



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAA00001AS**  
Revision No:  
**3**

## This is to certify:

**That the Programmable Electronic System**

with type designation(s)  
**LOGO!**

Issued to

**Siemens Industrial Automation Products Ltd., Chengdu**  
**Chengdu City, Sichuan Province, P.R. China, China**

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>A/B*</b>
<b>Enclosure</b>	<b>Required protection according to the Rules shall be provided upon installation on board.</b>

\* see Application/Limitation

Issued at **Hamburg** on **2023-03-01**

for **DNV**

This Certificate is valid until **2028-02-29**.

DNV local station: **Wuhan NB & CMC**

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**  
**Programmable Logic Controller LOGO!**

Variante	Designation
LOGO! Basic (Base Module with display)	LOGO! 12/24RCE LOGO! 24CE* LOGO! 24RCE (AC/DC) LOGO! 230RCE (AC/DC) LOGO! 24C LOGO! 12/24RC LOGO! 24 LOGO! 24RC (AC) LOGO! 230RC
LOGO! Pure (Base Module without display)	LOGO! 12/24RCEo LOGO! 24CEo LOGO! 24RCEo (AC/DC) LOGO! 230RCEo (AC/DC) LOGO! 24o LOGO! 24Co LOGO! 12/24RCo LOGO! 24RCo (AC) LOGO! 230RCo
Digital modules	LOGO! DM8 12/24R LOGO! DM8 24 LOGO! DM8 24R LOGO! DM8 230R LOGO! DM16 24 LOGO! DM16 24R LOGO! DM16 230R
Analog modules	LOGO! AM2 LOGO! AM2 RTD LOGO! AM2 PT100 LOGO! AM2 AQ (0...10 V, 0/4...20 mA)
Long	LOGO! 12RCL LOGO! 24L LOGO! 24RCL LOGO! 230RCL
Bus	LOGO! 24RCLB11 LOGO! 230RCLB11
Text Display module with Ethernet interfaces	LOGO! TDE

**Application/Limitation**

**Location class EMC B:** LOGO! With the order number -0BA2 series only with filter B84113-C-B30.

Surge Immunity: External Protective circuits required for DC systems. See the current System Manual for recommendations.

All 12/24xxx modules only to be used with 24V DC power supply.

Only the devices mentioned under the Designation and mentioned with the related Order number according to the Manuals, see Type Approval documentation, are approved.

## 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:

Specifications for Type Tests and Test Report of Marine Electrical Equipment

- AUT7-B8.4P-9606, Acceptance March 1997 dated 11-12-1996
- A&D AS E423-0108 dated 28-05-2001
- A&D AS RD ST Type Test-01/05 dated 18-01-2005
- I IA AS RD ST Type Test 03/09 dated 13-03-2009
- I IA AS RD ST Type Test 04/2010 dated 03-05-2010
- I IA AS RD ST Type Test- 2012-01 dated 2012-01
- SIMATIC Type Test-2014-01 dated 06-03-2015
- A&D AS RD 423-301 dated 19-05-2003
- EMC Test Report 2020045-E-XG1 dated 19-08-2020
- EMC Test Report 2020046-E-XG1 dated 19-08-2020

### Documents:

#### Manuals

- Manual No. A5E03556174-01 dated 04/2011
- Manual No. A5E33039675 dated 06/2014
- Manual No. A5E00067781-1 dated 05/2000
- Manual A5E00119092-01 dated 07/2001

## Tests carried out

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

## Place of manufacture

Siemens Industrial Automation Products Ltd.

## Marking of product

The products to be marked with:

- Manufacturer name
- Model 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