 x 24 V DC Input (Sink/Source) / 8 x 24 V DC Output (Source) | 6ES7223-5BH50-0XB0 |
|                        | SM 1223 8 x 24 V DC Input (Sink/Source) / 8 x RLY Output              | 6ES7223-5PH50-0XB0 |
| Analog input           | SM 1231 8 x Analog Input                                              | 6ES7231-4HF50-0XB0 |
| Analog output          | SM 1232 8 x Analog Output                                             | 6ES7232-4HF50-0XB0 |
| Analog input / output  | SM 1233 4 x Analog Input / 4 x Analog Output                          | 6ES7233-4HF50-0XB0 |

| Signal boards (SBs)    |                                                                                   | Article number     |
|------------------------|-----------------------------------------------------------------------------------|--------------------|
| Digital input          | SB 1221 100 kHz 8 x 24 V DC Input (Sink/Source)                                   | 6ES7221-3BF50-0XB0 |
| Digital output         | SB 1222 100 kHz 8 x 24 V DC Output (Push-pull)                                    | 6ES7222-5BF50-0XB0 |
| Digital input / output | SB 1223 200 kHz 4 x 5 V DC Input (Source) / 200 kHz 4 x 5 V DC Output (Push-pull) | 6ES7223-7AF50-0XB0 |
| Analog input           | SB 1231 4 x Analog Input                                                          | 6ES7231-4HD50-0XB0 |
| Analog output          | SB 1232 4 x Analog Output                                                         | 6ES7232-4HD50-0XB0 |
| Analog input / output  | SB 1233 2 x Analog Input / 2 x Analog Output                                      | 6ES7233-4HD50-0XB0 |

## Application/Limitation

**Location class EMC A/B:** To fulfil EMC requirements in the General Power Distribution Zone and the Bridge & Deck Zone, the modules must be installed in a suitable EMI enclosure of appropriate dimension (Hoffman CONCEPT EMC enclosure recommended), and a filter is to be fitted in the power supply lines with the following ratings: 1=3A, C=2x0.47µF, L=4x4.7mH (EPCOS B84113-C-B30)

The S7-1200 G2's NFC (near field communication) feature, which may impact the operation of important and essential ship systems (not maintenance), must be disabled via the Step 7 software's Near Field Communication Protection feature.

## 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

See Annex

## Tests carried out

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

## Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- Serial number
- Firmware version
- Supply voltage.

## 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.



Job ID: **262.1-044178-1**  
Certificate no.: **TAA00003S3**

**Manufactured by:**

- Siemens AG, Electronic Works Amberg (EWA)
- Siemens Industrial Automation Products Ltd., Chengdu

END OF CERTIFICATE



Job ID: **262.1-044178-1**  
Certificate no.: **TAA00003S3**

**Annex: Type Approval documentation**  
Hidden